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Mohammed, L.B., Hamdan, M.A., Abdelhafez, E.A., Shaheen, W.
Hourly solar radiation prediction based on nonlinear autoregressive exogenous (narx) neural network
(2013) Jordan Journal of Mechanical and Industrial Engineering, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84893440357&partnerID=40&md5=c4ef05892cb2bd5cc2f4f62dc4ff3697
AFFILIATIONS: Al Zaytoonah University of Jordan, Jordan;
National Center for Research and Development, Jordan
ABSTRACT: In this study, Nonlinear Autoregressive Exogenous (NARX) model was used to predict hourly solar radiation in Amman, Jordan. This model was constructed and tested using MATLAB software. The performance of NARX model was examined and compared with different training algorithms. Meteorological data for the years from 2004 to 2007 were used to train the Artificial Neural Network (ANN) while the data of the year 2008 were used to test it. The Marquardt-Levenberg learning algorithm with a minimum root mean squared error (RMSE) and maximum coefficient of determination (R) was found as the best in both training and validation period when applied in NARX model. © 2013 Jordan Journal of Mechanical and Industrial Engineering.

Al-Kaddo, A., Al-Neaimi, A.
Requirements analysis modeling for buyer-driven e-commerce using congolog agent-oriented
(2013) International Journal of Software Engineering and its Applications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84891774451&doi=10.14257%2fijseia.2013.7.6.32&partnerID=40&md5=664dccbf3ad7885a1f5cadfa6d20900e
AFFILIATIONS: Dept. of Computer Science, College of Education for Women, University of Baghdad, Iraq;
Dept. of Software Engineering, College of Science and IT, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: This paper describes an agent-oriented requirements engineering approach. Agent-oriented techniques represent an exciting new means of analysing, designing and building complex software systems. They have the potential to significantly improve current practice in software engineering and to extend the range of applications that can feasibly be tackled. i* can be used to model social dependencies between agents and how process design choices affect the agents' goals. Agent-oriented approaches are becoming popular in software engineering, both as architectural frameworks, and as modeling frameworks for requirements engineering and design. i* is an informal diagram-based language for early-phase requirements engineering that supports the modeling of social dependencies between agents and how process design choices affect the agents' goals both functional and non-functional. ConGolog is an expressive logic-based formalism for specifying processes that involves multiple agents. The two formalisms complement each other well, and in this work, we used the combination of the two frameworks in requirements engineering. The i* SR-diagram language is extended with process specification annotations, which allow the SR model of a system to be refined and then mapped into a ConGolog model. The mapping must satisfy a set of mapping rules, which ensure that it specifies which elements in the two models are related and that the models are consistent. © 2013 SERSC.

Al-Shayea, Q.K.
Evaluating marketing campaigns of banking using neural networks
(2013) Lecture Notes in Engineering and Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84887956997&partnerID=40&md5=7fda939ae1b6338a050f32f04b427937
AFFILIATIONS: Department of Management Information Systems, Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: Marketing campaigns of banking institutions is vital in all banks. The marketing campaigns were based on phone calls. Phone calls have an important influence in the behavior of customers. This paper proposed neural network to evaluate the bank marketing. This assessment will highlight the importance of marketing in the banks and thus the importance of phone calls. A feed-forward back propagation neural network with tan-sigmoid transfer functions is used in this paper to predict if the customer subscribes the deposit. The data set is obtained from UCI machine learning repository. The results of applying the proposed neural network methodology to predict subscribe based upon selected phone calls parameters show abilities of the network to learn the patterns corresponding to customer subscribes the deposit. The percent correctly classified in the simulation sample by the proposed neural network is 90 percent.

Al Sallami, N.M.
Load balancing in green cloud computation
(2013) Lecture Notes in Engineering and Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-

84887883145&partnerID=40&md5=1ec9f42bc9a1fb1582f42dc181667927
AFFILIATIONS: Science and Information Technology College, Al Zaytoonah University of Jordan, Jordan
ABSTRACT: This paper discusses a proposed load balance technique based on Artificial Neural Network
ANN. ANN predict the demand and then allocate resources according to demand. Thus, it always
maintains the active servers according to current demand, which results in low energy consumption
than the conservative approach of over-provisioning. Furthermore, high utilization of server results
in more power consumption, server running at higher utilization can process more workload with
similar power usage. Finally the existing load balancing techniques in cloud computing are discussed
and compared based on various parameters.

Aburuz, S.M., Alrashdan, Y., Jarab, A., Jaber, D., Alawwa, I.A.
Evaluation of the impact of pharmaceutical care service on hospitalized patients with chronic kidney
disease in Jordan
(2013) International Journal of Clinical Pharmacy, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84886091114&doi=10.1007%2fs11096-013-9806-
8&partnerID=40&md5=95845d60a2dbc03cbab51ba4f0c9cae2
AFFILIATIONS: Department of Clinical Pharmacy, Faculty of Pharmacy, University of Jordan, Amman,
Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Department of Internal Medicine, University of Jordan, Jordan University Hospital, Amman, Jordan
ABSTRACT: Objectives The primary goal of the present study was to implement and evaluate the impact
of pharmaceutical care service for hospitalized chronic kidney disease (CKD) patients in Jordan.
Setting Nephrology wards of one of the largest general hospitals in Jordan. Methods All patients who
were previously diagnosed with CKD by their physician were eligible for inclusion in the study.
Recruited patients were fully assessed for treatment related problems (TRPs) by a clinical
pharmacist. Pharmaceutical care service was assessed through a systematic, prospective before-after
design. Chi Square test was used to investigate association between categorical variables. P value
<0.05 was considered to be statistically significant. Main outcome measures Study outcomes included:
Process outcomes (prevalence and nature of identified TRPs, clinical significance of TRPs, associated
diseases and drugs), General clinical outcomes (Therapeutic outcomes of TRPs) and CKD specific
clinical outcomes (Change from baseline in the number of patients receiving appropriate progression
modifying therapy and appropriate management of complications). Results 130 patients were included in
the study. The average number of the identified TRPs was 5.31. Eighty-six percent of the
recommendations were accepted by physicians. Efficacy related problems were the most common TRP
category. Seventeen percent of all TRPs were resolved, 5.5 % were improved, and 37.4 % were prevented
through the clinical pharmacist interventions. Conclusions The current study indicated that
hospitalized patients with CKD suffer from multiple TRPs mostly related to efficacy of medications
and patients monitoring. Clinical pharmacists substantially contributed towards the care of
hospitalized CKD patients through optimizing progression modifying therapies, medications safety and
management of CKD complications. Based on this study it is strongly recommended to implement
pharmaceutical care services for hospitalized CKD patients. © 2013 Springer Science+Business Media
Dordrecht.

Al-Ghabeesh, S.H., Abu-Moghli, F., Salsali, M., Saleh, M.
Exploring sources of knowledge utilized in practice among Jordanian registered nurses
(2013) Journal of Evaluation in Clinical Practice, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84885020013&doi=10.1111%2fj.1365-
2753.2012.01869.x&partnerID=40&md5=469dd4a5606cc9f951fe268fbac273ae
AFFILIATIONS: Faculty of Nursing, Al-Zaytoonah University, P.O. Box 130, Amman 11733, Jordan;
Faculty of Nursing, Alberta University, AB, Canada;
Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Rationale, aims and objectives Understanding sources of knowledge used in everyday practice
is very helpful in improving the quality of health care services. There is a consensus in the
literature that nurses mostly relied in their practice on experiential knowledge gained through their
interactions with other members of health care professionals and patients. The general aim of this
study is to explore the sources of knowledge Jordanian registered nurses use during their practice.
Method A descriptive correlational design was used to collect data from 539 Jordanian registered
nurses from 10 hospitals using a self-administered questionnaire. Results The mean year of experience
of the sample was 7.08 years. Of the 615 questionnaires distributed, 555 were returned. This yields a
response rate of 87.6%. Results revealed that the top five ranked sources used by Jordanian
registered nurses include: the information that nurses learned during nursing education, personal
experience in nursing over time, what was learned through providing care to patients, information
gained through discussion between physicians and nurses about patients, and information from policy
and procedure manuals. Conclusion Jordanian registered nurses recognize the value of research and
that research utilization (RU) is an important issue and must not be ignored. The study has many

implications for practice, education and research. Health care managers and decision makers need to play a more visible and instrumental role in encouraging RU to improve patients' quality of life. © 2012 John Wiley & Sons Ltd.

Khdour, M.R., Hallak, H.O., Shaeen, M., Jarab, A.S., Al-Shahed, Q.N.
Prevalence, awareness, treatment and control of hypertension in the Palestinian population
(2013) Journal of Human Hypertension, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84884281927&doi=10.1038%2fjhh.2013.26&partnerID=40&md5=ff6b70c797e383155b27e6b93f81249a
AFFILIATIONS: Faculty of Pharmacy, Al-Quds University, Abu Deis, PO Box 20002, Jerusalem 009722, Israel;
Pharm D Program, Birzeit University, West Bank, Birzeit, Palestine;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Department of Pharmacy, Patient Friends Society/Al-Rahma PolyClinic, Nablus, Palestine
ABSTRACT: We determined the prevalence of hypertension and the level of awareness, treatment and control of hypertension among Palestinian adults in a population-based cross-sectional survey. Two-stage stratified sampling method was used to select 2077 participants from the general population aged 25 years and over. Trained observers obtained two blood pressure (BP) measurements from each individual by the use of a standardized mercury sphygmomanometer after a 5-min sitting rest. Information on sociogeographical factors and antihypertensive medications was obtained using a standard questionnaire. Hypertension was defined as a mean systolic BP (SBP) ≥140 mm Hg, diastolic BP (DBP) ≥90 mm Hg, and/or use of antihypertensive medications. The overall prevalence of hypertension was 27.6%, with a higher percentage among men (29.2 vs 26.4%; P=0.04). Hypertension increased with age in both men and women. Among hypertensive patients, 51.0% were aware of their elevated BP, 40.2% had treatment and only 9.5% achieved targeted BP control (<140/90 mm Hg). Patients under antihypertensive treatment showed SBP and DBP that were only 3.1 mm Hg and 2.5 mm Hg lower than individuals without antihypertensive treatment, respectively. The data show that hypertension prevalence among Palestinian adults is high, whereas the proportions of awareness treatment and control of hypertension were low. Concerted public health effort is urgently required to improve the detection, treatment and control of hypertension in Palestine. © 2013 Macmillan Publishers Limited All rights reserved.

Hussein, B.A.-S.
Teaching and learning English-as-a-second / foreign language through mother tongue: A field study
(2013) Asian Social Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84881502838&doi=10.5539%2fass.v9n10p175&partnerID=40&md5=a6210f50621144282e09497cd03669e0
AFFILIATIONS: Department of English Language and Literature, Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: The underlying study aims to investigate and analyze the actual reasons, attitudes, and purposes behind the use of the mother tongue (Arabic) in teaching English-as-a-second language to Arab students attending English courses as a university compulsory requirement for the study of English language and literature at Jordanian private and government-aided universities. To achieve this goal, the researcher analyzed data he collected from classroom observation at three different private universities. In addition, the writer analyzes results of responses to questionnaires distributed to 120 students and 12 teachers learning and teaching English at three universities - 40 students and 4 teachers from each university. The results obtained show that almost all the respondents expressed the need for the use of Arabic in the English classroom because, according to them, it helps students understand the meaning of new or difficult words, explain complex syntactic rules, and save time. The study also shows that not allowing students to use their mother tongue will result in prohibiting them to have some opportunities to learn English better.

Salah, M., Abdelhafez, E., Mallouh, M.A., Hamdan, M.
Artificial neural netwroks-based modeling for electrical actuated automotive cooling systems
(2013) 2013 9th International Symposium on Mechatronics and Its Applications, ISMA 2013, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84881358477&doi=10.1109%2fISMA.2013.6547374&partnerID=40&md5=7d573b6cdd5c97b9e208f3eda98d782d
AFFILIATIONS: Mechatronics Engineering Department, Hashemite University, Zarqa, Jordan;
Mechanical Engineering Department, Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: In this study, artificial neural network-based models for electrical actuated automotive cooling systems are developed and analyzed. The proposed models are constructed to represent the dynamical behavior of advanced automotive cooling systems. Three types of artificial neural networks (ANNs) are constructed; MPL, Elman, and NARX networks where experimental data are utilized in the development process of the models. The proposed ANN models are developed and tested in simulation to approximate the performance of the actual system. Statistical results are demonstrated to show the

effectiveness of the proposed ANNs. © 2013 IEEE.

Jallad, A.-H.M., Mohammad, L.B.
Comparative analysis of middleware for multi-processor system-on-chip (MPSoC)
(2013) 2013 9th International Conference on Innovations in Information Technology, IIT 2013, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84881092541&doi=10.1109%2fInnovations.2013.6544403&partnerID=40&md5=d43283fc0cc84d7fd8bac2bb613372c0
AFFILIATIONS: Department of Computer and Communications Engineering, Al-Zaytoonah University of
Jordan, Jordan
ABSTRACT: Efficient software is required in order to make optimum utilization of the full-scale
features of the rapidly developing MPSoC hardware. Embedded MPSoCs are characterized by their
heterogeneity and resource limitation. In addition, embedded MPSoCs systems would be required to deal
with a complex set of tasks whose resource requirements cannot be easily determined statically at
design time. Middleware is a particularly important software component of embedded MPSoC that enables
the system to overcome heterogeneity and manage resources dynamically at run-time. An important part
of the middleware is the run-time system manager responsible for the distributed resource manager of
the MPSoC-based system. System management at run-time is important for many modern embedded systems
because the tasks performed by the system vary over time. In this paper we explore design trade-offs
for middleware systems targeting multi-core embedded systems. The experimental platform implemented
for the project is presented and future work is highlighted. © 2013 IEEE.

Shattat, G., Al-Qirim, T., Sheikha, G.A., Al-Hiari, Y., Sweidan, K., Al-Qirim, R., Hikmat, S.,
Hamadneh, L., Al-Kouz, S.
The Pharmacological effects of novel 5-fluoro-N-(9,10-dihydro-9,10- dioxoanthracen-8-yl)-1H-indole-2-
carboxamide derivatives on plasma lipid profile of Triton-WR-1339-induced Wistar rats
(2013) Journal of Enzyme Inhibition and Medicinal Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84880080155&doi=10.3109%2f14756366.2012.692085&partnerID=40&md5=288be07c6614a269bd0c11a8288ee8fd
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Department of Pharmacy, Amman
11733, Jordan;
Faculty of Pharmacy, University of Jordan, Amman, Jordan;
Department of Chemistry, Faculty of Science, University of Jordan, Amman, Jordan
ABSTRACT: A novel series of 5-fluoro-N-(9,10-dihydro-9,10-dioxoanthracen-8-yl)-1H- indole-2-
carboxamides (3c-3g) were synthesized. The present study was undertaken to investigate the possible
antihyperlipidemic effect of these novel compounds on hyperlipidemic rats. Hyperlipidemia was induced
by a single intraperitoneal injection of Triton WR-1339 (300 mg/kg). The tested animals were divided
into normal control (NCG), hyperlipidemic control (HCG), compounds 3c-, 3d-, 3e-, 3f-, 3g-and
bezafibrate (BF)-treated groups. At a dose of 15 mg/kg, compounds 3c-3g and BF (100 mg/kg)
significantly ($p < 0.0001$) reduced elevated plasma triglycerides levels after 12 and 24 h compared to
the hyperlipidemic control group. However, only compounds 3e and 3g obviously showed a significant ($p
< 0.0001$) reduction in plasma total cholesterol levels after 12 and 24 h. Moreover, high-density
lipoprotein cholesterol levels were significantly increased in all treated groups. The current study
demonstrates that 5-fluoro-N-(9,10-dihydro-9,10-dioxoanthracen-8-yl)-1H-indole-2-carboxamides (3c-3g)
have a definite antihyperlipidemic potential and these beneficial activities may contribute to their
cardioprotective and antiatherosclerotic role. © 2013 Informa UK, Ltd.

Joudeh, B.R.
Scattering properties of ground-state spin-polarized atomic hydrogen
(2013) Physica B: Condensed Matter, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84877996052&doi=10.1016%2fj.physb.2013.04.014&partnerID=40&md5=800363d7bf9b2d1e681cb4472be35ea7
AFFILIATIONS: Applied Physics Department, Tafila Technical University, Tafila, Jordan;
Department of Mathematics, Al-Zaytoonah University of Jordan, P.O. Box 130, Amman, 11733, Jordan
ABSTRACT: In this paper, the scattering properties of ground-state spin-polarized atomic hydrogen
(H↓) are studied at 0 K using the Lippmann-Schwinger formalism. The total, diffusion and viscosity
cross sections, as well as the S-wave scattering length, are calculated. The S-wave scattering cross
section is found to be the most significant partial wave contributing to the total cross section at
low energy. The contribution of the higher angular momentum waves, especially the D-wave ($\ell=2$), to
the scattering increases with increasing relative momentum k. Our calculations are performed for
three triplet-state potentials: Morse-type, Silvera and Born-Oppenheimer potentials. It is also noted
that as k→0, the results of the Morse potential are larger than those of the Silvera and Born-
Oppenheimer potentials. This is because of the exponential tail of the Morse potential which falls
off more rapidly than the r-6 behavior of the Silvera and Born-Oppenheimer potentials. Also, the
Morse potential is relatively shallower than the other two potentials. For high k, the Morse cross
sections approach the corresponding Silvera cross sections. This is because these triplet-state

potentials have almost the same short-range part. The total cross sections reflect the quantum oscillations arising from the diffraction caused by the repulsive short-range part of the potential. Our results are consistent with those obtained by other methods. © 2013 Elsevier B.V. All rights reserved.

Al-Allaf, O.N.A.
Hybrid web engineering process model for the development of large scale web applications
(2013) Journal of Theoretical and Applied Information Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84880100745&partnerID=40&md5=34c55a20c9455cef8a7d51933614885e
AFFILIATIONS: Department of CIS, AL-Zaytoonah University of Jordan, P.O. Box 130, Amman (11733), Jordan
ABSTRACT: Many web development models had been proposed in the literature and there are few studies related to proposing models for developing large web applications. It is important to construct a model that lead to large web applications development with minimum likelihood of failure. A Hybrid web engineering process model for large web development enterprises has been proposed in this research. This model focuses on overall development process phases and consists of many activities: division of large web application into many small sub applications; division of large number of developers into many sub teams; identify a management team to control the development process; Stakeholders' and customers' inclusion and feedback during development process; requirement analysis and management; adopting the Spiral model by management team; adopting the Throwaway Prototype, XP agile method, Web Engineering process model by each sub team; conducting CMMI levels key process areas; conducting web engineering practices and SQA activities; and training developers on CMMI and web engineering practices. An evaluation of this model according to CMMI process areas has been conducted in this research. This evaluation has been carried out by many professional developers currently working in many large web-development Jordanian enterprises. The evaluation results shows that the Hybrid model highly satisfied each of CMMI level2 and CMMI level3, medium satisfaction of CMMI level4, and finally low satisfaction of CMMI level5. © 2005 - 2013 JATIT & LLS. All rights reserved.

Hamadneh, I., Ahmad, A.M., Hamadneh, L.
Effect of heat treatment of HoBa2Cu3O 7-δ ceramics superconductor synthesized from nano-coprecipitated powders
(2013) Modern Physics Letters B, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84878872463&doi=10.1142%2fS0217984913501182&partnerID=40&md5=3ea61f8100f4e01152126d181ed166c0
AFFILIATIONS: Department of Chemistry, Faculty of Science, University of Jordan, Amman 11942, Jordan; Centre for Research and Instrumentation Management, Universiti Kebangsaan Malaysia, Bangi 43600, Selangor, Malaysia;
Al-Zaytoonah University, P. O. Box 130, Amman 11733, Jordan
ABSTRACT: Nano-sized metal oxalate precursors was thermally treated and investigated to produce high temperature superconducting ceramics with a formula of HoBa $_2$Cu3O7-δ (Ho-123). The nano metal oxalate powders were subjected to different heat treatments at various temperatures for the phase formation study. The high-TC phase was observed for all samples as an evidence for the single step transition of (R-T) curves. The TC(R = 0) for Ho123 is 91 K and 90 K for samples sintered at 920°C, 930°C and 88 K for samples sintered at 940°C and 950°C, respectively. XRD data showed single phase of an orthorhombic structure where a small amount of none superconducting phase Ho2BaCuO5 (Ho211) phase was detected. The Ho211 phase was increased as sintering temperature increased due to the decomposition process and affected the transport properties. SEM micrographs showed large grain sizes that are randomly distributed. However, the grain size decreased as the sintering temperature increased which resulted in the formation of weak-links and hence decreases the transport properties. Using nano-sized metal oxalate precursors simplified the formation of HTSC materials with less processing temperatures which could be beneficial in superconducting tape industry. In addition, control of the sintering temperature lead to the formation of Ho123 phase with optimum amount of Ho211 phase which acts as pinning centers and improves the transport properties. © 2013 World Scientific Publishing Company.

Al Ganideh, S.F., Aljanaideh, M.
Using Fuzzy Logic to Analyze Marketing Data: The Impact of Socio-psychological Variables on the National Identity of Jordanians
(2013) Transnational Corporations Review, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
85070751637&doi=10.1080%2f19186444.2013.11668682&partnerID=40&md5=64c750c4075dfef4c0b6842a08fbc438
AFFILIATIONS: Department of Marketing, Al Zaytoonah University in Amman, Jordan; Department of Aerospace Engineering, University of Michigan, United States

ABSTRACT: The fuzzy logic mathematics has started to change the perspectives in a number of management and marketing areas. This study applies fuzzy logic methodology to examine the influence of socio-psychological variables namely dogmatism, conservatism and world-mindedness on Jordanian consumers' national identity (NATID) levels. The concept of the NATID is valuable for international marketers as consumers all over the world are exposed to a wider range of foreign products in their home countries. In the current study, the MATLAB® ANFIS has been used to model the relationship between three inputs (dogmatism, conservatism, and world-mindedness) and one output (NATID). To examine the ability of fuzzy logic model to predict Jordanians' NATID based on socio-psychological variables, the data was collected from a total number of 183 Jordanians who live in Amman City during the winter and spring of 2010. The results indicate that the fuzzy logic model can predict correctly consumers' NATID based on their dogmatism, conservatism and world-mindedness feelings. Finally, the study provides insights for local and international marketing managers to conduct their marketing activities more effectively. © 2013, © 2013 Taylor and Francis Group, LLC.

Yaseen, S.G., Omoush, K.S.A.
Investigating the engage in electronic societies via Facebook in the Arab world
(2013) International Journal of Technology and Human Interaction, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84887463996&doi=10.4018%2fjthi.2013040102&partnerID=40&md5=0c216c66dfe73eeea599d49e7b81861a
AFFILIATIONS: Department of Economics and Administrative Sciences, Al-Zytoonah University of Jordan, Amman, Jordan;
Department of Management Information Systems, Al-Zytoonah University of Jordan, Amman, Jordan
ABSTRACT: The purpose of this study is to develop and validate a comprehensive framework to elucidate the relationship between members' motivations, attitudes, behavior, and usage patterns of Social Networking Sites (SNSs) as a platform of Electronic Societies (e-societies) focusing on Facebook social networking platform. A questionnaire survey method was used to collect data. The sample included Facebook users from six Arab countries. Structural Equation Modeling (SEM), using EQS, was conducted to analyze the data. The results indicated that motivations to engage in e-societies via Facebook, including self-presentation, social interaction, and curiosity, play a pivotal role in explaining Facebook user's attitudes, electronic behavior, and usage patterns. The findings suggest that Facebook has succeeded in providing the fundamental building blocks of e-society construction and copying the features of physical societies, satisfying the basic human needs of social networking. The present study contributes to a deeper understanding of why and how people join the SNSs as a major standardized instrument in building the universal e-societies across boundaries, languages, and cultures. Copyright © 2013, IGI Global.

Susanti, D., Awang, N.A., Qaralleh, H., Sheikh Mohamed, H.I., Attoumani, N.
Antimicrobial Activity and Chemical Composition of Essential Oil of Malaysian Etlingera elatior (Jack) R.M. Smith Flowers
(2013) Journal of Essential Oil-Bearing Plants, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84881629407&doi=10.1080%2f0972060X.2013.793968&partnerID=40&md5=e10289f7291422028b95bc1855afc87f
AFFILIATIONS: Department of Chemistry, Faculty of Science, International Islamic University Malaysia, Jalan Istana, Bandar Indera Mahkota, 25200, Kuantan, Pahang, Malaysia;
Department of Biomedical Science, Faculty of Science, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, 25200, Kuantan, Pahang, Malaysia;
Faculty of Pharmacy, Al-Zaytoonah, University of Jordan, PO BOX 130, Amman, 11733, Jordan;
Department of Biotechnology, Faculty of Science, International Islamic University Malaysia, Jalan Istana, Bandar Indera Mahkota, 25200, Kuantan, Pahang, Malaysia
ABSTRACT: The composition of the essential oil obtained from the flowers of Etlingera elatior (Jack) R.M. Smith was analysed using GC-MS. The antimicrobial activity of the essential oil was conducted using disc diffusion method, determination of minimum inhibition concentration (MIC) and minimum bactericidal/fungicidal concentration (MBC or MFC). The essential oil of the flowers of E. elatior was found to be active against Staphylococcus aureus, Bacillus cereus, Candida albicans and Cryptococcus neoformans. The GC-MS data showed the main components found in the essential oil were identified as 1decanol (16.27 %), dodecanal (16.87 %), n-dodecyl acetate (16.40 %), cis-9-tetradecen-1-ol (16.29 %) and 1-hexadecanol (16.34 %). © 2013 Copyright Har Krishan Bhalla & Sons.

Al-Debei, M.M., Al-Lozi, E., Fitzgerald, G.
Engineering innovative mobile data services: Developing a model for value network analysis and design
(2013) Business Process Management Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84878242605&doi=10.1108%2f14637151311308349&partnerID=40&md5=249e985d75064a6be2a718905678293e
AFFILIATIONS: Department of Management Information Systems, The University of Jordan, Amman, Jordan;
Department of Management Information Systems, Al-Zaytoonah University of Jordan, Amman, Jordan;

Department of Information Systems and Computing, Brunel University - West London, London, United Kingdom

ABSTRACT: Purpose: The aim of this study is to analytically develop a reference model for engineering (i.e. analysis, design, development, evaluation, delivery, maintenance, modification, and management) powerful value networks capable of creating innovative mobile data services. Design/methodology/approach: The paradigm followed is that of design-science research (DSR) which incorporates two main iterative processes: build and evaluate. For building the model (i.e. the design science artifact in this research), the authors followed three iterations: literature review analysis; semi-structured interviews analyzed through content analysis; and examination of real-life case studies. But for evaluating the model, the authors utilized the NTT DoCoMo's i-mode case. Findings: This paper puts forward a novel model for engineering value networks of mobile innovations. This model is composed of seven design constructs and their relationships. The developed model is argued to provide significant utility for telecoms in helping them to identify and design powerful value networks following a systematic and practical approach. Research limitations/implications: The data sources is somewhat limited and the sample is somewhat small which may result in lack of sufficient statistical power. Moreover, the analysis may have overlooked some important concepts and theories related to innovations and value networks. Originality/value: This study contributes to the current body of knowledge about how telecoms can best analyze and design their value networks in an approach that maximizes the potential of developing innovative mobile data services. © Emerald Group Publishing Limited.

Al-Debei, M.M., Al-Lozi, E., Papazafeiropoulou, A.
Why people keep coming back to Facebook: Explaining and predicting continuance participation from an extended theory of planned behaviour perspective
(2013) Decision Support Systems, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84877784793&doi=10.1016%2fj.dss.2012.12.032&partnerID=40&md5=2de27fab41ceaa01c1f8c8102fb02e40
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ABSTRACT: This study examines the continuance participation intentions and behaviour on Facebook, as a representative of Social Networking Sites (SNSs), from a social and behavioural perspective. The study extends the Theory of Planned Behaviour (TPB) through the inclusion of perceived value construct and utilizes the extended theory to explain users' continuance participation intentions and behaviour on Facebook. Despite the recent massive uptake of Facebook, our review of the related-literature revealed that very few studies tackled such technologies from the context of post-adoption as in this research. Using data from surveys of undergraduate and postgraduate students in Jordan (n = 403), the extended theory was tested using statistical analysis methods. The results show that attitude, subjective norm, perceived behavioural control, and perceived value have significant effect on the continuance participation intention of post-adopters. Further, the results show that continuance participation intention and perceived value have significant effect on continuance participation behaviour. However, the results show that perceived behavioural control has no significant effect on continuance participation behaviour of post-adopters. When comparing the extended theory developed in this study with the standard TPB, it was found that the inclusion of the perceived value construct in the extended theory is fruitful; as such an extension explained an additional 11.6% of the variance in continuance participation intention and 4.5% of the variance in continuance participation behaviour over the standard TPB constructs. Consistent with the research on value-driven post-adoption behaviour, these findings suggest that continuance intentions and behaviour of users of Facebook are likely to be greater when they perceive the behaviour to be associated with significant added-value (i.e. benefits outperform sacrifices). © 2013 Elsevier B.V. All rights reserved.

Iskandarani, M.Z.
A new approach to damage detection in composite body structures using time compensated hyperspectral image analysis technique
(2013) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84876235827&doi=10.3844%2fajassp.2013.123.130&partnerID=40&md5=e35e5e7bcc7d90aaa16f6ee9046df542
AFFILIATIONS: Department Computer Science, Al-Zaytoonah University of Jordan, Post Code 11191, Amman, Jordan
ABSTRACT: A novel approach to damage detection in composite car body structures using hyperspectral image index analysis algorithm is presented and discussed. The adapted technique allows the monitoring and analysis of a components structure based on correlation between time spaced thermal images. The technique produces several organized tables resulting from image fusion and frame

deviation pixel redistribution calculations, which results in computable matrices. The obtained results proved the technique to be capable of classifying damage with ability to model various types of damage under various conditions. There is a need to accurately identify damaged composite components. This will enable the used algorithm to determine if the level of damage or defect in the component is critical according to established database that takes into account mechanical and physical factors. Testing different composite structures using Hyperspectral technique and Pulse Video Thermography (PVT), as hyperspectral uses different bands with different wavelengths to analyze the image results, which enables better recognition and classification. Successful recognition and component classification obtained with characterization of tested composite. ©2013 Science Publication.

Hay, A.A., Kraif, O.
The constitution of an Arabic semantic resource from a multilingual aligned corpus [Constitution d'une ressource sémantique arabe à partir de corpus multilingue aligné]
(2013) Proceedings of TALN 2013, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-85123772997&partnerID=40&md5=be661bc55ace2edba62b31efbd7d2b5b
AFFILIATIONS: Alzaytoonah University of Jordan11733, Jordan;
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ABSTRACT: This paper aims at the implementation and evaluation of techniques for extracting semantic relations from a multilingual alignedcorpus, in order to build a lexical resource for Arabic language. We first extract translational equivalents froma multilingual aligned corpus. From these equivalences, we try to extract "clique", which are maximum complete related subgraphs, where all units are interrelated because of a probable semantic intersection. These cliques have the advantage of giving information on both the synonymy and polysemy of units, providing a kindof semantic disambiguation. Secondly, we attempt to link these cliques with a semantic lexicon (like WordNet) in order to assess the possibility of recovering, for the Arabicunits, a semantic relationships already defined for English, French or Spanish units. These relations would automatically build a semantic resource which would be useful for different applications of NLP, such as Question Answering systems, Machine Translation, alignment systems, Information Retrieval...etc. © ATALA.

Masoud, N.M.H.
The impact of stock market performance upon economic growth
(2013) International Journal of Economics and Financial Issues, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84979822709&partnerID=40&md5=81d89d6c844af56c6321dcd094551fc7
AFFILIATIONS: Department of Banking and Finance, College of Economics and Business, Al-zaytoonah University of Jordan, P.O. Box 130, Amman, 11733, Jordan
ABSTRACT: The main purpose of this study was to explore the causal link between stock market performance and economic growth in terms of a simple theoretical and empirical literature framework. Researchers hold diverse opinions regarding the importance of stock markets playing a significant role in economic growth processes by performing the following functions: improving liquidity, aggregating and mobilising capital, observing managers and exerting corporate control, providing risk-pooling and sharing services including investment levels. The growing theoretical literature argues that stock markets are crucially linked to economic growth. The findings suggest a positive relationship between efficient stock markets and economic growth, both in short run and long run and there is evidence of an indirect transmission mechanism through the effect of stock market development on investment. They are seen as providing a service that boosts economic growth. The results are consistent with the theoretical and empirical predictions. © 2013, Econjournals. All rights reserved.

Aboyassin, N.A., Abood, N.
The effect of ineffective leadership on individual and organizational performance in Jordanian institutions
(2013) Competitiveness Review, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84939621499&doi=10.1108%2f10595421311296632&partnerID=40&md5=bade7800993684f9a746ce51fe9fdc14
AFFILIATIONS: Department of Business Administration, College of Economic and Management, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: Purpose – The purpose of this paper is to explore how ineffective leadership behaviour affects individual and organizational performance in Jordanian institutions.
Design/methodology/approach – Data obtained concerned ineffective leadership behaviour in Jordanian private and public institutions. Performance was evaluated based on a survey questionnaire distributed to managers in these institutions. To arrive at statistically significant conclusions, the authors used multiple regression and correlation analysis. Findings – The results indicate that

there is a statistically significant impact of ineffective leadership, as adjudged using four dimensions (lack of shared strategic vision, ineffective leadership characteristics, negative effect on labour relations, and ethical violation) on individual and organizational performance in Jordanian institutions. However, no statistically significant impact of one dimension (ineffective leadership characteristics) on organizational performance was noticed in a sample of Jordanian institutions. Research limitations/implications – This study was limited to manager's point of view in Jordanian institutions. While there are some similarities with managers in Arab institutions, caution should be exercised when generalizing results of this study to other Arabian countries. Practical implications – This study provides useful information and impartial advice for leaders of private and public institutions in Jordan. It also reveals the need for new leadership practices that should be adopted and presents certain ineffective leadership practices that deserve to be eliminated. Originality/value – This study attempts to fill gaps in the literature on Arabian leadership practices. This is one of the few studies that examine the Jordanian environment with regard to identifying the nature of the relationship between ineffective leadership behaviour and organizational performance in Jordanian institutions. The paper's findings and recommendations are expected to benefit decision makers in their dealings with different Jordanian institutions. © Emerald Group Publishing Limited 1059-5422

Jaber, K.M., Al-Khatib, R.M., Taghizadeh, A., Al-Khateeb, A.
Efficient extraction method for biological data using boyer-moore search algorithm
(2013) Creating Global Competitive Economies: 2020 Vision Planning and Implementation - Proceedings of the 22nd International Business Information Management Association Conference, IBIMA 2013, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84905126313&partnerID=40&md5=b646d77bfe82731c2866a156279d94d1
AFFILIATIONS: Faculty of Science and Information Technology, Al-zaytoonah University of Jordan, Amman, Jordan;
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Computer IT Engineering Department, Islamic Azad University of Parand (PIAU), Tehran, Iran;
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ABSTRACT: Exponential growth of the biological data raises a fundamental problem for meaningful extraction of information from the huge GenBank databases. The Bioinformatics computational methods have been efficiently applied for extracting, searching, integrating and analyzing the biological data. In this paper, we propose an innovative extraction method, called Bio-BM, which uses the Boyer-Moore search algorithm to solve the problem of biological data selection and analysis. Experimental performance and evaluation process is utilized to compare the new Bio-BM method to the state-of-the-art biological search methods using the real benchmark datasets. The effectiveness and high-performance of the proposed method show more accurate results over the real biological datasets from GenBank.

Abu Khalaf, R., Sheikha, G.A., Al-Sha'Er, M., Taha, M.
Design, synthesis and biological evaluation of N4-sulfonamido-succinamic, phthalamic, acrylic and benzoyl acetic acid derivatives as potential DPP IV inhibitors
(2013) Open Medicinal Chemistry Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84902979028&doi=10.2174%2f1874104501307010039&partnerID=40&md5=cbe3aeffe2e70013bd27b7df911dcb7f
AFFILIATIONS: Department of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Zarqa University, Zarqa, Jordan;
Drug Discovery Unit, Department of Pharmaceutical Sciences, University of Jordan, Amman, Jordan
ABSTRACT: As incidence rate of type II diabetes mellitus continues to rise, there is a growing need to identify novel therapeutic agents with improved efficacy and reduced side effects. Dipeptidyl peptidase IV (DPP IV) is a multifunctional protein involved in many physiological processes. It deactivates the natural hypoglycemic incretin hormone effect. Inhibition of this enzyme increases endogenous incretin level, incretin activity and should restore glucose homeostasis in type II diabetic patients making it an attractive target for the development of new antidiabetic drugs. One of the interesting reported anti- DPP IV hits is Gemifloxacin which is used as a lead compound for the development of new DPP IV inhibitors. In the current work, design and synthesis of a series of N4-sulfonamido-succinamic, phthalamic, acrylic and benzoyl acetic acid derivatives was carried out. The synthesized compounds were evaluated for their in vitro anti-DPP IV activity. Some of them have shown reasonable bioactivity, where the most active one 17 was found to have an IC50 of 33.5 μM. © Abu Khalaf et al.; Licensee Bentham Open.

Elbes, M., Al-Fuqaha, A.
Design of a social collaboration and precise localization services for the blind and visually impaired

(2013) Procedia Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84897006814&doi=10.1016%2fj.procs.2013.09.037&partnerID=40&md5=911824435c4fdce0392d7785d88c291c
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ABSTRACT: The Blind and Visually Impaired (BVI) encounter various difficulties during their daily
activities like path planning, navigation and obstacle avoidance. Many BVI still trust and rely on
the white cane to explore their environments. The state-of-the-art white canes have audio systems to
guide the BVI through their environment. In this paper, we present a top-down design approach for a
social collaboration service especially designed for the BVI. We also present a precise localization
approach for indoor and outdoor environments which serves as the underlying foundation for the social
collaboration environment. © 2013 The Authors.

Saad, S., Taher, M., Susanti, D., Qaralleh, H., Noorhaidi, N., Awang, A.F.B.
Antimicrobial activity of mangrove plant Acrostichum speciosum
(2013) Journal of Pure and Applied Microbiology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84896500106&partnerID=40&md5=4e065613de52ca5c00e55279f3e249d0
AFFILIATIONS: Institute of Oceanography and Maritime Studies, Kulliyyah of Science, International
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Malaysia

ABSTRACT: The antimicrobial activity of leaves, stem and root of Acrostichumspeciosum was
evaluatedusing different polarity extraction solvents namely n-hexane, ethyl-acetate and methanol.
The samples were tested by disc diffusion and microdilution method against sixmicroorganisms after
the extraction process for their antimicrobial activity. All extracts tested in disc diffusion test
showed no antimicrobial activity. The exception of this is the moderate antibacterial activity of the
ethyl-acetate root extracts against the Gram-positive strains (Bacillus cereus) and the Gram-negative
bacterium Escherichia coli. Ethyl-acetate root extracts appeared to have bacteriostatic and
bactericidal action against B. Cereus at the concentration equal to 0.04 mg/mL (MIC=MBC) while it has
bacteriostatic action against E. Coli at the concentration equal to 0.012 mg/mL. The inhibition of
microbial growth at concentration as low as 0.04 mg/mL indicated the potent antimicrobial activity of
ethyl-acetate root extracts of A. Speciosum.

Al-Debei, M.M., Jalal, D., Al-Lozi, E.
Measuring web portals success: A respecification and validation of the DeLone and McLean information
systems success model
(2013) International Journal of Business Information Systems, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84882735381&doi=10.1504%2fIJBIS.2013.055555&partnerID=40&md5=70c723a5dfdb25a8dc43fac815eb66a8
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ABSTRACT: The main aim of this research is to investigate the role of web portals in improving job
performance at the individual level from the perspective of employees as users. This is deemed
significant as yet little research has assessed the success of web portals in delivering benefits at
the individual level in terms of improved performance in developing countries. The DeLone and McLean
IS success model was used as a foundational theory and then was refined to match the context of the
current research. In fact, the functions and features of portals were identified, clustered and then
linked to portals' quality factors: system quality, information quality, and service quality.
Moreover, job performance of employees is measured through task innovation, task productivity,
customer satisfaction, and management control. This research follows a case study approach where the
phenomenon was examined in the natural setting of the selected company (i.e., ProgressSoft) in Amman-
Jordan, and a survey questionnaire was developed for data collection purposes. Findings have shown
that the developed model explained about 69.6% of the variance in 'job performance'. © 2013
Inderscience Enterprises Ltd.

Al-Shawabkieh, S.S., Alkam, S.A.
Identity and taboos in Egyptian novelist, Rauf Mass'ad's novels: Baydat Anna'amah and Mezaj
Attamaseeh
(2013) Dirasat: Human and Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84879075373&doi=10.12816%2f0000624&partnerID=40&md5=ae1280cb9474c2c8c494f674b3a34299
AFFILIATIONS: Language Center, University of Jordan, Jordan;
Department of Arabic Language and Literature, Al-Zaytoonah Private University of Jordan, Jordan
ABSTRACT: This study aims at revealing the political, religious, and sexual taboos in the world of
the Egyptian novelist, Rauf Mas'sad, through his novels: Baydat Anna'amah and Mezaj Attamaseeh. By
violating the veils of taboos, the narrator exceeded the patterns of societal values, and those of
the traditional artistic structures while soaring in the worlds of the body in search of his
marginalized self, and his lost identity. He predicts a world of chaos which is full of identity
conflicts, repression, oppression, exclusion, hardship, extremism, and violence. This research
attempts to emphasize the relationship between the narrator and the text where what is public is
mingled with what is personal, what is realistic is tangled with what is imagined, what is sensed
with the political, the narrative with the biographic without any system or sequence, but with
flashbacks, referrals and predictions which scatter throughout the texts.

Shaqrah, A.A., Al-Hhashem, A., Alqirem, R.
Social capital, attitude, expectations and quality of knowledge sharing in Jordanian knowledge
stations
(2013) International Journal of Knowledge-Based Development, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84878405558&doi=10.1504%2fIJKBD.2013.054083&partnerID=40&md5=c985d6d72c8d4209defb50492090a34f
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MIS Dept., Faculty of Business, Al-Balqa' Applied University, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: This study argues that the structural, relational, and cognitive dimensions of social
capital in organisational knowledge sharing. These dimensions increase knowledge sharing; attitude
and expectations about knowledge sharing, and quality of knowledge sharing. Our proposed model is
tested on a sample of 141 employees and researchers within knowledge stations at Jordan, and then
examined their relationships using structural equation modelling. We find that social interaction
ties, trust, norm of reciprocity and attitude and expectations about knowledge sharing significantly
contributed to knowledge sharing quality-directly and indirectly- but only shared language and vision
was insignificant contributed to quality of knowledge sharing. Copyright © 2013 Inderscience
Enterprises Ltd.

Althunibat, O., Ridzwan, B., Taher, M., Daud, J., Jauhari Arief Ichwan, S., Qaralleh, H.
Antioxidant and cytotoxic properties of two sea cucumbers, Holothuria edulis Lesson and Stichopus
horrens Selenka
(2013) Acta Biologica Hungarica, .
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84877946228&doi=10.1556%2fABiol.64.2013.1.2&partnerID=40&md5=2495001b6ad22a8915ee2e5d4d33632d
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AlZaytoonah University of Jordan, Faculty of Pharmacy, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: Sea cucumbers are marine invertebrates of the phylum of Echinodermata that have been used
in Asian traditional medicine since ancient times. This study was conducted to investigate the
antioxidant and cytotoxic properties of aqueous and organic extracts from two sea cucumber species,
Holothuria edulis Lesson (Holothuriidae) and Stichopus horrens Selenka (Stichopodidae). Antioxidant
activities of the extracts were evaluated by DPPH· and β-carotene bleaching assays, while MTT and
trypan blue exclusion assays were used to demonstrate the cytotoxic effects of the extracts against
two human cancer cell lines, non-small cell lung cancer cells (A549) and esophageal cancer cells
(TE1). The results showed that both aqueous and organic extracts of H. edulis were able to scavenge
DPH radical (IC50 at 2.04 mg/ml and 8.73 mg/ml, respectively). Aqueous and organic extracts of S.
horrens inhibited 79.62% and 46.66% of β-carotene oxidation by linoleate free radical. On the other

hand, the organic extract of S. horrens exhibited the highest cytotoxic effects against A549 and TE1 cancer cells giving IC50 at 15.5 and 4.0 µg/ml, respectively. In conclusion, the present study revealed that H. edulis and S. horrens contain promising levels of antioxidant and cytotoxic natural products that might be used for cancer prevention and treatment. © 2013 Akadémiai Kiadó, Budapest.

Mukattash, T.L., Tahaineh, L., AlRawi, N., Jarab, A., Hammad, H., Nuseir, K.
Behaviors and attitudes towards dysmenorrhea; A crosssectional survey of 2,000 Jordanian University students
(2013) Jordan Medical Journal, .
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84876224784&doi=10.12816%2f0001066&partnerID=40&md5=8f22ece044676d2a0e710bb392d5a0ee
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Department of Pharmacy, Faculty of Pharmacy, Al Zaytoonah University of Jordan, Amman, Jordan;
Department of Biology, Faculty of Science, University of Jordan, Amman, Jordan
ABSTRACT: Background and Aims: Dysmenorrhea is a very common gynecologic condition encountered by women. The majority of women suffering from dysmenorrhea self-medicate with over the counter medications, which might be inadequate or not very effective. The present study aims to determine the prevalence of dysmenorrhea, the factors significantly associated with the prevalence of dysmenorrhea, the attitudes and behaviors towards dysmenorrhea among Jordanian female students, and the pharmacist's role in the management of dysmenorrhea. Materials and Methods: A total of 2,000 female university students in seven public universities were randomly approached and anonymously surveyed by our research team using a validated structured questionnaire technique. Responses were coded and entered into a customized database in SPSS, version 17, for statistical analysis. Results: Two thousand female university students took part in this survey. The prevalence of dysmenorrhea among the study group was 90.1% (50.5% had pain during each menstruation while 39.6% had pain during some menstruations). Participants were statistically more likely to have dysmenorrhea if they were underweight, having a low family income, living in a rural area, and reporting to have a family history of dysmenorrhea. The majority of respondents thought that the pharmacist had a major role in the treatment of dysmenorrhea. Conclusion: This study has reported a high prevalence of dysmenorrhea among female university students in Jordan. There are growing opportunities for pharmacists to act in the treatment and management of dysmenorrhea. © 2013 DAR PublisheršM University of Jordan. All Rights Reserved.

Zraiqat, A., Dababneh, A.
Study of development of cracks under compressive stresses
(2013) Applied Mathematical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84874741590&doi=10.12988%2fams.2013.13149&partnerID=40&md5=2a3f5d3c65431df3d86b9ef300962daa
AFFILIATIONS: Al-Zaytoonah University of Jordan, P. O. Box 130, Amman 11733, Jordan;
Al-Zaytoonah University of Jordan, P. O. Box 130, Amman 11733, Jordan
ABSTRACT: We solve the model problem of the stability and development of a single crack, located in a field of compressive stresses. © 2013 Amjed Zraiqat and Amer Dababneh.

Zraiqat, A., Al-Madi, A.K.
On translativity of the product of Riesz Nörlund summability methods
(2013) Applied Mathematical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84874702014&doi=10.12988%2fams.2013.13148&partnerID=40&md5=3db62781db99a9aa4a72481733dd8f69
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ABSTRACT: Necessary and Sufficient conditions for the product of Riesz Nörlund summability methods (Ñ, r) (N, q) to be translative have been established. Two interesting examples will be given to show in the first that the product (Ñ, r) (N, q) is translative and in the other example to show that (Ñ, r) (N, q) need not be translative. © 2013 Amjed Zraiqat and Azmi K. Al-Madi.

Oreku, G.S., Mtenzi, F.J., Ali, A.-D.
A viewpoint of Tanzania E-commerce and implementation barriers
(2013) Computer Science and Information Systems, .
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84874623217&doi=10.2298%2fCSIS110725002O&partnerID=40&md5=3ba8c1f30a0b1572d519ed4d16c1b414
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ABSTRACT: The growing rate of ICT utilization particularly the Internet and mobile phones has influenced at an exponential rate online interaction and communication among the generality of the populace. However, with the enormity of businesses on the Internet, Tanzania is yet to harness the opportunities for optimal financial gains. This study is exploratory in nature as it attempts to unveil the prospects of ecommerce implementation, participation, motivation and opportunity to the developing countries like Tanzania where by the domestic market is very big to ensure the growth of agricultural sector. The paper proposes to investigate the ability of consumers to purchase online, the available motivation to do so, and the opportunities for Internet access. We argue the Government and central bank to encourage innovative new technological developments by pre-regulating electronic money to familiarize itself with electronic money schemes generally. Findings revealed that Tanzanians have the ability to participate in e-commerce, but there is need for improved national image to bring in the element of trust and discipline within, and before the international communities. Currently, consumers source for information online but make purchases the traditional way.

Yehia, D.B.M., Callister, L.C., Hamdan-Mansour, A.
Prevalence and predictors of postpartum depression among Arabic Muslim Jordanian women serving in the military
(2013) Journal of Perinatal and Neonatal Nursing, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84873335644&doi=10.1097%2fJPN.0b013e31827ed6db&partnerID=40&md5=40e23503f608bcaebcc034bed24688dc
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ABSTRACT: The purpose of this cross-sectional correlational study was to investigate the prevalence of symptoms and psychosocial predictors of postpartum depression (PPD) among Arabic Muslim Jordanian women serving in the military. Jordanian active-duty military women who had given birth within the last year (n = 300) and were working in 4 military hospitals participated in the study. Tools used included the Edinburgh Postnatal Depression Scale, the Impact of Event Scale-Revised, and the Multidimensional Perception of Social Support. Sixty-seven percent of study participants had mild to moderate symptoms of PPD, and 16% had high levels of symptoms of PPD. Seventy-five percent reported having adequate social support, and 75% reported perceived stress above the cutoff score. There was a strong positive significant relationship between symptoms of PPD and perceptions of stress. There was a significant moderate negative relationship between symptoms of PPD and perception of social support. Income, intendedness of pregnancy, mode of birth, family social support, and perception of stress were the strongest predictors of PPD. There was a reciprocal relationship between PPD and psychosocial variables, with women having low levels of perceived stress and satisfaction with social support having fewer symptoms of postpartum. These findings demonstrate the need to address the psychosocial needs of Arabic Muslim Jordanian childbearing women serving in the military through comprehensive interventions. Findings highlight the importance of social support in decreasing perceived stress and symptoms of PPD in these women. Copyright © 2013 Wolters Kluwer Health | Lippincott Williams & Wilkins.

Omoush, K.S.A., Alqirem, R.M., Ajlouni, M.I.
The role of web-based group decision support systems in clarifying the collective intelligence: Measuring the outcomes
(2013) Journal of Theoretical and Applied Information Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84872371201&partnerID=40&md5=bd697559c7ba862f48e906607f7206bb
AFFILIATIONS: Department of Management Information Systems, Al-Zaytoonah University of Jordan, Jordan;
Business Administration, Al-Zaytoonah University of Jordan, Jordan

ABSTRACT: The main objective of this research is to develop a conceptual framework for exploring the role of GDSSs in shaping the dimensions of collective intelligence and the expected outcomes. The ever-increasing complexities and controversial challenges in today's business environment require organizations to be recognized as adaptive systems and be examined as an evolving intelligent being. An organization is intelligent only if it is able to nurture a high level of collective intelligence. The tremendous advances in Internet and Web applications bring impetus to Web-based Group Decision Support Systems (GDSSs) development as the most recent collective intelligence systems. Based on extensive literature review, six dimensions of collective intelligence were identified in this paper. These dimensions are freedom of mind, shared memory, knowledge sharing, collective perception, collective problem-solving, and collective learning. Furthermore, the study's framework identified four major expected outcomes, involving sense and response capability, relationship quality, decision

Guerrouf, F., Chaoui, A., Aldahoud, A.
A graph transformation approach of mobile activity diagram to nested Petri nets
(2013) International Journal of Computer Aided Engineering and Technology, .
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84870770850&doi=10.1504%2fIJCAET.2013.050549&partnerID=40&md5=61d794cae0b779ea3d2ff520cc7df8e2
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MISC Laboratory, University Mentouri Constantine, Route Ain Elbey, Constantine, 25000, Algeria;
Al-Zaytoonah University of Jordan, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: UML is considered as the standard language for modelling object oriented software systems.
Mobile activity diagram is an extension of the standard UML activity diagram that deals with the
requirements to model, specify, and visualise mobile agent-based systems. However, it inherits its
lack of formal notation for analysis and verification purposes. In this paper we propose an approach
for transforming mobile activity diagrams to nested Petri nets models. The meta-modelling tool AToM3
is used to create meta-models for mobile activity diagram and nested Petri net. A graph grammar is
proposed for automatic transformation. An auctioning system example illustrates our proposed
approach. Copyright © 2013 Inderscience Enterprises Ltd.

Burshaid, K.I., Hamdan, M.A.
The reduction of soot formation from fuels using oxygenates additives
(2013) Energy Conversion and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84870450872&doi=10.1016%2fj.enconman.2012.02.033&partnerID=40&md5=8bd369e4c9207418711066b60a715b66
AFFILIATIONS: Department of Mechanical Engineering, University of Jordan, Amman 11942, Jordan;
Department of Mechanical Engineering, Al Zaytoonah University of Jordan, Amman 11733, Jordan
ABSTRACT: This work presents an experimental technique for the measurement of the soot formation in
pure fuel, biofuel and emulsified fuel, that constitute this fuels was studied in heated shock tube
and investigated the possibility of reducing soot production in locally refined diesel, locally
produced biofuel and emulsified fuel. This reduction was conducted using certain oxygenated additives
(methane, ethane and acetone). It was found that soot concentration is maximum when pure diesel was
burned, followed by emulsified fuels and the lease concentration was obtained when biofuel was
burned. Further, methanol has the most significant effect on the reduction of soot once added to each
fuel, while acetone has the lease effect on soot reduction. The results gave good indication of the
effect for oxygenated additives in reduction the soot formation. © 2012 Elsevier Ltd. All rights
reserved.

Fasfous, A., Asfar, J., Al-Salaymeh, A., Sakhrieh, A., Al-hamamre, Z., Al-Bawwab, A., Hamdan, M.
Potential of utilizing solar cooling in the University of Jordan
(2013) Energy Conversion and Management, .
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84870444114&doi=10.1016%2fj.enconman.2012.01.045&partnerID=40&md5=16e48c34463b97df92309a940f6ea493
AFFILIATIONS: Mechanical Engineering Department, University of Jordan, Amman 11942, Jordan;
Energy Center, University of Jordan, Amman 11942, Jordan;
Chemical Engineering Department, University of Jordan, Amman 11942, Jordan;
Hamdi Mango Center, University of Jordan, Amman 11942, Jordan;
Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: In this paper, the potential of utilizing a solar cooling system to improve the indoor air
quality is investigated. The analysis is performed for a 41 m2 with a 3.65 m height laboratory
located at Mango Center for Scientific Research - University of Jordan in Amman. The hourly ambient
temperatures and the monthly solar radiation in Amman are recorded. The calculations of the cooling
demand were done using two methods, i.e. manual calculations and block load software. For the
analysis, the internal loads of lightning, computer, etc. and the building envelope (e.g. double
glass, no shading) were considered. The results show that proposed solar collectors of 40 m2 area can
provide solar heat for an 8 kW solar air-conditioning system. Moreover, domestic hot water (solar
fraction up to 100%) and solar heating (approx. 15-25% solar fraction) could be also provided, with
the solar air-conditioning system, for the centre. An economic study was also carried, which showed
that the estimated payback period of the solar cooling system, exceeds that of project life time of
the project, which is assumed to be 24 years unless the government of Jordan issues a new law for
renewable energy that grants incentives, exemptions and subsidizes projects that invest in solar
energy applications by about 40% of initial investment cost of the system. © 2012 Elsevier Ltd. All
rights reserved.

Dabbour, L.M.

Geometric proportions: The underlying structure of design process for Islamic geometric patterns
(2012) Frontiers of Architectural Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84899860084&doi=10.1016%2fj.foar.2012.08.005&partnerID=40&md5=2494af15e83de91ce02d203f3be97839
AFFILIATIONS: Department of Architectural Engineering and Building Systems, Alzaytoonah University of
Jordan, Amman, 11733, Jordan
ABSTRACT: This paper discusses geometric proportions which serve as a design tool, especially for
Islamic pattern design. The key role of geometry in Islamic patterns is discussed with relation to
proportions which act as the underlying structure of the design process. Evaluations based on spatial
structure and esthetic criteria are integrated into the conceptual phase of the design process.
Proportions serve two objectives; firstly, in pattern design, proportions are strongly linked to
geometry, which can be viewed as a self-guiding method of esthetically proven design. Secondly,
geometric proportions regulate primarily the order of patterns; while at the same time they mediate
between the two poles of order and diversity as well as among different esthetic levels. This paper
analyzes geometric principles and design features of traditional Islamic patterns, involving
geometric proportion analysis. It also describes the syntheses of Islamic patterns from the
perspectives of Islamic cosmology, philosophy and metaphysics of geometry, which can be seen as
following a pre-established principle of geometric and proportional design with high accuracy and
great precision. Furthermore, the underlying relationship between cosmology and geometry is
manifested in Islamic patterns where geometry acts as the vocabulary underpinning the pattern
language. These findings support the argument that geometry was independently discovered and applied
by Islamic culture as a universal language, constituting one of the most important multicultural
symbols in design. © 2012 Higher Education Press Limited Company.

Mitrović, D., Ivanović, M., Vidaković, M., Al-Dahoud, A.
Developing software agents using enterprise javabeans
(2012) CEUR Workshop Proceedings, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84892594676&partnerID=40&md5=d1ebbaffbbfb42ce95cec5512763c538
AFFILIATIONS: Department of Mathematics and Informatics, Faculty of Sciences, University of Novi Sad,
Novi Sad, Serbia;
Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia;
Al-Zaytoonah University of Jordan, P.O.Box 130, Amman 11733, Jordan
ABSTRACT: Enterprise JavaBeans (EJBs) represent one of the most widely-used server-side component
architectures for devel- oping the business logic of enterprise-scale applications. Be- cause of
their runtime properties, such as scalability, secu- rity, and transactional integrity, Enterprise
JavaBeans are also an excellent tool for building software agents. This pa- per outlines an
architecture for developing and deploying EJB-based agents. The presented approach is designed in a
way that employs all the benefits of EJBs, while, at the same time, it hides the underlying
complexity from agent developers. Copyright © 2012 by the paper's authors.

Al-Qatawneh, S.M., Ipson, S.S., Qahwaji, R.S.
3D facial feature extraction based on the symmetry plane analysis
(2012) Proceedings of the IASTED International Conference on Signal and Image Processing, SIP 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84884186040&doi=10.2316%2fP.2012.786-
023&partnerID=40&md5=3064011a239da007ccf29f74d1f40f5f
AFFILIATIONS: Department of Software Engineering, Faculty of Science and Information Technology, Al-
Zaytoonah University of Jordan, Amman, Jordan;
Informatics Research Institute, School of Computing, Informatics and Media, University of Bradford,
Richmond Road, Bradford, West Yorkshire, BD7 1DP, United Kingdom
ABSTRACT: Recently with the development of more affordable 3D acquisition systems and the
availability of 3D face databases, 3D face recognition has been attracting interest to tackle the
limitations in performance of most existing 2D systems. In this work, a novel method for the
automatic processing of 3D facial data is presented. Here the input data can be in the form either of
a 3D triangular facial mesh (containing the coordinate and connectivity information), or of a data
point cloud. In the new approach, the main goal is to automatically determine a symmetry profile for
the face. This is undertaken by computing the intersection between the symmetry plane (found by an
automatic search) and the facial mesh, resulting in a planer curve that accurately represents the
symmetry profile. This is then utilized to allocate the central region of the face and it extracts a
set of profiles from that region which can be used for recognition purposes.

Mghawish, A., AbdelQader, A.A., Al-Jezawi, M.A., AbuMahfouz, M.
Multi function control system using GSM modem based SM5100B module
(2012) 2012 International Conference for Internet Technology and Secured Transactions, ICITST 2012, .
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84876185649&partnerID=40&md5=d59a1a74bcf642f541367af1cc62e5ea
AFFILIATIONS: Department of Computer Science, Alzaytoonah University of Jordan, Amman, Jordan
ABSTRACT: This paper proposes a multi function solution, based on GSM (Global System for Mobile Communication) networks [1] for control of a motor driving circuit and LCD (Liquid Crystal Display). This system provides ideal solution for controlling the direction of motor driving within a specified range of time, two directions where controlled in addition to activated functionality with 5V. In this system, a real time data can be accessed world wide using the GSM network. The system can also be configured to control an alarm or any other electrical device via a mobile phone using SMS text messaging. The proposed system controls the motor direction from the remote location, determines the time duration the motor is in a specified direction and whenever it crosses the Cellular Shield to the SM5100B Module. The Cellular Shield will send the signal to the output PIN's which are programmed using C language to control the motor operation. The concerned authority can control the system through his mobile phone by sending AT Commands to GSM MODEM and in turn to microcontroller. The system uses GSM technology [2] thus providing the access to the system for security and automated monitoring and control the motor operations. © 2012 Infonomics Society.

Abushihab, I.
Syntactic contrastive analysis of Turkish and English
(2012) Dacoromania, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84875008011&partnerID=40&md5=bf0eac9b0101b0264460215249d90d1f
AFFILIATIONS: English Department, Alzaytoonah Private University of Jordan, Jordan
ABSTRACT: This study explores the differences and similarities between Turkish and English in the area of syntax. The discussion leads to the conclusion that the word order of the Turkish sentence can be described as SOV where the verb is positioned at the end whereas the word order of the English sentence can be described as SVO. Example: Sabahta çay? içtim / sæbæhtæ t?æj? it?tim/ morning + in (-ta) + tea + drink + past suffix (-ti) + personal suffix (I) (-m) (I drank tea in the morning). In Turkish, the nominal sentence (non-verbal sentence) consists of the subject which takes the initial position and the predicate which follows. A Personal suffix is attached to the predicate as the following examples show: Ben ogretmenim /ben ?retmenim/ I + teacher + personal suffix standing for Be (im) (I am a teacher.) Sen ogretmensin /sen ?retmensin/ You + teacher + personal suffix standing for Be (-sin) (you are a teacher) Unlike English, the subject of Turkish could be cancelled if it is stated in the previous sentence and the personal suffix is attached to the verb instead, as the following example testifies: Aksamta Ankaraya gittim /æk?æmtæ ænkæræjæ gitim/ evening + in (-ta) + Ankara + buffer sound between two vowels (-y) + to (-a) + go + past suffix(-ti) + personal suffix (I) (-m) (I went to Ankara in the evening). Such conclusions are helpful in language teaching materials, syllabuses and test construction.

Ridha, M.B.
Linear programming model as a decision support system in knowledge management
(2012) Proceedings - 2012 8th International Conference on Computing and Networking Technology (INC, ICCIS and ICMIC), ICCNT 2012, .
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84874153578&partnerID=40&md5=5e4dfb7f18f972059f2c6e92d8830a18
AFFILIATIONS: Business Management, Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: This study aims to examine a quantitative method applied to determine transportation cost of knowledge assets between three hospitals in Jordan. The results of the study explain that quantitative method (Linear Programming) can be used as decision support system to help decision maker when he want to select between many kinds of knowledge assets with minimum cost. © 2012 AICIT.

Sakhrieh, A., Hamdan, M.
A study on the Jordanian oil shale resources and utilization
(2012) AIP Conference Proceedings, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84873829661&doi=10.1063%2f1.4768979&partnerID=40&md5=3744afb25bc7285ee6ca81f7d53d2822
AFFILIATIONS: University of Jordan, Jordan;
Al-Zaytoonah Private University, Jordan
ABSTRACT: Jordan has significant oil shale deposits occurring in 26 known localities. Geological surveys indicate that the existing deposits underlie more than 60% of Jordan's territory. The resource consists of 40 to 70 billion tones of oil shale, which may be equivalent to more than 5 million tones of shale oil. Since the 1960s, Jordan has been investigating economical and environmental methods for utilizing oil shale. Due to its high organic content, is considered a suitable source of energy. This paper introduces a circulating fluidized bed combustor that simulates the behavior of full scale municipal oil shale combustors. The inside diameter of the combustor is 500 mm, the height is 3000 mm. The design of the CFB is presented. The main parameters which affect

the combustion process are elucidated in the paper. The size of the laboratory scale fluidized bed reactor is 3 kW, which corresponds to a fuel-feeding rate of approximately 1.5 kg/h. © 2012 American Institute of Physics.

Al-Zwyalif, I.M.
Using six sigma approach to improve accounting information systems performance
(2012) European Journal of Economics, Finance and Administrative Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84873734128&partnerID=40&md5=315fad65e7f619f2213fc2f4dbae532c
AFFILIATIONS: Accounting Department, Faculty of Economics and Administrative Sciences, Al-Zaytoonah University of Jordan, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: The study aimed at investigating the extent of applying six sigma criteria in the King Abdullah II awarded Jordanian private firms for excellence and its impact on improving accounting information systems performance. Data were collected from the surveyed firms by using a questionnaire designed specially for this purpose. The study revealed the existence of very high- high level of applying six sigma criteria in the King Abdullah II awarded Jordanian private firms; it also revealed that there was a significant correlation between six sigma criteria and the improvement of accounting information systems performance in these firms. © EuroJournals, Inc. 2012.

Tamimi, A.A., Abdalla, A.M.
A double-shuffle image-encryption algorithm
(2012) Proceedings of the 2012 International Conference on Image Processing, Computer Vision, and Pattern Recognition, IPCV 2012, .
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84873298665&partnerID=40&md5=290df2b3c2a047803d18e08a6fb99e56
AFFILIATIONS: Department of Multimedia Systems, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: This new algorithm employs two shuffling procedures combined with S-box substitution to perform lossless image encryption, combining stream cipher with block cipher. This algorithm was implemented and tested with each of the three steps; stream shuffling, block shuffling and S-box substitution. In addition, different combinations of these steps were tested. Empirical analysis using different types of test images of different sizes showed that this new algorithm is effective and it becomes more secure and more resistant to statistical attach with each step, where using all three steps together produced the best results.

Shahwan, M., Al-Qirim, T., Bader, A.
Short-term feeding effects of origanum syriacum crude extract on immobilization stress induced antioxidant defense changes in rat
(2012) Journal of Biological Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84871796808&doi=10.3923%2fjbs.2012.421.425&partnerID=40&md5=e7f7d69c64d3273b727d7a4831259489
AFFILIATIONS: College of Pharmacy and Health Sciences, Ajman University of Science and Technology, Ajman, United Arab Emirates;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, 11733, Jordan;
Faculty of Pharmacy, Umm Al-Qura University, Mekkah, Saudi Arabia
ABSTRACT: Ethnomedically genus Origanum L. is commonly used in many countries due to its stimulating, analgesic, antitussive, expectorant, sedative, anti-inflammatory and antihelminthic agent. The aim of this research was to study the antioxidant potential of the aerial parts of origanum syriacum extract and to evaluate its effect on the modulation of restraint induced oxidative stress. Rats were treated with crude extract of origanum syriacum alone and both before (pre-extract stress treated) and after (post-extract stress treated) 6 h of stress exposure. Pro-oxidant effect of rat plasma was evaluated by determining the activities of Superoxide Dismutase (SOD), Catalase (CAT), Glutathione-S-Transferase (GST) and the levels of glucose, uric acid and lipid peroxidation (MDA). About 6 h of restraint stress caused a significant decrease in the activities of SOD, CAT and GST andthe level of glucose, while increase in the levels of MDA and uric acid. The post treatment of crude extract was found more effective in restoring restraint stress induced changes in rat plasma than pre treatment. In order to reduce oxidative stress, observed in many pathological conditions, the O. syriacum extract can be given both as a prophylactic and therapeutic supplement for scavenging free radicals. © 2012 Asian Network for Scientific Information.

Hamdan, M.A., Yamin, J., Abdel Hafez, E.M.
Passive cooling roof design under Jordanian climate
(2012) Sustainable Cities and Society, .
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84870833533&doi=10.1016%2fj.scs.2011.10.004&partnerID=40&md5=73b7a7f9c899ab915e9e0e5795f12651
AFFILIATIONS: Mechanical Engineering Department, University of Jordan, Amman 11942, Jordan;

Mechanical Engineering Department, Al Zaytoonah University, Amman 11733, Jordan
ABSTRACT: Four identical test structures each having dimensions 1 m × 0.6 m × l m have been
fabricated. All the four sides of the test structure were made by using mild steel angle and
galvanized steel sheet. A 0.08 m layer thickness of reinforced cement concrete CRCC roof was casted
over each one. Different passive techniques were used over the roof for cooling the environment
inside test structure; these techniques are painting of roof with white cement, pieces of glass and
clay layer. One of the four structures is without any material over the cement concrete roof which is
to be a reference one to compare other system results with it. The four structures were constructed,
and installed next to each other so that they may be tested simultaneously. Under local climate the
test procedure was casted out by measuring the inside, outside, wet and dry temperatures and also by
measuring the relative humidity. The structure with clay on top of the concrete was found to be the
most efficient structure for cooling purpose. Finally the thickness of clay layer was varied so as to
find optimum layer thickness for cooling purpose. It was found that the cooling efficiency of the
clay structure increases with thickness up to 0.05 m, beyond which the inside temperature remains
constant. © 2011 Elsevier B.V.

Mukattash, T.L., Shara, M., Jarab, A.S., Al-Azzam, S.I., Almaaytah, A., Al Hamarneh, Y.N.
Public knowledge and awareness of cardiovascular disease and its risk factors: A cross-sectional
study of 1000 Jordanians
(2012) International Journal of Pharmacy Practice, .
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7174.2012.00208.x&partnerID=40&md5=a8482b3846e06c0303b9b6b5292ca9f6
AFFILIATIONS: Department of Clinical Pharmacy, Faculty of Pharmacy, Jordan University of Science and
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Department of Pharmaceutical Technology, Faculty of Pharmacy, Jordan University of Science and
Technology, Irbid, Jordan;
Department of Pharmacy, Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Epicore Centre, University of Alberta, Edmonton, AB, Canada
ABSTRACT: Objective To assess the level of the current knowledge and understanding of cardiovascular
disease (CVD) among Jordan's general public, their behaviour towards CVD and the factors associated
with different CVD knowledge levels. Methods The data in the present study were collected using an
interview-administered questionnaire. One thousand members of the general public were interviewed
face to face. CVD knowledge was computed as a continuous variable. Key findings The present study
reports limited public knowledge and awareness of CVD. Participants were more likely to have better
CVD knowledge scores if they were non-smokers, always or often paid attention to their diet, reported
having an 'about right' weight, occupied a very high socioeconomic level, held a university degree
and had positive family history of CVD. Participants indicated that the community pharmacists had to
play a role in helping patients manage their prescribed medicines; however, they did not recognise
the community pharmacists' role in other areas of CVD prevention and management. Conclusion The
present study reports that the general public in Jordan has limited knowledge and awareness of CVD.
In planning to positively impact CVD prevention and management, community pharmacists must develop
and promote effective and accessible services. © 2012 The Authors. IJPP © 2012 Royal Pharmaceutical
Society.

Ramamurthy, A.S., Tadayon, R., Al Kayed, M.
LDA measurement in cylindrical containers without using planar secondary units
(2012) Journal of Hydraulic Engineering, .
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7900.0000629&partnerID=40&md5=15dd2a91359289861b4cda12120a0ca6
AFFILIATIONS: Dept. of Building, Civil and Environmental Engineering, Concordia Univ., 1455 de
Maisonneuve, Montreal, QC, Canada;
Dept. of Civil Engineering, Al-Zeitoonah Univ. of Jordan, Amman, Jordan
ABSTRACT: To measure velocity components using the laser Doppler anemometry (LDA)in a cylindrical
surface, as in a hydrocyclone, traditionally, one encloses the top circular tube of the hydrocyclone
with a flat surface box to minimize the refraction effects of laser beams caused by the curved solid
walls. In this brief study, an alternative procedure is suggested to reorient the laser beams to
measure the mean and fluctuation velocity components. Adopting the beam orientation suggested-at a
single point in the flow field-the axial and circumferential mean velocity components, along with the
corresponding turbulent normal and shear stress components, can be determined. Test results confirm
that the proposed method is valid to get data related to the mean velocities and the Reynolds
stresses at a single point in the flow field of a hydrocyclone. The suggested procedure with slight
modifications can be applied to measure velocities in the flow field formed by other circular
surfaces, such as cones. © 2012 American Society of Civil Engineers.

Khalaf, R.A., Sheikha, G.A., Al-Sha'er, M., Albadawi, G., Taha, M.

Design, synthesis, and biological evaluation of sulfonic acid ester and benzenesulfonamide derivatives as potential CETP inhibitors
(2012) Medicinal Chemistry Research, .
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AFFILIATIONS: Department of Pharmacy, Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Faculty of Pharmacy, Zarqa University, Zarqa, Jordan;
Drug Discovery Unit, Department of Pharmaceutical Sciences, University of Jordan, Amman, Jordan

ABSTRACT: Epidemiological studies have established an inverse relationship between plasma high-density lipoprotein (HDL) cholesterol concentration, and incidence of coronary artery disease (CAD); thus, the development of novel therapies that attempt to exploit the atheroprotective functions of HDL is a major goal. Inhibition of cholesteryl ester transfer protein (CETP) is one of the approaches targeted to increase HDL cholesterol concentration. CETP is a glycoprotein involved in transporting lipoprotein particles and neutral lipids between HDL and low-density lipoproteins (LDL), and therefore CETP inhibitors could be useful agents in the future for treating dyslipidemia and related disorders. Guided by our previously reported pharmacophore and QSAR models for CETP inhibition, we synthesized and bioassayed a series of sulfonic acid ester and benzenesulfonamide derivatives that can serve as a promising lead compounds for the development of potential and selective CETP inhibitors. The most potent compound 6k illustrated an IC50 of 3.4 lM. © Springer Science+Business Media, LLC 2011.

Darabkh, K.A., Ismail, S.S., Al-Shurman, M., Jafar, I.F., Alkhader, E., Al-Mistarihi, M.F.
Performance evaluation of selective and adaptive heads clustering algorithms over wireless sensor networks
(2012) Journal of Network and Computer Applications, .
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ABSTRACT: Target tracking in wireless sensor networks can be considered as a milestone of a wide range of applications to permanently report, through network sensors, the positions of a mobile target to the base station during its move across a certain path. While tracking a mobile target, a lot of open challenges arise and need to be investigated and maintained which mainly include energy efficiency and tracking accuracy. In this paper, we propose three algorithms for tracking a mobile target in wireless sensor network utilizing cluster-based architecture, namely adaptive head, static head, and selective static head. Our goal is to achieve a promising tracking accuracy and energy efficiency by choosing the candidate sensor nodes nearby the target to participate in the tracking process while preserving the others in sleep state. Through Matlab simulation, we investigate the performance of the proposed algorithms in terms of energy consumption, tracking error, sensor density, as well as target speed. The results show that the adaptive head is the most efficient algorithm in terms of energy consumption while static and selective static heads algorithms are preferred as far as the tracking error is concerned especially when the target moves rapidly. Furthermore, the effectiveness of our proposed algorithms is verified through comparing their results with those obtained from previous algorithms. © 2012 Elsevier Ltd. All rights reserved.

Al Omoush, K.S., Yaseen, S.G., Atwah Alma'Aitah, M.
The impact of Arab cultural values on online social networking: The case of Facebook
(2012) Computers in Human Behavior, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84865638010&doi=10.1016%2fj.chb.2012.07.010&partnerID=40&md5=82cc4fbef3a297019d7259de74139074
AFFILIATIONS: Al-Zytoonah University of Jordan, Department of MIS, Jordan;
Al-Zytoonah University of Jordan, Faculty of Economics and Administrative Sciences, Jordan;
Al-Balqa Applied University, Department of MIS, Jordan

ABSTRACT: The purpose of this research is to investigate the impact of cultural values on motivations and attitudes toward Social Networking Sites (SNSs) in the Arab world, and the factors affecting the continuity of membership value. Online questionnaire was used to collect data from the Arab Facebook members. Structural Equation Modeling, using EQS was conducted to analyze the data. The results indicated to a disparity in cultural impact on motivations and attitudes. At the time that Arab youth

seek to liberate from all the kinds of restrictions to satisfy their human needs through joining SNSs, their attitudes are still influenced by the cultural values of Arab nation. The results also revealed a significant effect of members' motivations, attitudes, and usage on the continuity of Facebook membership value. The present study contributes to the continuing discussion about why and how people engage in SNSs from different nations' cultures, especially after the critical roles of SNSs in so-called Arab Spring. © 2012 Elsevier Ltd. All rights reserved.

Al-Betar, M.A., Khader, A.T., Muslih, O.
A multiswap algorithm for the university course timetabling problem
(2012) 2012 International Conference on Computer and Information Science, ICCIS 2012 - A Conference of World Engineering, Science and Technology Congress, ESTCON 2012 - Conference Proceedings, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84867917715&doi=10.1109%2fICCISci.2012.6297258&partnerID=40&md5=134ee113957053683eee3ef5ac9aab95
AFFILIATIONS: Al-zaytoonah University of Jordan, Amman, Jordan;
School of Computer Sciences, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia
ABSTRACT: Being a complex computational optimisation problem, the university course timetabling involves assignment of events to timeslots and rooms on a weekly basis. In handling the problem, the hard and soft constraints must be addressed to ensure that a feasible and (near) optimal timetable is obtained. Since assigning rooms to events is an integral part of the university course timetabling, this paper is particularly concerned of the previously-overlooked room operations (any operation performed between the room and the event in the same timeslot). The proposed MultiSwap algorithm contributes to major improvement in processing the room operations. This is achieved by combining the MultiSwap algorithm with the graph coloring heuristic method to satisfy the hard constraints and with the local search-based algorithms to minimize the violations of the soft constraints. In this paper, the MultiSwap is incorporated with the largest weighted degree and backtracking algorithms on one hand to satisfy the hard constraints, and is incorporated with local search algorithm to minimize the violation of soft constraints. Using the standard dataset of Socha prepared for the university course timetabling, the results show that the room operations can further enhance the performance of heuristic methods and local search-based algorithms. © 2012 IEEE.

Jaber, K.M., Abdullah, R., Abdul Rashid, N.
HDT-HS: A hybrid decision tree/harmony search algorithm for biological datasets
(2012) 2012 International Conference on Computer and Information Science, ICCIS 2012 - A Conference of World Engineering, Science and Technology Congress, ESTCON 2012 - Conference Proceedings, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84867909906&doi=10.1109%2fICCISci.2012.6297266&partnerID=40&md5=bfbfea3141dd15366de44736c377cfd6
AFFILIATIONS: Department of Software Engineering, Faculty of Science and Information Technology, Al-zaytoonah University of Jordan, Amman, Jordan;
School of Computer Sciences, Universiti Sains Malaysia, Penang, Malaysia
ABSTRACT: This paper introduces the Hybrid Decision Tree with Harmony Search (HDT-HS) optimization algorithm to improve the rate of accuracy for the decision tree algorithm so as to apply it to DNA data sets. The hybridization includes operating the decision tree method after the Improvisation step of the harmony search algorithm in order to navigate for several solutions at the same time. This is to improve the accuracy of the final results for the decision tree. The results show that the hybrid algorithm achieved better accuracy of about 96.73% compared to classifier algorithms such as Nave (94.8%), MBBC (95.99%); optimization algorithms such as bagging (94.5%) and boosting (94.7%); hybrid decision tree with genetic algorithm (70.7%) and another version from the decision tree such as C4.5 (94.3%) and PCL (94.4%). © 2012 IEEE.

Khdour, M.R., Jarab, A.S., Adas, H.O., Samaro, E.Z., Mukattash, T.L., Hallak, H.O.
Identification of drug-related problems: A prospective study in two general hospitals
(2012) Current Clinical Pharmacology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84867776675&doi=10.2174%2f157488412803305795&partnerID=40&md5=a5ae493bf662f50912df4814647b026e
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Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
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Department of Pharmacy, Alwatani Hospital, Nablus, Palestine;
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ABSTRACT: Drug-related problems (DRPs) can reduce the potential clinical benefits of treatment with medicines and waste valuable resources. No previous studies were published to examine the nature and frequency of drug related problems among hospitalized patients in Palestinian hospitals. Methodology: Prospective observational study was conducted to report and record the natural and frequency of drug

related problems in two general hospitals. Results: The study included 212 patients, 54.4 % female, with a mean age 62.2 (±10.6 SD). 88% of the patients were reported with one or more DRPs, with an average of 1.9 DRPs per patient were found. The most prevalent DRP was incorrect dosing regimen which was represented by (22.2%), followed by drug-drug interaction (19.4%), drugs need laboratory tests (15.2%). Ceftriaxone, warfarin, enoxapirin and dogixin were the drugs causing most frequent DRPs. The drug groups causing most DRPs were anti-infective agents, anti-thrombotic agents and non-steroidal anti-inflammatory agents. Once discovered, the majority of DRPs (71.6%) were accepted by the physicians and solved immediately, while 11.5 % of pharmacist advice was not approved. Multiple regression analysis indicated that the number of medications (RR 1.99; 95% CI 1.31-3.76) and the number of medical conditions (RR 1.81; 95% CI 1.11-3.13) independently predicted the number of DRPs. Conclusion: DRPs in general hospitals are frequent, serious and predictable. Most of the problems identified as DRPs by the pharmacists were accepted by the physicians and solved. Pharmacists in the hospital setting are well suited to identify and resolve DRPs. © 2012 Bentham Science Publishers.

Qinna, N.A., Muhi-eldeen, Z.A., Ghattas, M., Alhussainy, T.M., Al-Qaisi, J., Matalka, K.Z.
Non-selective inhibition of cyclooxygenase enzymes by aminoacetylenic isoindoline 1,3-Diones
(2012) Inflammation and Allergy - Drug Targets, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866898552&doi=10.2174%2f187152812803250999&partnerID=40&md5=d8d6e2c1ace07efd0e76496ff31aa27b
AFFILIATIONS: Department of Pharmacology and Biomedical Sciences, Faculty of Pharmacy and Medical Sciences, Petra University, Amman, Jordan;
Department of Pharmaceutical Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy and Medical Sciences, Petra University, Amman, Jordan;
Faculty of Pharmacy, Alzaytoonah University, Amman, Jordan
ABSTRACT: The reported pharmacological activities of acetylenic and phthalimide groups promoted our interest to synthesize a novel series of N-[4-(t-amino-yl)-but-2-yn-1-yl] isoindoline-1,3-diones as anti-inflammatory compounds. The aim of this research is to investigate the selectivity of two compounds, ZM4 and ZM5, on inhibiting cyclooxygenase (COX) in vitro and in silico as well as reducing carrageenan-induced edema in rats. Oral administration of 5-20 mg/kg ZM4 and ZM5 reduced significantly carrageenan-induced edema in dose-and time dependent manner. Furthermore, the IC50 values induced by ZM4 and ZM5 were in the range of 3.0-3.6 μM for COX1 and COX 2 but were higher than those induced by Diclofenac and Celecoxib, respectively. Docking of ZM4 and ZM5 in both COX enzymes, on the other hand, exhibited the conventional binding modes that are usually adopted by different non-steroidal anti-inflammatory drugs (NSAIDs). Furthermore, ZM4 and ZM5 bind to COX enzymes as strongly as Flurbiprofen and Celecoxib. In conclusion, aminoacetylenic isoindoline 1, 3-dione compounds have shown anti-inflammatory activity by inhibiting COX-1 and COX-2 enzymes. Interestingly, the best hits showed inhibition at low micromolar levels although they are not selective at this stage. Further research will be conducted to improve both selectivity and potency. © 2012 Bentham Science Publishers.

Ristić, S., Luković, I., Aleksić, S., Banović, J., Al-Dahoud, A.
An approach to the specification of user interface templates for business applications
(2012) ACM International Conference Proceeding Series, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84867346123&doi=10.1145%2f2371316.2371340&partnerID=40&md5=58f2d6894d7e8a5a9cd2f4f0745f5993
AFFILIATIONS: Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia;
Crnogorski telekom, Podgorica, Montenegro;
Al-Zaytoonah University of Jordan, P.O.Box 130, Amman 11733, Jordan
ABSTRACT: Through a number of research projects we propose a form-driven approach to business application generation. Our IIS*Studio development environment (IIS*Studio DE, current version 7.1) is aimed to support the form-driven approach and provides the information system (IS) design and generating executable business application prototypes. An executable business application specification, generated by means of IIS*Studio, may be visually interpreted in different ways. In the paper we present the extension of the IIS*Studio repository containing the common model of user interface (UI). The IIS*UIModeler is an integrated part of the IIS*Studio development environment, aimed at modelling UI templates. Applying it, a designer specifies UI templates. UI template specification contains attribute values that describe common UI characteristics, such as: screen size, main application window position, background/foreground colour, etc. UI template specifications are independent from any specific IS project specification, generated by means of IIS*Studio tool. The same UI template may be used for the business application prototype generation of different ISs. Also, the same IS project specification may be visually interpreted in different ways by means of different UI templates. The specification of a UI template may be seen as a fully platform independent UI model. Besides the detail description of UI template common model, we illustrate the main features of the IIS* UIModeler tool. Copyright 2012 ACM.

Khamis, F.G., El-Refae, G.A.
Examining the relationship between spatial patterns of household deprivation and some socioeconomic indexes in Iraq-2004
(2012) Asian Social Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866893184&doi=10.5539%2fass.v8n12p95&partnerID=40&md5=75dbd9dc18dbb6069d71f5a383dead87
AFFILIATIONS: Banking and Finance Department, Faculty of Economics and Administrative Sciences, AL-Zaytoonah University of Jordan, Amman, Jordan;
Banking and Finance Department, Al Ain University of Science and Technology, Al Ain, United Arab Emirates
ABSTRACT: Regions, independent of their geographic level of aggregation, are known to be interrelated partly due to their relative locations. Similar economic performance among regions can be attributed to proximity. Consequently, a proper understanding and accounting of spatial liaisons are needed in order to effectively forecast regional economic variables. In this research household deprivation (HD) is viewed from the perspective of living standards index (LSI). Historically, governorates in Iraq suffered inequalities of living standards for many reasons, such as government's focus on the heart of the city, specifically Baghdad, Basra, and Nineveh. Question is raised whether the spatial pattern of HD is existed in Iraq? If so, can household economic status (HES) and education indexes explain this pattern? The objective is to investigate spatial structure of LSI and its spatial correlation to spatial structure of each of HES and education. This investigation will provide implications for policy makers, finding local clusters and showing visual picture for each of LSI, HES and education. The study utilizes a cross-sectional census data collected in 2004 for 18 governorates. Mapping is used as the first step to conduct visual inspection for LSI using quartiles. Several spatial econometric techniques are available in the literature, which deal with the spatial autocorrelation in geographically referenced data. Two statistics of spatial autocorrelation, based on sharing boundary neighbours, known as global and local Moran's I, are carried out. Wartenberg's measure is used to detect bivariate spatial correlation. The hypothesis of spatial clustering for LSI was confirmed by a positive global Moran's I of.34 with p=.002 and permutation p=.006, while for education was not confirmed by a negative global Moran's I of -.16 with p=.451 and for HES was confirmed by a positive global Moran's I of.28 with p=.010. Bivariate spatial correlation between LSI and education wasn't found significant.09 with p=.165 and between LSI and HES was found significant.31 with p=.002. In conclusion, based on visual inspection of mapping global clustering was found in LSI on the northern and southern parts. It was confirmed by the significant global Moran's I statistic. Out of 18 governorates; eight, seven, and one were found as local clusters in LSI, HES, and education respectively based on local Moran's Ii. The bivariate spatial correlation between LSI and education was not found significant while between LSI and HES was found significant.

El-Harami, J.H.
Creating new dimension in marketing new destination in Jordan: Suggested strategy for Aqaba region
(2012) Current Issues in Hospitality and Tourism Research and Innovations - Proceedings of the International Hospitality and Tourism Conference, IHTC 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866888874&partnerID=40&md5=c3d5aef5aa91185c0f3ad5333ff3201a
AFFILIATIONS: Hospitality and Tourism Management Department, College of Economics and Administrative Sciences, Al-Zaytoonah University, Jordan
ABSTRACT: The main goal of this research is to improve marketing of tourism destinations in Aqaba region by including the well-known archaeological site in Madain Saleh north western Saudi Arabia. Recently Aqaba region witnessed major developments in tourism infrastructure by the construction of luxury hotels and resorts undertaken by Tala Bay, Saraya, Ayla, Marsa Zayed projects with upon completion will transform Aqaba into an important tourist destination in the region. These giant tourist projects will definitely require serious and innovative venues of marketing able to generate large numbers of tourists from around the world. Aqaba is marketed with Wadi Rum and Petra as the golden triangle of tourism. By including Madain Saleh the sister city of Petra the name will be the golden quadrangle of tourism. Joint marketing the four destinations with the cooperation of Saudi Arabia tourism authority will open the door for citizens and residents from the Gulf States to travel and see deferent destination. Cruiseship tourism will also be considered. © 2012 Taylor & Francis Group.

Delgadillo, J.A., Al Kayed, M., Vo, D., Ramamurthy, A.S.
CFD simulations of a hydrocyclone in absence of an air core
(2012) Journal of Mining and Metallurgy, Section B: Metallurgy, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866752767&doi=10.2298%2fJMMB111123028D&partnerID=40&md5=c594aa8494324cc7c7570f3369b26778
AFFILIATIONS: Facultad de Ingeniería, Instituto de Metalurgia, Universidad Autónoma de San Luis Potosí, Mexico;

Department Of Civil Engineering, Al-Zaytoonah University, Amman, Jordan;
Department of Building, Civil and Environmental Engineering, Concordia University, Montreal, Canada

ABSTRACT: Computational Fluid Dynamics (CFD) is a versatile means to predict the characteristics of flow in fluid mechanics problems under a wide range of design and operating conditions. Applying the CFD in many engineering fields alleviates the problem of the usual engineering design. Recent advance in computational methods and computer technology make CFD an efficient means to study the dynamics of many physical systems. CFD simulations use three dimensional grid and the Reynolds Stress Model (RSM) to investigate the flow without air core in a 6″ hydrocyclone have been conducted using FLUENT. The numerical results are compared with the experimental data related to the Laser Doppler Anemometry (LDA) measurements of velocity. In the experimental study, a new procedure is developed to reorient the laser beams that permit one to measure two velocity components at a single point using LDA. The conclusion developed from these experiments enables one to use the LDA directly in the hydrocyclone wall without recourse to auxiliary attachments such as an enclosing box that usually used to minimize the refraction effects of laser beams which are caused by the curved solid wall of the hydrocyclone and the refractive index of the test medium.

Nawafleh, H.A., Abo Zead, S.A.-S., Al-Maghairehc, D.F.
Pulmonary Function Test: The value among smokers and nonsmokers
(2012) Health Science Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84867261770&partnerID=40&md5=4fce8b33949b7f4d485aa6205143efc2
AFFILIATIONS: Al-Hussein Bin Talal University, Princess Aisha Bint Al-Hussien Faculty of Nursing, P.O. Box: 26, Ma;an (71111), Jordan;
Al-Zaytoonah Private University, Faculty of Nursing, Jordan

ABSTRACT: Background: Pulmonary function testing is a routine procedure for the assessment and monitoring of respiratory diseases. Aim: To estimate the values of peak expiratory flow rate (PEFR), forced expiratory volume in first second (FEV1), forced vital capacity (FVC) and ratio between FEV1/FVC among smoking and nonsmoking students, staff and workers at Al-Zarqa Private University and to study the effect of age, gender and body mass index (BMI) on these variables. Subjects and methods: A cross-sectional research design was used. The study was conducted at Al-Zarqa Private University, Jordan. Two hundred and thirteen healthy smokers and nonsmokers were approached through probability sampling among the students, staff and workers of Al-Zarqa Private University were screened through a questionnaire and spirometric test. Data from 213 subjects was used for analysis. Subjects were excluded if pregnant, or with cardiopulmonary disease body, mass index (BMI) not ranging from 17-25, FEV1/FVC% less than 70 or with no reproducible results. Results: Mean FVC, FEV1 FEV1/FVC% and PEFR were found to be lower in smokers than the nonsmokers, there were significant differences between mean spirometric values smoking and nonsmoking in age 20-30 years and 30-39and 40-49. Conclusion: The mean FVC, FEV1 and PEFR were lower in smoker. In order to generalize these reference values, a larger study following the ATS criteria is needed. Health education campaign needed to keep community aware of the risk of smoking.

Abusukhon, A., Talib, M.
A novel network security algorithm based on private key encryption
(2012) Proceedings 2012 International Conference on Cyber Security, Cyber Warfare and Digital Forensic, CyberSec 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866723264&doi=10.1109%2fCyberSec.2012.6246080&partnerID=40&md5=4d10be1c00ea914a5aa54ed42bafceef
AFFILIATIONS: IT Faculty, Computer Network Department, Al-Zaytoonah University of Jordan, Amman, Jordan;
Department of Computer Science, University of Botswana, Gaborone, Botswana

ABSTRACT: In cryptographic application, the data sent to a remote host are encrypted first at the source machine using an encryption key then the encrypted data are sent to the destination machine. This way the attacker will not have the encryption key which is required to get the original data and thus the hacker will be unable to do anything with the session. In this paper, we propose a novel method for data encryption and our method is based on the transformation of a text file into an image file on both client and server machines. We analyze our algorithm by calculating the number of all possible key permutations. © 2012 IEEE.

Khamis, F.G., EL-Refae, G.A.
Investigating spatial clustering of chronic diseases at governorate level in Iraq-2007
(2012) Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866246060&doi=10.3923%2fjas.2012.1564.1571&partnerID=40&md5=9e86937a802928991a701bc9ade351c0
AFFILIATIONS: Faculty of Economics and Administrative Sciences, AL-Zaytoonah University of Jordan, Jordan;

Department of Banking and Finance, Al Ain University of Science and Technology, United Arab Emirates
ABSTRACT: Although, many studes examinedthe existence of spatial pattern of Chronic Diseases (CDs) problem in many developed and some developing countries, in improving health status and reducing inequalities between areas of such country, there is still much work to be done. Some of these studies were found spatial pattern for CDs using different statistical techmques and geographical mapping. Question is raised whether the spatial pattern of CDs rate is existed in Iraq? The objective of this study was to investigate the spatial structure of CDs rate across governorates, showing visual picture for health status and to provide implications for policy makers. Both descriptive and inference analysis were done. Study design was a cross-sectional census data for 18 governorates conducted in 2007. Mapping was used as a first step to conduct visual inspection for CDs using qualtiles. Two statistics of spatial autocorrelation, based on sharing boundary neighbours, known as global Moran's I and local Moran's L, were carried out for examining global clustering and local clusters, respectively. Global Moran statistic $I = 0.06$ wasn't found significant with $z = 0.91$, $p = 0.365$ andpemutation$p = 0.175$ Three local Moranstatistics ($I_1 = 1.40$, $I_5 = 0.71$ and $I_7 = 0.38$) were found significant with p-values (0.019, 0.020 and 0.058), respectively. In conclusion, high inequality in CDs was concentrated in eastern-northern and western-southern governorates based on visual impection of mapping. Global clustering was not found in CDs but local clusters were found. Out of 18, three governorates were found as local clusters in CDs Further research is needed to understand mechanisms underlying the influence of neighbourhood context. © 2012 Asian Network for Scientific Information.

Iskandarani, M.Z.
Low pass filter model for chemical sensors in response to gases and odors
(2012) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84865993695&doi=10.3844%2fajassp.2012.605.608&partnerID=40&md5=178652593932eb462f5ff1986874f9c9
AFFILIATIONS: Department of Computer Science, Faculty of Science and Information Technology, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Design and Modeling multi-gap sensing odor system for the objectives of odor recognition, classification and correlation are carried out. The model illustrates the low pass functionality of the multi-gap sensor acting as a filter for odors. Problem statement: Odor filtering is an important issue in today's world. In addition knowing the original material that an odor belongs to even after being mixed with others is also of vital importance. In addition measuring quality of mixed odors in terms of their affinity and belonging to a specific category or is critical. Approach: Mathematical modeling using low pass filter is carried out. Results: Clear evidence of ability to filter components of an odor mixture as the multi-gap sensor is acting as a filter. Conclusion: The ability to custom design chemical sensors to indicate the presence of various odors. © 2012 Science Publications.

Al-Hiari, Y.M., Qandil, A.M., Al-Zoubi, R.M., Alzweiri, M.H., Darwish, R.M., Shattat, G.F., Al-Qirim, T.M.
Synthesis and antibacterial activity of novel 7-haloanilino-8- nitrofluoroquinolone derivatives
(2012) Medicinal Chemistry Research, .
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AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan, Amman 11942, Jordan;
Faculty of Pharmacy, Jordan University of Science and Technology, Irbid 22110, Jordan;
Department of Pharmaceutics and Pharmaceutical Technology, Faculty of Pharmacy, University of Jordan, Amman 11942, Jordan;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman 11733, Jordan
ABSTRACT: The synthesis of new 7-(halophenylamino)-1-cyclopropyl-6-fluoro-8-nitro-4- oxo-1,4-dihydroquinoline-3-carboxylic acid derivatives is described. Substitution of quinolonic compound 1a with chloro and fluoro aniline derivatives at position 7 produced target compounds 2-9 with relatively low yields. Alternatively, the product of correspondent carboxylate ester 1b subsequent with acid hydrolysis produced satisfactory yield. The prepared targets have shown interesting antibacterial properties against standard and resistant gram-positive strains. In particular, 2-chloro and 3-chloro aniline derivatives (3 and 4) depict MIC values of 6.7 and 0.9 μg/ml, respectively against standard S. aureus. Both compounds showed good activity against resistant strains of S. aureus. © Springer Science+Business Media, LLC 2011.

Shikara, M., Al-Jaff, K.H.M.
A novel method for purifying a DNase from lysosomal fraction from human small intestine [Özgün metodla insan ince bağırsağı lizozomal fraksiyonundan DNaz izolasyonu]
(2012) Turkish Journal of Biochemistry, .

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84864451898&doi=10.5505%2ftjb.2012.69775&partnerID=40&md5=311f3520adb0cc34a0c03a64f9445914
AFFILIATIONS: Biotechnology Division, Department of Applied Sciences, University of Technology,
Baghdad, Iraq;
Department of Clinical Pharmacy, Faculty of Pharmacy, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: Aims: The purification of an acid DNase related DNase II family from lysosomes of human
small intestine (jejunum). Materials and Methods: Two different methods: a column chromatography
series, including phosphocellulose, CM-cellulose and Sephadex G-200 and a novel procedure that use
immunoabsorbent technique were used in the purification. Results: The purified DNase is an
endonuclease that consisted of one polypeptide chain (monomer) with a molecular mass of 28-32kDa with
an optimal pH and temperature of 6.0 and 30°C, respectively. The enzyme prefers native DNA on
denatured DNA Discussion: The catalytic properties of the purified enzyme are essentially the same as
those of DNase II family such as independency of divalent ions which inhibited its activity at 10mM.
The enzyme acts on dsDNA and ssDNA and generates 3'-phosphate and 5'-OH termini which was a
characteristic of DNase II. The functions of the intestinal purified DNase from lysosomes were
unclear, but lysosomes contained a set of enzymes required for degradation of food, and the enzyme
may be necessary for degradation of nucleic acids within food, but small amounts of the enzyme were
found in the nuclei and cytoplasm were detected. Several researchers suggested that DNase II family
may be active in apoptosis and played a role as a barrier to transfection. The purified was
designated SIDNase. © TurkJBiochem.com.

Khudhur, I.A.G., Mehabes, F.J.
Impact of epilepsy on patient's physical and psychosocial functioning: Iraqi study
(2012) Health Science Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84863850761&partnerID=40&md5=d96cdfa08a6a0c7c24dbfd61be62107f
AFFILIATIONS: Psychiatric Nursing/ Nursing Faculty, Al-Zaytoonah University, Amman, Jordan;
Adult Nursing / Nursing Faculty, Al-Zarkaa University, Al-Zarkaa, Jordan
ABSTRACT: Background: Epilepsy is a common neurological disease, which affect people of all ages. It
is stigmatizing, unpredictable and disabling illness. The primary objective of this study was to
assess the physical and psychosocial problems facing patients with epilepsy. A total of 100 patients
with epilepsy were compared with 100 normal subjects to find out the differences between the two
groups regarding the physical and psychosocial problems. The questionnaire was generated from
previous studies and the short form healthy survey (SF- 36). It was modified and tested for validity
and reliability. Results: The mean age of our patients was 32.5 years. 69% from them were single and
68% were male. The result showed that there were statistically differences between the two groups
regarding all of the four domains p=0.000. Most of the patients complained from threat to death (88%)
and they were affected by the social stigma (86%), more than half of the number of the sample didn't
know why the attack happened (78%), while half of them were unable to control their disease in spite
of taking medication. Conclusions: This is an Iraq study prepared to understand the effect of
epilepsy on patient's physical and psychosocial functioning. It was found that epilepsy has a great
impact on patient's life especially on patients psychological functioning with significant
differences. Understanding patient's problems can lead to a good progress in nursing assessment,
intervention, and reaching the ultimate goal in controlling these problems that are more likely
improve quality of their life. © Health Science Journal.

Fezari, M., Boumaza, M.S., Aldahoud, A.
Voice command system based on pipelining classifiers GMM-HMM
(2012) 2012 International Conference on Information Technology and e-Services, ICITeS 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84863688476&doi=10.1109%2fICITeS.2012.6216652&partnerID=40&md5=2f7a40ca2729c443e92666cb5cf7e33c
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ABSTRACT: Details of designing and developing a voice guiding system for a robot arm is presented.
The features combination technique is investigated and then a hybrid method for classification is
applied. Based on research and experimental results, more features will increase the rate of
recognition in automatic speech recognition. Thus combining classical components used in ASR system
such as Crossing Zero, energy, Mel frequency cepstral coefficients with wavelet transform (to extract
meaningful formants parameters) followed by a pipelining ordered classifiers GMM and HMM has
contributed in reducing the error rate considerably. To implement the approach on a real-time
application, a PC interface was designed to control the movements of a four degree of freedom robot
arm by transmitting the orders via RF circuits. The voice command system for the robot is designed
and tests showed an Improvement by combining techniques. © 2012 IEEE.

Siam, A.Z., Rifai, F.
Business angels financing of entrepreneurial projects in Jordan
(2012) European Journal of Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84864967796&partnerID=40&md5=286fa0761c18005d5c8bf5b92e8a92b5
AFFILIATIONS: Al-Balqaa' Applied University, Jordan;
AL-Zayttonah University of Jordan, Jordan
ABSTRACT: This study aimed at examining the role of Business Angels in finding the entrepreneurial
projects. It is known that banking and financial institutions distanced themselves from financing
such projects. This study followed the descriptive analytical approach. Along with reliance on
statistical instruments, in testing the study's hypotheses. A questionnaire distributed over the
study's sample n=120. Hundred of these questionnaires were retrieved and useful for analysis. SPP 14
program and one sample T-test. Results showed that financial and banking institution reframe from
financing entrepreneur projects especially at early stages (Sced Capital). In addition, results
revealed the presence of many barriers for financing entrepreneurial projects. © EuroJournals
Publishing, Inc. 2012.

Sultan, S.S., Shihab, I.A.
Jim Crace's Arcadia: A new variation on an old topic
(2012) International Journal of Asia-Pacific Studies, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84864552107&partnerID=40&md5=e5711d52b7dfd0b2ff49fe3a6d416a0e
AFFILIATIONS: Middle East University, Amman, Jordan;
Al-Zaytoonah University, Amman, Jordan
ABSTRACT: The present paper aims to shed light on an old-new topic in literature and culture in
general, i.e., the urban and rural modes of living as reflected in literature. Since times
immemorial, this has been an underlying issue, engaging the minds of philosophers, writers, critics,
sociologists and artists. As such, this article is devoted to exploring two aspects of this
multifarious topic. The first one is a general survey of how writers from different cultures and
times have responded to this issue and their priorities. The second presents a reading of Jim Crace's
Arcadia (1992) as a contemporary handling of the country-city problematics. © Penerbit Universiti
Sains Malaysia, 2012.

AbuRuz, S.M., Al-Ghazawi, M.A., Bulatova, N., Jarab, A.S., Alawwa, I.A., Al-Saleh, A.
Expectations and experiences of physicians regarding pharmaceutical care and the expanding role of
pharmacists in Jordan
(2012) Jordan Journal of Pharmaceutical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84862242456&partnerID=40&md5=3e285b554d75de7a36e1af29e5a23956
AFFILIATIONS: Department of Clinical Pharmacy, Faculty of Pharmacy, University of Jordan, Amman,
Jordan;
Department of Clinical Sciences, Faculty of Pharmacy, Alzaytoonah University of Jordan, Amman,
Jordan;
Department of Internal Medicine, Faculty of Medicine, University of Jordan and Jordan University
Hospital, Amman, Jordan
ABSTRACT: The main aim of this study was to investigate physicians' expectations and experiences
regarding pharmaceutical care in Jordan. A questionnaire was hand delivered to a random sample of 240
physicians. The questionnaire collected physicians' current expectations, current experiences and
future expectations regarding pharmaceutical care. Physicians' positive expectations were on 6 of the
current expectation statements (46% of the statements). In the experience part, for only two
statements more than 50% of physicians indicated a positive experience. In the future expectations
parts, physicians did not only agree on most of the statements (81% of statements) but also the
agreement was by more than two third of them in most of the statements. Physicians in Jordan do not
disagree with the concept of pharmaceutical care. They also accept traditional pharmacy services such
as educating patients about their treatment. However they have bad experience with pharmacists
providing pharmaceutical care or expanding their service. They do not think that pharmacists are
currently ready to practice such service. It will be interesting to examine the change in physicians'
expectations and experience in the future with the increasing number of PharmD and Master of Clinical
Pharmacy graduates. © 2012 DAR Publishers/University of Jordan. All Rights Reserved.

Atieh, A., Hussain, S.
Accounting data and UK dividends
(2012) Journal of Applied Accounting Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84861594880&doi=10.1108%2f09675421211231916&partnerID=40&md5=dede8148859883a3afa811f723b4f0a9

AFFILIATIONS: Al-Zaytoonah University, Amman, Jordan;
Newcastle University Business School, Newcastle upon Tyne, United Kingdom

ABSTRACT: Purpose - Accruals data reflect managers' judgements and estimates. The purpose of this paper is to examine whether they provide users of accounts with additional insight into a firm's dividends beyond that conveyed by cash flows alone. Design/methodology/approach - The authors employ regression analysis to examine the relative ability of earnings, cash flows and accruals to explain dividends. Findings - It is found that both cash flows and accruals (earnings) possess significant explanatory power for dividends indicating that, on average, UK financial statements provide users with improved insight beyond that conveyed by cash flows alone. Research limitations/implications - These results demonstrate the importance of accruals data for users of accounts. However, if accruals are manipulated for opportunistic purposes then their usefulness will likely be compromised and users of accounts will loose out. The study focuses on non-financial, UK dividend-paying firms only. Practical implications - These results provide direct evidence that UK financial statement data has significant explanatory power for dividend-paying activity, which may be viewed as good news. However, this paper reiterates the need for those who prepare and audit accounts to ensure that accruals truly reflect a firm's financial situation and are not being "managed" to artificially boost reported earnings. Short-term accruals are an obvious focus for such activities. Originality/value - The paper reports the first direct test of the link between disaggregated earnings components and UK dividends.

Jarrah, S.S., Kamel, A.A.
Attitudes and practices of school-aged girls towards menstruation
(2012) International Journal of Nursing Practice, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84861477027&doi=10.1111%2fj.1440-172X.2012.02032.x&partnerID=40&md5=01b63f408099220faa8ebf08268728a8
AFFILIATIONS: Faculty of Nursing, Applied Science Private University, Amman, Jordan;
Faculty of Nursing, Al-Zaytoonah University, Amman, Jordan

ABSTRACT: The purpose of this study was to (i) investigate attitude and menstruation-related practices in Jordanian school-aged girls; (ii) identify the influence of premenstrual preparation on girls' attitude and menstruation-related practices. A descriptive cross-sectional design was used. Data was collected from a convenience sample of 490 school-age girls (12-18 years) from different districts in Jordan. Self-report instruments [Menstrual Attitude Questionnaire (MAQ), and Menstrual Practices Questionnaires (MPQ)] were used to assess the study variables. Descriptive statistics, correlation and chi-square tests were used to analyze the data. It was found that menstrual attitude and practices were positively correlated. Poor attitude toward menstruation and low menstrual practices were significantly associated with inadequate premenstrual preparation. There is a need to prepare girls for menstruation before menarche. The role of the schools and teachers should be reinforced through formal and well planned reproductive health educators for girls and their mothers.

Khamis, F.G.
The relationship between health and household economic status using spatial measures in Iraq, 2004
(2012) International Journal of Quality, Statistics, and Reliability, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84861059998&doi=10.1155%2f2012%2f481538&partnerID=40&md5=ccf54267d5c311d3e8462ea3971ac177
AFFILIATIONS: Faculty of Economics and Administrative Sciences, AL-Zaytoonah University of Jordan, P.O. Box 130, Amman 11733, Jordan

ABSTRACT: This study addresses spatial effects by applying spatial analysis in studying whether household economic status (HES) is related to health across governorates in Iraq. The aim is to assess variation in health and whether this variation is accounted for by variation in HES. A spatial univariate and bivariate autocorrelation measures were applied to cross-sectional data from census conducted in 2004. The hypothesis of spatial clustering for HES was confirmed by a positive global Morans I of 0.28 with P = 0.010, while for health was not confirmed by a negative global Morans I of 0.03. Based on local Morans I i, two and seven significant clusters in health and in HES were found respectively. Bivariate spatial correlation between health and HES wasnt found significant (I x y = -0.08) with P = 0.80. In conclusion, geographical variation was found in each of health and HES. Based on visual inspection, the patterns formed by governorates with lowest health and those with lowest HES were partly identical. However, this study cannot support the hypothesis that variation in HES may spatially explain variation in health. Further research is needed to understand mechanisms underlying the influence of neighbourhood context.

Al-Qirim, T., Shattat, G., Sweidan, K., El-Huneidi, W., Sheikha, G.A., Khalaf, R.A., Hikmat, S.
In vivo antihyperlipidemic activity of a new series of N-(Benzoylphenyl) and N-(Acetylphenyl)-1-benzofuran-2-carboxamides in rats
(2012) Archiv der Pharmazie, .

https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84861313755&doi=10.1002%2fardp.201100225&partnerID=40&md5=ab48aef55d7555c4b355187822244edf

AFFILIATIONS: Faculty of Pharmacy, Department of Pharmacy, Al-Zaytoonah University of Jordan, Amman
11733, Jordan;
Faculty of Science, Department of Chemistry, University of Jordan, Amman, Jordan

ABSTRACT: A new series of N-(benzoylphenyl) and N-(acetylphenyl)-1-benzofuran-2- carboxamides (3a-3d
and 4a'-4c') were synthesized. Compounds (3a, 3b, and 4a'-4c') were tested in vivo using Triton-WR-
1339-induced hyperlipidemic rats as an experimental model for their hypolipidemic activity. The
tested animals were divided into eight groups: control, hyperlipidemic, 3a, 3b, 4a', 4b', 4c', and
bezafibrate. At a dose of 15 mg/kg, the elevated plasma triglyceride (TG) levels were significantly
reduced in compounds 3b (p <0.0001) and 4c' (p <0.05) after 12 and 24 h compared to the normal
control group. Furthermore, high-density lipoprotein-cholesterol levels were remarkably increased in
compounds 3b (p <0.001) and 4c' (p <0.05). Meanwhile, compound 4b' slightly reduced the TG levels
after 12 and 24 h. The present study demonstrated new properties of the novel series of benzofuran-2-
carboxamides 3b and 4c' as potent lipid-lowering agents. It is, therefore, reasonable to assume that
compounds 3b and 4c' may have a promising potential in the treatment of hyperlipidemia and coronary
heart diseases. A new series of N-(benzoylphenyl) and N-(acetylphenyl)-1-benzofuran-2-carboxamides
(3a-3d and 4a'-4c') were synthesized and most of them were tested in vivo for their hypolipidemic
activity. Compounds 3b and 4c' turned out to be potent lipid-lowering agents and thus may have a
promising potential in the treatment of hyperlipidemia and coronary heart diseases. Copyright © 2012
WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.

Hussein, B.A.-S.
Analysis of the real situation of teaching reading comprehension to first year students at the
department of English language and literature at Al-Zaytoonah private university of Jordan
(2012) Asian Social Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84859125897&doi=10.5539%2fass.v8n4p237&partnerID=40&md5=0b0ab01334640d628cf75e09e073c0fc

AFFILIATIONS: Department of Language and Literature, Al-Zaytoonah Private University of Jordan,
Amman, Jordan

ABSTRACT: There is a trend in teaching foreign languages that advocates the prime importance of
teaching reading as a receptive skill before the other productive skills (listening, speaking, and
writing).There is also an increasing feeling among teachers and educators that reading should receive
a considerable amount of attention in teaching a foreign language. Reading is an essential skill for
students not only because it is a source of pleasure and getting information but also because it
helps them widen and deepen their knowledge of language. Reading in this sense is not the mere
mouthing of words and decoding of every word in every sentence. It is rather the activity that
enables the students to go deeper and deeper to get the meaning which is intended by the author. It
is the activity that depends largely on comprehension. Accordingly, developing reading comprehension
is one of the great aims of teaching English. It is reading comprehension that enables students to
pursue their studies and to meet their interests in all fields of knowledge. Thus, reading
comprehension should receive more emphasis throughout the teaching process. The importance of this
study is to help students realize that they are literary readers and their attempts to go beyond the
literal meaning are very limited. Moreover, this study attempts to make students aware of the fact
that reading comprehension is a process of thinking, evaluating, judging, imagining, and problem
solving. The study yields that: 1) First year students lack many important reading comprehension
skills which they should have in order to understand fully a piece of writing. 2) The textbook
adopted in teaching reading comprehension is mainly designed to help create readers to whom the
absorbing of the literal meaning of a piece of writing is the ultimate aim of reading comprehension
courses. 3) Little attention is given to teaching other important reading comprehension skills like
the inferential and critical ones.

Kamel, A.A., Bond, A.E., Froelicher, E.S.
Depression and caregiver burden experienced by caregivers of Jordanian patients with stroke
(2012) International Journal of Nursing Practice, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84858759741&doi=10.1111%2fj.1440-
172X.2012.02011.x&partnerID=40&md5=449fade00ceb769aca6c073b83a90ed6

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Amman, Jordan;
Latter-Day Saints Charities Humanitarian Services, Brigham Young University Emeritus, University of
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Department of Physiological Nursing, School of Nursing and Department of Epidemiology and
Biostatistics, School of Medicine, University of California, San Francisco, CA, United States;
Faculty of Nursing, University of Jordan, Amman, Jordan

ABSTRACT: Many stroke survivors will be cared for at home, primarily by their relatives. Providing

care to a family member with a chronic disabling disease can be both emotionally and physically distressing for the caregivers. The purpose of this study was to investigate the relationship between patients' characteristics, duration of caregiving, daily caregiving time, caregiver's characteristics, caregiver depression and burden in caregivers of patients with stroke. A cross-sectional design was used with a convenience sample of 116 subjects. The Center of Epidemiologic Studies of Depression and the Caregiver Strain Index were used to identify caregiver depression and burden, respectively. Logistic regression analysis identified the influence of independent variables on caregiver depression and caregiver burden. Caregivers had high scores for depression and burden indices. Caregivers' health, receiving professional home health care and caregivers' burden were related to caregiver depression. Functional disabilities of patients with stroke and depression of caregivers were related to caregiver burden. To decrease caregiver depression and burden, nurses must provide caregivers with instructions for home management of patients with stroke. Development of specialized stroke home health services in Jordan that targets patients with stroke and their caregivers are recommended. © 2012 Blackwell Publishing Asia Pty Ltd.

Al-Husainy, M.A.F.
A novel encryption method for image security
(2012) International Journal of Security and its Applications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84858229826&partnerID=40&md5=96650a9d4852696f99378ee2f85d2814
AFFILIATIONS: Department of Multimedia Systems, Faculty of Science and Information Technology, Al-Zaytoonah University of Jordan, Amman-Jordan P.O. Box: 130, Amman (11733), Jordan
ABSTRACT: Image encryption is one of the most methods of information hiding. A novel secure encryption method for image hiding is presented in this paper. The proposed method provides good confusion and diffusion properties that ensures high security due to mixing the two Boolean operations: XOR and Rotation that are done on the bits of the pixels in the image. This method is implemented by firstly doing a sequential XOR operation on all the bits of pixels in the image, and secondly makes a circular rotate right of these bits. These two operations are repeated many times during the encryption phase. The security and performance of the proposed encryption method have been evaluated by applying it on images and analyze the recorded results using key space analysis, key sensitivity analysis, and statistical analysis. The performance experiments show that the proposed method is promising to use effectively in wide fields of image encryption.

Ahmad, H.A.
The best candidates method for solving optimization problems
(2012) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84857672120&doi=10.3844%2fjcssp.2012.711.715&partnerID=40&md5=31c8a8999ceeaab83b83e77cd27f97a6
AFFILIATIONS: Department of Computer Information System, Faculty of Science and Information Technology, Al-zaytoonah University of Jordan, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: Problem statement: This study is about describing solution technique called Best Candidates Method (BCM) for solving optimization problems; the goal is to minimize the computation time to get the optimal solution. In this study I apply the BCM to the linear assignment problems (LAP) that is one of the optimization problems in the Operation Research (OR). Approach: The optimization problem solution methods operate in two ways. First, that find all available combinations in sequential or parallel solution manner then compare the results to get the optimal one, but its need a very large computation time either for a large scale problems. Second, is to try to reach directly the optimal solution using different methods, but all available methods not always reach the optimal solution and have a complex solution technique or have a long computation time. Results: The BCM elect the best candidates that give the lowest combinations to get the optimal solution. Conclusion/Recommendations: The BCM minimize the computation time and reduce the complexity where we can apply this method to different area of optimization problems. © 2012 Science Publications.

Atieh, A., Hussain, S.
Do UK firms manage earnings to meet dividend thresholds?
(2012) Accounting and Business Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84862088634&doi=10.1080%2f00014788.2012.622187&partnerID=40&md5=9f337ed34922b7224200de59676355fe
AFFILIATIONS: Al-Zaytoonah University, P.O. Box 130, Amman, 11733, Jordan;
Newcastle University Business School, Newcastle University, NE1 4SE, United Kingdom
ABSTRACT: This paper examines earnings management by dividend-paying firms in cases where pre-managed earnings would fall below the expected dividend, and by non-dividend paying firms aiming to avoid reporting losses. We find that within the UK market the likelihood of upward earnings management is significantly greater in the former case than the latter, though both are drivers for earnings management. Large firms are less likely to upwardly manage earnings to reach dividend thresholds,

consistent with prior UK evidence on the ability of the largest firms to avoid restrictive debt covenants. We also find that earnings management is more clearly observable through examining working capital discretionary accruals than through examining total discretionary accruals. © 2012 Copyright Taylor and Francis Group, LLC.

Al-Shannag, M., Lafi, W., Bani-Melhem, K., Gharagheer, F., Dhaimat, O.
Reduction of COD and TSS from paper industries wastewater using electro-coagulation and chemical coagulation
(2012) Separation Science and Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84859641443&doi=10.1080%2f01496395.2011.634474&partnerID=40&md5=b6cab2ae1bed0a0a72d690af5ff7957c
AFFILIATIONS: Department of Chemical Engineering, Faculty of Engineering Technology, Al-Balqa Applied University, Marka, Amman, Jordan;
Environmental Engineering Program, Faculty of Sciences and Engineering, The American University in Cairo, Cairo, Egypt;
Department of Civil Engineering, College of Engineering, Al-Isra Private University, Amman, Jordan;
Department of Civil Engineering, College of Engineering, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: The objective of the present study was to investigate experimentally the removal of total suspended solid (TSS) and chemical oxygen demand (COD) of wastewater from paper industries by electro-coagulation techniques solely, or with the aid of chemical flocculants. Electro-coagulation experiments were carried out using iron electrodes and either iron sulphate or calcium carbonate as chemical coagulants. A parametric study including the effect of the type of coagulant, initial pH, current density (CD), circulating flow rate, and electro-coagulation time, on the percent removals of TSS, and COD was considered to explore their role in improving the treatment performance. Without the aid of flocculants, electro-coagulation treatment was able to reduce TSS and COD concentrations up to 80%. In particular, electro-coagulation with the aid of iron sulphate or calcium carbonate as flocculants was found to have the highest removal levels that reach values in the range of 90-97%. © 2012 Copyright Taylor and Francis Group, LLC.

Al-Saket, A.
On determining bounds for the real parts of the zeros of polynomials
(2012) Linear and Multilinear Algebra, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84858204981&doi=10.1080%2f03081087.2011.599067&partnerID=40&md5=186d7e8c0ac8d88ec8e9077f1dcc6efe
AFFILIATIONS: Department of Mathematics, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: In this article, we derive a generating function out of which various different bounds with increasing tightness for the real parts of the zeros of monic polynomials can be generated. Then we present particular bounds based on this generating function. © 2012 Copyright Taylor and Francis Group, LLC.

Jarab, A.S., AlQudah, S.G., Khdour, M., Shamssain, M., Mukattash, T.L.
Impact of pharmaceutical care on health outcomes in patients with COPD
(2012) International Journal of Clinical Pharmacy, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84860815643&doi=10.1007%2fs11096-011-9585-z&partnerID=40&md5=068355bbbf11af403d255c41a80eb06a
AFFILIATIONS: Department of Pharmacy, Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Department of Pharmacy, Royal Medical Services Hospital, Amman, Jordan;
Department of Pharmacy, AlQuds University, Jerusalem, Palestine;
Department of Pharmacy, Health and Wellbeing, University of Sunderland, Sunderland, United Kingdom;
Department of Clinical Pharmacy, Faculty of Pharmacy, Jordan University of Science and Technology, Irbid 22110, Jordan
ABSTRACT: Background Chronic obstructive pulmonary disease (COPD) treatment goals are often not achieved despite the availability of many effective treatments. Furthermore, clinical pharmacist interventions to improve clinical and humanistic outcomes in COPD patients have not yet been explored and few randomized controlled trials have been reported to evaluate the impact of pharmaceutical care on health outcomes in patients with COPD. Objective The aim of the present study wastoevaluate the impactofpharmaceutical care intervention, with a strong focus on self-management, on a range of clinical and humanistic outcomes in patients with COPD. Setting Outpatient COPD Clinic at the Royal Medical Services Hospital. Method In a randomised, controlled, prospective clinical trial, a total of 133 COPD patients were randomly assigned to intervention or control group. A structured education about COPD and management of its symptoms was delivered by the clinical pharmacist for patients in the intervention group. Patients were followed up at 6 months during a scheduled visit. Effectiveness of the intervention was assessed in terms of improvement in health-related quality of life, medication adherence, disease knowledge and healthcare utilization. Data collected at baseline and at

the 6 month assessment was coded and entered into SPSS® software version 17 for statistical analysis. A P value of <0.05 was considered statistically significant. Main outcome measure The primary outcome measure was health-related quality of life improvement. All other data collected including healthcare utilization, COPD knowledge and medication adherence formed secondary outcome measures. Results A total of 66 patients were randomized to the intervention group and 67 patients were randomized to the control group. Although the current study failed to illustrate significant improvement in health-related quality of life parameters, the results indicated significant improvements in COPD knowledge (P < 0.001), medication adherence (P < 0.05), medication beliefs (P < 0.01) and significant reduction in hospital admission rates (P < 0.05) in intervention patients when compared with control group patients at the end of the study. Conclusion The enhanced patient outcomes as a result of the pharmaceutical care programme in the present study demonstrate the value of an enhanced clinical pharmacy service in achieving the desired health outcomes for patients with COPD. © 2011 CARS.

Hussein, B.A.-S.
Weaknesses and Strengths of approaches followed in teaching reading
(2012) European Journal of Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84859086697&partnerID=40&md5=e53b9b1e6d1861abf5e7ac1ce7d895a8
AFFILIATIONS: Department of English Language and Literature, Al - Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: This paper discusses the frequently used approaches in teaching reading - the programmed, the experienced, and the individualized approaches - aiming at detecting their Weaknesses and Strengths in order to improve the mechanics they apply to the process of teaching. The author of this paper hopes that the teacher of reading will preferably deal with the approach that motivates students and keeps them active in the classroom. © EuroJournals Publishing, Inc. 2012.

Al Sorkhy, M., Ferraiuolo, R.-M., Jalili, E., Malysa, A., Fratiloiu, A.R., Sloane, B.F., Porter, L.A.
The cyclin-like protein Spy1/RINGO promotes mammary transformation and is elevated in human breast cancer
(2012) BMC Cancer, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84856118979&doi=10.1186%2f1471-2407-12-45&partnerID=40&md5=a419acfc42dad539a299c4415a336636
AFFILIATIONS: Faculty of Pharmacy, Al Zyatoona Private University, Amman, Jordan;
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Department of Biochemistry, University of Calgary, AB T2N 1 N4 Alberta, Canada;
Department of Pharmacology, Wayne State University School of Medicine, Detroit, MI 48201, United States
ABSTRACT: Background: Spy1 is a novel 'cyclin-like' activator of the G1/S transition capable of enhancing cell proliferation as well as inhibiting apoptosis. Spy1 protein levels are tightly regulated during normal mammary development and forced overexpression in mammary mouse models accelerates mammary tumorigenesis.Methods: Using human tissue samples, cell culture models and in vivo analysis we study the implications of Spy1 as a mediator of mammary transformation and breast cancer proliferation.Results: We demonstrate that this protein can facilitate transformation in a manner dependent upon the activation of the G2/M Cdk, Cdk1, and the subsequent inhibition of the anti-apoptotic regulator FOXO1. Importantly, we show for the first time that enhanced levels of Spy1 protein are found in a large number of human breast cancers and that knockdown of Spy1 impairs breast cancer cell proliferation.Conclusions: Collectively, this work supports that Spy1 is a unique activator of Cdk1 in breast cancer cells and may represent a valuable drug target and/or a prognostic marker for subsets of breast cancers. © 2012 Al Sorkhy et al; licensee BioMed Central Ltd.

Al-Betar, M.A., Khader, A.T., Zaman, M.
University course timetabling using a hybrid harmony search metaheuristic algorithm
(2012) IEEE Transactions on Systems, Man and Cybernetics Part C: Applications and Reviews, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84865471072&doi=10.1109%2fTSMCC.2011.2174356&partnerID=40&md5=e30a3d401db09e3c5e7b3c370d61c684
AFFILIATIONS: Universiti Sains Malaysia (USM), 11800 USM Pulau Pinang, Malaysia;
Al-Zaytoonah University of Jordan, Amman 11733, Jordan
ABSTRACT: University course timetabling problem (UCTP) is considered to be a hard combinatorial optimization problem to assign a set of events to a set of rooms and timeslots. Although several methods have been investigated, due to the nature of UCTP, memetic computing techniques have been more effective. A key feature of memetic computing is the hybridization of a population-based global search and the local improvement. Such hybridization is expected to strike a balance between exploration and exploitation of the search space. In this paper, a memetic computing technique that is designed for UCTP, called the hybrid harmony search algorithm (HHSA), is proposed. In HHSA, the harmony search algorithm (HSA), which is a metaheuristic population-based method, has been hybridized

by: 1) hill climbing, to improve local exploitation; and 2) a global-best concept of particle swarm optimization to improve convergence. The results were compared against 27 other methods using the 11 datasets of Socha et al. comprising five small, five medium, and one large datasets. The proposed method achieved the optimal solution for the small dataset with comparable results for the medium datasets. Furthermore, in the most complex and large datasets, the proposed method achieved the best results. © 1998-2012 IEEE.

Al-Betar, M.A., Doush, I.A., Khader, A.T., Awadallah, M.A.
Novel selection schemes for harmony search
(2012) Applied Mathematics and Computation, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84655176458&doi=10.1016%2fj.amc.2011.11.095&partnerID=40&md5=6c600cfe8403a3c1fe539ad58a0bdd3b
AFFILIATIONS: School of Computer Sciences, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia; Department of Computer Science, Al-zaytoonah University of Jordan, Amman, Jordan;
Computer Science Department, Yarmouk University, Irbid, Jordan
ABSTRACT: Selection is a vital component used in Evolutionary Algorithms (EA) where the fitness value of the solution has influence on the evolution process. Normally, any efficient selection method makes use of the Darwinian principle of natural selection (i.e., survival of the fittest). Harmony search (HS) is a recent EA inspired by musical improvisation process to seek a pleasing harmony. Originally, two selection methods are used in HS: (i) memory consideration selection method where the values of the decision variables are randomly selected from the population (or solutions stored in harmony memory (HM)) to generate a new harmony, and (ii) selecting a new solution in HM whereby a greedy selection is used to update the HM. The memory consideration selection, the focal point of this paper, is not based on natural selection principle which draws heavily on random selection. In this paper, novel selection schemes which replace the random selection scheme in memory consideration are investigated, comprising global-best, fitness-proportional, tournament, linear rank and exponential rank. The proposed selection schemes are individually altered and incorporated in the process of memory consideration and each adoption is realized as a new HS variation. The performance of the proposed HS variations are evaluated and a comparative study is conducted. The experimental results using benchmark functions show that the selection schemes incorporated in memory consideration directly affect the performance of HS algorithm. Finally, a parameter sensitivity analysis of the proposed HS variations is analyzed. © 2011 Elsevier Inc. All rights reserved.

El-Harami, J.H.
Creating new dimension in marketing new destination in Jordan: Suggested strategy for Aqaba Region
(2012) Current Issues in Hospitality and Tourism Research and Innovations, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055209711&partnerID=40&md5=786398005d38a99e7599fc760b47db52
AFFILIATIONS: Hospitality and Tourism Management Department, College of Economics and Administrative Sciences, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: The main goal of this research is to improve marketing of tourism destinations in Aqaba region by including the well-known archaeological site in Madain Saleh north western Saudi Arabia. Recently Aqaba region witnessed major developments in tourism infrastructure by the construction of luxury hotels and resorts undertaken by Tala Bay, Saraya, Ayla, Marsa Zayed projects with upon completion will transform Aqaba into an important tourist destination in the region. These giant tourist projects will definitely require serious and innovative venues of marketing able to generate large numbers of tourists from around the world. Aqaba is marketed with Wadi Rum and Petra as the golden triangle of tourism. By including Madain Saleh the sister city of Petra the name will be the golden quadrangle of tourism. Joint marketing the four destinations with the cooperation of Saudi Arabia tourism authority will open the door for citizens and residents from the Gulf States to travel and see deferent destination. Cruiseship tourism will also be considered. © 2012 Taylor & Francis Group, London.

Al Sallami, N.M.A.
Genetic programming testing model
(2012) Lecture Notes in Engineering and Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-85051732615&partnerID=40&md5=ab7a8e28389870602936094c8d976eec
AFFILIATIONS: Department of Management Information Systems, Faculty of economic and business, Al Zaytoonah university of Jordan, Jordan
ABSTRACT: Software testing requires the use of a model to guide such efforts as test selection and test verification. In this case, testers are performing model-based testing. This paper introduces model-based testing and discusses its tasks in general terms with proposed finite state models. These FSMs depend on software's semantic rather than its structure,, it use input-output specification and trajectory information to evolve and test general software. Finally, we close with a discussion of

how our model-based testing can be used with genetic programming test generator. © 2012 Newswood Limited. All rights reserved.

Al-Ani, H., Hasan, W.M., El-Khatieb, M.
Statistical identification of a prestressed concrete beam with unbonded tendons using modal data
(2012) Jordan Journal of Civil Engineering, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
85030539887&partnerID=40&md5=14ccb0505620fc986407b99145de956b
AFFILIATIONS: Department of Civil Engineering, Al-Zaytoona Private University of Jordan, Amman, Jordan;
Department of Civil Engineering, Al-Isra University, Amman, Jordan
ABSTRACT: An iterative statistical identification method, based on Bayesian approach, was used to identify the actual stiffness and prestressing force of a prestressed simply supported beam with unbonded curved tendons. A finite element model, with consistent mass matrix, was used as analytical model and the first three natural frequencies of the beam were used as experimental modal parameters. Because the procedure involves inversion of matrices, the ill-conditioning of the problem was also investigated. The aim of this paper is to identify a reliable model of a prestressed beam which represents very well the real structure by identifying the stiffness parameters and the prestressing force. This model can be used, then, as a reference model to detect damage or loss of prestressing force. It was seen that the accuracy of the identified parameters and the rate of convergence are highly influenced by the coefficients of variation assigned to the various parameters. The effect of the uncertainties associated with the physical and experimental parameters on the accuracy of the identification results was illustrated by some graphics and tables. Other graphics and tables show the utility of the improved statistical identification method to accelerate the convergence of the identified parameters. © 2012 JUST. All Rights Reserved.

al Omoush, K.S., al Ali, I.M.
The Adoption of Web-Based Supply Chain Management Applications: An Institutional Perspective
(2012) International Journal of E-Adoption, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
85001575189&doi=10.4018%2fjea.2012070104&partnerID=40&md5=eccd5c26c0d69429888f54ec9717971e
AFFILIATIONS: Al-Zaytoonah University, Jordan;
Politehnica University, Bucharest, Romania
ABSTRACT: The objective of this study is to develop a comprehensive model to explain why organizations adopt Web-based Supply Chain Management (SCM) applications from an institutional perspective. Questionnaire survey was used to collect data from manufacturing firms in Jordan. Structural Equation Modeling (SEM), using EQS was used to analyze the data. The results indicated that the environmental coercive and mimetic pressures and organizational characteristics have a positive effect on the top management's perception and support of Web-based SCM adoption and usage. Furthermore, the study revealed that the Web-based SCM applications represent the pool that reflects the degree of response to institutional pressures. This study was the first to empirically explain why organizations adopt Web-based SCM from an institutional perspective, adding new contribution to the developing literature on Web-based SCM. Understanding the external pressures and the effect of organizational factors will provide the practitioners with better knowledge on how to manage the adoption of Web-based SCM applications. © 2012, IGI Global. All rights reserved.

Ahmad AL-Allaf, O.N.
Cascade-forward vs. function fitting neural network for improving image quality and learning time in image compression system
(2012) Lecture Notes in Engineering and Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84990310298&partnerID=40&md5=fdba78849927ccb09f2b15b126b64e2b
AFFILIATIONS: Department of Computer Information Systems, Faculty of Sciences and Information Technology, AL-Zaytoonah University of Jordan, P.O. Box 130, Amman, 11733, Jordan
ABSTRACT: The backpropagation neural network algorithm (BP) was used largely in image and signal processing. The BP requires long time to train the BPNN with small error. Therefore, in this research, three Artificial Neural Networks models (ANNs) were constructed. Three algorithms: FeedForwardNet, CascadeForwardNet and FitNet were adopted to train the three constructed ANNs models separately. Each one of constructed models consists of input layer to input the original image, hidden layer to produce the compressed image and finally output layer for decompressed image. The training and testing performance of the constructed models with different architecture were compared to identify the model with best compression ratio (CR) and Peak to Signal to Noise Ratio (PSNR). From experiments, we noted that the better results are obtained when we used the FitNet ANN model. According to results, the performance of constructed FitNet ANN for image compression can be increased by changing the number of hidden layer neurons. © 2012 Newswood Limited. All rights

Al-Lozi, E.M., Al-Debei, M.M.
A framework of value exchange and role playing in Web 2.0 WebSites
(2012) Proceedings of the European, Mediterranean and Middle Eastern Conference on Information Systems, EMCIS 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84962716433&partnerID=40&md5=3ccf1cd469e3b8349bbe409873a08c86
AFFILIATIONS: Al-Zaytoonah University of Jordan, Department of Management Information Systems, Jordan;
University of Jordan, Department of Management Information Systems, Jordan

ABSTRACT: Digitally engaged communities can be described as communities created and evolved within Web 2.0 Websites such as Facebook, Bebo, and Twitter. The growing importance of digitally engaged communities calls for the need to efficiently manage the building blocks of sustaining a healthy community. The initial operation of any digitally-engaged community depends on the existence of its own members, the beneficial values created and exchanged, and the relationships interlinking both. However, the level of contribution and involvement might vary depending on the benefits being gratified from engaging in such communities. In other words, motivations for participating and getting involved are purposive; individuals are driven into joining and/or taking part in any digitally engaged network for capturing and purtaining certain beneficial values. Accordingly, this paper proposes a framework that classifies the values created and exchanged within these communities as well as the roles adopted and played by users of these communities. Utilizing ethnography as the primay methodological strategy to study Bebo digitally-engaged community, this research identifies five different roles of users: Newbie, Lurker, Novice, Insider, and Leader. Moreover, the research also identifies five value elements that could be captured by different users: Social, Hedonic, Epistemic, Gift, and Utilitarian. The results of this study provides insights for decision and policy makers, service providers, and developers; as it inspires them in knowing and meeting the needs and values of participants based on the roles adopted by users.

Ibrahim, M.A.
Phonotactic parameters of final consonant clusters in Iraqi Arabic and Kuwaiti Arabic: Some contrastive points
(2012) Theory and Practice in Language Studies, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84901415405&doi=10.4304%2ftpls.2.12.2453-2459&partnerID=40&md5=9d840e39d4d6f5ed9948a36a0ef66ce2
AFFILIATIONS: Dept of English and Translation, Al-Zaytoonah Private University of Jordan, Jordan

ABSTRACT: The present paper throws light on the field of phonotactics in which the treatment of final consonant clusters of Iraqi Arabic and Kuwaiti Arabic are investigated in order to trace the contrastive points of the two. It has been investigated that at the phonological level, differences are seen in phonological contrasts between forms purely on the basis of sound unit distributions. However, the contrasting features are not confirmed to one segment of the form, but, in some contexts, concern the syllabification of the whole form or part of it. © 2012 ACADEMY PUBLISHER Manufactured in Finland.

Al-Sheikh Hussein, B.
Language and sex: The relationship of language to behavior
(2012) Theory and Practice in Language Studies, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84901189521&doi=10.4304%2ftpls.2.10.2011-2015&partnerID=40&md5=947ddd16905f84011a7c65c8a97faee2
AFFILIATIONS: Department of English and Literature, Al-Zaytoonah Private University of Jordan, Amman, Jordan

ABSTRACT: Long before linguists have focused on the role language plays in the position of women in society, they had studied and are still studying the presence of lexical, phonological, and morphological forms that are used only or predominantly by speakers of one sex or the other. Now linguists are interested in sociolinguistic variation: men's and women's speech is investigated along with social status, style, age, and ethnicity. Studies of linguistic variation related to sex in some Arab, American, and British communities reveal the fact that women are more conservative than men in their tendency to standard linguistic forms. Women are sensitive to linguistic variants that are socially stigmatized; therefore, they consistently produce forms which approach those of the standard language. And because women feel socially insecure, they are more status conscious than men are in the equivalent social roles. It follows from this that women tend more than men to use the forms of language that carry higher status connotations. In this paper, the author will attempt to investigate the hypothesis that the same holds true for sex-linked variation not only in highly sophisticated countries but also in still developing and non-developing communities which have been studied. © 2012 ACADEMY PUBLISHER Manufactured in Finland.

Hussein, B.A.-S.
The sapir-whorf hypothesis today
(2012) Theory and Practice in Language Studies, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84901189135&doi=10.4304%2ftpls.2.3.642-646&partnerID=40&md5=2d5dff413d01b7e439bc18d0709c6f7b
AFFILIATIONS: Department of English Language and Literature, Al-Zaytoonah Private University of Jordan, College of Arts, Amman, Jordan
ABSTRACT: The Sapir-Whorf's Linguistic Relativity Hypothesis provokes intellectual discussion about the strong impact language has on our perception of the world around us. This paper intends to enliven the still open questions raised by this hypothesis. This is done by considering some of Sapir's, Whorf's, and other scholar's works. © 2012 ACADEMY PUBLISHER Manufactured in Finland.

AlKam, S.A.
Theatrical text and the aesthetics of reception a reading in Eizis play by 'Nawal al-Saadawi"
(2012) Dirasat: Human and Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84879113010&partnerID=40&md5=fa8278d2056d596bb59a87699cd355bf
AFFILIATIONS: Arabic Language and Literature Department, Al-Zaytoonah Private University, Jordan
ABSTRACT: This research aims at presenting leading in "Eizis" play by Dr. Nawal El Saadawi from (aesdietic of reception) perspective or 'Reception Theory', particularly as regards theoretical and application efforts of the French researcher and theorist Patrice Pavis whereby it is supposed that explanatory reading of any text is determined by the test itself, and that it is impossible for the reader to create without respect of the text's aims, that is to say that die reading method imposed by the text offers to reach it through interaction and reaction between the text and the reader, in addition to the aware check to die text on die basis of ideological direction intended by die implied author or die "ideal author". The research necessitated, before the reading application, dial it presents a theoretical framework through reviewing 'Reception Theory': definition, its roots in die old and modern criticism thought, literature sociology and explanatory and aesthetic theories, then review of die thoughts of the first pioneers and modern theorists like: Wolf Gang Izer, Hans Robert Jaus, Umberto Eco and Patrice Pavis.

Abu-Zreig, M., Abo-Izreik, A., Abd Elbasit, M.A.
Water seepage rate from clay emitters
(2012) American Society of Agricultural and Biological Engineers Annual International Meeting 2012, ASABE 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84871787080&partnerID=40&md5=6f0c9bb9729d53a179f0d77f92cead8a
AFFILIATIONS: Jordan University of Scince and Technology, Civil Engineering Department, P.O.Box 3030, Irbid, Jordan;
Al-Zaytoonah University of Jordan, Department of Mathematics, P.O.Box 130, Amman 11733, Jordan;
Tottori University, Arid Land Research Center, 1390 Hamasaka, Tottori 680-0001, Japan
ABSTRACT: Laboratory experiments were conducted to evaluate water seepage rate from ceramic materials under various environmental and hydraulic conditions. Seven ceramic pitchers (simulating large ceramic emitters) with various dimensions were used in the experiments. Results indicated that seepage rate is affected by various conditions including pan evaporation, soil suction pressure and hydraulic head. The value of hydraulic head seemed to have the largest effect on pitchers' seepage rate. The experiments revealed that ceramic pitchers can be used to supply water even under negative head thus eliminating the need for pressurized flow inside irrigation pipes.

Abo-Izreik, A., Abu-Zreig, M.
Soil reclamation and drainage with evaporation drainage methods
(2012) American Society of Agricultural and Biological Engineers Annual International Meeting 2012, ASABE 2012, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84871767959&partnerID=40&md5=2f694b99bc1b95ff44bc7f7032ce7ab3
AFFILIATIONS: Al-Zaytoonah University of Jordan, Department of Mathematics, P.O.Box 130, Amman 11733, Jordan;
Jordan University of Scince and Technology, Civil Engineering Department, P.O.Box 3030, Irbid, Jordan
ABSTRACT: Land drainage can be achieved by removing excess water and salts through evaporation. An experimental attempt was carried out for reclamation of logged saline soil and water logging problems called Evaporative Drainage Method (EDM). In this method, columns or wicks of absorbent materials called accelerators are used to accelerate evaporation rate and enhance removal of soluble salts from saline solution or resolve water logging problem in soil. Experiments were conducted under laboratory conditions and showed that accelerators increased the evaporation rates from unsaturated soil and

saturated soil matrix by about 100%% compared to direct evaporation from soil surface. The soil salinity was also reduced by about 25% Results showed EDM method prevented accumulation formation of salt crust on the soil surface that would improve germination and cropping conditions under arid conditions.

Noccioli, C., Luciardi, L., Barsellini, S., Favro, C., Bertoli, A., Bader, A., Loi, M.C., Pistelli, L.
Flavonoids from two Italian genista species: Genista cilentina and genista sulcitana
(2012) Chemistry of Natural Compounds, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84871497609&doi=10.1007%2fs10600-012-0344-8&partnerID=40&md5=a28187574f45c357f7804def694a184b
AFFILIATIONS: Dipartimento di Chimica Scienze Farmaceutiche-sede Chimica Biorganica e Biofarmacia, Universita di Pisa, via Bonanno 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P. O. Box 130, Amman 11733, Jordan;
Dipartimento di Scienze Botaniche, Universita di Cagliari, V. le S. Ignazio da Laconi 13, 09100 Cagliari, Italy

Jarab, A.S., Alqudah, S.G., Mukattash, T.L., Shattat, G., Al-Qirim, T.
Randomized controlled trial of clinical pharmacy management of patients with type 2 diabetes in an outpatient diabetes clinic in jordan
(2012) Journal of Managed Care Pharmacy, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84867694398&doi=10.18553%2fjmcp.2012.18.7.516&partnerID=40&md5=90d3cd1495356c78c1092615eff29855
AFFILIATIONS: AIZaytoonah University of Jordan, Amman, Jordan;
Jordanian Royal Medical Services Hospital, Amman, Jordan;
Jordan University of Science and Technology, Irbid, Jordan
ABSTRACT: BACKGROUND: Glycemic goals (hemoglobin A1c < 7%) are often not achieved in patients with type 2 diabetes despite the availability of many effective treatments and the documented benefits of glycemic control in the reduction of long-term microvascular and macrovascular complications. Several studies have established the important positive effects of pharmacist-led management on achieving glycemic control and other clinical outcomes in patients with diabetes. Diabetes prevalence and mortality are increasing rapidly in Jordan. Nevertheless, clinical pharmacists in Jordan do not typically provide pharmaceutical care; instead, the principal responsibilities of pharmacists in Jordan are dispensing and marketing of medical products to physicians. OBJECTIVE: To assess the primary clinical outcome of glycemic control (A1c) and secondary outcomes, including blood pressure, lipid values, selfreported medication adherence, and self-care activities for patients with type 2 diabetes in an outpatient diabetes clinic randomly assigned to either usual care or a pharmacist-led pharmaceutical care intervention program. METHODS: Patients with type 2 diabetes attending an outpatient diabetes clinic of a large teaching hospital were recruited over a 4-month period from January through April 2011 and randomly assigned to intervention and usual care groups using the Minim software technique. The intervention group at baseline received face-to-face objective-directed education from a clinical pharmacist about type 2 diabetes, prescription medications, and necessary lifestyle changes, followed by 8 weekly telephone follow-up calls to discuss and review the prescribed treatment plan and to resolve any patient concerns. The primary outcome measure was glycemic control (A1c), and secondary measures included systolic and diastolic blood pressure, complete lipid profile (i.e., total cholesterol, low-density lipoprotein cholesterol [LDL-C], high-density lipoprotein cholesterol [HDL-C], serum triglycerides), and self-reported medication adherence (4-item Morisky Scale) and self-care activities (Summary of Diabetes Self-Care Activities questionnaire). Data were collected at baseline and at 6 months follow-up. Changes from baseline to follow-up were calculated for biomarker values, and between-group differences in the change amounts were tested using the t test for independent samples. A P value of < 0.05 was considered statistically significant. RESULTS: A total of 77 of 85 patients (90.6%) randomly assigned to the intervention group and 79 of 86 patients (91.9%) assigned to usual care had baseline and 6-month follow-up values. Compared with baseline values, patients in the intervention group had a mean reduction of 0.8% in A1c versus a mean increase of 0.1% from baseline in the usual care group (P = 0.019). The intervention group compared with the usual care group had small but statistically significant improvements in the secondary measures of fasting blood glucose, systolic and diastolic blood pressure, total cholesterol, LDL-C, serum triglycerides, self-reported medication adherence, and self-care activities. Between-group differences in changes in the secondary measures of HDL-C and body mass index were not significant. CONCLUSIONS: Patients with type 2 diabetes who received pharmacist-led pharmaceutical care in an outpatient diabetes clinic experienced reduction in A1c at 6 months compared with essentially no change in the usual care group. Six of 8 secondary biomarkers were improved in the intervention group compared with usual care. © 2012, Academy of Managed Care Pharmacy.

Awwad, M.S., Al Omoush, K.S.
Governance of information technology-business relationship quality and performance outcomes
(2012) Electronic Government, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84867632417&doi=10.1504%2fEG.2012.049724&partnerID=40&md5=54841acec461aaa1911035a345e3f648
AFFILIATIONS: P.O. Box: 90, Amman 11118, Jordan;
Management Information Systems Department, Faculty of Economics and Administrative Science, Al-
Zaytoonah University of Jordan, P.O.Box: 130, Amman 11733, Jordan
ABSTRACT: The purpose of this research is to develop a comprehensive model for identifying the nature of relationship between information technology governance, IT-business relationship quality and performance outcomes. The questionnaire survey method was used to collect data from the Jordan Customs Department. The results indicated that IT governance has a direct positive effect on IT-business relationship quality. IT governance was also found to have a direct positive effect on performance outcomes as a whole. The fi ndings support is the success of practitioners in their efforts to provide the necessary conditions for building a healthy IT-business relationship and improving the performance outcomes of IT adoption. Copyright © 2012 Inderscience Enterprises Ltd.

Khamis, F.G.
The relationship between spatial patterns of illnesses and unemployment in Iraq-2007.
(2012) Global journal of health science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84866899867&partnerID=40&md5=e4a84c7bfe0c78c142e69f422c8a2be5
AFFILIATIONS: AL-Zaytoonah University of Jordan, Jordan
ABSTRACT: Studies of the relationship between spatial patterns of chronic illnesses (CI) and unemployment rate (UR) characteristics were not well documented. However, when analyzing the data that were collected on geographic areas, the spatial effects were seldom considered. This study addresses this concern by applying the mapping and spatial analysis techniques in studying how UR pattern is related to the CI pattern in Iraq. The aim is to assess the existence of spatial pattern in CI across geographical areas, and find whether this pattern was influenced by the pattern of socioeconomic indicators such as UR. The study design was cross-sectional census data obtained in 2007. Governorates were used as the respective units of the analysis. Two statistics of spatial autocorrelation based on sharing boundary neighbours known as global and local Moran measures were used to investigate the global and local clustering respectively. To investigate the bivariate spatial relationship between CI and UR, Wartenberg's (1985) measure was used. It was found that UR varied significantly across different governorates, while CI didn't. Significant local clusters in UR, in northern and southern parts of the country were found, while no significant local clusters were found in CI. No significant spatial association was found between CI and UR based on bivariate spatial correlation coefficient.

Casciati, F., Faravelli, L., Al-Saleh, R., Hinc, K.
Structural diagnostic via compressive sensing
(2012) Bridge Maintenance, Safety, Management, Resilience and Sustainability - Proceedings of the
Sixth International Conference on Bridge Maintenance, Safety and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84863957657&doi=10.1201%2fb12352-
26&partnerID=40&md5=d30c36e33c1f7919269baa9627310831
AFFILIATIONS: University of Pavia, Italy;
Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Wireless sensor networks (WSN) are built of spatially distributed nodes which are connected to one or more sensors. Each sensor node typically consists of several parts that are connected to an energy source like a battery, which limits the power resources of a wireless sensor. The major energy demanding parts in a sensor network node are the processor and the transmitter. Typically, those nodes that work continuously consume huge amounts of power. This suggested reducing the quantity of the obtained data to reduce the required power, of course without losing any important data. It means that the data should be sent through sensors with minimal additional operations performed by the processor. This is called the Compressive Sensing which is an innovative technique that fulfills the previously mentioned requirements. The aim of this research is to evaluate the reliability of compressive sensing when applied on signals obtained in real life. For this purpose; two types of signals are used with two different reconstruction algorithms. The obtained results are discussed and some conclusion remarks are presented. © 2012 Taylor & Francis Group.

Ampeliotis, D., Bogdanović, N., Berberidis, K., Casciati, F., AlSaleh, R.
Power-efficient wireless sensor reachback for SHM
(2012) Bridge Maintenance, Safety, Management, Resilience and Sustainability - Proceedings of the
Sixth International Conference on Bridge Maintenance, Safety and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84863919667&doi=10.1201%2fb12352-

25&partnerID=40&md5=d85f236faea75af442734fda94803f9d
AFFILIATIONS: Department of Computer Engineering and Informatics, University of Patras and C.T.I RU-8, 26500, Rio - Patra, Greece;
Department of Structural Mechanics, University of Pavia, Italy;
Architecture and Building Systems Engineering Department, AlZaytoonah University of Jordan, Jordan

ABSTRACT: Wireless sensor networks have recently received great attention from the scientic community, because they hold the key to revolutionize many aspects of our economy and life. On the other hand, the design, implementation and operation of a wireless sensor network in an SHM system requires the synergy of many disciplines, including civil engineering, signal processing, networking, etc. The process of collecting the measurements acquired by a sensor network into a central sink node, constitutes one of the main challenges in this area of research and is often referred to as the sensor reachback problem. In this work, we describe a time-division multiple-access based protocol for sensor reachback, that takes into account the fact that sensor measurements are correlated in time and space, in order to reduce the amount of information that needs to be transmitted to the sink node. Furthermore, cooperative communication is incorporated into the developed protocol, so as to achieve reduced energy consumption. Experiments with real acceleration measurements, obtained from the Canton Tower in China during an earthquake, have demonstrated the effectiveness of the proposed method. © 2012 Taylor & Francis Group.

Al-Hashem, A., Shaqrah, A.
Social knowledge network as an enabling factor for organizational learning
(2012) Journal of Theoretical and Applied Information Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84862860501&partnerID=40&md5=5f35c8cf795e95e1ee9495755e904b1c
AFFILIATIONS: Department of MIS, Al-Balqa Applied University, Jordan;
Department of MIS, Alzaytoonah University of Jordan, Jordan

ABSTRACT: Organizational learning is a set of processes by which organizations improve their performance. Learning processes furthermore require that the organization anticipates and attends to feedback, creates knowledge from that feedback, and takes action based on that knowledge. The relationships among people can be modeled as social knowledge networks in which network nodes represent people and network graph represent relationships for sharing opinions, experiences, insights, perceptions, and various media, including photos, videos, and music, with each other. Social knowledge networks play supportive role for collaborative knowledge management phases - creation, capture, codify, communicate, and capitalize knowledge. © 2005 - 2012 JATIT & LLS. All rights reserved.

Al-Allaf, O.N.A.
The usage of capability maturity model integration and web engineering practices in large web development enterprises: An empirical study in Jordan
(2012) Journal of Theoretical and Applied Information Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84862533072&partnerID=40&md5=9c7024b95f8346ad9a43d9613b49545d
AFFILIATIONS: Dept. of CIS, Faculty of Sciences and Information Technology, AL-Zaytoonah University of Jordan, P.O. Box 130, Amman (11733)- Amman, Jordan

ABSTRACT: There is a lack of surveys in large web development enterprises to determine: the level of adoption of web engineering practices and capability maturity model integration (CMMI) in these enterprises. Therefore, we need a survey in large enterprises to improve their web development processes and overcome their problems during the development process. We focus in this research on answering four questions: What are the characteristics of developers working in large enterprises? What are the properties of web development processes adopted by large enterprises? What are the symptoms that large enterprises face during web development? And finally, what are levels of usage of CMMI and web engineering practices by these enterprises. A survey has been conducted in this research based on questionnaires in large enterprises in Jordan to answer the above questions. According to survey results, we noticed that: two of web engineering practices such as tools and technology, and standards and procedures are partially adopted, whereas organizational issues, web metrics, and control of development process are barely used by these enterprises. We also noticed that the majority of the respondents have not previously participated in CMMI activities. Finally, recommendations are provided to improve web development processes and overcome identified problems in these enterprises. © 2005 - 2012 JATIT & LLS. All rights reserved.

Khamis, F.G.
Measuring the spatial correlation of unemployment in Iraq-2007
(2012) Modern Applied Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84857851502&doi=10.5539%2fmas.v6n1p17&partnerID=40&md5=7b943f17562bf6908e31da581be8c964

AFFILIATIONS: AL-Zaytoonah University of Jordan, Faculty of Economics and Administrative Sciences, PO box 130, Amman 11733, Jordan

ABSTRACT: Although many studies examined the existence of spatial pattern of unemployment in some developing and many developed countries in improving the prosperity or social status and reducing the inequalities in unemployment between areas of such country, there is still much work to be done. Some of these studies were found spatial pattern for unemployment using different statistical techniques and geographical mapping. Question is raised whether the spatial pattern of unemployment is existed in Iraq? The objective is to investigate the spatial structure of unemployment rate (UR) across different governorates to provide implications for policy makers, investigating the hot spots of UR, and showing visual picture for UR. The study utilized a cross-sectional census data for 18 governorates collected in 2007. Mapping was used as a first step to conduct visual inspection for UR using quartiles. Two statistics of spatial autocorrelation, based on sharing boundary neighbours, known as global and local Moran's I, were carried out for examining the global clustering and local clusters respectively. Based on visual inspection of mapping, the global clustering was found in UR and it was confirmed by the significant statistic found by global Moran's I. Out of 18, seven governorates: 3, 4, 5, 12, 15, 16, and 17 were found as local clusters in UR based on local Moran's I i. In conclusion, the UR was found to vary across different governorates with black spots in northern and southern parts of the country.

Aldaajeh, S., Asghar, T., Khan, A.A., ZakaUllah, M.
Communing different views on quality attributes relationships' nature
(2012) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84855543781&partnerID=40&md5=cfe9fe6f387d121f3dcbffd2be55c569
AFFILIATIONS: Department of Software Engineering, Al-Zaytoonah University of Jordan, Amman, Jordan;
Systems and Software Development Department, Brainglass AB, Stockholm, Sweden;
Systems Engineering, Research and Development Dept., Hanns Systems AB., Copenhagen, Denmark

ABSTRACT: The understanding of software products quality attributes relationships' nature impersonates a focal role in sustaining a sufficient level of quality to software products and their development processes. In order to conduct correct tradeoffs between software development solutions and therefore develop a software system in a cost effective way, we need to take into account the relationship between quality attributes. This research study discusses the previous views on quality attributes relationships. Additionally, this study reveals the nature between software product different quality attributes relationships based on the utilized results from previous studies investigating quality attributes relationships for software products. © 2012 EuroJournals Publishing, Inc.

Aldaajeh, S., Asghar, T., Ali Khan, A., ZakaUllah, M.
Communing different views on quality attributes relationships' nature
(2012) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84855534556&partnerID=40&md5=dbcc5081bcc9dd16e7d00d184f02f245
AFFILIATIONS: Department of Software Engineering, Al-Zaytoonah University of Jordan, Amman, Jordan;
Systems and Software Development Department, Brainglass AB, Stockholm, Sweden;
Systems Engineering, Research and Development Dept., Hanns Systems AB, Copenhagen, Denmark

ABSTRACT: The understanding of software products quality attributes relationships' nature impersonates a focal role in sustaining a sufficient level of quality to software products and their development processes. In order to conduct correct tradeoffs between software development solutions and therefore develop a software system in a cost effective way, we need to take into account the relationship between quality attributes. This research study discusses the previous views on quality attributes relationships. Additionally, this study reveals the nature between software product different quality attributes relationships based on the utilized results from previous studies investigating quality attributes relationships for software products. © Euro Journals Publishing, Inc. 2012.

Iskandarani, M.Z.
Novel approach to natural child head and hand gestures using roll and slide maximum value algorithm (RSMV)
(2011) Recent Researches in Computer Science - Proceedings of the 15th WSEAS International Conference on Computers, Part of the 15th WSEAS CSCC Multiconference, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
82955196781&partnerID=40&md5=b4b697b4d49e3de966377fe9994a371a
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah University of Jordan, P O BOX 911597, 11191, Amman, Jordan

ABSTRACT: A novel algorithm for child head and hand movements is designed. The proposed algorithm

allows the monitoring and analysis of a child's behavior based on a correlation between facial expressions, hand inclination and angle positions. The algorithm system maps a predefined coordinates for the child and results in a computable geometry which is fed to an intelligent analysis system.

Alqirem, R.M.
Enhancing simulation in complex systems
(2011) WIT Transactions on Modelling and Simulation, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84875826531&doi=10.2495%2fCMEM110041&partnerID=40&md5=0115c77da6399c6253cf8886c34fdabd

AFFILIATIONS: Department of Management Information Systems, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Simulation is an important tool in understanding and designing physical systems, engineering systems and social systems. Because of its importance and broad range, it has been the subject of numerous research studies and books. Simulation is about techniques for using computers to imitate (simulate) the operations of various kinds of real world complex systems. It has been an accepted tool for the improvement of decision making through learning how to deal with the complexity of the real world. The complexity slows the learning loop and reduces the learning gained on each cycle. This paper illustrates the importance of system thinking in enhancing the simulation process and providing the ability to see the world as a complex system, where "you cannot just do one thing" and that "everything is connected to everything else". It is a holistic worldview that enables people to act in consonance with the best interests of the system as a whole and thus enhance the learning loop through various system thinking tools. The case study in this paper illustrated the use of a system dynamics simulator to allow the financial manager in a firm to test different account receivables scenarios and the strategies to control these accounts. We found that this simulator has helped the manager to get a deeper insight into the effect of their decisions and the different interrelated variables that involve with setting a strategy to control account receivables. © 2011 WIT Press.

Iskandarani, M.Z.
Inheritance based intelligent technique employing Nested-XOR with recursion for recognition and classification of odors using multi-sensor nose system
(2011) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84867176079&doi=10.3844%2fajassp.2011.910.917&partnerID=40&md5=86e0662aea6ab81ab7f0837e3c295491

AFFILIATIONS: Department of Computer Science, Faculty of Science and Information Technology, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Problem statement: Odor originality and fraud is an important issue in today's world. In addition knowing the original material that an odor belongs to even after being mixed with others is also of vital importance. In addition measuring quality of mixed odors in terms of their affinity and belonging to a specific category or is critical. Approach: Design, testing and analysis of multi-sensor odor system for the objectives of odor recognition, classification and correlation are carried out. Results: Various mixtures are tested and checked for originality through inheritance using The built multi-sensor electronic nose. The testing devices and interpretation using Nested-XOR based algorithm with recursion showed clearly some odors to be related to others or derived from the same source. Conclusion/Recommendations: Clear evidence of ability to trace components of an odor mixture and to determine its originality and quality. © 2011 Science Publications.

Al-Allaf, O.N.A.
Fast BackPropagation Neural Network algorithm for reducing convergence time of BPNN image compression
(2011) 2011 International Conference on Information Technology and Multimedia: "Ubiquitous ICT for Sustainable and Green Living", ICIM 2011, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84856417318&doi=10.1109%2fICIMU.2011.6122720&partnerID=40&md5=2584ed963700f60352f7f3f468e2b161

AFFILIATIONS: Department of Computer Information Systems, Faculty of Sciences and Information Technology, Al-Zaytoonah University of Jordan, P.O. Box 130, Amman (11733), Jordan
ABSTRACT: Artificial neural networks (ANNs) especially Backpropagation Neural Network (BPNN) was used largely in image processing. The backpropagation neural network algorithm (BP) was used for training the BPNN for image compression/ decompression. The BP requires long time to train the BPNN with small error. Therefore, in this research, a three layered BPNN was designed for building image compression system. The Fast backpropagation neural network algorithm (FBP) was used for training the designed BPNN to reduce the training time (convergence time) of BPNN as possible as. Many techniques were used to improve the use of FBP for BPNN training. This is done by using different architecture of BPNN by changing the number of input layer neurons and number of hidden layer neurons. Also we trained the BPNN with different FBP parameters. Finally, FBP results such as compression ratio (CR) and peak signal to noise ratio (PSNR) are computed and compared with BP results. From the results, we noticed that the use of FBP improve the BPNN training by reducing the convergence time of image compression

learning process. © 2011 IEEE.

Al-Daajeh, S.H., Al-Qutaish, R.E., Al-Qirem, F.
Engineering dependability to embedded systems software via tactics
(2011) International Journal of Software Engineering and its Applications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84855522974&partnerID=40&md5=1f8ee2e3ba75298435a4d72a457856ff
AFFILIATIONS: Department of Software Engineering, Al-Zaytoonah University of Jordan, Amman, Jordan;
Department of MIS, Al Ain University of Science and Technology, Abu Dhabi Campus, Abu Dhabi, United
Arab Emirates
ABSTRACT: Embedded systems are used in many critical applications of our daily life. The increased
complexity of embedded systems and the tightened safety regulations posed on them and the scope of
the environment in which they operate are driving the need of more dependable embedded systems.
Therefore, achieving a high level of quality and dependability to embedded systems is an ultimate
goal. This research study investigates the inter-relationships between dependability and other
embedded systems quality attributes using two pieces of information: Tactics and Dependability
Quality attributes scenarios.

Awadallah, M.A., Khader, A.T., Al-Betar, M.A., Bolaji, A.L.
Nurse rostering using modified harmony search algorithm
(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial
Intelligence and Lecture Notes in Bioinformatics), .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84555196583&doi=10.1007%2f978-3-642-27242-
4_4&partnerID=40&md5=230a3010911401fa8493b434c1f0b7ae
AFFILIATIONS: School of Computer Sciences, Universiti Sains Malaysia (USM), 11800, Pulau Pinang,
Malaysia;
Department of Computer Science, Al-zaytoonah University, Amman, Jordan
ABSTRACT: In this paper, a Harmony Search Algorithm (HSA) is adapted for Nurse Rostering Problem
(NRP). HSA is a global optimization method derived from a musical improvisation process which has
been successfully tailored for several optimization domains. NRP is a hard combinatorial scheduling
problem of assigning given shifts to given nurses. Using a dataset established by International Nurse
Rostering Competition 2010 of sprint dataset that has 10-early, 10-late, 10-hidden, and 3-hint. The
proposed method achieved competitively comparable results. © 2011 Springer-Verlag.

Alia, O.M., Al-Betar, M.A., Mandava, R., Khader, A.T.
Data clustering using harmony search algorithm
(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial
Intelligence and Lecture Notes in Bioinformatics), .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84555191764&doi=10.1007%2f978-3-642-27242-
4_10&partnerID=40&md5=1da5155c99541acabf4cfbd68ccc33a0
AFFILIATIONS: Faculty of Computing and Information Technology, University of Tabuk, Tabuk, Saudi
Arabia;
School of Computer Sciences, Universiti Sains Malaysia, Penang 11800, Malaysia;
School of Computer Science, AL-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: Being one of the main challenges to clustering algorithms, the sensitivity of fuzzy c-means
(FCM) and hard c-means (HCM) to tune the initial clusters centers has captured the attention of the
clustering communities for quite a long time. In this study, the new evolutionary algorithm, Harmony
Search (HS), is proposed as a new method aimed at addressing this problem. The proposed approach
consists of two stages. In the first stage, the HS explores the search space of the given dataset to
find out the near-optimal cluster centers. The cluster centers found by the HS are then evaluated
using reformulated c-means objective function. In the second stage, the best cluster centers found
are used as the initial cluster centers for the c-means algorithms. Our experiments show that an HS
can minimize the difficulty of choosing an initialization for the c-means clustering algorithms. For
purposes of evaluation, standard benchmark data are experimented with, including the Iris, BUPA liver
disorders, Glass, Diabetes, etc. along with two generated data that have several local extrema. ©
2011 Springer-Verlag.

Mukattash, T.L., Wazaify, M., Khuri-Boulos, N., Jarab, A., Hawwa, A.F., McElnay, J.C.
Perceptions and attitudes of Jordanian paediatricians towards off-label paediatric prescribing
(2011) International Journal of Clinical Pharmacy, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-83255187211&doi=10.1007%2fs11096-011-9569-
z&partnerID=40&md5=79ae9b3faeabee279b56e18ecc0f193a
AFFILIATIONS: Department of Clinical Pharmacy, Faculty of Pharmacy, Jordan University of Science and
Technology, Irbid 22110, Jordan;
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Amman 11942, Jordan;
Department of Paediatrics, Faculty of Medicine, University of Jordan, Amman 11942, Jordan;
Department of Clinical Pharmacy, Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Clinical and Practice Research Group, School of Pharmacy, Medical Biology Centre, 97 Lisburn Road, BT9 7BL Belfast, United Kingdom

ABSTRACT: Objective To assess current experiences and attitudes of hospital based paediatricians towards off-label medicine prescribing. Setting Paediatric hospital wards and out-patient clinics. Design A prospective, questionnaire based study. Results A 30 item questionnaire was sent to 300 hospital based paediatricians and 250 (83%) were returned completed. Over 69% of responders were familiar with the term off-label medicines. However, only 28% were knowingly prescribing off-label medicines to children. The majority of respondents (90%) expressed concerns about the safety and efficacy of off-label medicines. Only 15% had observed Adverse Drug Reactions, and 31% a treatment failure. The vast majority of respondents (83%) did not obtain informed consent or tell parents they were prescribing off label medicines to their children. Conclusions Off-label prescribing of medicines to children is a familiar concept to the majority of paediatricians in Jordan although only a smaller number are aware that it is common in their practice. Respondents showed concern about off label prescribing, although the majority do not consider it necessary to inform parents. More comprehensive research is needed in this area in Jordan and other Middle Eastern countries. © Springer Science+Business Media B.V. 2011.

Aboyassin, N.A., Alnsour, M., Alkloub, M.
Achieving total quality management using knowledge management practices: A field study at the jordanian insurance sector
(2011) International Journal of Commerce and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84946819165&doi=10.1108%2f10569211111189383&partnerID=40&md5=d3a3efa5a9502cca2aebc5d867091422
AFFILIATIONS: Al-Zaytoonah University, Amman, Jordan;
Al-Balqa' Applied University, Amman, Jordan;
Al-Balqa' Applied University, Amman, Jordan

ABSTRACT: Purpose - The purpose of this paper is to explore the benefits that can result from the use of knowledge management (KM) principles in achieving total quality management (TQM) in the Jordanian insurance sector. Design/methodology/approach - Data about KM and TQM were obtained through a survey questionnaire distributed to managers in the insurance industry in Jordan. To arrive at statistically significant conclusions, the authors used variance and correlation analysis. Findings - The results indicate that KM processes (diagnosing, acquiring, generating, sharing, storing, and application) do influence TQM. Research limitations/implications - Since this study was limited to the insurance sector in Jordan, caution must be exercised in generalizing the results from this study to other situations in the service sector. Practical implications - This study provides useful information and impartial advice for managers in the insurance business in Jordan. It also suggests new business practices for the sector. Originality/value - This study attempts to fill gaps in the literature on Arabian management practices. It may also contribute to developing management practices cross-culturally. © Emerald Group Publishing Limited.

Alwada'n, T., Janicke, H., Aldabbas, O., Alfawair, M.
New framework for policy support for Mobile Grid Services
(2011) 6th International Conference on Risks and Security of Internet and Systems, CRiSIS 2011, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-81155132436&doi=10.1109%2fCRiSIS.2011.6061826&partnerID=40&md5=3769ba0c57566a9d0bddfe7cb8df904c
AFFILIATIONS: Faculty of Technology, De Montfort University, United Kingdom;
Faculty of Technology, Al- Balqa Applied University, Jordan;
Faculty of Science and Information Technology, Al-Zaytoonah University, Jordan

ABSTRACT: In a multi-organization environment like the GRID, each institute might want to apply some boundaries on how its resources are being utlized by other institutes. A disagreement between the multi-Virtual Organizations (VOs) might happen in the security aspect for the policy framework. Mobile Grid Services has given the ability to move jobs, data and application software from nodes to nodes during jobs execution in the grid environment. It has also solved some of the lack in finding suitable resources for the jobs, but not a lot of attention was given to the policy in this solution. This paper presents a new framework for dynamic policy management to support mobility services in the grid environment. © 2011 IEEE.

Awadallah, M.A., Khader, A.T., Al-Betar, M.A., Bolaji, A.L.
Nurse scheduling using Harmony Search
(2011) Proceedings - 2011 6th International Conference on Bio-Inspired Computing: Theories and Applications, BIC-TA 2011, .

https://www.scopus.com/inward/record.uri?eid=2-s2.0-80155179853&doi=10.1109%2fBIC-TA.2011.75&partnerID=40&md5=767245b252cf1dab9cee46f855b42716

AFFILIATIONS: School of Computer Sciences, Universiti Sains Malaysia (USM), 11800, Pulau Pinang, Malaysia;
Department of Computer Science, Al-zaytoonah University, Amman, Jordan

ABSTRACT: In this research an adaption of Harmony Search Algorithm (HSA) for Nurse Scheduling Problem (NSP) is presented. Nurse scheduling problem is a task of assigning shifts to nurses for the duties that have to carry out. The difficulty of handling this problem is due to the high number of constraints to be satisfied. Thus, we are proposing an adaptation of HSA i.e. a new population-based metaheuristic algorithm that mimics the musical improvisation process which has been successfully applied for wide range of optimisation problems. The performance of HSA is evaluated using datasets established by International Nurse Rostering Competition 2010 (INRC2010). The results obtained were compared with the best results reported in the competition. The results show that the proposed method can compete well in comparison with those reported results. © 2011 IEEE.

La'aro Bolaji, A., Tajudin Khader, A., Azmi Al-Betar, M., Awadallah, M.A.
An improved artificial bee colony for Course Timetabling
(2011) Proceedings - 2011 6th International Conference on Bio-Inspired Computing: Theories and Applications, BIC-TA 2011, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-80155165652&doi=10.1109%2fBIC-TA.2011.74&partnerID=40&md5=55d24c83b74b51c2da656b0fa0a27c54

AFFILIATIONS: School of Computer Sciences, Universiti Sains Malaysia (USM), 11800, Pulau Pinang, Malaysia;
Department of Computer Science, Al-zaytoonah University, Amman, Jordan;
Department of Computer Science, University of Ilorin, Ilorin, Nigeria

ABSTRACT: The Artificial Bee Colony Algorithm (ABC) is an emerging nature-inspired, metaheuristic optimisation algorithm. In this paper, an improved ABC algorithm is proposed for tackling Curriculum-Based Course Timetabling Problem (CBCTT). The ABC as a population-based algorithm, the initial population is generated using Saturation Degree (SD) followed by Backtracking Algorithm (BA) to ensure that all the solutions in the population are feasible. The improvement loop in ABC used neighbourhood structures severally within the employed and onlooker bees operators in order to navigate the CB-CTT search space tightly. The performance of ABC is tested using dataset prepared by second international timetabling competition (ITC-2007), the ABC is able to achieved good quality results, yet these are not comparable with the best results obtained by other methods. Future work can be directed further improve the ABC operators to achieve a better results. © 2011 IEEE.

Al-Hiari, Y., Shattat, G., Al-Qirim, T., El-Huneidi, W., Sheikha, G.A., Hikmat, S.
Antihyperlipidemic properties of novel N-(benzoylphenyl)-5-substituted-1H- indole-2-carboxamides in Triton WR-1339-induced hyperlipidemic rats
(2011) Molecules, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-80054923585&doi=10.3390%2fmolecules16108292&partnerID=40&md5=7c41640ac5a207f874654876d1f81d64

AFFILIATIONS: Faculty of Pharmacy, University of Jordan, Amman-11942, Jordan;
Faculty of Pharmacy, Al-Zaytoonah Private University, Amman-11733, Jordan

ABSTRACT: In the search for new potential antihyperlipidemic agents, the present study focuses on the synthesis of novel N-(benzoylphenyl)-5-substituted-1H- indole-2-carboxamides (compounds 8-12, 15, 16, 18) and investigating their antihyperlipidemic activity using Triton WR-1339-induced hyperlipidemic rats as an experimental model. Hyperlipidemia was developed by intraperitoneal injection of Triton WR-1339 (250 mg/kg body weight). The tested animals were divided into normal control (NCG), hyperlipidemic (HG), compound 8, 9, 15, 16, 18-and bezafibrate treated groups. At a dose of 15 mg/kg body weight, compounds 9, 16, 18 and bezafibrate (100 mg/kg) significantly ($p < 0.0001$) reduced elevated plasma triglycerides levels after 12 h compared to the hyperlipidemic control group. However, only the group treated with compounds 9, 16 and 18 showed an obviously significant ($p < 0.001$) reduction in plasma total cholesterol levels after 12 h compared to the hyperlipidemic control group. Moreover, high density lipoproteincholesterol levels were significantly ($p < 0.0001$) increased in all treated groups after 12 h compared to the hyperlipidemic control group, except for compounds 8 and 15 which revealed inactive. It is therefore reasonable to assume that compounds 9, 16 and 18 may have potential in the treatment of hyperlipidemia.

Al-Saiyd, N.A., Mohammad, A.H., Al-Sayed, I.A., Al-Sammarai, M.F.
Distributed knowledge acquisition system for software design problems
(2011) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-80054748854&partnerID=40&md5=b9868ef6c601d68769ec4aa323e033cd
AFFILIATIONS: Comp. Sc. Department, Faculty of Information Technology, Applied Science University,

Amman, Jordan;
CIS Department, Faculty of Information Technology, Applied Science University, Amman, Jordan;
Software Engineering Department, Faculty of Computer Science Information Technology, Al-Isra
University, Amman, Jordan;
MIS Department, Faculty of Economics and Administrative Sciences, Al-Zaytoonah University, Amman,
Jordan
ABSTRACT: Knowledge plays an important role in designing intelligent systems especially in expert
systems and knowledge-based systems in different application domains. Its efficiency and
effectiveness depends on the Knowledge Acquisition (KA) phase. Acquiring experience knowledge and
transferring it into a knowledge-based system is complex and involves a range of diverse activities.
There are two key problems related to KA-the identification of domain knowledge expertise and the
heuristics that are useful in problem solving; and the identification of people who can provide this
knowledge. In this paper, an approach for Web-based knowledge acquisition system is presented for
acquiring expertise from software designers. This knowledge is used in software design decision
making and knowledge reasoning. The process and decision laddering techniques are involved with the
concept mapping to create and evaluate the knowledge as efficient and effective as possible. © 2011
EuroJournals Publishing, Inc.

Sheikha, G.A., Al-Sha'Er, M.A., Taha, M.O.
Some sulfonamide drugs inhibit ATPase activity of heat shock protein 90: Investigation by docking
simulation and experimental validation
(2011) Journal of Enzyme Inhibition and Medicinal Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
80052837394&doi=10.3109%2f14756366.2010.541394&partnerID=40&md5=e203c249ff15b85af0075767c8d6ae79
AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al-Zaytoonah Private
University of Jordan, Amman, 11942, Jordan;
Faculty of Pharmacy, Zarqa Private University, Zarqa, Jordan;
Drug Discovery Unit, Faculty of Pharmacy, University of Jordan, Amman, Jordan
ABSTRACT: Eight selected sulfonamide drugs were investigated as inhibitors of heat shock protein 90
(Hsp90). The investigation included simulated docking experiments to fit the selected compounds
within the binding pocket of Hsp90. The selected molecules were found to readily fit within the ATP-
binding pocket of Hsp90 in low-energy poses. The sulfonamides torsemide, sulfathiazole, and
sulfadiazine were found to inhibit the ATPase activity of Hsp90 with IC 50 values of 1.0, 2.6, and
1.5 µM, respectively. Our results suggest that these well-established sulfonamides can be good leads
for subsequent optimization into potent Hsp90 inhibitors. © 2011 Informa UK, Ltd.

Al-Hiari, Y.M., Shakya, A.K., Alzweiri, M.H., Al-Qirim, T.M., Shattat, G., El-Abadelah, M.M.
Synthesis and antibacterial properties of new N 4-acetylated hexahydro-2,7-dioxopyrido[2,3-
f]quinoxaline-8-carboxylic acids
(2011) Journal of Enzyme Inhibition and Medicinal Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
80052831546&doi=10.3109%2f14756366.2010.543421&partnerID=40&md5=2721e24f4aa23a400d66a1eee537db7d
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Faculty of Pharmacy and Medical Sciences, Al-Ahliyya Amman University, PO Box 263, Amman, 19328,
Jordan;
Department of Pharmacy, Al-Zaytoonah Private University, Amman, Jordan;
Department of Chemistry, Faculty of Science, University of Jordan, Amman, Jordan
ABSTRACT: Direct interaction between 7-chloro-1-cyclopropyl-6-fluoro-8-nitro-4-oxo-1, 4-
dihydroquinoline-3-carboxylic acid and primary α-amino acids (exemplified by glycine, alanine, and l-
valine) in aqueous ethanolic NaHCO3 at 7080°C for 2472h produced the respective N-(4-oxoquinolin-7-
yl)-α- amino acids (6ac). The latter derivatives underwent reductive lactamization upon treatment
with Na 2S 2O 4 in aqueous ethanol to afford moderate yields of the corresponding pyrido[2,3-
f]quinoxaline-8- carboxylic acids (8ac). Acetylation of 8ac using acetyl chloride afforded N 4-
acetylated hexahydro-2,7-dioxopyrido[2,3-f]quinoxaline-8-carboxylic acids (9ac). The structures,
assigned to these new heterocyclic products, are supported by analytical and spectral data. The
synthesized compounds (6ac/9ac) showed appreciable antibacterial activity as compared with
ciprofloxacin. © 2011 Informa UK, Ltd.

Houhamdi, Z., Athamena, B.
Structured integration test suite generation process for multi-agent system
(2011) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
80053089888&doi=10.3844%2fjcssp.2011.690.697&partnerID=40&md5=1016ba71eaff44bf3882272f2925422a
AFFILIATIONS: Department of Software Engineering, Faculty of Science and Information Technology, Al-
Zaytoonah University, Jordan

ABSTRACT: Problem statement: In recent years, Agent-Oriented Software Engineering (AOSE) methodologies are proposed to develop complex distributed systems based upon the agent paradigm. The implementation for such systems has usually the form of Multi-Agent Systems (MAS). Testing of MAS is a challenging task because these systems are often programmed to be autonomous and deliberative and they operate in an open world, which requires context awareness. Approach: We introduce a novel approach for goal-oriented software integration testing. It specifies an integration testing process that complements the goal oriented methodology Tropos and strengthens the mutual relationship between goal analysis and testing. Results: The derived test suites from the system goals can be used to observe emergent properties resulting from agent interactions and make sure that a group of agents and contextual resources work correctly together. Conclusion: This approach defines a structured and comprehensive integration test suite derivation process for engineering software agents by providing a systematic way of deriving test cases from goal analysis. © 2011 Science Publications.

Al-Allaf, O.N.A.
Codebook enhancement in vector quantization image compression using backpropagation neural network
(2011) Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
80052850748&doi=10.3923%2fjas.2011.3152.3160&partnerID=40&md5=68f6caa63f969673c1d73dafa7d88094
AFFILIATIONS: Department of Computer Information Systems, Faculty of Sciences and Information Technology, AL-Zaytoonah Private University of Jordan, P.O. Box 130, Amman (11733), Jordan
ABSTRACT: Vector Quantization (VQ) is a powerful technique for image compression. One of the most VQ problems is the high computational complexity of searching for the closest codevector in the codebook during the compression phase. Artificial Neural Networks (ANNs) were used in image compression where high computational performance is required. A three layered Back Propagation Neural Network (BPNN) was proposed in this research for building an enhanced codebook for VQ compression of images. The Backpropagation neural network algorithm (BP) was used for training the designed VQ BPNN. Finally, a trained VQ BPNN was obtained to produce the codevectores of any image by the hidden layer neurons. We can later apply both trained and un-trained images to this VQ BPNN to compress them. Experiments were conducted with different VQ BPNN architecture and BP parameters to speed up this algorithm and enhance VQ codebook. It is observed that proposed algorithm is faster than other algorithms, although it needs a time for learning process. The performance of VQ BPNN image compression can be increased by modifying the VQ BPNN architecture especially, the number of hidden layer neurons and modifying BP learning parameters. © 2011 Asian Network for Scientific Information.

Iskandarani, M.Z.
A novel approach to head positioning using fixed center interpolation net with weight elimination algorithm
(2011) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
80052845782&doi=10.3844%2fjcssp.2011.173.178&partnerID=40&md5=7504a7a7db5809cf2dfe888c736efcdd
AFFILIATIONS: Faculty of Science and Information Technology, Department of Computer Science, Al-Zaytoonah University of Jordan, P.O. Box 911597, Post Code 11191, Amman, Jordan
ABSTRACT: A reliable algorithm for head movements inside a vehicle is designed. The proposed algorithm allowed the adjustment of basic functions such as indicators, mirrors and reverse lights based on the driver final head position. The algorithm system mapped a predefined coordinates for driver's head that resulted in a computable geometry via a sensory system which is fed to the vehicle actuating system. Problem statement: Head position recognition is one of the most common problems encountered in engineering and scientific disciplines, which involves developing prediction or classification models from historic data or training samples. In the past few years face detection and person identification became important issues due to security concerns, leading to head gesture algorithm development and implementation. Approach: This study introduces a new approach that combines Fixed Center Interpolation Net Algorithm (FCIN) with Wight Elimination Algorithm (WEA). This enhances the ability to classify and predict head positions and poses and gives better representation capabilities for the overall system algorithm. Such algorithm is able to handle pattern recognition problems using Radial Basis Function (RBF) models. The system algorithm has been developed based on the mathematical properties of the interpolation and design matrices of RBF models. Results: A reliable, fast and robust approach for driver head position recognition is achieved and presented. Conclusion: A simple hybrid algorithm for driver's head movements is designed and tested. The obtained results proved the algorithm applicability and ability to predict and act upon head gestures. © 2011 Science Publications.

Al-Sammraie, M.F.H.
Colored image compression using gradient adjustment prediction based wavelet
(2011) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-

80052843741&doi=10.3844%2fjcssp.2011.304.313&partnerID=40&md5=7bf8b50bc527e68b2f81d8bf52d3cdb7
AFFILIATIONS: Department of Management Information System, Faculty of Economics and Administrative
Sciences, Al-Zaytoonah University, P.O.Box 130, Amman 11733, Jordan

ABSTRACT: Problem statement: Uncompressed graphics, audio and video data require considerable storage
capacity and transmission bandwidth. Despite rapid progress in mass-storage density, processor speeds
and digital communication system performance, demand for data storage capacity and data transmission
bandwidth continues to outstrip the capabilities of available technologies. The recent growth of data
intensive digital audio, image and video (multimedia) based web applications, have not only sustained
the need for more efficient ways to encode signals and images but have made compression of such
signals central to signal-storage and digital communication technology. Approach: The objective
includes developing and applying an efficient Space-Frequency Segmentation (SFS) as an image
partitioning scheme, then using an appropriate entropy-coding algorithm that can be used with the
developed segmentation to improve compression performance, particularly in the case of still image
compression. The proposed compression system focuses on an innovative scheme for adaptive wavelet
coding technique combined with spatial encoding. Result: Experiments conducted using the proposed
system produced encouraging results. The entropyspatial coders used in the proposed system produced
better results than those obtained by using the basic arithmetic coder. It provides more appropriate
rate-distortion optimization for the spacefrequency segmentation than the basic arithmetic coder
does. The proposed compression system implies some control coding parameters; the effects of these
parameters were investigated to determine the suitable range for each one of them. Conclusion: We
conclude that a comparison between the energy of two partitioning types (space and frequency) shows
that the energy of frequency partitioning is greater than the space partitioning from the point of
view of quality of compressed image. And also the selection of parameter value used in SFS part
(Ratio and Threshold) should be chosen correctly, because its value has a great effect on the
compressed image quality. And the selection of the quantization step size and the quantization factor
(weight) should be done carefully, because experimental results show that these two factors have a
great effect on the compression ratio and PSNR factor. Finally experimental results indicate that the
use of GAP predictor produces better PSNR than other predictors. © 2011 Science Publications.

Taha, M.O., Qandil, A.M., Al-Haraznah, T., Khalaf, R.A., Zalloum, H., Al-Bakri, A.G.
Discovery of New Antifungal Leads via Pharmacophore Modeling and QSAR Analysis of Fungal N-Myristoyl
Transferase Inhibitors Followed by In Silico Screening
(2011) Chemical Biology and Drug Design, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-80051589872&doi=10.1111%2fj.1747-
0285.2011.01160.x&partnerID=40&md5=a2e83c79059856053dfaf669d352d615
AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan,
Amman, Jordan;
Department of Medicinal Chemistry and Pharmacognosy, Faculty of Pharmacy, Jordan University of
Science and Technology, Irbid, Jordan;
Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al Zaytoonah Private University of
Jordan, Amman, Jordan;
Department of Pharmaceutics and Technology, Faculty of Pharmacy, University of Jordan, Amman, Jordan

ABSTRACT: N-Myristoyl transferase is an essential enzyme for fungal growth and survival. The
continuous interest in the development of new antifungal agents prompted recent interest in
developing new potent inhibitors of fungal N-myristoyl transferase. In this context, we combined
pharmacophore and QSAR modeling to explore the structural requirements for potent N-myristoyl
transferase inhibitors employing 55 known N-myristoyl transferase ligands. Four binding pharmacophore
models emerged in the optimal QSAR equations (= 0.81-0.83, F-statistic=47.89-58.83, =0.77-0.80,
against 11 external test inhibitors= 0.61-0.71). The successful pharmacophores were complemented with
exclusion spheres to optimize their receiver operating characteristic curve profiles. The QSAR
equations and their associated pharmacophore models were validated by the identification and
experimental evaluation of new promising antifungal leads retrieved from the NCI database and our in-
house-built database of established drugs and agrochemicals. © 2011 John Wiley & Sons A/S.

Kittaneh, F., Manasrah, Y.
Reverse young and heinz inequalities for matrices
(2011) Linear and Multilinear Algebra, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79961134150&doi=10.1080%2f03081087.2010.551661&partnerID=40&md5=856ea1014977047e49d927b7b1adc4eb
AFFILIATIONS: Department of Mathematics, University of Jordan, Amman, Jordan;
Department of Mathematics, Al-Zaytoonah University, Amman, Jordan

ABSTRACT: We give reverses of the classical Young inequality for positive real numbers and we use
these to establish reverse Young and Heinz inequalities for matrices. © 2011 Taylor & Francis.

El-Qirem, F., Cockton, G.

Computer usage and user experience in Jordan: Development and application of the diamond model of territorial factors
(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79960333602&doi=10.1007%2f978-3-642-21616-9_55&partnerID=40&md5=9d84129c237f749a74c21a30931280d6
AFFILIATIONS: Al-Zaytoonah University of Jordan, Department of Software Engineering, Amman, Jordan; Northumbria University, School of Design, Newcastle, United Kingdom
ABSTRACT: The Diamond Model structures territorial factors of relevance to Interaction Design into five segments with objective and subjective facets. The initial structure and content was derived iteratively on the basis of a literature survey. Three field studies were then used to populate the model with Jordanian instances of cultural and other territorial variables, and to add new variables to the model. The model can act as design resource that combines concerns from HCI4D (HCI for Development) with cultural variables that extend beyond the acceptability and suitability of user interface elements. The derivation and evolution of a Jordanian instance of the model is presented, with brief suggestions on how it could be used by software development teams. © 2011 Springer-Verlag.

Alkhateeb, J.H., Pauplin, O., Ren, J., Jiang, J.
Performance of hidden Markov model and dynamic Bayesian network classifiers on handwritten Arabic word recognition
(2011) Knowledge-Based Systems, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79955006396&doi=10.1016%2fj.knosys.2011.02.008&partnerID=40&md5=16576f238e11b9548e0cb7c00febfcb1
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoona University of Jordan, Amman, Jordan;
School of Informatics, University of Bradford, Bradford BD7 1DP, United Kingdom;
Centre for Excellence in Signal and Image Processing, Department of Electronic and Electrical Engineering, University of Strathclyde, Glasgow, United Kingdom
ABSTRACT: This paper presents a comparative study of two machine learning techniques for recognizing handwritten Arabic words, where hidden Markov models (HMMs) and dynamic Bayesian networks (DBNs) were evaluated. The work proposed is divided into three stages, namely preprocessing, feature extraction and classification. Preprocessing includes baseline estimation and normalization as well as segmentation. In the second stage, features are extracted from each of the normalized words, where a set of new features for handwritten Arabic words is proposed, based on a sliding window approach moving across the mirrored word image. The third stage is for classification and recognition, where machine learning is applied using HMMs and DBNs. In order to validate the techniques, extensive experiments were conducted using the IFN/ENIT database which contains 32,492 Arabic words. Experimental results and quantitative evaluations showed that HMM outperforms DBN in terms of higher recognition rate and lower complexity. © 2010 Elsevier B.V. All rights reserved.

Bader, A., De Tommasi, N., Cotugno, R., Braca, A.
Phenolic compounds from the roots of Jordanian Viper's Grass, Scorzonera judaica
(2011) Journal of Natural Products, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79959697160&doi=10.1021%2fnp200143s&partnerID=40&md5=3afd5f55661dca01e239f8259425e0b4
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan;
Dipartimento di Scienze Farmaceutiche e Biomediche, Università di Salerno, Via Ponte Don Melillo, 84084 Fisciano (SA), Italy;
Dipartimento di Scienze Farmaceutiche, Università di Pisa, Via Bonanno 33, 56126 Pisa, Italy
ABSTRACT: Nine new phenolic compounds, 3S-hydrangenol 4′-O-α-l- rhamnopyranoysl-(1→3)-β-d-glucopyranoside (1), thunberginol F 7-O-β-d-glucopyranoside (2), 2-hydroxy-6-[2-(4-hydroxyphenyl)-2-oxo-ethyl] benzoic acid (3), 2-hydroxy-6-[2-(3,4-dihydroxyphenyl)-2-oxo-ethyl]benzoic acid (4), 2-hydroxy-6-[2-(3,4-dihydroxyphenyl-5-methoxy)-2-oxo-ethyl]benzoic acid (5), hydrangeic acid 4′-O-β-d-glucopyranoside (6), E-3-(3,4-dihydroxybenzylidene)-5-(3,4-dihydroxyphenyl)dihydrofuran-2-one (7), Z-3-(3,4-dihydroxybenzylidene)-5-(3,4-dihydroxyphenyl)-2(3H)-furanone (8), and 4-[β-d-glucopyranosyl)hydroxy]pinoresinol (9), and nine known compounds were isolated from the roots of Scorzonera judaica. Structures of 1 - 9 were elucidated by mass spectrometry, extensive 1D and 2D NMR spectroscopy, and CD spectroscopy. All compounds were evaluated for cytotoxic activity. © 2011 The American Chemical Society and American Society of Pharmacognosy.

Omari, D.M., Johary, D., Salem, I.I., Najib, N., Sallam, A.A.
Bioequivalence of two oral extended release formulations of ciprofloxacin tablets in healthymale volunteers under fed and fasting conditions
(2011) Journal of Bioequivalence and Bioavailability, .

https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79958714080&partnerID=40&md5=cd420eb41118ede63c3f1fa96b4a1b68
AFFILIATIONS: Faculty of Pharmacy, Alzaytoonah Private University of Jordan, Amman, Jorda, United
States

ABSTRACT: The bioavailability of a single dose of ciprofloxacin 1000 mg Extended release (XR) tablets manufactured by a Jordanian manufacturer (Hikma PLC), was compared with a reference ciprofloxacin 1000 mg XR tablets (Cipro® XR, Bayer-health care, Germany) in two different studies (under fasting and fed conditions). In each study, 28 healthy, male, Jordanian volunteers were enrolled. However, only 25 subjects in fasting study and 23 subjects in fed study completed the crossover. Each study was designed as single-center, open-label, randomized, singledose, two-way crossover study. Nineteen blood samples were taken during 24hrs. Samples were frozen and kept until time of analysis. Ciprofloxacin concentrations in subjects' plasma were determined by using a validated HPLC fluorescence technique. Confidence intervals (90%) for the peak plasma concentration (Cmax) and area under the concentration-time curve (AUC0-t) were determined by calculating log-transformed Test/Reference ratio using standard non-compartmental method and ANOVA statistics. The 90% CI result in fasting study for Cmax was 88.87 (82.17 - 96.10)% and for AUC0-t was 87.60 (80.38-95.46)%. In fed study the results were 102.09 (92.77-112.34)% and 104.06 (100.01-108.27)% for Cmax and AUCO-t, respectively. In conclusion, it is evident that the 90% CI for theprimary pharmacokinetics parameters was within the bioequivalence acceptable boundaries of 80-125%, while forAUC0-t, and 75.-133% for Cmax. Therefore, it was concluded that both products were bioequivalent. © 2011 Omari DM, et al.

Alkhateeb, J.H., Ren, J., Jiang, J., Al-Muhtaseb, H.
Offline handwritten Arabic cursive text recognition using Hidden Markov Models and re-ranking
(2011) Pattern Recognition Letters, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79953042413&doi=10.1016%2fj.patrec.2011.02.006&partnerID=40&md5=9321c0aedbf97285f48490bd6bb0581f
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoona University of Jordan, Amman,
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31261, Saudi Arabia;
Centre for Excellence in Signal and Image Processing, Department of Electronic and Electrical
Engineering, University of Strathclyde, Glasgow, G1 1XW, United Kingdom

ABSTRACT: Recognition of handwritten Arabic cursive texts is a complex task due to the similarities between letters under different writing styles. In this paper, a word-based off-line recognition system is proposed, using Hidden Markov Models (HMMs). The method employed involves three stages, namely preprocessing, feature extraction and classification. First, words from input scripts are segmented and normalized. Then, a set of intensity features are extracted from each of the segmented words, which is based on a sliding window moving across each mirrored word image. Meanwhile, structure-like features are also extracted including number of subwords and diacritical marks. Finally, these features are applied in a combined scheme for classification. Intensity features are used to train a HMM classifier, whose results are re-ranked using structure-like features for improved recognition rate. In order to validate the proposed techniques, extensive experiments were carried out using the IFN/ENIT database which contains 32,492 handwritten Arabic words. The proposed algorithm yields superior results of improved accuracy in comparison with several typical methods. © 2011 Elsevier B.V. All rights reserved.

Al Ganideh, S.F., El Refae, G.A., Aljanaideh, M.
Can fuzzy logic predict consumer ethnocentric tendencies? An empirical analysis in Jordan
(2011) Annual Conference of the North American Fuzzy Information Processing Society - NAFIPS, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79955890347&doi=10.1109%2fNAFIPS.2011.5752001&partnerID=40&md5=166b5dec5b4e928710cfc0c409f69846
AFFILIATIONS: Department of Marketing, Al Zaytoonah University of Jordan, Amman, Jordan;
Economics and Business School, Al Zaytoonah University of Jordan, Amman, Jordan;
Department of Mechatronics, University of Jordan, Amman, Jordan

ABSTRACT: This paper applies fuzzy logic approach to examine consumer ethnocentrism level for Jordanians based on their socio-psychological variables namely, patriotism, nationalism and internationalism. To model the relationships between three inputs namely, patriotism, nationalism and internationalism and one output ethnocentrism MATLAB® ANFIS has been used, utilizing a sample of 341 Jordanians live in Amman city. Results indicate that fuzzy logic model can predict correctly consumers' ethnocentric tendencies knowing their patriotic, nationalistic and internationalist feelings. Fuzzy logic approach shows that high level of nationalism leads consumers to be ethnocentric. © 2011 IEEE.

Obaidat, R.M., Bader, A., Al-Rajab, W., Sheikha, G.A., Obaidat, A.A.

Preparation of mucoadhesive oral patches containing tetracycline hydrochloride and carvacrol for treatment of local mouth bacterial infections and candidiasis
(2011) Scientia Pharmaceutica, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79952979168&doi=10.3797%2fscipharm.1004-18&partnerID=40&md5=0de12b5d1efb430b4c67731e40c4ad83
AFFILIATIONS: Faculty of Pharmacy, Jordan University of Science and Technology, Irbid, Jordan; Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan

ABSTRACT: The specific aim of this work was to prepare mucoadhesive patches containing tetracycline hydrochloride and carvacrol in an attempt to develop a novel oral drug delivery system for the treatment of mouth infections. The bilayered patches were prepared using ethyl cellulose as a backing layer and carbopol 934 as a matrix mucoadhesive layer. Patches were prepared with different loading amounts of tetracycline hydrochloride and carvacrol. The antimicrobial activity was assessed for the prepared patches using the disc-diffusion method against the yeast Candida albicans and five bacterial strains, including Pseudomonas aeruginosa, Escherichia coli, Bacillus cereus, Staphylococcus aureus, and Bacillus bronchispti. In this work, we highlighted the possibility of occurrence of a synergistic action between carvacrol and tetracycline. The best formulation was selected based on microbiological tests, drug release, ex-vivo mucoadhesive performance, and swelling index. Physical characteristics of the selected formulations were determined. These included pH, patch thickness, weight uniformity, content uniformity, folding endurance, and patch stability. © Obaidat et al.

Abo-Izreik, A.
Aestimation of cracks behavior in rock's Massif with underground structures
(2011) Journal of Applied Sciences Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79959845479&partnerID=40&md5=248b8650a0610d5438b52cc2607c2dbb
AFFILIATIONS: Al-Zaytoonah Private University of Jordan, Faculty of Science and Information Technology, Department of Mathematics, P.O. Box 130, Amman 11733, Jordan

ABSTRACT: There are two main factors that affect a system of cracks behavior in rock's massif in surrounding of underground structures. Firstly, there is an over patching in configuration of constructions and as result changes in stress-strain behavior of rock's massif. And the second factor is decreasing of fracture toughness upon influence of natural factors (atmosphere, groundwater and so on). In this study the model of cracks system spread and various scenarios of this spread are considered.

Khalaf, R.A., Abdula, A.M., Mubarak, M.S., Taha, M.O.
Discovery of new β-d-glucosidase inhibitors via pharmacophore modeling and QSAR analysis followed by in silico screening
(2011) Journal of Molecular Modeling, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79954428460&doi=10.1007%2fs00894-010-0737-1&partnerID=40&md5=46d203fbd533f3a4ae3bee570cf36205
AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al Zaytoonah Private University of Jordan, Amman, Jordan;
Department of Chemistry, Faculty of Science, University of Jordan, Amman, Jordan;
Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan, Amman, Jordan

ABSTRACT: Glycosidases, including β-d-glucosidase, are involved in a variety of metabolic disorders such as diabetes, viral or bacterial infections and cancer. Accordingly, we were prompted to find new β-d-glucosidase inhibitors. Towards this end we scanned the pharmacophoric space of this enzyme using a set of 41 known inhibitors. Genetic algorithm and multiple linear regression analyses were employed to select an optimal combination of pharmacophoric models and physicochemical descriptors to yield self-consistent and predictive quantitative structure-activity relationship (QSAR). Three pharmacophores emerged in the QSAR equations, suggesting the existence of more than one binding mode accessible to ligands within the β-d-glucosidase pocket. The successful pharmacophores were complemented with strict shape constraints in an attempt to optimize their receiver-operating characteristic (ROC) curve profiles. The validity of the QSAR equations and the associated pharmacophoric models were established experimentally by the identification of several β-d-glucosidase inhibitors retrieved via in silico search of two structural databases, namely the National Cancer Institute (NCI) list of compounds, and our in-house structural database of established drugs and agrochemicals (DAC). © 2010 Springer-Verlag.

Obaidat, A., Obaidat, R.
Development and evaluation of fast-dissolving tablets of meloxicam-β-cyclodextrin complex prepared by direct compression
(2011) Acta Pharmaceutica, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79952785916&doi=10.2478%2fv10007-011-0005-

7&partnerID=40&md5=67cb21ccdf5b54479892c2b9786cd323
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Department of Pharmaceutical Sciences, Faculty of Pharmacy, Alzaytoonah Private University of Jordan,
Amman, Jordan

ABSTRACT: The aim of this study was to prepare fast-dissolving tablets of meloxicam after its
complexation with β-cyclodextrin (β-CD) and to investigate the effect of using different
superdisintegrants on the disintegration and release of meloxicam from the tablets. A complex of
meloxicam with β-CD was prepared by spray drying and then compressed in the form of tablets utilizing
the direct compression technique. Three superdisintegrants were employed at various levels - sodium
starch glycolate, croscarmellose sodium, and crospovidone. Co-spray dried micro-crystalline cellulose
and mannitol (Avicel HFE-102) were used as diluents in the tablets. Prior to compression, the pre-
compression parameters showed satisfactory flow properties. Post-compression parameters showed that
all tablet formulations had acceptable mechanical properties. Wetting and disintegration times were
prolonged by increasing the level of sodium starch glycolate in the tablets. This was attributed to
the formation of a viscous gel layer around the tablets by sodium starch glycolate whereas this
effect was not observed with croscarmellose sodium and crospovidone. Dissolution studies showed fast
release of meloxicam except in tablets containing a high level of sodium starch glycolate.
Complexation of meloxicam with β-CD significantly improved the solubility of the drug and improved
the mechanical properties of tablets produced by direct compression.

Suleiman, K.H., Yates, B.C.
Translating the insomnia severity index into Arabic
(2011) Journal of Nursing Scholarship, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79951822600&doi=10.1111%2fj.1547-
5069.2010.01374.x&partnerID=40&md5=9c6a01ae849fe761befe06e61e70ff3e
AFFILIATIONS: College of Nursing, Al-Zaytoonah University, Amman, Jordan;
College of Nursing, University of Nebraska Medical Center, Omaha, NE, United States
ABSTRACT: Purpose: The purpose of this study was to translate the Insomnia Severity Index (ISI) into
Arabic (Fusha dialect), and obtain preliminary reliability and validity estimates for the translated
version. Background: Arabic populations experience sleep problems that interfere with their vitality
and quality of life. The ISI was established to screen for insomnia in both clinical and research
situations. Design: This study used a descriptive correlational design. The ISI was translated into
Arabic using the back-translation method and compared with three other sleep measures: the Pittsburgh
Sleep Quality Index, the Epworth Sleepiness Scale, and the Vitality Subscale from the Medical
Outcomes Study Short Form-36. These measures were administered to 35 healthy Arabic bilingual
participants from three community locations. Findings: The mean ISI score was 9.2 (SD= 5.8; range 0-
20). Internal consistency reliability was 0.84. The correlations between the total ISI score and the
single items ranged from 0.49 to 0.92 (p < .01). In terms of convergent validity, the total ISI score
showed a strong positive correlation with the Pittsburgh Sleep Quality Index global score (r= 0.76, p
< .001) and a moderate, negative correlation with vitality (r= -0.38, p=026). Conclusions: The
translated ISI demonstrated adequate reliability and validity. The translated ISI needs further
testing in a larger sample of both clinical and healthy Arabic populations in their own countries.
Clinical Relevance: Preliminary psychometric estimates show that the translated ISI is reliable and
valid in this community-dwelling Arabic sample. The translated ISI allows for Arabic researchers to
screen for insomnia and plan for future intervention studies. © 2011 Sigma Theta Tau International.

Abdula, A.M., Khalaf, R.A., Mubarak, M.S., Taha, M.O.
Discovery of new β- D -galactosidase inhibitors via pharmacophore modeling and QSAR analysis followed
by in silico screening
(2011) Journal of Computational Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
78650440331&doi=10.1002%2fjcc.21635&partnerID=40&md5=6b42ccac676dd13bfcc56270928c610d
AFFILIATIONS: Department of Chemistry, Faculty of Science, University of Jordan, Amman, Jordan;
Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al Zaytoonah Private University of
Jordan, Amman, Jordan;
Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan, Amman, Jordan
ABSTRACT: Glycosidases, including β-D-galactosidase, are involved in a variety of metabolic
disorders, such as diabetes, viral or bacterial infections, and cancer. Accordingly, we were prompted
to find new β-D-galactosidase inhibitors. Towards this end, we scanned the pharmacophoric space of
this enzyme using a set of 41 known inhibitors. Genetic algorithm and multiple linear regression
analyses were used to select an optimal combination of pharmacophoric models and physicochemical
descriptors to yield self-consistent and predictive quantitative structure-activity relationship
(QSAR). Five pharmacophores emerged in the QSAR equations suggesting the existence of more than one
binding mode accessible to ligands within β-D-galactosidase pocket. The successful pharmacophores

were complemented with strict shape constraints in an attempt to optimize their receiver-operating characteristic curve profiles. The validity of the QSAR equations and the associated pharmacophoric models were experimentally established by the identification of several β-D-galactosidase inhibitors retrieved via in silico search of two structural databases: the National Cancer Institute list of compounds and our in house built structural database of established drugs and agrochemicals. © 2010 Wiley Periodicals, Inc.

Ghannam, S., Al-Rawi, O., El-Khatieb, M.
Experimental study on light weight concrete-filled steel tubes
(2011) Jordan Journal of Civil Engineering, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84966880550&partnerID=40&md5=1d85978d3d1c3f59cf57e864962a02ff
AFFILIATIONS: Al-Zaytoonah University of Jordan, Jordan;
Al-Isra University, Jordan
ABSTRACT: Tests on steel tubular columns of rectangular and circular sections filled with normal and lightweight concrete were performed to investigate the behavior of such columns under axial loadings. Comparison between normal and lightweight concrete filled steel columns for different column cross-sections using Euro Code 4 and BS 5400 codes was also conducted. The test results showed that both types of filled columns failed due to overall buckling; while hollow steel columns failed due to local buckling at the ends. According to these results, further interest was taken onto the replacement of normal concrete by lightweight concrete due to its low specific gravity and thermal conductivity. © 2011 JUST. All Rights Reserved.

Alhawari, S., Talet, A.N., Al-Jarrah, M., Hadi, W.M.
Analysis of the new knowledge management process: A literature review and waterfall model
(2011) Creating Global Competitive Economies: A 360-Degree Approach - Proceedings of the 17th International Business Information Management Association Conference, IBIMA 2011, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84905116744&partnerID=40&md5=f638b17f4626a1d3985f9260b89ddb86
AFFILIATIONS: Applied Science Private University, Jordan;
King Fahd University of petroleum and Minerals, Saudi Arabia;
Al-Zaytoonah Private University of Jordan, Amman, Jordan;
Philadelphia University, Jordan
ABSTRACT: Fast growth of information through different mediums, Knowledge is becoming the key if not the ultimate factor of organization success in terms of its competence and survival. The economies of many countries are depending more on knowledge availability and accessibility. Some organizations have taken initiatives to understand and manage this critical resource. So, managing knowledge has great significance recognition in the business community. In spite of these initiatives, the bulk of organizations still have not approached knowledge management (KM) activity properly. The reason for this confusion and lack of clarity can be attributed to a gap between the emerging KM and the current lack of understanding about this concept by practitioners. To bridge the lack this paper is that it presents the several taxonomies related to KM and KM process, reviews KM process theories and present suggestions for what a general process should include based on analysis of various models presented in KM. The main emphasis is laid upon the concepts goal definition review and training across the KM process from need for knowledge to knowledge training.

Sheikha, G.A., Hussin, B., Al-Hiari, Y., Al-Qirim, T., Shattat, G.
Synthesis of benzothiophene carboxamide derivatives and their pharmacological evaluation as potent antihypertriglyceridemic agents in rats
(2011) Zeitschrift fur Naturforschung - Section C Journal of Biosciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79956189401&doi=10.1515%2fznc-2011-3-
402&partnerID=40&md5=080dfb7a731372ffe64cd1a1bd996b44
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah Private University, Amman 11733, Jordan;
Faculty of Pharmacy, University of Jordan, Amman, Jordan
ABSTRACT: Benzothiophene carboxamide derivatives of aminobenzophenone, aminopyridine, aminobenzimidazole, and aniline derivatives (compounds 1 - 9) were synthesized and compounds 3, 6, 7, 8, and 9 tested in vivo for their hypolipidemic activity. Compounds 1 - 8 were prepared adopting the fusion process at 130 - 150 °C between benzothiophene-2-carbonyl chloride and aminobenzophenones, aminopyridine, and anilines, respectively, and were obtained in high yield, while compound 9 was obtained from the reaction of benzothiophene acyl chloride with aminobenzimidazole in DMF at 160 °C. At a dose of 15 mg/kg body weight compounds 6, 7, and 9 significantly reduced plasma triglyceride levels in Triton WR-1339-induced hyperlipidemic rats in comparison to control rats. Furthermore, they significantly increased high-density lipoprotein levels. It is therefore reasonable to assume that compounds 6, 7, and 9 may have a promising potential in the treatment of hyperlipidemia and atherosclerosis. © 2011 Verlag der Zeitschrift für Naturforschung.

Chitra, K., Ali, A.-D.
Concurrency control and consistency maintenance with DTD and SSM for weakly connected environments
(2011) World Congress on Internet Security, WorldCIS-2011, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79955924657&doi=10.1109%2fworldcis17046.2011.5749862&partnerID=40&md5=953ff8c1a843e82dd9f2f64c2f5af7c
e
AFFILIATIONS: Dept. of Computer Applications, Thiagarajar School of Management, Tamil Nadu, India;
Al-Zaytoonah University, Faculty of IT, Amman, Jordan
ABSTRACT: In mobile computing environment, mobile clients are concurrently accessing the database
server. The broadcast-based mobile data dissemination poses new challenging issues on data
consistency of mobile transaction processing due to frequent disconnection from the network. In this
paper, we design smart server model and we control the concurrency of mobile transactions to provide
consistent data to the mobile clients that may be often disconnected from the network. We also design
dynamic transmission disks (DTD) which are broadcast to satisfy two types of users: frequently
accessed data items user, rarely accessed data item users taking into consideration of frequency of
accession and also frequency of updates. And also we prioritize the reads and writes of mobile
clients to maintain consistency of the data provided to the mobile clients. © 2011 WorldCIS.

Al-Matubsi, H.Y., Kanaan, R.A., Hamdan, F., Salim, M., Oriquat, G.A., Al Hanbali, O.A.
Smoking practices in Jordanian people and their impact on semen quality and hormonal levels among
adult men
(2011) Central European Journal of Public Health, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79954564077&doi=10.21101%2fcejph.a3629&partnerID=40&md5=7a57cb70454135f102783041ca9854b1
AFFILIATIONS: Faculty of Pharmacy, Applied Science University, Amman, Jordan;
School of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan;
College of Medicine, Al-Nahrain University, Baghdad, Iraq;
Faculty of Pharmacy and Medical Sciences, Al-Ahliyya Amman University, Amman, Jordan;
Faculty of Pharmacy, Philadelphia University, Amman, Jordan
ABSTRACT: Despite worldwide anti-smoking campaigns, cigarette smoking prevalence is increasing in the
third-world countries. It is now regarded as the most important public health issue. Here, we study
the current smoking situation and investigate the impact of cigarette smoking on semen quality and
hormonal levels among adult people. Furthermore, we suggest various strategies to reduce smoking
consumption among young individuals. A cross-sectional data from 804 adult smoker subjects (male
n=530 and female n=274) aged between 15 and 45 years were analyzed. One hundred and eleven males were
agreed for further evaluation of their semen quality and hormones compared with 93 age-matched non-
smoking males. This study showed that the major factors initiating smoking among women were friends'
influence (49%), life pressures (16%) and parental imitation (14%). The major reasons in men was
friends' influence (65%). Furthermore, 61% of women and 89% of men smoke in public implying social
acceptance or even encouragement of this habit. This study also found that low-income Jordanians
consume more tobacco materials than those in the middle- and higher income. Furthermore, smokers had
significantly lower (p<0.001) sperm concentration and motility values and higher (p<0.001) serum
testosterone and luteinizing hormone (LH) levels than non-smokers.

Shaqrah, A.
Antecedents of security pillars in E-commerce applications
(2011) International Journal of Business Data Communications and Networking, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79954514254&doi=10.4018%2fjbdcn.2011010102&partnerID=40&md5=fb06ee4b6ed7c711736673bbf4558b47
AFFILIATIONS: Alzaytoonah University of Jordan, Jordan
ABSTRACT: This paper investigates the relationship between internet security and e-business
competence at banking and exchange firms in Jordan. The proposed conceptual model examines the
antecedents and consequences of e-business competence and tests its empirical validity. The sample of
152 banking and exchange firms tests the posited structural equation model. The results consistently
support the validity of the proposed conceptual model, the results also found that organizations
realize the importance of e-business and are willing to proceed further with e-business. Beyond
concerns about internet security, their awareness of security hazards and internet performance is
minimal. The author concludes that the public awareness of ICT in general is low. In light of the
data collected, the author makes recommendations for the interested authorities to improve e-business
in Jordan. Copyright © 2011, IGI Global.

Al-Azzah, F.M., Yahya, A.A.
Quality criteria's of computing disciplines
(2011) European Journal of Scientific Research, .

https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79953883017&partnerID=40&md5=c3b95df2dc4f7a45cc892f5c384e5805
AFFILIATIONS: Alzaytoonah University of Jordan, Faculty of Science and IT, Department of Computer
Information System, Jordan;
Alzaytoonah University of Jordan, Faculty of Science and IT, Department of Computer Science, Jordan
ABSTRACT: This paper analyze study plans of the five approved disciplines in the computing space of
international universities and provides a mechanism and a set of quality standards that you must
follow when creating or defining a study plan of and academic content of any discipline belongs to
the computing space to improve the quality of higher education through links between the expected
outputs and the proposed study plan.

Abo-Izreik, A.
One approach to assessing the fragility of the (Crack Resistance) rock formations
(2011) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79953814179&partnerID=40&md5=71dca83c048a0a834d49af67d22086b6
AFFILIATIONS: Department of Mathematics, Faculty of Science and Information Technology Al-Zaytoonah
Private University of Jordan, P.O.Box 130 Amman 11733, Jordan
ABSTRACT: In this paper one of possible approaches to construction of criteria of an assessment
Fracture (fragility) of files of rocks is considered, based on the construction of piecewiselinear
approximation of the total deformation curve and study the parameters of this approximation. As the
model is investigated under plane-strain situation problem of the stress-strain situation and
fracture of rock massif with a cylindrical cavity. © EuroJournals Publishing, Inc. 2011.

Muhairat, M.I., Al-Qutaish, R.E., Athamena, B.M.
From graphical user interface to domain class diagram: A reverse engineering approach
(2011) Journal of Theoretical and Applied Information Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79951829298&partnerID=40&md5=3b4aef124aab10824db335c1ac63d657
AFFILIATIONS: Al Zaytoonah University of Jordan, P.O. Box: 130, Amman 11733, Jordan;
Al Ain University of Science and Technology, Abu Dhabi Campus, P.O. Box: 112612, Abu Dhabi, United
Arab Emirates
ABSTRACT: The Graphical User Interfaces (GUIs) of software products are extensively used by
researchers and practitioners in Software Engineering field. For Example, they are used for testing,
measuring usability, and many other purposes. This paper describes a new reverse engineering approach
to transform the GUI into class diagram. However, the correctness of such transformation process is
essential for the corrected execution of the overall software. To assure this correctness, the
interpreted Petri nets models will be implemented on the proposed transformation processes (i.e.
capturing, normalization, and translation processes). © 2005-2011 JATIT & LLS. All rights reserved.

Al-Masri, A., Sharaideh, S.A.
The effect of using response-based strategy for teaching english poetry on the Jordanian university
students' achievement
(2011) European Journal of Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79251617972&partnerID=40&md5=42f26b00a3b0d39d3ce7b9ee53fe28a8
AFFILIATIONS: Al- Zaytoonah University of Jordan;
Ministry of Education, Tafila Directorate of Education
ABSTRACT: The purpose of this study was to determine whether the using of the Response-based strategy
is effective in teaching English poetry compared to the current strategy in developing Jordanian
university students' achievement in poetry. In compliance with this purpose, the study seeks to
answer the following question: 1 Are there any statistically significant differences among the
posttest scores of the Jordanian university students studying English poetry due to the strategy of
teaching (Response -based Strategy and Current Strategy)? 2 Are there any statistically significant
differences among the posttest scores of the Jordanian university students studying English poetry
due to gender? 3 Are there any statistically significant differences among the posttest scores of the
Jordanian university students studying English poetry due to the interaction between group and
gender? The participants of the study were 128 students of English Language Literature enrolled in
the third year at Mutah University during the academic year 2009/2010. The results of the study
showed a variance in the means of the achievement test according to group, it also showed that there
were statistically significant differences on the achievement test due to the Strategy variable.
There were statistically significant differences between the Response- based Strategy and the Current
Strategy in favor of the Response- based Strategy, and there was no statistically significant
difference in the students' achievement due to gender. There was no statistically significant
difference due to the interaction between gender and group. The researchers recommend that EFL

researchers focus on literature and conduct more studies related to literature. They also recommend
that other researchers conduct studies and focus on the Response- based Strategy.

AL-Allaf, O.N.A.
Agile software development processes in large web development enterprises
(2010) Proceedings of the IASTED International Conference on Software Engineering and Applications,
SEA 2010, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84862303287&doi=10.2316%2fP.2010.725-
039&partnerID=40&md5=cff3d5f3cd42e8dbca17bf464eba0f12
AFFILIATIONS: Department of Computer Information Systems, Faculty of Sciences and Information
Technology, AL-Zaytoonah Private University of Jordan, P.O. Box 130, Amman 11733, Jordan

ABSTRACT: Agile processes can be applied to any software process for effective response to changing
requirements during the development process and effective communication among stakeholders. There is
lack of surveys related to agile processes in large web development enterprises in the world and the
current state of adoption of agile processes by large enterprises is still unknown. A survey has been
conducted in this research based on questionnaire and interviews in five large Jordanian enterprises
to examine the process models adopted by these enterprises, the extent to which these enterprises are
using agile processes, and finally to examine the problems associated with large web applications'
development. The results of this survey showed that there is a weakness in adoption of agile
processes in large Jordanian enterprises and the Extreme Programming (XP) is well known agile process
by the developers working in these enterprises. According to survey results, we suggested
recommendations related to adoption of XP agile process in large enterprises.

Al-Fayoumi, M.A., Aboud, S.J., Al-Fayoumi, M.A., Alghazzawi, D.
Efficient e-payment protocol using hash chain
(2010) Proceedings of the European, Mediterranean and Middle Eastern Conference on Information
Systems: Global Information Systems Challenges in Management, EMCIS 2010, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84857551421&partnerID=40&md5=b8f745675db347fa307278d42d09daf2
AFFILIATIONS: IS Department, Faculty of Computing and Information Technology, King Abdulaziz
University, Saudi Arabia;
Information Technology Advisor, Iraqi Council of Representatives, Baghdad, Iraq;
CS Department, Faculty of IT, Al-Zaytoonah Private University, Amman, Jordan

ABSTRACT: The spreading of information in the last decade has led to great development in e-commerce.
For instance, e-trade and e-bank are two main Internet services that implement e-transaction from
anyplace in the world. This helps merchant and bank speed up the financial transaction process and to
give user instant services at any time. However, the cost of workers and communications falls down
considerably while the cost of trusted authority and protecting information is increased. E-payment
is now one of the most central research areas in e-commerce, mainly regarding online and offline
payment scenarios. In this paper, we will discuss an important e-payment protocol namely pay-word
scheme examine its advantages and limitations, which encourages the authors to develop an improved
scheme that keeps all characteristics intact without concession of the security robustness of the
protocol. The suggest protocol employs the idea of public key encryption scheme using the thought of
hash chain. We will compare the proposed protocol with pay-word protocol and demonstrate that the
proposed protocol offers more security and efficiency, which makes the protocol workable for real
world services.

Obaidat, R.M., Sweidan, K., Al-Rajab, W., Khanfar, M., Abu-Hwaij, R., Al-Hiari, Y., Al-Gharabli, S.
Development of local, mucoadhesive, sustained release patches of tetracyclinen hydrochloride for
treatment of mouth infections: A preliminary in vitro study
(2010) European Journal of Parenteral and Pharmaceutical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79960713097&partnerID=40&md5=d21345f376671331c6dbb6aca7f3892a
AFFILIATIONS: Department of Pharmaceutical Technology, Faculty of Pharmacy, Jordan University of
Science and Technology, Jordan;
Department of Chemistry, Faculty of Science, University of Jordan, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Jordan;
Faculty of Pharmacy, Philadelphia University of Jordan, Jordan;
Faculty of Pharmacy, Al-Ahlyya University of Jordan, Jordan;
Faculty of Pharmacy, University of Jordan, Jordan;
German University of Jordan, Jordan

ABSTRACT: The aim of this study was to develop tetracycline hydrochloride sustained drug delivery
system for local treatment of mouth infections, and to demonstrate the feasibility of xanthan gum as
a film forming material that can be used in buccal drug delivery systems. The bilayered patches were
prepared using ethyl cellulose as a backing layer, and xanthan gum as a matrix mucoadhesive layer.

The patches were prepared by solvent-casting method with different loading amounts. In vitro drug release was performed using Franz-diffusion cells. Antibacterial activity was assessed for all prepared patches using disc-diffusion method against Escherichia coli, Bacillus cereus, Staphylococcus aureus and Bacillus bronchisepti. Ex vivo mucoadhesive force, swelling studies, physical characteristics, and Fourier transform infra-red spectroscopy were performed for all the patches. The sustained action was achieved for 8h, with effective microbial activity against the tested microbes. The polymer reserved acceptable swelling with average value 400% for water uptake. The mucoadhesion force was 50*103 dyne/cm2 and it was adhesive for more than 8h. The addition of selected loading amounts of tetracycline hydrochloride did not result in a change in swelling or mucoadhesive properties. The patches were smooth, elegant in appearance, uniform in thickness, weight, drug content, and possessed good folding endurance (>200). In this study, preparation of sustained release buccal mucoadhesive patches was obtained. This study illustrated the feasibility of xanthan gum as a mucoadhesive film forming polymer. The patches were elastic and easy to prepare and can be used as a model for buccal drug delivery system of any water soluble drug. © 2010 Pharmaceutical and Healthcare Sciences Society.

Al-Douri, N.A., Al-Essa, L.Y.
A survey of plants used in Iraqi traditional medicine
(2010) Jordan Journal of Pharmaceutical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79960289198&partnerID=40&md5=0bba6d1081adff875af61eaf65b953ae
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah Private Jordanian University, Amman, Jordan
ABSTRACT: A list of 96 plants belonging to 43 families, used in Iraqi traditional medicine to treat a variety of disorders, has been compiled. The survey is based on a field specimen collection and on information gathered following interviews with various people and traditional healers, called Attars. The plants are listed in alphabetical order, giving the parts used and methods of preparation according to their therapeutic use. © 2010 DAR Publishers/University of Jordan. All Rights Reserved.

Al-Alak, B.A.M.
Impact of marketing actions on relationship quality in the health and fitness sector in Jordan and its implications for social marketing: A field/analytical study
(2010) Social Marketing Quarterly, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79959877476&doi=10.1080%2f15245001003746733&partnerID=40&md5=3ac4555098a60b5f0ca2d0b1df43554a
AFFILIATIONS: AL-Zaytoonah Private University of Jordan, Faculty of Economics and Administrative Sciences, Amman, Jordan
ABSTRACT: This field/analytical study examined the marketing actions (antecedents) and performance (consequences) of relationship quality in a health and fitness setting. To analyze data collected from a random sample of 542 members drawn from fitness centers in Amman, Jordan, the linear structural relationship model was used to identify structural characteristics of relationship management among fitness centers' employees, including physical fitness and health experts, administrative staff, and members. The empirical results of this study were fourfold. First, greater employees' relational and member orientation resulted in higher relationship quality. Second, better health and fitness providers' (employees') attributes resulted in higher relationship quality. Third, higher relationship quality resulted in better relationship continuity. Fourth, committed member relationships resulted in member satisfaction, loyalty, positive word of mouth, and promotion. These in turn contributed to the enhancement of fitness center image. Within the past 20 years, social marketing application to health and fitness problems has grown rapidly. A number of social marketing implications and recommendations are highlighted.

Iskandarani, M.Z.
Application of neural networks to damage classification in composite structures
(2010) International Conference on Computers - Proceedings, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79958729048&partnerID=40&md5=0882fbf959c204942fb323bfbd7084f0
AFFILIATIONS: Faculty of Engineering, Al-Zaytoonah Private University of Jordan, P O BOX: 911597, 11191, Amman, Jordan
ABSTRACT: Smart classification software is designed to process data taken for damaged composite structures such as modern car bodies. This software is used in conjunction with Neural Networks algorithms to provide predictive models for impact damage in composite structures. The developed neural models correlates between various NDT testing techniques, such that in the absence of one technique, its results can be predicted by the Neural Network through interrogation of available data obtained from using other testing methods.

Al-Zoubi, M.B., Ali, A.-D., Yahya, A.A.

Fuzzy clustering-based approach for outlier detection
(2010) Proceedings of the 9th WSEAS International Conference on Applications of Computer Engineering,
ACE '10, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79952591090&partnerID=40&md5=4235032fac5c4d23e9577e637720928c
AFFILIATIONS: Department of Computer Information Systems, KASIT University Of Jordan, Amman, Jordan;
Faculty of Science and IT, Al-Zaytoonah University, Amman, Jordan

ABSTRACT: Outlier detection is an important task in a wide variety of application areas. In this
paper, a proposed method based on fuzzy clustering approaches for outlier detection is presented. We
first perform the c-means fuzzy clustering algorithm. Small clusters are then determined and
considered as outlier clusters. The rest of outliers (if any) are then detected in the remaining
clusters based on temporary removing a point from the data set and re-calculating the objective
function. If a noticeable change occurred in the Objective Function (OF), the point is considered an
outlier. Experimental results show that our method works well. The test results show that the
proposed approach gave good results when applied to different data sets.

Ali, A.-D., Fezari, M., Hamza, A.
Implementation of a tele-operating high level communication system to control a colony of robots
(2010) Proceedings of the 9th WSEAS International Conference on Applications of Computer Engineering,
ACE '10, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
79952586312&partnerID=40&md5=2a85d7a4d400ed196a30575dcb8dc775
AFFILIATIONS: Al-Zaytoonah University, Amman, Jordan;
Department of Electronics, Annaba Laboratory of Automatic and Signals, Faculty of Engineering, BP.
12, Annaba, 23000, Algeria

ABSTRACT: In this paper, the implementation of a high level communication interface based on a multi
agents model for autonomous robots is designed. A collection of hybrid techniques, used in speech
recognition which are zero crossing and extremes, dynamic time warping and Mel frequency cepstral
coefficients followed by a decision system based on independent methods test results, are used as a
speech recognition agent. Two consecutive agents namely syntactic and semantic agents, are added to
improve the recognition rate. To implement the approach of tele-operation on a real time application,
a Personal Computer interface was designed based on Bluetooth wireless communication modules to
control the movement of a set of robots using high level language. The voice command system for four
autonomous robots is designed. The main parts of the robots are a microcontroller from Microchip
PIC18F2450, a set of sensors modules and a Bluetooth module.

Shattat, G., Al-Qirim, T., Sweidan, K., Shahwan, M., El-Huneidi, W., Al-Hiari, Y.
The hypolipidemic activity of novel benzofuran-2-carboxamide derivatives in Triton WR-1339-induced
hyperlipidemic rats: A comparison with bezafibrate
(2010) Journal of Enzyme Inhibition and Medicinal Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
78149451332&doi=10.3109%2f14756360903389880&partnerID=40&md5=670d35e7f307aad60a96103f69a1a9f4
AFFILIATIONS: Department of Pharmacology, Faculty of Pharmacy, Al-Zaytoonah Private University, Amman
11733, Jordan;
Faculty of Pharmacy, University of Jordan, Amman, Jordan

ABSTRACT: Using Triton WR-1339-induced hyperlipidemic rats as an experimental model, we investigated
whether compound 4 [N-(9,10-dihydro-9,10-dioxoanthracen-2-yl) bezofuran-2-carboxamide] and compound 5
[N-(4-benzoylphenyl)benzofuran-2- carboxamide], two novel anti-hyperlipidemic agents, have any effect
on plasma triglyceride (TG), total cholesterol (TC), and high-density lipoprotein cholesterol levels
(HDL-C) levels. The tested animals were divided into control (CG), hyperlipidemic (HG), and compounds
4, 5, and bezafibrate (BF) treated groups. At a dose of 15mg/kg body weight, compounds 4, 5, and BF
significantly reduced elevated plasma TG levels after 7 and 24h. Furthermore, HDL-C levels were
remarkably increased in all treated groups after 7 and 24h compared to the hyperlipidemic control
group. However, only compounds 4 and 5 treated groups clearly showed a significant reduction in
plasma total cholesterol levels after 7 and 24h. It is therefore reasonable to assume that compounds
4 and 5 may have promising potential in the treatment of hyperlipidemia and atherosclerosis. © 2010
Informa UK, Ltd.

Al Salami, N.M.A.
Analysing multiobjective fitness function with finite state automata
(2010) Lecture Notes in Electrical Engineering, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-78651539124&doi=10.1007%2f978-90-481-9419-
3_46&partnerID=40&md5=86ee71f41a1f6f6732bce7bd75b44f74
AFFILIATIONS: Department of Management Information Systems, Faculty of Economic and Business, Al
Zaytoonah University of Jordan, 130, Amman, 11733, Jordan

ABSTRACT: This research analyses and discusses the use of Multiobjective fitness function to evolve Finite State Automata. Such automata can describe system's behavior mathematically in an efficient manner. However system's behavior must highly depend on its input-output specifications. Genetic Programming is used, and the fitness function is built to guide the evolutionary process in two different cases. First case: Single point fitness function is used where the only focus is on the correctness of the evolved automata. Second case: multiobjective fitness function is used since every real-world problem involves simultaneous optimization of several incommensurable and often competing objectives. Multiobjective optimization is defined as a problem of finding a Finite State Automata which satisfies: parsimony, efficiency, and correctness. It has been presented that for large and complex problems it is necessary to divide them into sub problem(s) and simultaneously breed both sub-program(s) and a calling program. © 2010 Springer Science+Business Media B.V.

Hammoudeh, M., Aldabbas, O., Mount, S., Abuzour, S., Alfawair, M., Alratrout, S.
Algorithmic construction of optimal and load balanced clusters in wireless sensor networks
(2010) 2010 7th International Multi-Conference on Systems, Signals and Devices, SSD-10, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-78149233166&doi=10.1109%2fSSD.2010.5585512&partnerID=40&md5=c8372e99f0500e251badaf544041a3c1
AFFILIATIONS: Department of Computing, Manchester Metropolitan University, Manchester, United Kingdom;
Al-Balqa Applied University, Faculty of Engineering, Jordan;
School of Computing and IT, University of Wolverhampton, Wolverhampton, United Kingdom;
Al-Zaytoonah Private University of Jordan, Faculty of Science and IT, Jordan
ABSTRACT: This paper proposes a clustering algorithm - Balanced Minimum Radius Clustering (BMRC) - for use in large scale, distributed Wireless Sensor Networks (WSN). Cluster balancing is an intractable problem to solve in a distributed manner, and distribution is important, by reason of both avoiding specialised node vulnerability and minimising message overhead. The BMRC algorithm described here distributes several of the cluster balancing functions to the cluster-heads. In proposing this algorithm, several tentative claims have been made for it, namely that it is suitable for arbitrary number of cluster heads; that it specifies a way to elect cluster heads and use them to create the local models; that it accomplishes optimal balanced clusters in distributed manner; that it is scalable and it uses the number-of-hops as a clustering parameter; that it is energy efficient. These claims were studied and verified by simulation. ©2010 IEEE.

Iskandarani, M.Z.
Head gesture analysis using matrix group displacement algorithm
(2010) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-78049522176&doi=10.3844%2fjcssp.2010.1362.1365&partnerID=40&md5=a50f8f79cc55963ca1f39d976704bb07
AFFILIATIONS: Department of Electrical Engineering, Faculty of Engineering, Al-Zaytoonah University of Jordan, P.O. Box 911597, Post Code 11191, Amman, Jordan
ABSTRACT: A novel algorithm for head gestures interpretation is designed and tested. The designed system carries out gesture detection and recognition using the MGDA algorithm, which implements random sampling and importance sampling, such technique can track head poses and estimate head positions. Problem statement: Head position is an important indicator of a person's focus of attention, which can be used as a key for multi-view face analysis assuming that face recognition and identification to be viewed dependently. This will help in selecting the best view model. Also, in the past few years face detection and person identification became important issues due to security concerns, leading to head gesture algorithm development and implementation. Approach: The captured image was allocated a map after which a file conversion process is carried out, allowing the next stage of image data conversion of head poses to be applied. This results in a specific number of matrices per pose that hold the necessary information. Such information was then allocated sequences representing head gesture poses which is combined for classification and correlation purposes to regenerate a predicted time reconstructed continuous movements. Results: A reliable, fast and robust approach for static head gesture recognition was achieved and presented. Conclusion: This very successful approach to head pose detection and gesture classification is strongly supported by its ability to correlate different signal input technologies as the devised algorithm can accommodate different inputs. © 2010 Science Publications.

AL-Allaf, O.N.A.
Improving the performance of backpropagation neural network algorithm for image compression/decompression system
(2010) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-78049510641&doi=10.3844%2fjcssp.2010.1347.1354&partnerID=40&md5=4964b8c0ac3b4cfe00b115232a76c2bd
AFFILIATIONS: Department of Computer Information Systems, Faculty of Sciences and Information

Technology, AL-Zaytoonah Private University of Jordan, P.O. Box 130, Amman (11733), Jordan
ABSTRACT: Problem statement: The problem inherent to any digital image is the large amount of bandwidth required for transmission or storage. This has driven the research area of image compression to develop algorithms that compress images to lower data rates with better quality. Artificial neural networks are becoming attractive in image processing where high computational performance and parallel architectures are required. Approach: In this research, a three layered Backpropagation Neural Network (BPNN) was designed for building image compression/decompression system. The Backpropagation neural network algorithm (BP) was used for training the designed BPNN. Many techniques were used to speed up and improve this algorithm by using different BPNN architecture and different values of learning rate and momentum variables. Results: Experiments had been achieved, the results obtained, such as Compression Ratio (CR) and peak signal to noise ratio (PSNR) are compared with the performance of BP with different BPNN architecture and different learning parameters. The efficiency of the designed BPNN comes from reducing the chance of error occurring during the compressed image transmission through analog or digital channel. Conclusion: The performance of the designed BPNN image compression system can be increased by modifying the network itself, learning parameters and weights. Practically, we can note that the BPNN has the ability to compress untrained images but not in the same performance of the trained images. © 2010 Science Publications.

Muslih, O.K., Saleh, I.H.
Increasing Database Performance through Optimizing Structure Query Language Join Statement
(2010) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
78049497772&doi=10.3844%2fjcssp.2010.585.590&partnerID=40&md5=5ac1de133ee1b789ccf72f3a22df68c2
AFFILIATIONS: Department of Software Engineering, Faculty of Science and Information Technology, Alzaytoonah University of Jordan, Jordan;
Department of Computer Science, Faculty of Information Technology, Amman Arab University of Jordan, Jordan
ABSTRACT: Problem statement: A join statement is a select statement with more than table in the FROM clause. A join predicate is a predicate in the WHERE clause that combines the columns of two of the tables in the join. Any database gives you the ability to join various tables together through different types of joins, resulting large number of rows to process. Query language can be used to join these tables and as it is well known query language should be declarative, so we can write alternative formulas to perform join statements. Different formulas provide variation in performance. Approach: This research presented a transparent middle layer between application interface front end and database back end. Results: The responsibilities of this layer were catching the SQL commands sent by application before reaching the database then examining these commands to see if they join more than one table, after that rewriting the SQL command taking into consideration the order of executing join predicates and none join predicates. This research focused on rewriting the SQL commands without application modification. Conclusion: Rewriting stage is the most complex stage because the system will restructure the SQL command with new syntax taking two things in its consideration, the first one was rewriting the command with better performance syntax after getting the help from recommendation dictionary, the second one was resulting the same data (output) as previous old command.

Sweidan, K., Al-Sheikh, A., Maichle-Mößmer, C., Steimann, M., Kuhn, N.
Novel Synthetic Routes To 1,3,1',3'-Tetramethyl-Hydurilic Acid and Tetramethylalloxantine (Amalic Acid) and Their Crystal Structures
(2010) Journal of Structural Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77956841774&doi=10.1007%2fs10947-010-0120-
1&partnerID=40&md5=f8d02c1c6dd622874845815127872922
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Faculty of Pharmacy, Petra University, Amman, Jordan;
Institut für Anorganische Chemie der University, Tübingen, Germany
ABSTRACT: 1,3,1',3'-Tetramethylhydurilic acid (1) and tetramethylalloxantine (5) were prepared by simple novel methods. The crystal structures of the compounds 1 and 5·2(DMSO) are reported. © 2010 Pleiades Publishing, Ltd.

Al Ganideh, S.F., El Refae, G.A.
Socio- Psychological variables as antecedents to consumer ethnocentrism: A fuzzy logic based analysis study
(2010) Annual Conference of the North American Fuzzy Information Processing Society - NAFIPS, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77956609553&doi=10.1109%2fNAFIPS.2010.5548274&partnerID=40&md5=0d0384cd1f42a7c1ea6d21a2586ff126
AFFILIATIONS: Department of Marketing, Al Zaytoonah University of Jordan, Amman, Jordan;

Economics and Business School, Al Zaytoonah University of Jordan, Amman, Jordan

ABSTRACT: Despite the growing homogeneity of world markets, ethnocentric tendencies are of the strongest motivations that influence purchasing foreign products. The consequences of consumer ethnocentrism have been well studied in previous research. Yet, the sources of consumer ethnocentrism phenomenon have not been well acknowledged. This study empirically investigates the influence of socio-psychological variables namely, dogmatism, conservatism and world-mindedness on consumer ethnocentrism. All previous studies in the field of consumer ethnocentrism have used traditional statistical techniques to explore the relationships between consumer ethnocentrism and socio-psychological variables; however, this study is the first to apply fuzzy logic on a consumer ethnocentrism research. Such a technique is highly suited to the current research problem. MATLAB® ANFIS has been employed to model the relationships between three inputs (conservatism, dogmatism, and world-mindedness) and one output (ethnocentrism). The results of employing fuzzy logic have proved that high level of dogmatism and high level of conservatism lead to high consumer ethnocentrism. Nevertheless, high level of world-mindedness leads to low consumer ethnocentric tendencies. Overall, fuzzy logic can improve the research of consumer ethnocentrism and can illuminate uncovered sides in the area of consumer ethnocentrism. © 2010 IEEE.

Iskandarani, M.Z.
Application of Unified Smart Classification and Modified Weight Elimination algorithms to damage evaluation in composite structures
(2010) WSEAS Transactions on Computers, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77958113213&partnerID=40&md5=0fe1bb6629534456af71b24303845afe
AFFILIATIONS: Department of Electrical Engineering, Al-Zaytoonah Private University of Jordan, P O BOX: 911597, Post Code: 11191, Amman, Jordan

ABSTRACT: Unified Smart Classification Algorithm (USCA) for the purpose of data processing and classification of data obtained from different testing techniques is designed and tested. The developed algorithm conditions data taken from damaged composite structures such as modern car bodies and Plane frame structure. It is used in conjunction with a Modified Weight Elimination Neural Networks Algorithm (MWEA) to provide predictive models for impact damage in composite structures. The developed neural models correlated between various NDT testing techniques, such that in the absence of one technique, its results are predicted by the Neural Network through interrogation of available data obtained using other testing methods. The real and predicted data showed good agreements in terms of classification and prediction.

Shattat, G., Al-Qirim, R., Al-Hiari, Y., Sheikha, G.A., Al-Qirim, T., El-Huneidi, W., Shahwan, M.
Synthesis and anti-hyperlipidemic evaluation of N-(benzoylphenyl)-5-fluoro- 1H-indole-2-carboxamide derivatives in Triton WR-1339-induced hyperlipidemic rats
(2010) Molecules, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77957297949&doi=10.3390%2fmolecules15095840&partnerID=40&md5=ab7997a3479c7ff3ff0dc8ef940e92da
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah Private University, Amman, Jordan;
Faculty of Pharmacy, University of Jordan, Amman, Jordan

ABSTRACT: The lipid-lowering activity of a series of novel N-(benzoylphenyl)-5- fluoro-1H-indole-2-carboxamide derivatives has been studied in Triton WR-1339-induced hyperlipidemia in rats. The test animals were divided into four groups: control, hyperlipidemic, compound + 4% DMSO [C1: N-(2-benzoylphenyl)-5- fluoro-1H-indole-2-carboxamide (1), C2: N-(3-benzoylphenyl)-5-fluoro-1H-indole- 2-carboxamide (2), C3: N-(4-benzoylphenyl)-5-fluoro-1H-indole-2-carboxamide (3)]-treated and bezafibrate (BF)-treated. At a dose of 15 mg/Kg body weight, compounds 2, 3 and BF significantly reduced elevated plasma triglycerodes levels after 12 h. Moreover, high density lipoproteincholesterol levels were significantly increased in all treated groups after 12 h compared to the hyperlipidemic control group, except for C1 which was inactive. In sum, it may be stated that the results of the present study demonstrated new properties of some N-(benzoylphenyl)-5-fluoro-1H-indole-2-carboxamide derivatives as potent lipid lowering agents and these beneficial activities may contribute to their cardioprotective and antiatherosclerotic role. © 2010 by the authors.

Al-Hiari, Y.M., Qandil, A.M., Al-Zoubi, R.M., Alzweiri, M.H., Darwish, R.M., Shattat, G.F., Al-Qirim, T.M.
7-(3-chlorophenylamino)-1-cyclopropyl-6-fluoro-8-nitro-4-oxo- 1,4-dihydroquinoline-3-carboxylic acid
(2010) MolBank, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77955573234&doi=10.3390%2fM669&partnerID=40&md5=b103ddc8949acb9212d2b1a8d7794186
AFFILIATIONS: Faculty of Pharmacy, University of Jordan, Amman-11942, Jordan;
Faculty of Pharmacy, Jordan University of Science and Technology, Irbid, Jordan;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman-11733, Jordan

ABSTRACT: 7-(3-Chlorophenylamino)-1-cyclopropyl-6-fluoro-8-nitro-4-oxo-1,4-dihydroquinoline- 3-carboxylic acid (2) was prepared and fully characterized by NMR, IR, and MS. Compound 2 exhibited good antibacterial activity against gram-positive standard and resistant strains. © by the authors.

Okoor, S., Al-Khateeb, A., Odeh, I.
Longitudinal coupling impedance for particle beams with Gaussian charge distributions in the longitudinal and transverse directions
(2010) Canadian Journal of Physics, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77958015180&doi=10.1139%2fP10-036&partnerID=40&md5=2a21a34671ab124bf1fc60de84c6e755
AFFILIATIONS: Department of Physics, Faculty of Science, Yarmouk University, Irbid, Jordan; Alzaytoonah University, College of Science and Information Technology, Department of Mathematics, Amman, Jordan
ABSTRACT: The longitudinal coupling impedance is obtained analytically for a smooth and resistive cylindrical pipe of finite wall thickness. We assumed a particle beam with Gaussian charge distribution in the longitudinal and transverse directions. For wall thicknesses d less than the skin depth, the impedance increases because of coupling with the vacuum outside the pipe, while for thicknesses d nearly of the order of the skin depth, the impedance becomes independent of the wall thickness. The resistive wall impedance decreases with increasing wall conductivity and it has its maximum values at low frequencies. By increasing beam energies, the space charge impedance decreases while the resistive wall contribution increases. Gaussian and uniform beams have nearly the same impedance at low energy, independent of the wall thickness, while at higher energies obvious differences are observed at wall thicknesses below the skin penetration depth.

Sheikha, G.A., Khalaf, R.A., Melhem, A., Albadawi, G.
Design, synthesis, and biological evaluation of benzylamino-methanone based cholesteryl ester transfer protein inhibitors
(2010) Molecules, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77956096016&doi=10.3390%2fmolecules15085721&partnerID=40&md5=42259f8c210b6fbb34de6aafe3ce1d66
AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: Cholesteryl ester transfer protein (CETP) is a glycoprotein involved in transporting lipoprotein particles and neutral lipids between high-density lipoprotein (HDL) and low density lipoproteins (LDL) and therefore its a proper target for treating dyslipidemia and related disorders. Guided by our previosuly-reported pharmacophore and QSAR models for CETP inhibition, we synthesized and bioassayed a series of benzylamino-methanones. The most potent illustrated 30% CETP inhibition at 10 μM. © 2010 by the authors.

Said Suwaidan, M., Qasim, A.
External auditors' reliance on internal auditors and its impact on audit fees: An empirical investigation
(2010) Managerial Auditing Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77954238956&doi=10.1108%2f02686901011054845&partnerID=40&md5=f4914c04de8cdb2a1bcd605460a5e1f3
AFFILIATIONS: Department of Accounting, Yarmouk University, Irbid, Jordan; Department of Accounting, Faculty of Economics and Administrative Sciences, Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: Purpose – The purpose of this paper is to investigate the perceptions of a sample of Jordanian external auditors for the importance given by them to a number of factors which may influence their reliance on an internal auditor during their external audit. The paper also examines the relationship, if any, between the degree of reliance on the internal and external audit fees. Design/methodology/approach – A sample of 100 external auditors is employed to investigate the perceptions of external auditors as to the importance given by them to a number of factors which may influence their reliance on an internal auditor during their external audit. Also, a cross-sectional multiple regression analysis is conducted to examine the impact of this reliance on audit fees. Findings – The results of the paper indicate that external auditors in Jordan consider the objectivity, competence and work performance of internal auditors as very important factors affecting their reliance decisions. It is found that "objectivity" had the highest mean score (4.353), followed by "competence" (4.188) and "work performance" (4.156). The results of the multiple regression analysis indicated that the size of the audited company is the most important variable in explaining the variation in audit fees paid by the sample companies. As for the reliance variable, it is found insignificant. Originality/value – It is believed that no previous research has examined these issues on the basis of Jordanian data. Thus, the current paper aims to extend the literature on these topics on a developing country with different characteristics. The results of this paper will be of concern

to companies in their attempt to reduce external audit fees. Audit firms may also benefit from the paper in terms of reducing the efforts of external auditors due to the understanding and cooperation between external and internal auditors. © 2010, Emerald Group Publishing Limited

Ali, A.-D., Fezari, M., Hamza, A.
High level tele-operating speech communication system for controlling a colony of robots
(2010) WSEAS Transactions on Communications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77954904851&partnerID=40&md5=f7465fb0b51f76d4ef67929818081c57
AFFILIATIONS: Faculty of IT, Al-Zaytoonah University, Amman, Jordan;
Department of Electronics, Faculty of Engineering, Badji Mokhtar University, Annaba, Annaba, BP.12, Annaba, 23000, Algeria
ABSTRACT: The purpose of this article is to presents the implementation and design of a high level communication interface based on multi agents model for a set of autonomous robots. Classical techniques, used in speech recognition which are zero crossing and extremes, dynamic time warping and different features such as Mel frequency Cepstral coefficients, delta MFCC , Energy and LPC are merged in order to increase the rate of recognition, followed by a decision system based on independent methods test results, are used as a speech recognition agent. Two consecutive agents; namely syntactic and semantic agents, are added to improve the recognition rate and improve the human-machine communication language. To implement the approach for tele-operating a set of robots on a real time, a Personal Computer interface was designed based on Bluetooth wireless communication modules to control the movement of a set of robots using high level language. The voice command system for four autonomous robots is designed however the robot navigation techniques are not discussed in this work. The main parts of the robots are based on a microcontroller from Microchip PIC18F2450, a set of sensors modules and a Bluetooth module.

Abo-Izreik, A.
Probabilistic model of brittle fracture of geomaterials
(2010) Advances in Natural and Applied Sciences, .
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78049254467&partnerID=40&md5=40a038d72012d85899d801f24a35975a
AFFILIATIONS: Al-Zaytoonah Private University of Jordan, Faculty of Science and Information Technology, Department of Mathematics, P.O.Box 130, Amman 11733, Jordan
ABSTRACT: In theory, the destruction of rock massifs prevailed probabilistic methods. Class of geomaterials, whose behavior during fracture can be seen as fragile, is broad enough. In addition, it is known that geomaterials under various conditions of power load can be as fragile properties, as well as viscous. Consider one of the options for constructing a model for fracture of geomaterials scenario of brittle fracture under complex stress state using probabilistic methods. This theory is based on the theories Weibull and Batdorf (Vitvitskiy P.M., S.Y. Popina, 1980). © 2010, American Eurasian Network for Scientific Information.

Al-Zoubi, M.B., Al-Dahoud, A., Yahya, A.A.
New outlier detection method based on fuzzy clustering
(2010) WSEAS Transactions on Information Science and Applications, .
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77955132815&partnerID=40&md5=528360c124aee851fd12e788c07ad8ab
AFFILIATIONS: Department of Computer Information Systems, University of Jordan, Amman, Jordan;
Faculty of Science and IT, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: In this paper, a new efficient method for outlier detection is proposed. The proposed method is based on fuzzy clustering techniques. The c-means algorithm is first performed, then small clusters are determined and considered as outlier clusters. Other outliers are then determined based on computing differences between objective function values when points are temporarily removed from the data set. If a noticeable change occurred on the objective function values, the points are considered outliers. Test results were performed on different well-known data sets in the data mining literature. The results showed that the proposed method gave good results.

Al-Shayea, Q.K., Bahia, I.S.H.
Ground penetrating radar slice reconstruction for embedded object in media with target follow
(2010) WSEAS Transactions on Computers, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77954743954&partnerID=40&md5=2e85c00b5728792a9cdef17347999afd
AFFILIATIONS: MIS Department, Al Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: The detection of embedded object from ground penetrating radar GPR imagery is our goal. TheGPR image is a cross sectional slices. The embedded objects are metal and/or plastic type. In many fields demand for visualizing objects scanned as cross sectional slices is growing. This research has

many real world applications, such as robotic environments, medicine, remote sensing, inspection of industrial parts and geology. An even better way is to visualize the underground object by reconstruction a threedimensional model of those objects from the slices. Objects here are stable underground while, camera is moving. The task of object track in a cross sectional slices consists of two parts: first gather information on changes between succeeding slices (object detection), and second process this information appropriately to obtain the track of an object. If the object is like cable or pipe. The proposed method starts with two dimensional 2D image preprocessing for each slice. The preprocessing involves multispectral to gray conversion, contrast enhancement, segmenting, thresholding and denoising to modify each 2D image slice individually. Preprocessing algorithms involved in this paper are chosen appropriately to have image without noise, with object detected and with object eliminated. After a preprocessing step the proposed algorithm for object detection starts with objects contour finding in each slice, 2D objects transparency and transformation. The last step is the proposed interpolation technique to build the successive slices until the spaces is filled to find out the embedded object.

Al-Nadaf, A., Sheikha, G.A., Taha, M.O.
Elaborate ligand-based pharmacophore exploration and QSAR analysis guide the synthesis of novel pyridinium-based potent β-secretase inhibitory leads
(2010) Bioorganic and Medicinal Chemistry, .
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77951208774&doi=10.1016%2fj.bmc.2010.03.043&partnerID=40&md5=d316cf527f234890fc897f4831cc2839
AFFILIATIONS: Department of Pharmaceutical Chemistry, Applied Science University, Amman, Jordan;
Faculty of Pharmacy Al-Zaytoonah Private University of Jordan, Amman, Jordan;
Drug Discovery Unit, Department of Pharmaceutical Sciences, Faculty of Pharmacy, Amman, Jordan
ABSTRACT: β-Secretase (BACE) inhibitors have potential as anti-Alzheimer's disease treatments prompting us to explore the pharmacophoric space of 129 known BACE inhibitors. QSAR analysis was employed to select optimal combination of pharmacophoric models and 2D physicochemical descriptors capable of explaining bioactivity variation ($r2 = 0.88$, $F = 60.48$, $rLOO2 = 0.85$, rPRESS2 against 25 external test inhibitors = 0.71). We were obliged to use ligand efficiency as the response variable because the logarithmic transformation of bioactivities failed to access self-consistent QSAR models. Three pharmacophoric models emerged in the successful QSAR equation suggesting at least three binding modes accessible to ligands within BACE binding pocket. QSAR equation and pharmacophoric models were validated through ROC curves and were employed to guide synthesis of novel pyridinium-based BACE inhibitors. The best inhibitor illustrated an IC50 value of 1.0 μM against BACE. © 2010.

Obaidat, R., Al-Jbour, N., Al-Sou'D, K., Sweidan, K., Al-Remawi, M., Badwan, A.
Some physico-chemical properties of low molecular weight chitosans and their relationship to conformation in aqueous solution
(2010) Journal of Solution Chemistry, .
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x&partnerID=40&md5=dc149a55982c67292acb9e74ff814490
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Depatment of Chemistry, Al Al-Bayt University, Mafraq, Jordan;
Suwagh Company for Drug Delivery Systems, Jordanian Pharmaceutical Manufacturing Company, PLC, P.O. Box 94, Naor 11710, Jordan
ABSTRACT: Depolymerization for different time intervals of high molecular weight chitosan using 2 mol·L-3 HCl resulted in low molecular weight (LMW) chitosan of 6, 10, 13, 18, and 30 kDa. These were studied using the FT-IR which indicated that the depolymerization process did not influence the chemical structure. LMW chitosan increases the surface tension of water but adjusting the ionic strength (1% NaCl) caused LMW chitosan to reduce the water surface tension. The zeta potential increased with increasing concentration up to a maximum in 1% NaCl solutions. Particle size showed a reduction in size with increasing concentration. This behavior in reduction of particle size was similar to that for the stiffness parameters. These physico-chemical properties showed that LMW chitosan was present in low concentration in its extended form while in higher concentrations it adopted a more contracted form. This change in conformation was confirmed by using molecular modeling where LMW chitosan is ribbon-like to rod-like in solution but becomes rod-like to spherical at the gas-liquid interface. © 2010 Springer Science+Business Media, LLC.

Abu Khalaf, R., Abu Sheikha, G., Bustanji, Y., Taha, M.O.
Discovery of new cholesteryl ester transfer protein inhibitors via ligand-based pharmacophore modeling and QSAR analysis followed by synthetic exploration
(2010) European Journal of Medicinal Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77349098506&doi=10.1016%2fj.ejmech.2009.12.070&partnerID=40&md5=222d3c18bfaa3fb5a17e3e031d16164b
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan;

Department of Biopharmaceutics and Clinical Pharmacy, Faculty of Pharmacy, University of Jordan, Amman, Jordan;
Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan, Amman, Jordan
ABSTRACT: Cholesteryl ester transfer protein (CETP) is involved in trafficking lipoprotein particles and neutral lipids between HDL and LDL and therefore is considered a valid target for treating dyslipidemic conditions and complications. Pharmacophore modeling and quantitative structure-activity relationship (QSAR) analysis were combined to explore the structural requirments for potent CETP inhibitors. Two pharmacophores emerged in the optimal QSAR equation (r2 = 0.800, n = 96, F = 72.1, r2LOO = 0.775, r2PRESS against 22 external test inhibitors = 0.707) suggesting the existence of at least two distinct binding modes accessible to ligands within CETP binding pocket. The successful pharmacophores were complemented with strict shape constraints in an attempt to optimize their receiver-operating characteristic (ROC) curve profiles. The validity of our modeling approach was experimentally established by the identification of several CETP inhibitory leads retrieved via in silico screening of the National Cancer Institute (NCI) list of compounds and an in house built database of drugs and agrochemicals. Two hits illustrated low micromolar IC50 values: NSC 40331 (IC50 = 6.5 μM) and NSC 89508 (IC50 = 1.9 μM). Active hits were then used to guide synthetic exploration of a new series of CETP inhibitors. © 2010 Elsevier Masson SAS. All rights reserved.

Suleiman, K.H., Yates, B.C., Berger, A.M., Pozehl, B., Meza, J.
Translating the pittsburgh sleep quality index into arabic
(2010) Western Journal of Nursing Research, .
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77649258187&doi=10.1177%2f0193945909348230&partnerID=40&md5=e9e5b99fc69736ef8907fa74b0e7d34c
AFFILIATIONS: Al-Zaytoonah University, P.O. Box 130, Amman 11733, Jordan;
University of Nebraska Medical Center, United States
ABSTRACT: This descriptive correlational study describes the translation process and the psychometric testing of the Pittsburgh Sleep Quality Index (PSQI). The PSQI has been successfully translated into Arabic and back-translated into English by 10 Arabic bilingual translators. Then the PSQI is tested in a sample of 35 healthy Arabic bilinguals.The internal consistency reliability for the Global PSQI demonstrates borderline acceptability (Cronbach's alpha =.65). The reliability is further supported by moderate to high correlations between five PSQI components and the global PSQI score (r =.53 to. 82, p <.01). Convergent validity is supported by the global PSQI correlating strongly with the Insomnia Severity Index (r =.76) and moderately with the related construct of the Medical Outcome Study Short Form-36 vitality subscale (r = -.33). Further testing of the PSQI is needed in a larger Arabic population, both clinical and healthy populations, living in their native countries. © The Author(s) 2010.

Maswadeh, H.A., Al-Hanbali, O.A., Kanaan, R.A., Shakya, A.K., Maraqa, A.
Testing lyoequivalency for three commercially sustained-release tablets containing diltiazem hydrochloride
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AFFILIATIONS: Department of Pharmacy, Faculty of Pharmacy and Medical Sciences, Al-Ahliyya Amman University, 19328 Amman, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: In vitro release kinetics of three commercially available sustained release tablets (SR) diltiazem hydrochloride were studied at pH 1.1 for 2 h and for another 6 h at pH 6.8 using the USP dissolution apparatus with the paddle assemble. The kinetics of the dissolution process was studied by analyzing the dissolution data using five kinetic equations: the zero-order equation, the first-order equation, the Higuchi square root equation, the Hixson-Crowell cube root law and the Peppas equation. Analyses of the dissolution kinetic data for diltiazem hydrochloride commercial SR tablets showed that both Dilzacard and Dilzem SR tablets released drug by Non-Fickian (Anomalous transport) release with release exponent (n) equal to 0.59 and 0.54, respectively, which indicate the summation of both diffusion and dissolution controlled drug release. Bi-Tildiem SR tablets released drug by super case II (n = 1.29) which indicate zero-order release due to the dissolution of polymeric matrix and relaxation of the polymer chain. This finding was also in agreement with results obtained from application of zero-order and Hixson-Crowell equations. A dissolution profile comparative study was done to test the lyoequivelancy of the three products by using the mean dissolution time (MDT), dissimilarity factor f1 and similarity factor f2. Results showed that the three products are different and not lyoequivalent.

Dal Piaz, F., Imparato, S., Lepore, L., Bader, A., De Tommasi, N.
A fast and efficient LC-MS/MS method for detection, identification and quantitative analysis of bioactive sesterterpenes in Salvia dominica crude extracts

(2010) Journal of Pharmaceutical and Biomedical Analysis, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
70349309319&doi=10.1016%2fj.jpba.2009.08.006&partnerID=40&md5=94e2d9e50e3a6694e6f2d10b5a90553c
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Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan
ABSTRACT: Sesterterpenes are a small group of terpenoids showing a number of interesting
pharmacological properties, including cytotoxicity, anti-inflammatory, anti-microbial and anti-
angiogenic activities and platelet aggregation inhibition. Recently, some sesterterpene lactones
isolated from Salvia dominica have been shown to modulate enzymatic activity of tubulin tyrosine
ligase (TTL), a promising target for new anticancer therapeutic strategies. However, to allow a
direct use of S. dominica extracts as a source of TTL inhibitors, analytical method aimed to their
fast qualitative and quantitative characterization is required. Despite the structural features and
diverse biological activities of sesterterpenoids, actually no analytical method for their
quantization into complex mixtures has been published. Here we describe an LC-MS/MS method aimed to
qualitative and quantitative analysis of sesterterpenes lactones in the crude extracts obtained from
different parts of S. dominica. This approach allowed us to characterize all the sesterterpenes by a
single step analysis and also to identify two unknown compounds. Moreover, a quantitative comparison
of the composition in sesterterpenes of extracts obtained from S. dominica leaves, roots and leaf
galls was performed, leading to the definition of both leaves and leaf galls as suitable sources of
TTL inhibitors. © 2009 Elsevier B.V. All rights reserved.

Alqirem, R.
A viable system model to analyze an organization's metasystem
(2010) IMCIC 2010 - International Multi-Conference on Complexity, Informatics and Cybernetics,
Proceedings, .
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85032952768&partnerID=40&md5=5acc6bfb3155d18fe1925e8c442ca943
AFFILIATIONS: Department of Management Information Systems, Al-Zaytoonah University of Jordan, P. O.
Box 130., Amman, 11733, Jordan
ABSTRACT: Organisations in any economy are rapidly changing as they considered being complex and
dynamic systems and they are incorporated in a complex environment which establishes a need for a new
methodology to help the analysts and the banks in making better decisions in assessing these
organisations. This paper used a systems thinking approach by constructing accurate models to
illustrate how problems could be identified in an early stage. The Viable System Model shows that it
could provides the analyst with a deeper insight into the organizational structure of any firm and
helps in identifies problems that need to be addressed.

Shaqrah, A.A.
A Typology of Tacit Knowledge Sharing Themes to Fostering Group Decision Support System
(2010) International Journal of Decision Support System Technology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
85001831579&doi=10.4018%2fjdsst.2010070103&partnerID=40&md5=bce86155def3955d83538bd5f190a42f
AFFILIATIONS: Alzaytoonah University of Jordan, Jordan
ABSTRACT: Today, much effort and importance is placed on the management of knowledge, its security,
and sustainability in context to organizations and their competitiveness. This paper outlines a
typology to guide that applying tacit knowledge sharing themes from a social perspective, that is
trust, care, leadership charisma, knowledge culture, concept ba, and social network analysis, affect
a group's decision support system. This paper shows that the mentioned themes facilitate a more open
group discussion with a higher degree of consensus and agreement resulting in a vividly higher amount
of accuracy in decision making. © 2010, IGI Global. All rights reserved.

Yaseen, S.G., Zayed, S.
Exploring critical determinants in deploying mobile commerce technology
(2010) International Journal of Information Science and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
84903986878&partnerID=40&md5=e1f3eb1999c2f7adc5e5eed2ecc76a23
AFFILIATIONS: Al-Zaytoonah University of Jordan, Jordan;
Arab Academy for Banking and Financial Science, Jordan
ABSTRACT: Problem statement: The research's problem lies in the fact that deploying m-commerce
technology in Jordan represent the first serious trail to understand and explore the critical
determinants that affect deploying mobile commerce technology. Approach: This research applied TAM
model using the following variables: Perceived trust, perceived usefulness, perceived ease of use,
social and cultural values and economic issues to explore determinants. Results: The result of the
distributed 210 questionnaires to mobile commerce users in Amman Stock Exchange (Brokers and

Investors) and 179 were returned correct and studied, reveal that perceived trust, perceived usefulness, perceived ease of use, social and cultural values have significant association with intention to deploy mobile commerce technology while economical issue is not significant. Conclusion: The results of the research indicate that TAM have capability in exploring critical determinants that affecting the intention to deploy mobile commerce technology in Jordanian marketplace, therefore, further studies are recommended to explore the critical determinants of deploying mobile commerce technology in other economic sectors.

Al-Ghaniybeh, A.D.A.
Syntactic times in maqam al- Yasameen by khalid al- karaki a studv in structure and meaning
(2010) Dirasat: Human and Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84878971304&partnerID=40&md5=e53141948fe43815cda129b08a49d15e
AFFILIATIONS: Department of Arabic Language and Literature, Faculty of Aits, Al-Zaytoonah Private University, Amman, Jordan
ABSTRACT: This piece of research deals with syntactic times in Maqam Al- Yasameen by Khalid AL-Karaki in a way that expends on language structure in order to reveal the beauty of the text and its meanings, for the meaning of structure differs from a text to another even though lexemes may be the same The association between meanings and structures in the text of the book has shown the wonder fullness of the text and has also shown that the poet has successfully utilized the suitable structures to convey his meanings. Thus, he was so expressive when he bitterly eulogized his brother, father and eagerness for well-built, artistic, style. He succeeded in elevating language vocabularies up to the level that suits his purposes and his experience.

Khalil, R.H., Sakhrieh, A., Hamdan, M., Asfar, J.
Effect of Pressure and Inlet Velocity on the Adiabatic Flame Temperature of a Methane-Air Flame
(2010) Jordan Journal of Mechanical and Industrial Engineering, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84856912001&partnerID=40&md5=009ba109cc3b148647c92471dabe2e70
AFFILIATIONS: Department of Mechanical Engineering, Philadelphia University, Jerash, Jordan; Department of Mechaanical Engineering, University of Jordan, Amman, Jordan; Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: The present study focuses on the effect of pressure and high inlet velocity of turbulent premixed flames on the adiabatic flame temperature of a methane-Air Flame. Turbulent premixed flames are widely spread in technical applications and are used especially in stationary gas turbines for a high-efficient and low emission energy conversion of gaseous fuels. The simulation process was performed using Fluent software. The pressure was varied between 2 atmosphere and 10 atmosphere, while the inlet velocity varies between 5 and 10 m/s. it was found that and in general the temperature increase with pressure © 2010 Jordan Journal of Mechanical and Industrial Engineering. All rights reserved

Khamis, F.G., Ibrahim, A.A.J.K.
On a comparison between two measures of spatial association
(2010) Journal of Modern Applied Statistical Methods, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-82055196820&doi=10.22237%2fjmasm%2f1272687120&partnerID=40&md5=8720b7765aab6f131782b89c0ea62839
AFFILIATIONS: Faculty of Economics and Administrative Sciences, Al-Zaytoonah University of Jordan, Amman, Jordan;
Faculty of Sciences and Technology, University Kebangsaan Malaysia, Selangor, Malaysia
ABSTRACT: Two measures of spatial association between two variables were used by many researchers. These are the Wartenberg (1985) and Lee (2001) measures. Based on simulation for lattice data, the sensitivity of both measures was studied and compared with different choices of spatial structures, spatial weights and sample sizes using bias and mean square error. Different scenarios are used in terms of assumed numbers and sample sizes. Moran's I is used to examine the spatial autocorrelation of such a variable with itself. Both the Wartenberg and Lee measures are found to be sensitive, however, Wartenberg's measure is found to be somewhat better than Lee's measure because it is slightly more sensitive when sample size is small. © 2010 JMASM, Inc.

Yaseen, S.G., Zayed, S.
Exploring determinants in deploying mobile commerce technology: Amman stock exchange
(2010) 2010 International Conference on Information Society, i-Society 2010, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-80053346874&doi=10.1109%2fi-society16502.2010.6018787&partnerID=40&md5=187e4dbdab4e25b131aaaeb93fc05bd4
AFFILIATIONS: Al-Zaytoonah University of Jordan, Jordan;
Arab Academy for Banking and Financial Science, Jordan

ABSTRACT: The purpose of this research is to explore the critical determinants that affect the intention of the users to deploy mobile commerce technology in Amman Stock Exchange. This research applied TAM model using the following variables: perceived trust, perceived usefulness, perceived ease of use, social and cultural values, and economic issues. The result of the distributed 210 questionnaires to mobile commerce users in Amman Stock Exchange (Brokers and Investors), and 179 were returned correct and studied, reveal that perceived trust, perceived usefulness, perceived ease of use, social and cultural values have significant association with intention to deploy mobile commerce technology while economical issue is not significant. The results of the research indicate that TAM have capability in exploring critical determinants that affecting the intention to deploy mobile commerce technology in Jordanian marketplace, therefore, further studies are recommended to explore the critical determinants of deploying mobile commerce technology in other economic sectors. © 2010 i-Society.

Al-Azzah, F.M., Yahya, A.A.
Quality procedures to review, mission, vision and objectives in higher educational institutions
(2010) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79960097008&partnerID=40&md5=5050e26d9e528a80d70c154911b816ef
AFFILIATIONS: Alzaytoonah University of Jordan, Faculty of Science, IT Department of Computer Information System, Jordan

ABSTRACT: This paper provides a clear mechanism for planning and implementation of periodic review to assess mission, vision and objectives of higher education institutions, and the reflection results of the assessment on the policy planning, implementation and measurement of the activities of the institution in all areas of performance at all levels Proposes a set of models as tools to achieve desired measurement in monitoring the extent to which the activities of the institution with its mission, objectives and vision. © EuroJournals Publishing, Inc. 2010.

Muhairat, M., Aldaajeh, S., Al-Qutaish, R.E.
The impact of global software development factors on effort estimation methods
(2010) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79960086972&partnerID=40&md5=f65ff89649a0f67e395f6e6345f8f953
AFFILIATIONS: Department of Software Engineering, Al-Zaytoonah University of Jordan, Amman, Jordan; Department of Management Information Systems, Al-Ain University of Science and Technology, Abu Dhabi Campus, Abu Dhabi, United Arab Emirates

ABSTRACT: Outsourcing software development work activities has brought many benefits to software development projects, such as, reduced development cost and time. Managing the application of this strategy is a key characteristic in its own or in its implications. Accurate effort estimation is crucial to software development projects success, especially in globally distributed projects. Therefore, it is necessary to identify and to investigate the underlying factors which influence the accuracy of effort estimation methods. In this paper, we will investigate the COCOMO II, SLIM and ISBSG effort estimation methods. Furthermore, the ISBSG method supports the experts' judgment estimation for effort as a candidate effort estimation method representing the expert judgment with accuracy in estimating the required amount of effort to accomplish a given project within the context of globally distributed projects. © EuroJournals Publishing, Inc. 2010.

Alia, M.A., Yahya, A.A.
Public-key steganography based on matching method
(2010) European Journal of Scientific Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-79959998809&partnerID=40&md5=c5d10d07ed9e78faaff0d64c3acc0626
AFFILIATIONS: Faculty of Sciences and IT, Alzaytoonah University of Jordan, Jordan

ABSTRACT: In this paper we proposed a method which describes two steps for hiding the secret information by using the public steganography based on matching method. This is done by two steps: Find the shared stego-key between the two communication parties over insecure networks by applying Diffie Hellman Key exchange protocol, then sender uses the secret stego-key to select pixels that it will be used to hide. Each selected pixel used to hide 8 bits which depends on the matching method. This steganographic protocol is more efficient than LSBs. It produces matching between the data bit parts and selected or least significant bits of each pixel. © EuroJournals Publishing, Inc. 2010.

Bader, A., Cioni, P.L., Flamini, G.
GC-MS analysis of the essential oils of ripe fruits, roots and flowering aerial parts of Elaeoselinum asclepium subsp. meoides growing in Sicily
(2010) Natural Product Communications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-

77956627144&doi=10.1177%2f1934578x1000500727&partnerID=40&md5=cdc211aea7dfe4622d573487dc98c40b

AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan;
Dipartimento di Scienze Farmaceutiche, Sede di Chimica Bioorganica and Biofarmacia, Università di Pisa, Via Bonanno 33, 56126 Pisa, Italy

ABSTRACT: The compositions of the essential oils obtained by hydrodistillation of the ripe fruits, flowering aerial parts and roots of Elaeoselinum asclepium (L.) Bertol subsp. meoides (Desf.) Fiori (Apiaceae) were determined by GC-MS analysis. All the analyzed parts were very rich in α-pinene (77.1%, 92.2% and 60.8%, respectively). Other compounds detected in appreciable amounts were β-pinene (4.3%, 4.0% and 8.2%), and sabinene (11.9% in ripe fruits; 12.8% in aerial parts). The plant synthesizes different classes of monoterpenes, including pinane, camphane, thujane, menthane, and fenchane derivatives, besides some acyclic monoterpenes.Trace amounts of sesquiterpenes and diterpenes were also detected.

Yamin, J., Hamdan, M.
Simulation of an electrical engine powered by fuel cell-solar energy hybrid system
(2010) International Journal of Electric and Hybrid Vehicles, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77956247693&doi=10.1504%2fIJEHV.2010.034983&partnerID=40&md5=24f05f63eb6a85abd066cfda98738af9

AFFILIATIONS: Department of Mechanical Engineering, Faculty of Engineering and Technology, University of Jordan, Amman 11942, Jordan;
Faculty of Engineering, Al-Zaytoonah University, Amman 11733, Jordan

ABSTRACT: Theoretical simulation has been carried out to find the performance of an electric engine using Advanced Vehicle Simulator (ADVISOR) software. The electric power necessary to operate the engine is supplied either using solar energy that has been converted into electrical energy and then stored in batteries, or using hydrogen fuel cells, which continuously produce electric power that is stored in the batteries. The results obtained under these two conditions were used to compare the performance of the engine. It was found that the engine had better performance when using hydrogen fuel cells than when it is driven by solar energy. Copyright © 2010 Inderscience Enterprises Ltd.

Shahwan, M., Shattat, G., Al-Qirim, T., Sheikha, G.A., Al-Hiari, Y., El-Huneidi, W., Jarab, A., Al-Najdawi, M.
Synthesis and pharmacological evaluation of novel substituted and unsubstituted N-(benzoylphenyl)-1H-indole-2-carboxamides as potent antihypertriglyceridemic agents
(2010) Zeitschrift fur Naturforschung - Section C Journal of Biosciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77954971151&doi=10.1515%2fznc-2010-5-601&partnerID=40&md5=993a9e45a5610f40f2a6e9de4082f213

AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah Private University, Amman 11733, Jordan;
Faculty of Pharmacy, University of Jordan, Amman, Jordan

ABSTRACT: The N-(benzoylphenyl)-1H-indole-2-carboxamide derivatives 1-6 were synthesized, and the lipid-lowering effects of two of these novel compounds were studied using hyperlipidemic rats as an experimental model. Treatment of ethyl-1H-indole-2-carboxylate with aminobenzophenones in the presence of sodium ethoxide and DMF, followed by purification using column chromatography, gave the target compounds in good yields. The tested animals were divided into control, hyperlipidemic, compounds 2-, 3- and bezafibrate-treated groups. At a dose of 15 mg/kg body weight, compounds 2, 3 and bezafibrate significantly reduced the elevated plasma triglyceride levels after 7 and 24 h. Furthermore, the high-density lipoprotein-cholesterol levels were remarkably increased in all treated groups after 7 and 24 h compared to the hyperlipidemic control group. However, only compounds 2- and 3-treated groups obviously showed a significant reduction in plasma total cholesterol levels after 24 h. It is therefore reasonable to assume that 2 and 3 may have a promising potential in the treatment of hyperlipidemia and coronary heart diseases. © 2010 Verlag der Zeitschrift für Naturforschung, Tübingen.

Al-Allaf, O.N.A.
XP-prototyping approach for user interface design of large web-based applications
(2010) Proceedings of the IASTED International Conference on Software Engineering, SE 2010, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77954590679&doi=10.2316%2fp.2010.677-082&partnerID=40&md5=c58c3760d73bc7b2f68a2596935ac27d

AFFILIATIONS: Department of Computer Information Systems, Faculty of Sciences and Information Technology, Al-Zaytoonah Private University of Jordan, P.O. Box 130, Amman 11733, Jordan

ABSTRACT: The development of interactive web applications with Graphical User Interface (GUI) has become increasingly common in recent years. The user interface (UI) of web applications includes multimedia such as text, images, video and sound. The success of such applications depends on how the combinations of media are used and good design. The large enterprises need effective methods, tools and experienced developers to design UIs of large web applications because these applications consist

of complex interacting activities, supports multiple users and developed by large number of developers. We addressed in this paper the problems of UI design based on literature and a survey conducted in five large Jordanian enterprises which undertaken large web development. We proposed in this paper a UI design approach (XP-PROTOTYPING) that combines XP agile with Throwaway Prototype processes to overcome UI design problems of large web applications. Based on our initial evaluation, the combination of these two processes (XP-PROTOTYPING) could be more effective to make web application easier to develop; reduce risks by increasing flexibility to change and maintain, quality but this may require experienced professionals to work as XP team.

Yaseen, S.G., Zayed, S.
Exploring critical determinants in deploying mobile commerce technology
(2010) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77953801735&doi=10.3844%2fajassp.2010.120.126&partnerID=40&md5=58c1e4625c0c9e75b9f76d49d53114c2
AFFILIATIONS: Department of Management of Information System, Al-Zaytoonah University of Jordan, Jordan;
Department of Management of Information System, Arab Academy for Banking and Financial Science, Jordan
ABSTRACT: Problem statement: The research's problem lies in the fact that deploying m-commerce technology in Jordan represent the first serious trail to understand and explore the critical determinants that affect deploying mobile commerce technology. Approach: This research applied TAM model using the following variables: Perceived trust, perceived usefulness, perceived ease of use, social and cultural values and economic issues to explore determinants. Results: The result of the distributed 210 questionnaires to mobile commerce users in Amman Stock Exchange (Brokers and Investors) and 179 were returned correct and studied, reveal that perceived trust, perceived usefulness, perceived ease of use, social and cultural values have significant association with intention to deploy mobile commerce technology while economical issue is not significant. Conclusion: The results of the research indicate that TAM have capability in exploring critical determinants that affecting the intention to deploy mobile commerce technology in Jordanian marketplace, therefore, further studies are recommended to explore the critical determinants of deploying mobile commerce technology in other economic sectors. © 2010 Science Publications.

Ali, A.-D., Belal, M.A., Al-Zoubi, M.B.
Load balancing of distributed systems based on multiple ant colonies optimization
(2010) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77953744765&doi=10.3844%2fajassp.2010.428.433&partnerID=40&md5=d3cbaa137e0b9ea238e3a986e0b875a6
AFFILIATIONS: Department of Computer Science, Faculty of Information Technology, Al-Zaytoonah University, Jordan;
Department of Computer Science, Halwan University, Egypt
ABSTRACT: Problem statement: Ant Colony Optimization (ACO) provides a meta-heuristic optimization tool and collective intelligence model to several applications such as routing and load balancing. A lot of work found in the literature on using ACO in load balancing. However, as far as our knowledge, there was no work relating load balancing in distributed systems with ACO. Approach: In this study, a proposed ACO algorithm for load balancing in distributed systems will be presented. This algorithm is fully distributed in which information is dynamically updated at each ant movement. Multiple colonies paradigm will be adopted such that each node will send a colored colony throughout the network. Results: In this study, colored ant colonies are used to prevent ants of the same nest from following the same route and hence enforcing them to be distributed all over the nodes in the system and each ant acts like a mobile agent that carries newly updated load balancing information to the next visited node. Conclusion: Finally, the performance of the proposed ACO algorithm is compared with the work-stealing approach for load balancing in distributed systems. © 2010 Science Publications.

Ali, A.-D., Swami, P.D., Singhai, J.
Modified curvelet thresholding algorithm for image denoising
(2010) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77952530278&doi=10.3844%2fjcssp.2010.18.23&partnerID=40&md5=b3252099efaca4634fce2bf2d9685970
AFFILIATIONS: Department of Computer Science, Faculty of Information Technololgy, Alzaytoonah University of Jordan, Amman, Jordan;
Department of Electronics, Samrat Ashok Technological Institute, Vidisha (Madhya Pradesh), India;
Department of Electronics and Communication Engineering, Maulana Azad National Institute of Technology, Bhopal (Madhya Pradesh), India
ABSTRACT: Problem statement: This study introduced an adaptive thresholding method for removing additive white Gaussian noise from digital images. Approach: Curvelet transform employed in the

proposed scheme provides sparse decomposition as compared to the wavelet transform methods which being nongeometrical lack sparsity and fail to show optimal rate of convergence. Results: Different behaviors of curvelet transform maxima of image and noise across different scales allow us to design the threshold operator adaptively. Multiple thresholds depending on the scale and noise variance are calculated to locally suppress the curvelet transform coefficients so that the level of threshold is different at every scale. Conclusion/Recommendations: The proposed algorithm succeeded in providing improved denoising performance to recover the shape of edges and important detailed components. Simulation results proved that the proposed method can obtain a better image estimate than the wavelet based restoration methods. © 2010 Science Publications.

Muhairat, M.I., Al-Qutaish, R.E., Abdelqader, A.A.
UML diagrams generator: A new case tool to construct the use-case and class diagrams from an event table
(2010) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77952488701&doi=10.3844%2fjcssp.2010.253.260&partnerID=40&md5=bc5715890758aede9799b4bacf73f916
AFFILIATIONS: Department of Software Engineering, Alzaytoonah University of Jordan, Airport Street, Amman 11733, Jordan
ABSTRACT: Problem statement: Building UML diagrams is a very important and time consuming task for both requirements and design phases. However, some of these diagrams, such as use-case and class diagrams can be considered as a transition between the two phases. Approach: Through this study, the event table will be used to derive the use-case and class diagrams. Results: A new CASE tool to automate the proposed approach will be introduced, that is, the UML diagrams generator (UMLdg). Conclusion: It is clearly noted that the proposed CASE tool (UMLdg) gives an ideal and reasonable methodology to construct the intended use-case and class diagrams from any comprehensive event table. Furthermore, this tool will save the time for the building process of such diagrams. © 2010 Science Publications.

Iskandarani, M.Z.
Integrity classification algorithm of images obtained from impact damaged composite structures
(2010) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77952481819&doi=10.3844%2fjcssp.2010.428.438&partnerID=40&md5=f42ef32bb6cdbc362b05bd28fae2f7df
AFFILIATIONS: Department of Electrical Engineering, Faculty of Engineering, Al-Zaytoonah University of Jordan, P.O. Box 911597, Post Code 11191 Amman, Jordan
ABSTRACT: Problem statement: Many NDT systems used for damage detection in composites are difficult to apply to complex geometric structures, also, they are time-consuming. As a solution to the problems associated with NDT applications, an intelligent analysis system that supports a portable testing environment, which allowed various types of inputs and provided sufficient data regarding level of damage in a tested structure was designed and tested. The developed technique was a novel approach that allowed locating defects with good accuracy. Approach: This research presented a novel approach to fast NDT using intelligent image analysis through a specifically developed algorithm that checks the integrity of composite structures. Such a novel approach allowed not only to determine the level of damage, but also, to correlate damage detected by one imaging technique using available instruments and methods to results that would be obtained using other instruments and techniques. Results: Using the developed ICA algorithm, accurate classification was achieved using C-Scan and Low Temperature Thermal imaging (LTT). Both techniques agreed on damage classification and structural integrity. Conclusion: This very successful approach to damage detection and classification is further supported by its ability to correlate different NDT technologies and predict others. © 2010 Science Publications.

Sweidan, K., Kuhn, N., Maichle-Mößmer, C., Steimann, M.
Reaction of a zwitterionic pyridinium ylide with N,N-dimethylaniline
(2010) Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77949815201&doi=10.1515%2fznb-2010-0118&partnerID=40&md5=882f755e631ab65e9ab2fc90fe534d5f
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, P.O. Box 130, Amman, Jordan; Institut für Anorganische Chemie, Universität Tübingen, Auf der Morgenstelle 18, 72076 Tübingen, Germany
ABSTRACT: 1,3-Dimethyl-2,4,6-trioxo-5-pyridinomethyl-1,3-perhydrodiazin- 5-ylpyridinium ylide (3) reacts with N,N-dimethylaniline to give 5-((1,3-dimethyl-2,4,6-trioxo-hexahydropyrimidin-5-yl)methyl) -5-(4-(dimethylamino)benzyl)-1,3-dimethylpyrimidine- 2,4,6(1H3H5H)-trione (6) in good yield. The crystal structure of 6 is reported. © 2010 Verlag der Zeitschrift für Naturforschung, Tübingen.

Iskandarani, M.Z.

Modified center interpolation net for classification of composite structures tested using low frequency electronic tapping
(2010) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
77349098298&doi=10.3844%2fajassp.2010.227.234&partnerID=40&md5=154fdedf9f968aceef846b2720630502
AFFILIATIONS: Department of Electrical Engineering, Faculty of Engineering, Al-Zaytoonah Private University of Jordan, P.O. Box 911597, Post Code: 11191, Amman, Jordan
ABSTRACT: Problem statement: Most exhaustive NDT techniques require large capital equipment, are difficult to apply to complex geometric structures and, above all, are time-consuming to use and some take a considerable time to complete. As a solution to the problems associated with NDT applications, there is a need to establish an intelligent analysis system that supports a portable testing environment, which allows various types of inputs and provides sufficient data regarding damage severity in the tested structure. Approach: This research investigated possible fast NDT systems and algorithms and provides a novel approach that allows engineers and researchers to pinpoint defects in real time. The system was based on incident signals on a composite surface being detected and analyzed. Any damage in the composite causes a change in the detected signal. The proposed technique is suitable for high volume monitoring and inspection of safety critical components non-destructively. It unified through conversion the extracted information from irrelevant background using the developed Classification Algorithm with the ability to correlate obtained data to level of damage and it is effect on the structure overall performance. Results: The feasibility of using time measurements to establish the integrity of RIM composites using a handheld, low frequency, electronic tapping device has been studied. The relationship between damage and component thickness had also been established. Conclusion: A mathematical model describing the composite time response and its relation to both level of damage and tensile strength was presented. An excellent agreement between the model and the testing data was observed. Also the credibility of the measuring device and its promising future as a cheap on line NDT testing instrument was proved. © 2010 Science Publications.

Taha, M.O., Tarairah, M., Zalloum, H., Abu-Sheikha, G.
Pharmacophore and QSAR modeling of estrogen receptor β ligands and subsequent validation and in silico search for new hits
(2010) Journal of Molecular Graphics and Modelling, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
71849088425&doi=10.1016%2fj.jmgm.2009.09.005&partnerID=40&md5=cd6d000498173a65bbb4b9f76409c7ad
AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, University of Jordan, Queen Rania Street, Amman, 11942, Jordan;
Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: The pharmacophoric space of estrogen receptor beta (ERβ) was explored using a set of 119 known ligands. Subsequently, genetic algorithm and multiple linear regression analysis were employed to select optimal combinations of pharmacophoric models and physicochemical descriptors in self-consistent and predictive quantitative structure-activity relationships (QSARs) (r_{962} = 0.79 - 0.83, F-statistic = 40.96-36.20, r_{LOO2} = 0.74 - 0.76 and r_{PRESS2} against 23 external compounds = 0.54-0.56, respectively). Four binding hypotheses emerged in two optimal QSAR equations suggesting the existence of distinct binding modes accessible to ligands within ERβ binding pocket. The close similarity among the resulting pharmacophores prompted us to merge them in two hybrid models. The hybrid pharmacophores illustrated superior receiver operator characteristic curves (ROCs) and closely resembled binding interactions suggested by docking experiments. The resulting models and associated QSAR equations were employed to screen the national cancer institute (NCI) list of compounds and an in house built database of known drugs and agrochemicals to search for new ERβ ligands. © 2009 Elsevier Inc. All rights reserved.

Kittaneh, F., Manasrah, Y.
Improved Young and Heinz inequalities for matrices
(2010) Journal of Mathematical Analysis and Applications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
70349378865&doi=10.1016%2fj.jmaa.2009.08.059&partnerID=40&md5=819ab251866c037df57b711606e5b4e5
AFFILIATIONS: Department of Mathematics, University of Jordan, Amman, Jordan;
Department of Mathematics, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: We give refinements of the classical Young inequality for positive real numbers and we use these refinements to establish improved Young and Heinz inequalities for matrices. © 2009 Elsevier Inc. All rights reserved.

Al-Qirem, R.M., Yaseen, S.G.
Modelling a small firm in Jordan using system dynamics
(2009) Handbook of Research on Discrete Event Simulation Environments: Technologies and Applications,

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ABSTRACT: The Jordanian banks and the risk analysts in particularly are seeking to adapt and buy new analytical techniques and information systems that help in identifying, monitoring and analysing the credit risk especially for the small firms that represents the biggest firms' base in the Jordanian markets. This chapter supports that what analysts need is a thinking tool that allow the user to simulate, understand and control different policies or strategies. It will then enable better decision to be made. A simulator based on system dynamics methodology is the thinking tool produced by this chapter. The system dynamics methodology allows the bank to test "What If" scenarios based on a model which captures the behaviour of the real system over time. The objectives of this chapter is to introduce new performance measures using systems thinking paradigm that can be used by the Jordanian banks to assess the credit worthiness of firms applying for credit. © 2010, IGI Global.

Ghaleb Yaseen, S., Al Omoush, K.S.
The critical success factors of web-based supply chain collaboration adoption: An empirical study
(2009) Utilizing Information Technology Systems Across Disciplines: Advancements in the Application of Computer Science, .
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ABSTRACT: This chapter aims to identify the Critical Success Factors (CSFs) and outcomes of Web-based Supply Chain Collaboration (SCC). A total of 230 questionnaires were initially distributed to sample respondents of seven manufacturing firms in Jordan that use Web systems to collaborate with supply chain members. The results showed that top management support, IT infrastructure, training and education, business processes reengineering, trust among partners, open information sharing, and performance measurement are critical factors for Web-based SCC implementation success. In addition, this study revealed that Web-based SCC implementation is positively related to supply chain relationship quality, performance effectiveness, and performance efficiency. © 2009, IGI Global.

Assafa, S.M., Khanfar, M.S., Obeidat, R., Salem, M.S., Arida, A.I.
Effect of different organic solvents on crystal habit of mefenamic acid
(2009) Jordan Journal of Pharmaceutical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77953677780&partnerID=40&md5=04811696268f27d940f3f8b2026900d9
AFFILIATIONS: Department of Pharmaceutical Sciences, Faculty of Pharmacy, Jordan University of Science and Technology, Jordan;
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Department of Pharmaceutical Sciences, Faculty of Pharmacy, Al Zaytoona University, Jordan

ABSTRACT: Mefenamic acid (MA) crystals which have different types of habits were prepared by antisolvent technique using different organic solvents; ethanol, acetone, and isopropanol. The physicochemical characteristics of the crystals were studied using various techniques: scanning electron microscope, X-ray powder diffractometry, FTIR spectrometry, differential scanning calorimetry, dissolution behavior, and wettability. All crystals were found to be isomorphic. Dissolution studies were performed. Crystals prepared using acetone as a solvent showed the highest dissolution rate among other solvents used in this study. The improvement in the dissolution is mainly due to the changes in the outer appearance of the crystals and surface modification. The choice of optimal solvent would influence the crystal habit and dissolution of MA. © 2009 DAR Publishers/University of Jordan.

Al-Hiari, Y.M., Sweileh, B.A., Shakya, A.K., Sheikha, G.A., Almuhtaseb, S.I.
Synthesis of 1-benzyl-1,2,3,4-tetrahydroisoquinoline, Part I: Grignard synthesis of 1-(substitutedbenzyl)-1,2,3,4-tetrahydroisoquinoline models with potential antibacterial activity
(2009) Jordan Journal of Pharmaceutical Sciences, .
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AFFILIATIONS: Pharmaceutical Sciences Department, Faculty of Pharmacy, University of Jordan, Amman, Jordan;
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Department of Allied Medical Science, Zarqa University Colleague, Al-Balqa Applied University, Zarqa, Jordan

ABSTRACT: Benzyl tetrahydroisoquinoline alkaloids have interesting biological activity. This work aims at investigating Grignard conditions for the preparation of models of 1-(substitutedbenzyl)-1,2,3,4-tetrahydroisoquinoline and to investigate their biological activity. The head 3,4-dihydroisoquinoline (3a) was coupled to selected substituted benzyl chloride tails (4ag) at carbon 1 of the tetrahydroisoquinoline unit, utilizing different Grignard conditions. Thorough investigation proved that the best conditions were to stir a mixture of magnesium turnings, iodine crystals, few drops of 1,2-dibromo ethane in THF and the substituted benzyl chloride tail at -10°C, followed by adding 3a in THF at -80°C. These conditions worked successfully for the preparation of benzyl-tetrahydroisoquinolines 5a-d with acceptable yields (62-86%). The substituted tails benzyloxybenzyl chloride 4f and 4-hydroxybenzyl chloride 4e were added under the same conditions but lower temperatures, furnishing benzyl tetrahydroisoquinolines 5e and 5f in low yields (< 8%). An alternative strategy based on lithiation of N-benzoyl-1,2,3,4-tetrahydroisoquinoline 13 followed by alkylation of the selected tails produced 5e and 5f with satisfactory yields upon hydrolysis of 16; 5e (82%) and 5f (60%). All products and intermediates were isolated, purified and their structure confirmed using NMR, IR and MS techniques. The antibacterial activity against tetracycline resistant MRSA revealed that some compounds were identified as being of potential interest. In particular, compounds 9 (42%), 5e (82%) and 16 (71%) showed interesting antibacterial activity with MIC ranges of 10 to 64 μ g/ml. In conclusion, this research was successful in preparing 1-substituted benzyl models of the tetrahydroisoquinoline nucleus. Such models can be good candidates for further biological activity screening tests. © 2009 DAR Publishers/University of Jordan.

Kamel, A.A., Bond, E., Froelicher, E.S.
Stroke patients' caregivers: Their experiences and needs: A qualitative literature review
(2009) Jordan Medical Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77951271925&partnerID=40&md5=4809659b35ec029d03fe812dccf46820
AFFILIATIONS: University of Jordan, Al-Zaytoonah University of Jordan, Faculty of Nursing, Amman, Jordan;
BYU College of Nursing, University of Jordan, Amman, Jordan;
Department of Physiological Nursing, School of Nursing, University of California San Francisco, United States;
Department of Epidemiology and Biostatistics, School of Medicine, University of California San Francisco, United States;
University of Jordan, Amman, Jordan
ABSTRACT: Background: Home-care for stroke patients contributes to physical, emotional and social difficulties for the caregivers. Objective: To explore the experience and needs of stroke patients' caregivers in qualitative research reports. Significance: Understanding the experiences of the caregivers from their own subjective perspective is an initial step for nurses in their way to understand caregivers' needs so that to help provide evidence-based care to improve the quality of life for patients and caregivers. Methods: literature review searches were conducted using CINAHL, and MEDLINE. The key search terms were caregiver, stroke, and qualitative. Full text and peer reviewed qualitative studies were evaluated in this paper. The studies were limited to those published between 2000 and 2008. Results: Fatigue, sleep alteration, exhaustion and pain were the most documented physical complaints of caregivers. Worries, anxiety and uncertainty were the hallmarks of the caregivers' emotional state. Social role changes led caregivers to feelings of social isolation. In general, the caregivers' needs were neglected. They would have liked to access information about the disease, caregiving tasks, and community resources. Conclusion: Quality home management for stroke patients depends on healthy, well prepared and trained caregivers. Nurses play a significant role in carefully listening to their concerns, needs, and positively supporting them throughout their caregiving trajectory. © 2009 DAR Publishers/University of Jordan. All Rights Reserved.

Mustafa, K.M., Al-Qutaish, R.E., Muhairat, M.I.
Classification of software testing tools based on the software testing methods
(2009) 2009 International Conference on Computer and Electrical Engineering, ICCEE 2009, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-77950496861&doi=10.1109%2fICCEE.2009.9&partnerID=40&md5=bcd1de04d4de26f5231e221e26b2f5f7
AFFILIATIONS: Al-Zaytoonah University of Jordan, Airport Street, Amman, Jordan
ABSTRACT: During the software development life cycle, testing is highly needed to assure the quality of the software process and product. For many years, researchers and practitioners came-up with a variety of software tools to automate the testing process. In this paper, we will classify and distribute a set of testing tools over the types of testing (testing methods) for three types of software products (web application, application software, and network protocol). However, the

outcomes of this classification are dedicated to the researchers and practitioners in software testing to know which types of testing have no or limited automated tools. © 2009 IEEE.

Chan, Y.-T.F., Shoniregun, C.A., Akmayeva, G.A., Al-Dahoud, A.
Applying semantic web and user behavior analysis to enforce the intrusion detection system
(2009) International Conference for Internet Technology and Secured Transactions, ICITST 2009, .
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77950322135&partnerID=40&md5=9b56069d73b278c2029075ef7818091c
AFFILIATIONS: Wessex Institute of Technology, United Kingdom;
Infonomics Society, United Kingdom;
Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: The Web Service has been extended to the back-end database. In this paper, we propose a novel method of user behavior analysis in semantic network. We use the weight value to analyze and record user behavior and then check user behavior record with the signatures which are generated by the Intrusion Detection System (IDS). If a user record matches with signatures, the system will pass the record to the Analysis Console for Intrusion Database (ACID) to do more the further processing and then response to user. The ACID does not only help the system administrator to maintain and protect the web service in order to prevent the intruders' attacking but also show the security information. In the current Internet, it is a very complex and insecure environment. Everything can be happened in this environment. In our solution, it can not only successfully solve the Cross-Site Scripting (XSS) attack and SQL Injection attack but also understand user behavior. In the future work, we can use user behavior information to design securer web service. Copyright © 2009 by the Institute of Electrical and Electronics Engineers, Inc. All rights reserved.

Sweidan, K., Abu-Salem, Q., Al-Sheikh, A., Abu Sheikha, G.
Novel derivatives of 1,3-dimethyl-5-methylenebarbituric acid
(2009) Letters in Organic Chemistry, .
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77249122533&doi=10.2174%2f157017809790442934&partnerID=40&md5=0cafc690e1d3071bfd06a2ccf9a1c29a
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Institut für Anorganische Chemie, Universität Tübingen, Auf der Morgenstelle 18, D-72076, Germany;
Department of Pharmacy, University of Petra, Amman, Jordan
ABSTRACT: The ability of the pyridinium adduct of 1,3-dimethyl-5-methylenebarbituric acid (2) to undergo nucleophilic substitution reaction has been examined. Various types of nucleophiles, including cyanide, barbiturate, sulfide anions and 1,2-bis(diphenylphosphino)ethane substitute the pyridinium fragment in 2 leading to synthesis of new organic derivatives. ©2009 Bentham Science Publishers Ltd.

Sweidan, K., Kuhn, N., Maichle-Mössmer, C.
Crystal structure of 1, 3-diisopropyl-4, 5-dimethylimidazolium E-2-cyano-1-phenylethenolate, (C11H21N2)(C 9H6NO)
(2009) Zeitschrift fur Kristallographie - New Crystal Structures, .
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76149123212&doi=10.1524%2fncrs.2009.0130&partnerID=40&md5=f98fb40ebe495ce1267c81a6fc3fc68f
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Universität Tübingen, Institut für Anorganische Chemie, Auf der Morgenstelle 18, 72076 Tübingen, Germany
ABSTRACT: C20H27N3O, monoclinic, P121/c1 (no. 14), a = 8.460(2) Å, b = 12.032(2) Å, c=18.279(4) Å, β = 90.45(3)°, V = 1860.6 Å3, Z = 4, Rgt(F) = 0.056, wRref(F2) = 0.142, T= 173 K. © by Oldenbourg Wissenschaftsverlag.

Iskandarani, M.Z.
Numerical modeling of neural switch programming field using finite element analysis
(2009) Proceedings of the 13th WSEAS International Conference on Computers - Held as part of the 13th WSEAS CSCC Multiconference, .
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75149152985&partnerID=40&md5=6f595ba4b43dd6e854ec80fdbf174357
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O.BOX 911597, Post Code: 11191, Jordan
ABSTRACT: The design and numerical modeling using Finite Element Analysis (FEA) of electric field strength in programmable neural switch is carried out. The obtained model provided good approximation to the derived complex analytical solution. Effect of electrode separation and field spread in both x and y directions are studied and explained. Boundary effect on field strength representation is discussed and numerically reduced through increasing the number of nodes for each element in the

finite grid. Edge effect on field strength is also eliminated using semi-infinite coplanar electrode approximation.

Sunjuk, M., Al-Noaimi, M., Al-Degs, Y., Al-Qirem, T., Lindner, E., Abu-Surrah, A.S.
Higher α-olefins carbonylation in aqueous media by Pd(II) catalysts modified with substituted diphosphine ligands: Aqueous polyketone latices with high solid contents and molecular weights
(2009) Journal of Polymer Science, Part A: Polymer Chemistry, .
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AFFILIATIONS: Faculty of Science, Department of Chemistry, Hashemite University, P.O. Box 150459, Zarqa 13115, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, P.O. Box 130, Amman, Jordan;
Institut Fü R Anorganische Chemie, Eberhard-Karls-UniversitÄt Tübingen, Auf der Morgenstelle 18, D-72076 Tübingen, Germany
ABSTRACT: Water-soluble palladium complexes cis-$[Pd(L)(OAc)_2]$ (1-8) (L represents a diphosphine ligands of the general formula $CH_2(CH_2PR_2)_2$, where for a: R = $(CH_2)_6OH$; b-g: R = $(CH_2)_nP(O)(OEt)_2$, n = 2-6 and n = 8; h: R = $(CH_2)_3NH_2$) have been employed, after activation with a large excess of HBF_4, for emulsion polymerization of alkenes (propene, butene, and their equimolar mixtures) with carbon monoxide. Aliphatic polyketone lattices with a high solid content (21%), high molecular weight (6.3 × 10^4 g mol^{-1}), and narrow polydispersities (Mw/Mn × ≈ 2) were isolated. The catalytic activity of the dicationic palladium (II) based catalysts, C1-C8 is highly dependent on the length of the alkyl chain of the ligand. Catalyst 3 proved to be highly active for propene/CO copolymers, whereas 6 is active for butene/CO and propene/ CO-butene/CO systems. The presence of methyl β-cyclodextrin, as a phasetransfer agent, and undecenoic acid, as an emulsifier, increase the molar mass and the stability of the polyketones and finally the activity of the catalyst. © 2009 Wiley Periodicals, Inc.

Iskandarani, M.Z.
Mathematical modeling and numerical analysis of the programming field in PEO10LiCF3SO3-polypyrrole neural switch
(2009) WSEAS Transactions on Computers, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-70450180458&partnerID=40&md5=759634dca93d222566d787b368deaccc
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O.BOX 911597, 11191, Jordan
ABSTRACT: The design and numerical modeling using Finite Element Analysis (FEA) of electric field strength in a programmable neural switch is carried out. The obtained model provided good approximation to the derived complex analytical solution, which is carried out by means of complex mathematical analysis employing SCHWARZ-CHRISTOFFEL transform. Effect of electrode separation and field spread in both x and y directions are studied and explained. Boundary effects on field strength representation is discussed and numerically reduced through increasing the number of nodes for each element in the finite grid. Edge effect on field strength is also eliminated using semi-infinite coplanar electrode approximation. Such a switch will function as a synaptic processor behaving in an adaptive manner and suitable to be used as a compact programmable device with other artificial neural network hardware.

Awawdeh, F., Jaradat, H.M., Alsayyed, O.
Solving system of DAEs by homotopy analysis method
(2009) Chaos, Solitons and Fractals, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-67650424269&doi=10.1016%2fj.chaos.2009.03.057&partnerID=40&md5=e9d4b35bb341a8c926d709ffbf96b038
AFFILIATIONS: Department of Mathematics, Hashemite University, Jordan;
Department of Mathematics, Al al-Bayt University, Jordan;
Department of Mathematics, Al-Zaytoonah University, Jordan
ABSTRACT: Homotopy analysis method (HAM) is applied to systems of differential-algebraic equations (DAEs). The HAM is proved to be very effective, simple and convenient to give approximate analytical solutions to DAEs. © 2009 Elsevier Ltd. All rights reserved.

Sudha, S., Samsudin, A., Alia, M.A.
Group re-keying protocol based on modular polynomial arithmetic over galois field GF(2n)
(2009) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-70350004943&doi=10.3844%2fajassp.2009.1714.1717&partnerID=40&md5=5d87ae200c91fd206ae62a616c8ec569
AFFILIATIONS: School of Computer Sciences, University Sains Malaysia, Malaysia;
Department of Computer Information System, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Problem statement: In this study we propose a group re-keying protocol based on modular

polynomial arithmetic over Galois Field GF(2n). Common secure group communications requires encryption/decryption for group re-keying process, especially when a group member is leaving the group. Approach: This study proposes secret keys multiplication protocol based on modular polynomial arithmetic (SKMP), which eliminates the need for the encryption/decryption during the group re-keying. Results: The implementation based on modular polynomial arithmetic over Galois Field GF(2n) offers fast re-keying process (about 50% faster than Secret Keys Multiplication Protocol (SKM) for 128 bit key) and compact key size representation against other secret keys multiplication protocols. Conclusion: With SKMP group re-keying is handled more efficiently through modular polynomial arithmetic manipulation rather than the expensive encryption/encryption which need to be done on every membership change. © 2009 Science Publications.

Iskandarani, M.Z.
Impedance analysis of heat treated polyethylene oxide polymeric material for a neural storage application
(2009) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-70349292571&doi=10.3844%2fajassp.2009.1364.1367&partnerID=40&md5=94c93363be1adae08b58e01cc8abff28
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, Post Code: 11191, Amman, Jordan
ABSTRACT: Problem statement: From the early days of, researchers have developed electronic models of neurons designed to emulate neural behavior with electrical signals that mimic in some ways the measured potentials of biological neurons. Researchers interested in fabricating artificial neurons have long sought a simple and techniques to produce devices that efficiently store synaptic weights, which is behind holding a particular state in relation to conductance parameters. As Engineers become closer to realizing accurate hardware models of neurons, the need for a simple analog memory device grows correspondingly. To determine the storage characteristics of polyethylene oxide based polymer as the base material for high charge storage analogue neural switch. Approach: Various devices prepared under controlled conditions. Each device tested for its impedance characteristics as a function of both frequency and temperature. Mathematical model developed to account for the obtained characteristics. Results: The heat treated devices showed stability, repeatability and ability to store enough charge for long time periods. Impedance analysis proved a similar response to the actual neural switches. Conclusion: The symmetrical behavior for such devices opened a wide application area for the manufacturing of low and high frequency analogue devices for intelligent system applications. © 2009 Science Publications.

Nabulsi, M.A., Al-Husainy, M.A.F.
Using combinational circuits for control purposes
(2009) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-68149179167&doi=10.3844%2fjcssp.2009.507.510&partnerID=40&md5=94ddb197ff0805d39838a45b7bef2c9b
AFFILIATIONS: Department of Computer Science, Faculty of Sciences and Information Technology, Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: Problem statement: Combinational circuits are used in computers for generating binary control decisions and for providing digital components for data processing. Approach: The use of combinational circuits and logic gates to control other circuits was discussed. Different systems that use logic gates, multiplexers, decoders and encoders to control different circuits were presented. This study presented a design and implementation of some combinational circuits such as a decoder, an encoder, a multiplexer, a bus system and read/write memory operations. Results: When we connected some types of combinational circuits to the inputs/outputs of digital circuit, these combinational circuits can help us to manage and flow a different types of control signals through a large digital circuit. Conclusion: Many combinational circuits had a good function which can be used for controlling different parts of any digital system and they produce a suitable way to transfer a control signals between different digital components of any large digital system. © 2009 Science Publications.

Shahwan, M.J., Al-Qirim, T.M., Daradka, H.
Hypolipidaemic effects of Euphorbia prostrata in rabbits
(2009) Journal of Biological Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-67650649773&doi=10.3923%2fjbs.2009.88.91&partnerID=40&md5=9a65631e43da3401916fe5db2c5f9f2a
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Department of Biology, Faculty of Science, Jerash Private University, P.O. Box 311, Jerash 26110, Jordan
ABSTRACT: The aim of this research was to study the effect of 70% ethanol extract of Euphorbia

prostrata on lipid profile in rabbits. The plant extract was orally administered to the atherogenic rabbits (atherogenic diet + cholesterol powder supplement at 400 mg/kg/body weight/day dissolved in 5 mL coconut oil) at dose of 0.0012 kg body weight/day. During the hall period of the experiment blood-samples were collected and serum was arialyzed for lipid profile. At the end of the experiment the animals were sacrificed; the heart and the liver were collected and stored at -20°C until assayed. Biochemical analysis of blood serum add tissue (liver- and heart muscle were performed for cholesterol, phospholipids and triglycerides. In addition blood serum was analyzed further for HDL-cholesterol. All the results were statistically analyzed using students t-test. Hypolipidaemic nature of Euphorbia prostrata extract was studied in hyperlipidaemic rabbits. The increased cholesterol levels were brought to normal by administration of Euphorbia prostrata. Serum cholesterol levels. dropped from 940.7 to 230.41 (75.55%) and further to 119.2 (87.32%) by the end of the experiment Similarly, phospholipids and triglycerides levels were reduced The tissues lipids, profiles of liver and heart muscle showed similar changes in those noticed in serum lipids. We can conclude from these results that Euphorbia prostrata possesses active hypolipidaemic constituents. The results suggest the validity of Euphorbia prostrata clinical use in hypolipidaemic control, after their toxicological investigation. © 2009 Asian Network for Scientific Information.

Al-Qutaish, R.E.
Measuring the software product quality during the software development life-cycle: An international organization for standardization standards perspective
(2009) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-67650080041&doi=10.3844%2fjcssp.2009.392.397&partnerID=40&md5=83df794cc70b66db385f2279c739e36d
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ABSTRACT: Problem statement: The International Organization for Standardization (ISO) published a set of international standards related to the software engineering, such as ISO 12207 and ISO 9126. However, there is a set of cross-references between these two standards. Approach: The ISO 9126 on software product quality and ISO 12207 on software life cycle processes had been analysed to investigate the relationships between them and to make a mapping from the ISO 9126 quality characteristics to the ISO 12207 activities and vers versa. Results: This study presented a set of comments and suggestions to improve the ISO 9126. Conclusion: The weaknesses of the cross-references between the two ISO standards had been highlighted. In addition, this study provided a number of comments and suggestions to be taken into account on the next version of the ISO 9126 international standard. © 2009 Science Publications.

Al-Salami, N.M.A.
System evolving using ant colony optimization algorithm
(2009) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-67650080035&doi=10.3844%2fjcssp.2009.380.387&partnerID=40&md5=c35b1ca9c0dba2b4b269306af6a78684
AFFILIATIONS: Department of Management Information Systems, Faculty of Economic and Business, Al Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: Problem statement: The goal of automatic programming system is to create, in an automated way, a computer program that enables a computer to solve a problem. It is difficult to build an automatic programming system: They require carefully designed specification languages and an intimate knowledge base. Determine the relevance of mathematical system theory to the problems of automatic programming and find automatic programming methodology, where a computer program evolved to solve problem by using problem's input output specifications only. Approach: Problem behavior was described as a finite state automata based on its meaning, also problem's input-output specifications were described in theoretical manner, based on its input and output trajectories information, then a program was evolved to solve the problem. Different implementation languages can be used without significantly affecting existing problem specification. Evolutionary process adapts ant colony optimization algorithm to find good finite state automata that efficiently satisfies input-output specifications. Results: By moving from state to states, each ant incrementally constructs subsolution in an iterative process. The algorithm converged to the optimal final solution, by accumulating most effective sub-solutions; main problem will appeared in solving problem with little input-output specifications. Fixed and dynamic input-output specifications were used to mimic chaotic behavior of real world. Conclusion: These results indicated that theoretical bases can enhance efficiency and performance of automatic programming system, leading to an increase in the system productivity and letting the concentrate to be done on problemTEM specification only. Also, the collective behavior emerging from the interaction of the different ants had proved effective in solving problem; finally, in dynamic input-output specification chaos theory, especially "butterfly effect", can be used to control the sensitivity to initial configuration of trajectory information. © 2009 Science Publications.

Dal Piaz, F., Vassallo, A., Lepore, L., Tosco, A., Bader, A., De Tommasi, N.
Sesterterpenes as tubulin tyrosine ligase inhibitors. First insight of structure-activity
relationships and discovery of new lead
(2009) Journal of Medicinal Chemistry, .
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67549128952&doi=10.1021%2fjm801637f&partnerID=40&md5=0ce8d5ded67a67cb0f29a13be3e1aae6
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ABSTRACT: Twenty-four new sesterterpenes, compounds 1-24, were isolated from the aerial parts of
Salvia dominica. Their structures were elucidated by 1D and 2D NMR experiments as well as ESIMS
analysis and chemical methods. The evaluation of the biological activity of Salvia dominica
sesterterpenes by means of a panel of chemical and biological approaches, including chemical
proteomics, surface plasmon resonance (SPR) measurements, and biochemical assays were realized.
Obtained results showed that 18 out of the 24 sesterterpene lactones isolated from Salvia dominica
interact with tubulin-tyrosine ligase (TTL) an enzyme involved in the tyrosination cycle of the C-
terminal of tubulin, and inhibit TTL activity in cancer cells. Besides, results of our studies
provided an activity/structure relationship that can be used to design effective TTL inhibitors. ©
2009 American Chemical Society.

Sunjuk, M., Al-Noaimi, M., Sheikha, G.A., Lindner, E., El-Eswed, B., Sweidan, K.
Synthesis and characterization of water-soluble palladium(II)-functionalized diphosphine complexes
(2009) Polyhedron, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
65549099554&doi=10.1016%2fj.poly.2009.01.040&partnerID=40&md5=7de1a046b092bf9d8f533156b5fac83c
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ABSTRACT: Water-soluble functionalized bis(phosphine) ligands L (a-h) of the general formula
CH2(CH2PR2)2, where for a: R = (CH2)6OH; b-g: R = (CH2)nP(O)(OEt)2, n = 2-6 and n = 8; h: R =
(CH2)3NH2 (Scheme 1), have been prepared photochemically by hydrophosphination of the corresponding
1-alkenes with H2P(CH2)3PH2. Water-soluble palladium complexes cis-[Pd(L)(OAc)2] (1-8) were obtained
by the reaction of Pd(OAc)2 with the ligands a-h in a 1:1 mixture of dichloromethane:acetonitrile.
The water-soluble phosphine ligands and their palladium complexes were characterized by IR, 1H and
31P NMR. A crystallographic study of complex 1 shows that the Pd(II) ion has a square planar
coordination sphere in which the acetate ligands and the diphosphine ligand deviate by less than 0.12
Å from ideal planar. © 2009 Elsevier Ltd. All rights reserved.

Al-Ani, M.Sh., Al-Kasasbeh, B.M., Al-Qutaish, R.E., Muhairat, M.I.
Constructing a new communication system by integrating the GSM to the satellites infrastructure
(2009) WSEAS Transactions on Communications, .
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66349119819&partnerID=40&md5=1a351128885bcc11396879852ee52062
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ABSTRACT: The current researches and industries are looking forward to integrate different
technologies to get a global technology that offers all of the intended services in a simple way. In
this paper, a new communications system is proposed to integrate the use of GSM over the available
satellites infrastructures. The proposed communications system could be used to facilitates and get
benefits of both systems (the GSM and Satellites) to achieve competitive services over the world. The
proposed system is concentrated on a global communications system that served all over the world and
gives some specialization and privacy for each country. Furthermore, this paper shows an algorithm on
how to implement the GSM over satellite systems in an efficient, flexible, and cost-effective manner.

Abu-Hammad, A., Zalloum, W.A., Zalloum, H., Abu-Sheikha, G., Taha, M.O.
Homology modeling of MCH1 receptor and validation by docking/scoring and protein-aligned CoMFA
(2009) European Journal of Medicinal Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
64249106202&doi=10.1016%2fj.ejmech.2009.01.031&partnerID=40&md5=c0933fb3366f4a25c30079d16fa40961
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ABSTRACT: Homology modeling is becoming a valid method for obtaining three-dimensional coordinates
for proteins. However, it is hard to judge the qualities of the resulting models warranting robust
subsequent validations. In an attempt to evaluate the quality of Melanin-concentrating hormone 1
receptor (MCH1R) homology models, a number of homology structures were scanned for potential binding
cavities. Subsequently, a group of 35 benzylpiperidines' MCH1R inhibitors were docked into each of
the proposed binding sites via four different scoring functions. The docked structures were utilized
to construct corresponding protein-aligned comparative molecular field analysis (CoMFA) models by
employing probe-based (H+, OH, CH3) energy grids and genetic partial least squares (G/PLS)
statistical analysis. The docking-based alignment succeeded in accessing self-consistent CoMFA models
upon employing JAIN scoring function in one of the proposed binding pockets in a particular homology
model. Furthermore, a ligand-based pharmacophore model was developed for the same set of inhibitors
and was found to agree with the successful docking configuration. Therefore, we proved that the
overall procedure of docking, scoring, and CoMFA evaluation can be a useful tool to validate homology
models, which can be of value for structure-based design, in-silico screening, and in understanding
the structural basis of ligand binding to MCH1R. © 2009 Elsevier Masson SAS. All rights reserved.

Sweidan, K., Kuhn, N., Maichle-Mössmer, C.
Crystal structure of 1,3-diisopropyl-4,5-dimethylimidazolium E-2-cyano-1-phenylethenolate, (C11H21N2)
(C9H6NO)
(2009) Zeitschrift fur Kristallographie - New Crystal Structures, .
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85025298627&doi=10.1524%2fncrs.2009.224.14.305&partnerID=40&md5=07017f8904075947ad579df3472ba7b6
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Universität Tübingen, Institut für Anorganische Chemie, Auf der Morgenstelle 18, 72076 Tübingen,
Germany
ABSTRACT: C20H27N3O, monoclinic, P121/c1 (no. 14), a - 8.460(2) Å, b = 12.032(2) Å, c = 18.279(4) Å,
β = 90.45(3)°, V = 1860.6 Å3, Z = 4, Rgt(F) = 0.056, wRref(F2) = 0.142, T= 173 K. © 2014 Oldenbourg
Wissenschaftsverlag GmbH, Rosenheimer Str. 145, 81671 München. All rights reserved.

Pawlowska, A.M., Camangi, F., Bader, A., Braca, A.
Flavonoids of Zizyphus jujuba L. and Zizyphus spina-christi (L.) Willd (Rhamnaceae) fruits
(2009) Food Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
50049130680&doi=10.1016%2fj.foodchem.2008.06.053&partnerID=40&md5=e7cc176e20b1db1fdf173a3cbfa3fba4
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Liberta 33, 56127 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan
ABSTRACT: The ripe edible fruits of jujube, Zizyphus jujuba Miller (syn. Z. sativa Gaertner, Z.
vulgaris Lam.) and Christ's thorn jujube Zizyphus spina-christi (L.) Willd (Rhamnaceae family) were
phytochemically investigated, comparing their quali-quantitative flavonoids profile. Twelve compounds
from both methanol extracts have been recognized as quercetin, kaempferol, and phloretin derivatives
by means of HPLC/ESI-MS analyses. Six major compounds have been purified by Sephadex LH-20 column
chromatography followed by HPLC and were characterized using NMR spectroscopy. One C-glycoside,
3′,5′-di-C-β-d-glucosylphloretin, was detected in Z. spina-christi. The quantitative analysis of all
compounds was also reported showing a higher content of flavonoids in Z. jujuba. © 2008 Elsevier Ltd.
All rights reserved.

Shaqrah, A.A., Alomoush, K.S., Al-Hashem, A.
A typology of tacit knowledge sharing themes to fostering group decision support system
(2009) Knowledge Management and Innovation in Advancing Economies: Analyses and Solutions -
Proceedings of the 13th International Business Information Management Association Conference, IBIMA
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84905106515&partnerID=40&md5=9f5cabafe2c5386f2358f05a7ce39ec3
AFFILIATIONS: Alzaytoonah University, Amman, Jordan;
Al-Balqa Applied University, Amman, Jordan
ABSTRACT: This paper outlines a typology to guide that applying tacit knowledge sharing themes from
social perspective "i.e. trust and care, leadership charisma, knowledge culture, concept ba, and
social network analysis" affect on group decision support system. Above themes facilitate more open

group discussion with higher degree of consensus and agreement resulting in a vividly higher accurate of decision.

Shaqrah, A.A., Alkhaldi, F.M.
An empirical model of the customer knowledge sharing management
(2009) Creating Global Economies through Innovation and Knowledge Management Theory and Practice - Proceedings of the 12th International Business Information Management Association Conference, IBIMA 2009, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84897972020&partnerID=40&md5=6f55c31407d7f2a3a5a74dd2ce49dcfa
AFFILIATIONS: Alzaytoonah University, Amman, Jordan;
KM Academy International, Amman, Jordan

ABSTRACT: Customer knowledge sharing management (CKSM) creates new knowledge sharing platforms and processes between insurance companies in Jordan and their customers. It is a continuous strategic process by enabling customers to move from passive knowledge sources and recipients of services to active knowledge partners in services development. This study investigates significant contribution to KM and CRM field as an integration strategy between customer knowledge sharing (CKS) and customer relationship management value strategy (CRM) to developed conceptual model. Proposed model incorporates principles of knowledge sharing strategies and customer relationship management value strategies potentially powerful competitive strategy and contributing to improved competitive advantage of Jordanian insurance companies. Structural equation modeling (SEM) was used to infer fitting proposed model.

Zamojski, W., Walkowiak, T., Adamiec, R., Ali, A.-D.
New approach to e-lecturing
(2009) International Journal of Internet Technology and Secured Transactions, .
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AFFILIATIONS: Institute of Computer Engineering, Control and Robotics, Wroclaw University of Technology, ul. Janiszewskiego 11/17, Wroclaw, 50-372, Poland;
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ABSTRACT: The paper describes a multimedia approach to distance lecturing. The authors present methods for enriching the traditional way of teaching by a usage of internet. A substitution of a traditional lecture with video records is presented. Student is able to see and hear recorded fragments of lectures. Furthermore, he or she can observe lecturer presentations (slides) synchronised with video and audio stream. The presented approach is cheap and easy to use, due to new technologies available with Flash 8 environment. Copyright © 2009 Inderscience Enterprises Ltd.

Ali, A.-D., Wosko, M.
The MIT beer game as multiagent simulation: A practical approach using AOR-modelling and an XML-based implementation framework
(2009) International Journal of Internet Technology and Secured Transactions, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84878655809&doi=10.1504%2fIJITST.2009.023904&partnerID=40&md5=1c75b3246c675327c41ae5473a2706a1
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Multimedia Center, Information, Communication and Media Center, Brandenburg University of Technology, 14 Nordstrasse, Cottbus, Brandenburg, 03044, Germany

ABSTRACT: This paper deals with a synthesis of theoretical and conceptual work on an MAS-model of the MIT beer game, known from the paper where it was first formulated (Luin et al., 2004), with the implementation of a general simulation framework, called absimulation, given in Raffel's (2005) work. The first goal of this study was to make the authors and the intended audience acquainted with issues that arise within processes such as MAS modelling and peculiarities of MAS implementation techniques. Though comparatively much work is associated here with the concrete case of a model of the particular supply chain management game, it was attempted to discuss much more general MAS-related problems, whenever the given implementation offered the opportunity for such a discussion. Copyright © 2009 Inderscience Enterprises Ltd.

Al-Qirim, T., Shahwan, M., Shattat, G., Al-Hiari, Y., Sheikha, G.A., Zaidi, S.
Pharmacological evaluation of novel indole-2-carboxamides as potent lipid-lowering agents in triton-WR-1339-induced hyperlipidemic rats
(2009) Zeitschrift fur Naturforschung - Section C Journal of Biosciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-70449591816&doi=10.1515%2fznc-2009-9-1003&partnerID=40&md5=998c5844da63d613dbe6de9428f8c633
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Faculty of Pharmacy, University of Jordan, Amman, Jordan;

VA Palo Alto Health Care System, Stanford School of Medicine, Stanford University, Silicon Valley, CA, United States
ABSTRACT: The lipid-lowering effects of two novel antihyperlipidemic agents, BMI2C [N-(4-benzoylphenyl)-5-methoxy-1H-indole-2-carboxamide] and DDMI2C [N-(9,10-dihydro-9,10-di- oxoanthracen-2-yl)-5-methoxy-1H-indole-2-carboxamide], were studied using hyperlipidemic rats as an experimental model; hyperlipidemia was developed by intraperitoneal injection of Triton WR-1339 (200 mg/kg body weight). At a dose of 15 mg/kg body weight, BMI2C and DDMI2C significantly reduced elevated plasma triglyceride levels after 7 and 24 h. Furthermore, BMI2C and DDMI2C significantly reduced elevated plasma total cholesterol levels after 24 h. Interestingly, high-density lipoprotein-cholesterol levels were significantly increased in all treated groups. These findings indicate that the two studied novel compounds have a promising potential in the treatment of hyperlipidemia and atherosclerosis. © 2009 Verlag der Zeitschrift für Naturforschung, Tübingen.

Sweidan, K., Al-Sheikh, A., Sweileh, B., Sunjuk, M., Kuhn, N.
Synthesis of Phosphorus, arsenic and antimony ylides containing the 1,3- dimethyl-2,4,6(1H,3H,5H)-pyrimidinetrione fragments
(2009) Letters in Organic Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-69249164136&doi=10.2174%2f157017809787003106&partnerID=40&md5=ccc74fc5e008ee69a138c2071d9ffb0c
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
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Department of Chemistry, Al-Hashemite University, Amman, Jordan;
Institut für Anorganische Chemie, Universität Tübingen, Germany;
Faculty of Pharmacy, Al- Zaytoonah University of Jordan, P.O. Box 130, Amman, Jordan
ABSTRACT: The ylides Ph3E-C6H6N2O 3 (7, E = P (a), As (b), Sb (c)) have been prepared through the reaction of Ph3E and 5- bromo-1,3-dimethyl-2,4,6(1H,3H,5H)- pyrimidinetrione (5-bromo-1,3-dimethylbarbituric acid) 6 in the presence of triethylamine.Their characterisation was performed by nuclear magnetic resonance (NMR), mass spectrometry (MS) and elemental analysis. © 2009 Bentham Science Publishers Ltd.

Al-Husainy, M.A.F.
Image steganography by mapping pixels to letters
(2009) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-64249111235&doi=10.3844%2fjcssp.2009.33.38&partnerID=40&md5=45021aede8f33cee26659122fb1bbac7
AFFILIATIONS: Department of Computer Science, Faculty of Sciences and IT, Al-Zaytoonah University of Jordan, Jordan
ABSTRACT: Problem statement: Steganography hides the very existence of a message so that if successful it generally attracts no suspicion at all. Using steganography, information can be hidden in carriers such as images, audio files, text files, videos and data transmissions. In this study, we proposed a new framework of an image steganography system to hide a digital text of a secret message. Approach: The main idea for this is to use enough number of bits from each pixel in an image (7-bits in this study) to map them to 26 alphabetic English characters ('a'...'z') with some special characters that are mostly using in writing a secret message. The main goal of this method, like any steganography techniques must do, is to hide a text of a secret message in the pixels of the image in such a manner that the human visual system is not able to distinguish between the original and the stego-image, but it can be easily performed by a specialized reader machine. Results: This method was implemented practically on different (long and short) messages and images. The carrier images that are used in the experiments of this research have no discernible change in it. Conclusion: The recorded experimental results showed that this proposed method can be used effectively in the field of steganography. © 2009 Science Publications.

Al-Sheikh, A., Sweidan, K., Kuhn, N., Maichle-Mößmer, C., Steimann, M.
Elimination of a thiomethyl substituent from an anionic 5-methylenebarbituric acid derivative by oxidation and substitution
(2009) Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-62549141541&doi=10.1515%2fznb-2009-0309&partnerID=40&md5=c9cfd240c5bf6639b52fbcf817957869
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Institut für Anorganische Chemie der Universität Tübingen, Auf der Morgenstelle 18, D-72076 Tübingen, Germany
ABSTRACT: Triethylammonium 5-[(1,3-dimethyl-2,4,6-trioxo-tetrahydropyrimidin-5(6H)- ylidene)-(methylthio)methyl]-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropyrimidin- 4-olate (5), obtained from 5-

[bis(methylthio)methylene]-1,3-dimethyl-2,4,6(1H, 3H,5H)-pyrimidinetrione (2) and 1,3-dimethylbarbituric acid in the presence of triethylamine, is protonated by methanesulfonic acid to give 5,5-(methylthiomethanediylidene)bis(1,3-dimethylpyrimidine-2,4,6(1H,3H,5H) -trione) (6) in good yield. Compound 6 is oxidized in two steps by m-chloroperbenzoic acid to give 5,5-(methylsulfinylmethanediylidene)bis(1,3- dimethylpyrimidine-2,4,6(1H,3H,5H)-trione) (7) and 5-[(1,3-dimethyl-2,4,6- trioxo-tetrahydropyrimidin-5(6H)-ylidene)(methylsulfinyl)methyl]-5-hydroxy-1, 3-dimethylpyrimidine-2,4,6(1H,3H,5H)-trione (8), respectively. Excess pyridine eliminates methanesulfinic acid from 8 to give the zwitterionic 5-[(1,3-dimethyl-2,4,6-trioxo-tetrahydropyrimidin-5(6H)-ylidene(pyridinium-1-yl) methyl]-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropyrimidin-4-olate (9). The crystal structures of compounds 6, 8, and 9 are reported. © 2009 Verlag der Zeitschrift für Naturforschung.

Hamdan, F.B., Al-Matubsi, H.Y.
Assessment of erectile dysfunction in diabetic patients
(2009) International Journal of Andrology, .
AFFILIATIONS: Faculty of Pharmacy, Applied Science University, Private Jordanian University, Amman 11931, Jordan;
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Faculty of Pharmacy, Applied Science University, Private Jordanian University, Amman, Jordan
ABSTRACT: Erectile dysfunction (ED) aetiology is multifactorial, including endocrine, neurological, vascular, systemic disease, local penile disorders, nutrition, psychogenic factors, and drug-related. This study was performed to compare the relevant comprehensive biochemical parameters as well as the clinical characteristics in diabetic ED and healthy control subjects and to assess the occurrence of penile neuropathy in diabetic patients and thus the relationship between ED and diabetes. A total of 56 patients accepted to undergo assessment for penile vasculature using intracavernosal injection and colour Doppler ultrasonography. Of the 56 diabetic patients, 38 patients were found with normal blood flow and thus they were considered as the diabetic-ED group, whereas, ED diabetic patients with an arteriogenic component were excluded. These patients with an age range between 17 and 58 years, complaining of ED, with duration of diabetic illness ranging from 2 to 15 years. The Control group comprised of 30 healthy subject aged between 19 and 55 years. Peripheral venous levels of testosterone, prolactin, follicle stimulating hormone (FSH), luteinizing hormone (LH), thyroid stimulating hormone (TSH), malondialdehyde and glycosylated haemoglobin (HbA1c) were obtained in all subjects. Valsalva manoeuvre and neurophysiological tests were also determined. Testosterone, prolactine, FSH, LH, and TSH hormones of the diabetic patients were not significantly different from those of the control group. Diabetic patients with ED have higher HbA1c and oxidative stress levels while the R-R ratio was significantly decreased. Bulbocavernosus reflex latency was significantly prolonged, whereas its amplitude, the conduction velocity and amplitude of dorsal nerve of penis were significantly reduced in the diabetic patients. We concluded that although ED is a multifactorial disorder, yet, the present study revealed that in ED patients without arteriogenic ED a neurogenic component is present. Furthermore, the complex effect of the Valsalva manoeuvre on cardiovascular function is the basis of its usefulness as a measure of autonomic function. Thus, it can be of value in the diagnosis of ED although these hypotheses require follow-up in a large study cohort. © 2008 The Authors.

Sweidan, K., Abu-Rayyan, A., Al-Sheikh, A., Maichle-Mößmer, C., Steimann, M., Kuhn, N.
Synthesis, structure and reactions of 1,3-dimethyl-5-bis(thiomethyl) methylenebarbituric acid
(2009) Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences, .
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Department of Pharmacy, University of Petra, P. O. Box 961343, Amman, Jordan;
Institut für Anorganische Chemie, Universität Tübingen, Auf der Morgenstelle 18, D-72076 Tübingen, Germany
ABSTRACT: 1,3-Dimethyl-5-bis(thiomethyl)methylenebarbituric acid (8) is obtained from 1,3-dimethylbarbituric acid and CS2/NEt3 followed by alkylation with methyl iodide. Compound 8 reacts with aqueous ammonia to give 5-amino(thiomethyl)methylene-1,3-dimethylbarbituric acid (9). With benzylamine, the thiomethyl substituent in 9 is replaced to give 5-amino(benzylamino) methylene-1,3-dimethylbarbituric acid (10) while with methanesulfonic acid the sulfonate salt 11 is formed. The crystal structures of 8 and 9 are reported. © 2009 Verlag der Zeitschrift für Naturforschung.

Al-Sheikh, A., Sweidan, K., Maichle-Mößmer, C., Steimann, M., Kuhn, N.
Synthesis and reactions of 5-[amino(thiomethyl)methylene]-2,2-dimethyl-1,3- dioxane-4,6-dione
(2009) Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-58649095291&doi=10.1515%2fznb-2009-0113&partnerID=40&md5=ceb34cbb460928bbdbead4162c6fc5d6
AFFILIATIONS: Faculty of Pharmacy, Petra University, P.O. Box 961343, Amman, Jordan;
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ABSTRACT: 5-[Amino(thiomethyl)methylene]-2,2-dimethyl-1,3-dioxane-4,6-dione (4) is obtained from 5-[bis-(thiomethyl)methylene]-2,2-dimethyl-1,3-dioxane-4,6-dione (1) and aqueous ammonia in excellent yield. Its reaction with m-chloroperbenzoic acid gives the sulfoxide derivative 5-[amino(sulfinylmethyl) methylene]-2,2-dimethyl-1,3-dioxane-4,6-dione (5). With triphenylphosphine, 5 reacts to give triphenyl(thiomethyl)phosphonium 5-cyano-2,2-dimethyl-1,3- dioxane-4,6-dionate (6) from which the methyltriphenylphosphonium salt 6a is obtained with excess triphenylphosphine. The crystal structures of 4, 5 and 6a are discussed. © 2009 Verlag der Zeitschrift für Naturforschung.

Shehabat, I., Mahdi, S.A., Khoualdi, K.
E-learning as a knowledge management approach for intellectual capital utilization
(2009) Turkish Online Journal of Distance Education, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-58149239956&partnerID=40&md5=34f7e2ddb909237f729ac4f3d90bc4af
AFFILIATIONS: Philadelphia University, Jordan;
Al-Zaytoonah University, Jordan

ABSTRACT: This paper addresses human resources utilization at the university environment. We address the design issues of e-learning courses that can capture the teacher knowledge. The underlying objective is that e-learning is a key knowledge and major resources for many universities. Therefore, the design of e-learning should be an important part of the university knowledge management process. Teachers' knowledge in any important topic or field should be managed in a way that the university can benefit from it in case of teacher leaving or retired. Hence, intellectual personal knowledge management will be explored through the development of e-learning systems. Some concepts from the Artificial Intelligence field can be used in developing such systems. The potential for utilizing human knowledge in the university environment will optimize the resources and can be of cost effective and quality assurance factors and provide the university with a sustainable competitive advantage. Assuring the proper knowledge management within the university environment is a more complex issue. This is due to the diverse of topics in one hand and the behavior of the student and the lecturers on the other hand. Effective implementation and success requires a lot of efforts that will guarantee the utilization of the intellectual capital within the university environment.

Abusukhon, A., Oakes, M.P., Talib, M., Abdalla, A.M.
Comparison between document-based, term-based and hybrid partitioning
(2008) 1st International Conference on the Applications of Digital Information and Web Technologies, ICADIWT 2008, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-57949098852&doi=10.1109%2fICADIWT.2008.4664324&partnerID=40&md5=eef028ef9a695b69bc27ac496c67f688
AFFILIATIONS: School of Computing and Technology, University of Sunderland;
Department of Computer Science, University of Botswana, Private Bag UB 00704, Gaborone, Botswana;
Department of Computer Science, Al-Zaytoonah University of Jordan

ABSTRACT: Information retrieval (IR) systems for large-scale data collections must build an index in order to provide efficient retrieval that meets the user's needs. In distributed IR systems, query response time is affected by the way in which the data collection is partitioned across nodes. There are three types of collection partitioning; document based partitioning (called the local index), term based partitioning (called the global index) and hybrid partitioning. In this paper, we compare the three types of partitioning in terms of average query response time for a system with one broker and six other nodes. Our results showed that within our distributed IR system, the document-based and hybrid partitioning outperformed the term-based partitioning. However, unlike Xi et al. [14], we did not find that hybrid partitioning was any better than document-based partitioning in terms of average query response time. ©2008 IEEE.

Jaradat, H., Alsayyed, O., Al-Shara, S.
Numerical solution of linear integro-differential equations
(2008) Journal of Mathematics and Statistics, .
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Department of Mathematics, Tafila Technical University, Jordan
ABSTRACT: Problem Statement: Integro-differential equations find special applicability within scientific and mathematical disciplines. In this study, an analytical scheme for solving Integro-differential equations was presented. Approach: We employed the Homotopy Analysis Method (HAM) to solve linear Fredholm integro-differential equations. Results: Error analysis and illustrative examples were included to demonstrate the validity and applicability of the technique. MATLAB 7 was used to carry out the computations. Conclusion/Recommendations: From now we can use HAM as a novel solver for linear Integro-differential equations. © 2008 Science Publications.

Yahya, A.A., Abdalla, A.M.
A Shuffle Image-Encryption Algorithm
(2008) Journal of Computer Science, .
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62849124711&doi=10.3844%2fjcssp.2008.999.1002&partnerID=40&md5=61506cb62cf4cf6010e66ca67943294f
AFFILIATIONS: Department of Computer Science, Al-Zaytoonah University of Jordan, Queen Alia Airport Road, Amman 11733, Jordan
ABSTRACT: Problem statement: Image encryption needs to be secure by resisting statistical attacks and other types of attacks. Approach: The new algorithm, call it the Shuffle Encryption Algorithm (SEA), applies nonlinear s-box byte substitution. Then, it performed a shuffling operation partially dependent on the input data and uses the given key. Results: SEA was implemented and tested with different data, mainly consisting of images. Results confirmed its security, shown through statistical analysis using histograms, correlation and covariance. Conclusion: New algorithm was suited for encrypting images and other types of data. © 2008 Science Publications.

Iskandarani, M.Z.
Characterization of Ag-PEO10LiCF3SO3 -polypyrrole-Au neural switch
(2008) WSEAS Transactions on Computers, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
59249097747&partnerID=40&md5=5c556de22c4db95f8e22ddb457826776
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O. BOX 911597, Amman 11191, Jordan
ABSTRACT: The design, build and characterization of a semiconducting, organic neural switch are carried out. Voltage-Current characteristics for an ionic-electronic interacting neural switch are presented. Neural Switch characteristics analyzed using an electronic equivalent circuit model. The model is proved to describe to a great degree of soundness the interacting mechanism between the used materials. Programmability of the switch is proved to be bi-directional and reversible with hysterisis effect which is due to excess charge storage, with a behavior similar to a biological Synapse.

Al-Dahoud, A., Walkowiak, T., Woda, M.
Dependability aspects of e-learning systems
(2008) Proceedings of International Conference on Dependability of Computer Systems, DepCoS -
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RELCOMEX.2008.19&partnerID=40&md5=4733db1f8762999e8a2b0f7bbdb97a52
AFFILIATIONS: Computer Center, Faculty of IT, Al-Zaytoonah University / Jordan, P. O. Box 130, Amman, Jordan;
Institute of Computer Engineering, Control and Robotics, Wroclaw University of Technology, ul. Janiszewskiego 11/17, 50-372 Wroclaw, Poland
ABSTRACT: This work is devoted to dependability analysis of e-learning systems. Authors present technical aspects of the software part of e-learning systems (e-learning platforms, distant lectures, multimedia presentations and virtual laboratories). Next, a high availability approach to hardware part is discussed. It is followed by a short analysis of several dependability aspects (availability, usability, scalability, interoperability, stability and security) with a conclusion that business continuity is a crucial factor. Therefore, the analysis of the e-learning system monitoring techniques is given. It is followed by a proposition of a new technique of monitoring: the virtual user representative. © 2008 IEEE.

Ali, A.-D., Wosko, M.
A practical approach using AOR-modelling and a XML-based implementation framework
(2008) 2008 3rd International Conference on Information and Communication Technologies: From Theory to Applications, ICTTA, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-

49149125902&doi=10.1109%2fICTTA.2008.4530300&partnerID=40&md5=09e13d5ec161cee821d88d579d01a078
AFFILIATIONS: Computer Center, Faculty of IT, Al-Zaytoonah University, Jordan, Jordan;
Multimedia Center, Information, Communication and Media Center, Brandenburg University of Technology,
Brandenburg, Germany

ABSTRACT: This paper deals with a synthesis of theoretical and conceptual work on a MAS-model of the MIT Beer Game, known from the paper where it was first formulated [1], with the implementation of a general simulation framework, called Absimulation, given in Raffel's work [2]. The first goal of this study was to make the authors and the intended audience acquainted with issues that arise within processes such as MAS modeling and peculiarities of MAS implementation techniques. Though comparatively much work is associated here with the concrete case of a model of the particular supply chain management game, it was attempted to discuss much more general MAS-related problems, whenever the given implementation offered the opportunity for such a discussion. Also finding the limitations of the adopted solution has to serve future more complex work.

De Abreu, M.B., Dal Piaz, F., Temraz, A., Bader, A., De Tommasi, N., Braca, A.
Gypsins A-D from Gypsophila arabica
(2008) Journal of Natural Products, .
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51849084241&doi=10.1021%2fnp700735a&partnerID=40&md5=f4329fec3008bbe3a2a543fd32fe359e
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Dipartimento di Scienze Farmaceutiche, Università di Salerno, Via Ponte Don Melillo, 84084 Fisciano
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Faculty of Pharmacy, Al Azhar University, Nasr-City, 11371 Cairo, Egypt;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan
ABSTRACT: Four new cyclopeptides, named gypsins A-D (1-4), together with one known oleanane saponin, were isolated from the roots of Gypsophila arabica. The structures of cyclo(-Leu1-Pro2-Leu3-Trp 4-Pro5-Gly6-) (1), cyclo(-Leu 1-Pro2-Tyr3-Phe4-Pro 5-Gly6-) (2), cyclo(-Ala1-Pro 2-Tyr3-Leu4-Leu5-Pro 6-Pro7-Ala8-) (3), and cyclo(-Leu 1-Trp2-Pro3-Gl4-Gly 5-Ser6-Ser7-) (4) were elucidated by 1D and 2D NMR spectroscopy including 1D-TOCSY, DQF-COSY, 2D-ROESY, HSQC, and HMBC experiments, as well as ESI tandem mass spectrometric fragmentation analysis and chemical evidence. © 2008 American Chemical Society and American Society of Pharmacognosy.

Al-Azzawi, T.R., Hamdan, F.B., Ali, A.K.
Neurophysiologic evaluation of the temporomandibular joint and related masticatory muscles in
rheumatoid arthritis patients
(2008) Neurosciences, .
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47749128091&partnerID=40&md5=20f6c0788d742cdb20accf86862a1bb3
AFFILIATIONS: Department of Faciomaxillary, College of Dentistry, Baghdad University, Baghdad, Iraq;
Department of Physiology, College of Medicine, Al-Nahrain University, Baghdad, Iraq;
Department of Pharmacy, Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: Objectives: To study the effect of rheumatoid arthritis (RA) on the temporomandibular joints (TMJ) and related muscles using CT scan and neurophysiologic tests. Methods: Forty-two RA patients referred from the Maxillofacial Clinic at the Special Surgeries Hospital, Medical City, Baghdad, Iraq from February 2006 to September 2006 were included in this study. Thirty-seven of them underwent CT scan of the TMJ and 25 of these patients were neurophysiologically examined. The data were compared to 30 age-matched control subjects. Results: Fifteen patients showed normal TMJ, whereas, abnormal TMJ on CT scan was present in 22 patients. Of these 22 patients, 6 showed decrease in the intra-articular space, 6 exhibited erosion of the condylar head, and 3 had flattening of the condylar head. The remaining 7 patients had all the abnormalities present. Electromyography (EMG) examination showed reduced interference pattern, poor recruitment of motor unit potentials, shift of the power spectra to the lower frequencies, low mean power frequency, and root mean square values, and prolonged blink reflex component latencies. Conclusion: Rheumatoid arthritis patients with positive CT scan findings have poorer neurophysiologic data than those without CT scan detectable lesions. Trigeminal motor neuropathy is suggested to be the cause of the masticatory muscle weakness. Root mean square voltage as a parameter of the EMG power spectra is of great value in diagnosing such weakness.

Abbas, W.A.K., Azar, N.G., Haddad, L.G., Umlauf, M.G.
Preconception health status of Iraqi women after trade embargo
(2008) Public Health Nursing, .
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1446.2008.00709.x&partnerID=40&md5=66e0b054ac6056c542e6d38c32253d04
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Azusa Pacific University, Azusa, CA, United States;
Virginia Commonwealth University, School of Nursing, Richmond, VA, United States;
University of Alabama School of Nursing, Birmingham, AL, United States;
University of Alabama School of Nursing, 1530 3rd Avenue South, NB 356, Birmingham, AL 35294-1210, United States
ABSTRACT: Objectives: To describe the preconception health status of Iraqi women in 2001 following the trade embargo imposed on Iraq beginning in 1991 and only partially removed in 1996. Design: A descriptive cross-sectional prevalence study. Sample: 500 Iraqi women at a premarital clinic in Baghdad in 2001. Measurements: Women were surveyed for age, area of residence, menstrual history, household crowding, consanguinity, and a family history of congenital problems. Clinical findings regarding height, weight, and hemoglobin level were included in the data. Results: Almost one third of the women were below the age of 20 and the majority were between 20 and 25 years of age. More than half of the women in this study had an intermediate-level education or less and lived in very crowded housing. Most of the women were anemic and reported a delay in menarche, suggesting malnutrition. Most of the women were planning consanguineous unions even though many reported congenital conditions in their family of origin. Conclusions: Young Iraqi women who endured embargo needed, and continue to need, aggressive preventive health services to recoup health gains lost during the 1990s and to address prevention of common congenital disorders. © 2008, The Authors.

Sabri, H.
Jordanian managers' leadership styles in comparison with the international air transport association (IATA) and prospects for knowledge management in Jordan
(2008) International Journal of Commerce and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84878630307&doi=10.1108%2f10569210710774758&partnerID=40&md5=cbc8a7531fb78294e24845460370169b
AFFILIATIONS: Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: Purpose - The research reported in this paper aims to examine the newer leadership styles and their implication for implementing knowledge management in Jordanian organizations. The research seeks to investigate Jordanian managers' leadership styles and then compare them with managers in other organizations with different cultures, such as the International Air Transport Association (IATA). Design/methodology/approach - A survey of 120 managers from Jordan and IATA was undertaken using an established measurement instrument. Findings - Results revealed that meanwhile IATA managers preferred transformational rather than transactional leadership style, in Jordan, there was no clear preference for transactional or transformational style as both were being used. But when compared with IATA managers Jordanian managers showed more inclination towards transactional than transformational behaviors. Research limitations/implications - Like other comparative research this study shares the limitation of likely sampling bias. Moreover, it did not take into account the political realities of conducting social science research in countries with long authoritarian histories, such as Jordan, which present the likelihood of further response bias. Originality/value - The paper investigates the leadership styles of Jordanian managers. This has important implications for local as well as international corporations. © Emerald Group Publishing Limited.

Cioffi, G., Bader, A., Malafronte, A., Dal Piaz, F., De Tommasi, N.
Secondary metabolites from the aerial parts of Salvia palaestina Bentham
(2008) Phytochemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-39149139595&doi=10.1016%2fj.phytochem.2007.11.002&partnerID=40&md5=1f581094e39544ddb686be1c38d72157
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Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan
ABSTRACT: Three sesterterpenes (1-3), one triterpene (4) and five diterpenes (5-9) were isolated from the aerial parts of Salvia palaestina Bentham (Lamiaceae), together with two sesquiterpenes, 10 known diterpenes, three triterpenes, and rosmarinic acid. Their structural elucidation was accomplished by extensive spectroscopic methods including 1D (1H, 13C, 13C DEPT, TOCSY, NOESY) and 2D NMR experiments (DQF-COSY, HSQC, HMBC, ROESY) as well as ESIMS analysis and chemical analysis. © 2007 Elsevier Ltd. All rights reserved.

Al-Gharaibah, A.-D.A.
Phonological phenomena in ajlun dialect: A historical, descriptive study
(2008) Dirasat: Human and Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84878979418&partnerID=40&md5=7324b89daa05f5fae3826c107ebffaa3
AFFILIATIONS: Department of Arabic Language and Literature, Faculty of Arts, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: The present research aims at disclosing the phonological phenomena in Ajlun dialect. I have

pursued the descriptive and historical approaches in detecting the phonological phenomena in this dialect and endeavoured to phonologically interpret them in an attempt to link most of those phenomena to their historical roots in Calssical Arabic and the ancient Arabic dialects. The phonological phenomena which have been examined in Ajlun dialect have been discerned in assimilation, constant and unconstaut substitution in addition to other phenomena such as the pronunciation of a shaded toward e. i.e. imala and facilitating the glottal stop, i.e. haraza.

Vassallo, A., Bader, A., Braca, A., Bisio, A., Rastrelli, L., De Simone, F., De Tommasi, N.
Secondary metabolites from the roots of Salvia palaestina Bentham
(2008) Natural Product Communications, .
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77954125050&doi=10.1177%2f1934578x0800301205&partnerID=40&md5=7831f30a252252322b1a6d0f879c7f79
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Dipartimento di Chimica Bioorganica e Biofarmacia, Università di Pisa, Via Bonanno 33, 56126 Pisa, Italy;
Dipartimento di Chimica e Tecnologie Farmaceutiche ed Alimentari, Università di Genova, Via Brigata Salerno 13, 16147 Genova, Italy
ABSTRACT: Two new sesquiterpenes (1-2), and one diterpene (3) were isolated from the roots of Salvia palaestina Bentham (Lamiaceae), together with eight known diterpenes and two triterpenes. Their structures were elucidated by 1D and 2D NMR spectroscopy, including 1D-TOCSY, DQF-COSY, ROESY, HSQC, and HMBC experiments, as well as ESIMS and chemical analysis.

Nabulsi, M.A., Abdalla, A.M.
The relationship between exclusive-Or and the unique existential quantifier
(2008) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
59349087510&doi=10.3844%2fjcssp.2008.741.743&partnerID=40&md5=dc02d117554f330dad632f03c7c8813b
AFFILIATIONS: Department of Computer Science, Al-Zaytoonah University of Jordan, Amman 11733, Jordan
ABSTRACT: Problem Statement: The efficiency of computer architecture design is affected by the components used. Establishing a relationship between exclusive-or (XOR) and the unique existential quantifier provides alternative system implementations. Approach: Applications of XOR and the unique existential quantifier were explained. Then, prepositional logic was used to establish the relationship between them. Results: Different quantified assertions with two variables that use the unique existential quantifier were represented without quantifiers by using XOR. Conclusions: The unique existential quantifier and XOR were helpful in some computer architecture systems such as multiplexers, decoders and bus systems. The unique existential quantifier and XOR may be used interchangeably in some situations, but not always. © 2008 Science Publications.

Shilbayeh, N.F., Iskandarani, M.Z.
Effect of hidden layer neurons on the classification of optical character recognition typed Arabic numerals
(2008) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
57549092308&doi=10.3844%2fjcssp.2008.578.584&partnerID=40&md5=865496a894a1ed1fc5c69b7c07c9f073
AFFILIATIONS: Faculty of Information Technology for Graduate Studies, Middle East University for Graduate Studies, P.O. Box 42, 11610 Amman, Jordan;
Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O. Box 911597, 11191 Amman, Jordan
ABSTRACT: Problem statement: The effect of varying the number of nodes in the hidden layer and number of iterations are important factors in the recognition rate. In this paper, a novel and effective criterion based on Cross Pruning (CP) algorithm is proposed to optimize number of hidden neurons and number of iterations in Multi Layer Perceptron (MLP) neural based recognition system. Our technique uses rule-based and neural network pattern recognition methods in an integrated system in order to perform learning and recognition of dynamically printed numerals. Approach: The study investigates the effect of varying the size of the network hidden layers (pruning) and number of iterations (epochs) on the classification and performance of the used MLP. The optimum number of hidden neurons and epochs is experimentally established through the use of our novel Cross Pruning (CP) algorithm and via designing special neural based software. The designed software implements sigmoid as its shaping function. Results: Experimental results are presented on the classification accuracy and recognition. Significant recognition rate improvement is achieved using 1000 epochs and 25 hidden neurons in our MLP OCR numeral recognition system. Conclusions/Recommendations: Our approach has a significant improvement in learning and classification of any numeral, character MLP based recognition system. © 2008 Science Publications.

Masoud, F.A.M., Al- Zoubi, M.B., Salah, I., Al-Dahoud, A.
Fast algorithms for outlier detection
(2008) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
54849433405&doi=10.3844%2fjcssp.2008.129.132&partnerID=40&md5=7827c604a3fafd73a92b857d242b009b
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Department of Computer Science, University of Jordan, Amman, Jordan;
Department of Computer Science, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: Finding fast algorithms to detect outliers (as unusual objects) by their distance to neighboring objects is a big desire. Two algorithms were proposed to detect outliers quickly. The first was based on the Partial Distance (PD) algorithm and the second was an improved version of the PD algorithm. It was found that the proposed algorithms reduced the number of distance calculations compared to the nested-loop method. © 2008 Science Publications.

Iskandarani, M.Z.
Effect of information and communication technologies (ICT) on non-industrial countries-digital divide model
(2008) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
54449094961&doi=10.3844%2fjcssp.2008.315.319&partnerID=40&md5=1441e947dd4c2b7fed1bbf51d92ef276
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O. Box 911597, 11191 Amman, Jordan
ABSTRACT: The influence of information and communication technology on the collective activities and interests of a broad range of people was discussed and analyzed. The important consequence of ICT called digital divide was mathematically modeled and the results analyzed. The closed loop feedback model proved the need for a society to be educationally, culturally, economically and politically ready to integrate and implement new technologies into its infrastructure. © 2008 Science Publications.

Nabulsi, M.A., Abdalla, A.M.
A method of deductive logical inference proofs
(2008) Journal of Computer Science, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
54449093381&doi=10.3844%2fjcssp.2008.345.348&partnerID=40&md5=47c988a6523b8baf983be90511374f42
AFFILIATIONS: Department of Computer Science, Al-Zaytoonah University of Jordan, Amman 11733, Jordan
ABSTRACT: A method of proof is presented and used in proving theorems in logic and set theory. Many commonly used methods of proof are rigid and not easy to apply in proving different theorems. This study deductively draws conclusions from rules of logical inference and then, it generalizes the deduction methods to be applied to logic and set theory. Then, it shows how this method of logical inference can be used to prove implications involving conjunction or disjunction of premises and to prove some identities in set theory involving implication or containment. © 2008 Science Publications.

Iskandarani, M.Z., Shilbayeh, N.F.
Design, modeling and implementation of Pic based wireless control system to eliminate blind spots in vehicle side mirrors
(2008) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
50649109370&doi=10.3844%2fajassp.2008.1263.1268&partnerID=40&md5=00f336e778791c50baedefe82e9e4e27
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O. Box 911597, 11191 Amman, Jordan;
Faculty of Information Technology, Middle East University for Graduate Studies, P.O. Box 42, 11610 Amman, Jordan
ABSTRACT: A PIC controlled IR system for the control of vehicle side mirror system movements for the purpose of revealing blind spots is designed and implemented. The designed and built system allows the side view mirrors to be adjusted based on the driver head movement. The infrared-based head tracking system maps a predetermined coordinates for head movements and results in a triangularly computable geometry, which is fed to the PIC, based controlling system. This will cause the vehicle mirror movement via carefully selected miniature motors. © 2008 Science Publications.

Al-Sheikh, A., Sweidan, K., Sweileh, B., Steimann, M., Schubert, H., Kuhn, N.
Synthesis and crystal structure of triethylammonium5-[(2,2-dimethyl-4,6- dioxo-1,3-dioxan-5-ylidene) (methylthio)methyl]-1,3-dimethylpyrimidine-2,4, 6-trionate
(2008) Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences, .

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AFFILIATIONS: Faculty of Pharmacy, Petra University, P.O. Box 961343, Amman, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, P.O. Box 130, Amman, Jordan;
Department of Chemistry, University of Jordan, P.O. Box 11942, Amman, Jordan;
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ABSTRACT: Triethylammonium 5-[(2,2-dimethyl-4,6-dioxo-1,3-dioxan-5-ylidene) (methylthio)methyl]-1,3-dimethylpyrimidine 2,4,6-trionate (6) is obtained as red-orange stable crystals by reaction of 5-[bis(methylthio)methylene]-2,2- dimethyl-1,3-dioxane-4,6-dione (5) with 1,3-dimethylbarbituric acid (2) in the presence of triethylamine in excellent yield. The crystal structure of 6 confirms the negative charge to be localized at the barbituric-acid ring in its enolate form. © 2008 Verlag der Zeitschrift für Naturforschung, Tübingen.

AL-Hwawcha, L.K., Abid, N.A.
A new approach for solving second order ordinary differential equations
(2008) Journal of Mathematics and Statistics, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-49249120219&doi=10.3844%2fjmssp.2008.58.59&partnerID=40&md5=29f1ed102aaf45c95f8094b25e4497e5
AFFILIATIONS: Al-Zaytoonah University, Amman, Jordan
ABSTRACT: A new approach is presented to solve second order linear differential equations with variable coefficients and some illustrative examples are given. © 2008 Science Publications.

Shehabat, I., Mahdi, S.A., Khoualdi, K.
E-learning as a knowledge management approach for intellectual capital utilization
(2008) Turkish Online Journal of Distance Education, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-40249099327&partnerID=40&md5=086737195231a17a1d2d7fe87fd6c074
AFFILIATIONS: Philadelphia University, Jordan;
Al-Zaytoonah University, Jordan
ABSTRACT: This paper addresses human resources utilization at the university environment. We address the design issues of e-learning courses that can capture the teacher knowledge. The underlying objective is that e-learning is a key knowledge and major resources for many universities. Therefore, the design of e-learning should be an important part of the university knowledge management process. Teachers' knowledge in any important topic or field should be managed in a way that the university can benefit from it in case of teacher leaving or retired. Hence, intellectual personal knowledge management will be explored through the development of e-learning systems. Some concepts from the Artificial Intelligence field can be used in developing such systems. The potential for utilizing human knowledge in the university environment will optimize the resources and can be of cost effective and quality assurance factors and provide the university with a sustainable competitive advantage. Assuring the proper knowledge management within the university environment is a more complex issue. This is due to the diverse of topics in one hand and the behavior of the student and the lecturers on the other hand. Effective implementation and success requires a lot of efforts that will guarantee the utilization of the intellectual capital within the university environment.

Braca, A., Bader, A., Siciliano, T., De Tommasi, N.
Secondary metabolites from Paronychia argentea
(2008) Magnetic Resonance in Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-38949117033&doi=10.1002%2fmrc.2113&partnerID=40&md5=e2bc8c4aa25b6dbda66160c305fd5ee6
AFFILIATIONS: Dipartimento di Chimica Bioorganica e Biofarmacia, Università di Pisa, Via Bonanno 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan;
Dipartimento di Scienze Farmaceutiche, Università di Salerno, Via Ponte Don Melillo, 84084 Fisdano (SA), Italy
ABSTRACT: Two new oleanane saponins (1 and 2) and one new flavonol glycoside (3) together with six known flavonoids, were isolated from the aerial parts of Paronychia argentea. Their structures were elucidated by 1D and 2D NMR experiments including 1D-TOCSY, DQF-COSY, NOESY, HSQC, and HMBC spectroscopy, as well as ESI-MS analysis. Copyright © 2007 John Wiley & Sons, Ltd.

Renno, W.M., Alkhalaf, M., Mousa, A., Kanaan, R.A.
A comparative study of excitatory and inhibitory amino acids in three different brainstem nuclei
(2008) Neurochemical Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-36949023126&doi=10.1007%2fs11064-007-9427-5&partnerID=40&md5=99d2c8fd7fe2c534b8497b188d1a8b81

AFFILIATIONS: Department of Anatomy, Faculty of Medicine, Kuwait University, P.O. Box 24923, Safat 13110, Kuwait;
Department of Biochemistry, Faculty of Medicine, Kuwait University, P.O. Box 24923, Safat 13110, Kuwait;
Faculty of Pharmacy, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: This study was designed to shed more light onto the three different brainstem regions which are implicated in the pain pathway for the level of various excitatory and inhibitory neurotransmitters before and following neuronal stimulation. The in vivo microdialysis technique was used in awake, freely moving adult Sprague-Dawley rats. The neurotransmitters studied included aspartate, glutamate, GABA, glycine, and taurine. The three brainstem regions examined included the mid-brain periaqueductal gray (PAG), the medullary nucleus raphe magnus (NRM), and the spinal trigeminal nucleus (STN). Neuronal stimulation was achieved following the administration of the sodium channel activator veratridine. The highest baseline levels of glutamate ($P < 0.0001$), aspartate ($P < 0.0001$), GABA ($P < 0.01$), taurine ($P < 0.0001$), and glycine ($P < 0.001$) were seen in the NRM. On the other hand, the lowest baseline levels of glutamate, GABA, glycine, and taurine were found in the PAG, while that of aspartate was found in the STN. Following the administration of veratridine, the highest release of the above neurotransmitters except for the aspartate and glycine was found in the PAG where the level of glutamate increased by $1{,}310 \pm 293\%$ ($P < 0.001$), taurine by $1{,}008 \pm 143\%$ ($P < 0.01$), and GABA by $10{,}358 \pm 1{,}920\%$ ($P < 0.0001$) when comparison was performed among the three brainstem regions and in relation to the baseline levels. The highest release of aspartate was seen in the STN ($2{,}357 \pm 1{,}060\%$, $P < 0.001$), while no significant difference was associated with glycine. On the other hand, the lowest release of GABA and taurine was found in the STN (696 ± 91 and $305 \pm 25\%$, respectively), and glutamate and aspartate in the NRM (558 ± 200 and $874 \pm 315\%$, respectively). Our results indicate, and for the first time, that although some differences are seen in the baseline levels of the above neurotransmitters in the three regions studied, there are quite striking variations in the level of release of these neurotransmitters following neuronal stimulation in these regions. In our opinion this is the first study to describe the pain activation/modulation related changes of the excitatory and inhibitory amino acids profile of the three different brainstem areas. © 2007 Springer Science+Business Media, LLC.

Ali, A.-D., Belal, M.A.
Multiple ant colonies optimization for load balancing in distributed systems
(2007) New Trends in ICT and Accessibility - Proceedings of the 1st International Conference in Information and Communication Technology and Accessibility, ICTA 2007, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84880200173&partnerID=40&md5=6e692218b06bfc63033a19aea148da1f
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah University, Jordan
ABSTRACT: Ant colony optimization (ACO) has proved its success as a meta-heuristic optimization in several network applications such as routing and load balancing. In this paper, a proposed ACO algorithm for load balancing in distributed systems will be presented. This algorithm is fully distributed in which information is dynamically updated at each ant movement. Multiple colonies paradigm will be adopted such that each node will send a colored colony throughout the network. Using colored ant colony helps in preventing ants of the same nest from following the same route, and hence enforcing them to be distributed all over the nodes in the network. Each ant acts like a mobile agent that carries newly updated load balancing information to the next visited node. Finally, the proposed algorithm will be compared with the standard work-stealing algorithm.

Al-Fayoumi, M., Nashwan, S., Yousef, S., Alzoubaidi, A.-R.
A new hybrid approach of symmetric/asymmetric authentication protocol for future mobile networks
(2007) 3rd IEEE International Conference on Wireless and Mobile Computing, Networking and Communications, WiMob 2007, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-47049086007&doi=10.1109%2fWIMOB.2007.4390823&partnerID=40&md5=bf39332204f94256c6eadbd78bea009b
AFFILIATIONS: Anglia Ruskin University, Chelmsford, United Kingdom;
Al-Zaytoonah University, Amman, Jordan
ABSTRACT: Most of current authentication schemes for mobile systems have some weaknesses; such as leakage of UE identities and high update overhead of temporary identities. This paper proposes a secure authentication mechanism for mobile communication systems that satisfies the security requirements of the third generation mobile systems. In this proposed protocol, the number of messages between authentication entities of the network is reduced to four messages instead of five in initial authentication procedure. The subsequent authentication procedure only contains two message exchanges. Therefore, the bottleneck at authentication center is avoided by reducing the number of messages between mobile and authentication center. The authentication time delay, call setup time and signaling traffic are minimized. Also, this proposed protocol is designed to be secure against network attacks, such as replay attacks and Guessing attacks and others attacks.

Consequently, this approach is secure and practical as it can satisfy the security requirements of the third generation mobile communication systems based on hybrid asymmetric and symmetric cryptosystem, and can save up to 20% of the authentication traffic delay time. © 2007 IEEE.

Abu-Zreig, M., Abe, Y., Isoda, H., Abo-Izreik, A.
Land drainage with evaporation drainage method
(2007) 2007 ASABE Annual International Meeting, Technical Papers, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
35648981789&partnerID=40&md5=d2b298046a1c3740245ddc5f6573bb71
AFFILIATIONS: Jordan University of Science and Technology, P.O.Box 3030, Irbid, Jordan;
Allied for Research in North Africa, University of Tsukuba, Tsukuba, Ibaraki 305-857, Japan;
Al-Zaytoonah University, Amman, Jordan
ABSTRACT: This paper summarizes the characteristics of land drainage with evaporation. Evaporation Drainage Method is used to remove excess water and salts from saturated soil through evaporation from fabric columns, called accelerators, installed in the soil or saline water. Laboratory experiments were conducted to examine the influence of accelerator length and diameter and salt concentration on water evaporation, and on salt removal. Accelerators with 8 lengths ranging from 60 to 300 mm and 4 diameters ranging from 5 to 30 mm and five saline solutions prepared by mixing KCl with water at 1%, to 10% by weight were used in the experiments. Results showed that accelerators significantly increased water evaporation and salt removal from saline solution and this increase is directly related to length, diameter of accelerator and salt concentration to a lesser degree,. A 60-mm and 300-mm long accelerators increased water evaporation by 27% and 100%, respectively compared to pan evaporation. A 300-mm accelerator increased salt removal by about 320% compared to the 60-mm long accelerator. Increasing the diameter of accelerator from 5 to 30 mm increased evaporation rate and therefore salt removal by 160%. High salt concentration slightly reduced evaporation compared to low concentration but increased salt removal from solutions.

Al Mobaideen, W., Mimi, H.M., Masoud, F.A., Qaddoura, E.
Performance evaluation of multicast ad hoc on-demand distance vector protocol
(2007) Computer Communications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
34250645385&doi=10.1016%2fj.comcom.2007.02.003&partnerID=40&md5=61dacf6c12a6b7444eda3dc19bec2970
AFFILIATIONS: King Abdullah II School for Information Technology, The University of Jordan, Amman, 11942, Jordan;
Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, Amman, 11733, Jordan
ABSTRACT: Multicast Ad hoc On-demand Distance Vector routing protocol (MAODV) is an on-demand multicast routing protocol that constructs a shared delivery tree to support multiple senders and receivers in a multicast session. Existing research does not address the performance evaluation of MAODV for short-lived connections. Existing research have studied the protocol assuming only long-lived connection. MAODV performance may be affected when most of the connections are short-lived ones. We show that the efficiency of delivering data packets for short-lived connection is greater than that for long-lived connections. Different performance parameters have been considered such as mobility speed, number of senders, and multicast group size. The average Latency for long-lived connection is greater than that for short-lived connections. The channel access efficiency of MAODV over long-lived connections is better than that for short-lived connections. The scalability of MAODV in short-lived situation is better than that in long-lived connection with respect to the number of senders. © 2007 Elsevier B.V. All rights reserved.

Bader, A., Panizzi, L., Cioni, P.L., Flamini, G.
Achillea ligustica: Composition and antimicrobial activity of essential oils from the leaves, flowers and some pure constituents
(2007) Central European Journal of Biology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-34249100281&doi=10.2478%2fs11535-007-0020-
3&partnerID=40&md5=c7328c32dfcfb41dd994e5cf659971b8
AFFILIATIONS: Al-Zaytoonah Private University of Jordan, 11733 Amman, Jordan;
Dipartimento della Prevenzione e Biotossicologia Presso Presidio Ospedaliero di Livorno, 57100 Livorno, Italy;
Dipartimento di Chimica Bioorganica e Biofarmacia, 56126 Pisa, Italy
ABSTRACT: The composition of the essential oils obtained from the leaves and the flowers of Achillea ligustica (Asteraceae) growing in Sicily has been studied. The main constituents of the leaves were 4-terpineol (19.3%), carvone (8.9%), γ-terpinene (7.2%) and β-phellandrene (6.8%). 4-terpineol (12.0%), carvone (10.0%), and β-phellandrene (5.4%), along with linalool (20.4%) and cedrol (4.3%) were detected in the flower's oil. Furthermore, the antimicrobial activity of the essential oils and of some of the main constituents were assayed on bacteria and fungi. © Versita Warsaw and Springer-

Verlag Berlin Heidelberg 2007.

Abu-Samak, M., Khuzaie, R., Khataibeh, M., Mahmoud, F.
Melanocyte-stimulating hormone modulates blood viscosity in short-term alloxan-induced diabetic rats
(2007) Journal of Biological Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
34948865335&doi=10.3923%2fjbs.2007.701.705&partnerID=40&md5=b632c2c265c5d42a326724fc26f989cb
AFFILIATIONS: Department of Medical Technology, Faculty of Allied Medical Science, Applied Science
University, Amman 11931, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: The effects of MSH on whole blood viscosity (WBV)and hematocrit (Ht) levels in short-term
alloxan-induced diabetic were studied. Male and Female Sprague-Dawley diabetic rats weighing 185-250
g were given intraperitonially (i.p.) a daily injection of 20 mg alloxan solution/100 g of body
weight for 10 days. Normal and diabetic rats were given daily injection (i.p.) of alpha-Melanocyte
stimulating hormone (MSH) at a dose of 2 µg/100 g b.w for 10 days. Body weight, serum glucose, serum
insulin, Ht and WBV were measured. The results indicated that MSH decreased serum glucose levels in
diabetic rats in comparison with normal rats. Our study demonstrates that MSH administration
significantly lowers blood viscosity of short-term diabetic rats. It proposed that MSH may exert a
protective effect on the vascular endothelial cells. © 2007 Asian Network for Scientific Information.

Al-Husainy, M.A.F.
A tool for compressing images based on genetic algorithm
(2007) Information Technology Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
34248158344&doi=10.3923%2fitj.2007.457.462&partnerID=40&md5=b2170a7ad246e95bce35feff72eebde0
AFFILIATIONS: Department of Computer Science, Faculty of Sciences and Information Technology, Al-
Zaytoonah University of Jordan, P.O. Box 130, Amman (11733), Jordan
ABSTRACT: Genetic Algorithm (GA) has been successfully applied to codebook design for Vector
Quantization (VQ). This work uses the facilities of the genetic algorithm (Crossover and Mutation
Operations) to enhance the use of one popular compression method, Vector Quantization (VQ) method.
After studying the VQ method, a new algorithm for mixing it with a Genetic Algorithm (GA) is proposed
and implemented for testing on some popular image datasets. A good enhancement was recorded for the
performance of the (VQ) method when mixed with the (GA). Some fidelity measures are calculated to
evaluate the performance of the new proposed algorithm. © 2007 Asian Network for Scientific
Information.

Al-Husainy, M.A.F.
Best-job-first CPU scheduling algorithm
(2007) Information Technology Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
34247157366&doi=10.3923%2fitj.2007.288.293&partnerID=40&md5=b186a1af3cb6a13441f0ba8fc87662b8
AFFILIATIONS: Department of Computer Science, Faculty of Sciences and Information Technology, Al-
Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: The major task of an operating system is to manage a collection of processes, in what is
known as a CPU scheduling. In this study, a new CPU scheduling algorithm called Best-Job-First is
suggested by mixing the functions of some well-known basic scheduling algorithm. When applying the
suggested algorithm, the performance measures promised to use this algorithm for CPU scheduling with
a good performance and it's introduce an easy way to switch between numbers of different scheduling
algorithms to satisfy different goals. © 2007 Asian Network for Scientific Information.

Maslat, A.O., Bkhaitan, M., Sheikha, G.A.
Study of the effects on DNA of two novel nucleoside derivatives synthesized as potential anti-HIV
agents
(2007) Drug and Chemical Toxicology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33847047433&doi=10.1080%2f01480540601017652&partnerID=40&md5=6bdee94d01e6f52f0c09cfc6293f84dc
AFFILIATIONS: Department of Biological Sciences, Yarmouk University, Irbid, Jordan;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: The pursuit of antiviral active compounds against different classes of viruses, in
particular HIV, HBV, and HTLV is an area of important and intense research. In the current study, two
novel nucleoside derivatives belonging to a new class of isoxazolidine were successfully synthesized
as potential anti-HIV agents by replacement of the furanose ring by a N,O-heterocyclic ring Both
compounds were investigated for biological activity, namely, mutagenic and antimutagenic properties.
Using Salmonella typhimurium strains TA97, TA100, and TA102, both compounds proved to be
nonmutagenic, which may be considered an encouraging result to further elucidate other biological

activities. Antimutagenic testing of the synthesized compounds revealed that they are active against the base-pair substitution mutagen sodium azide. However, they did not show any indication as antimutagenic agents against hydrogen peroxide and mitomycin C (oxidative mutagens) or against nitrophenylenediamine (a base-pair substitution and frameshift mutagen). Structure-activity relationship is also discussed. Testing these compounds as antiviral agents is highly recommended. Copyright © Informa Healthcare.

Athamena, B., Houhamdi, Z., Muhairat, M.
Fault detection and isolation in dynamic systems using statistical local approach and hybrid least squares algorithm
(2007) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-44849119439&doi=10.3844%2fajassp.2007.977.986&partnerID=40&md5=1db8ba55e27a670465554faa92254662
AFFILIATIONS: Software Engineering Department, Faculty of Science and Information Technology, Al-Zaytoonah University, Al-Zaytoonah, Jordan
ABSTRACT: A fault detection and isolation (FDI) scheme for dynamic system proposed. This study deals with the design of discrete-time linear system using delta operator approach and the hybrid least squares (HLS) algorithm. A third residual generation based on statistical local approach and the derivative of the normalized residual on a small temporal window investigated. This new technique meets the desired FDI performance specifications by increasing the faults magnitude and decreasing the noise effects. Some simulation results were provided to evaluate the design. © 2007 Science Publications.

Al-Hasanat, M.A.
La représentation de l'Autre dans les récits de voyage en Egypte au XIXème siècle
(2007) Dirasat: Human and Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-40849139684&partnerID=40&md5=b6121ab868aca8fc17b4be202f839eb7
AFFILIATIONS: Department of Modern Languages, Faculty of Arts, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: The trip to the East strongly states the issue if difference since its first objective is to know the other. But, How? In which circumstances does it achieve openness with the other? This study attempts to answer this question through its concern with representing the other- the Egyptian- in the literature of the trips to Egypt by the French travellers in the 19th century. The trip books which have been chosen represent various convictions of the French travellers towards the other, and they provide us with obvious and founded testimonies that help us to observe the development of the image of the other from their perspective. © 2007 DAR Publishers/University of Jordan. All Rights Reserved.

Ramzoun, H.F.
The socio impact of the Jordanian woman labor migration to the Arab-Oil countries
(2007) Dirasat: Human and Social Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-40749145726&partnerID=40&md5=9456e304a8c86b9decb7455234fcbb59
AFFILIATIONS: Department of Arabic Language, Faculty of Arts, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: The aim of this study is to analyze the socio-economic impact of the Jordanian woman labor migration to the Arab-Oil Countries. Such impact included: roles of family members, job stability, spending and investment patterns. A sample of 179 migrant women was taken from the regions of Amman, Zarqa and Madaba . Such sample was purposefully selected to represent urban and rural areas. A questionnaire was administered in the research areas. Results indicated that such migration of items was highly selected representing highly educated (92% hold post secondary school diploma) well-trained and relatively young women (62% less than 39 years old, and 64% spent less than 10 years working in the Gulf States). The results also indicated that 56% of the sample changed their jobs when they returned to Jordan, having a destructive influence on their profession. The results also indicated that about 71% of the sample signed independent contracts (not as a part of their family) and also 71% with no conditions to accompany parents or relatives, which means that these women started to play a leading role in their families. This means a major change in social values and traditions normally attached to woman when they travel abroad. This was clear in the wise patterns of money spending and investment as well as helping parents and family, far from personal items.

Jannoud, I.A.
Automatic Arabic hand written text recognition system
(2007) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-34848903221&doi=10.3844%2fajassp.2007.857.864&partnerID=40&md5=c422cdbc63239949877547761526d506
AFFILIATIONS: Damascus University, Damascus, Syrian Arab Republic;

Al-Zaytoonah University, Amman, Jordan

ABSTRACT: Despite of the decent development of the pattern recognition science applications in the last decade of the twentieth century and this century, text recognition remains one of the most important problems in pattern recognition. To the best of our knowledge, little work has been done in the area of Arabic text recognition compared with those for Latin, Chins and Japanese text. The main difficulty encountered when dealing with Arabic text is the cursive nature of Arabic writing in both printed and handwritten forms. An Automatic Arabic Hand-Written Text Recognition (AHTR) System is proposed. An efficient segmentation stage is required in order to divide a cursive word or sub-word into its constituting characters. After a word has been extracted from the scanned image, it is thinned and its base line is calculated by analysis of horizontal density histogram. The pattern is then followed through the base line and the segmentation points are detected. Thus after the segmentation stage, the cursive word is represented by a sequence of isolated characters. The recognition problem thus reduces to that of classifying each character. A set of features extracted from each individual characters. A minimum distance classifier is used. Some approaches are used for processing the characters and post processing added to enhance the results. Recognized characters will be appended directly to a word file which is editable form. © 2007 Science Publications.

Kuhn, N., Al-Sheikh, A., Maichlemößmer, C., Steimann, M., Sweidan, K.
The crystal structure of 5-bis(thiomethyl)methylene meldrum's acid [1] [Die Kristallstruktur der 5-Bis(thiomethyl)methylenmeldrumsäure [1]]
(2007) Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-34548586977&doi=10.1515%2fznb-2007-0919&partnerID=40&md5=cdfba486aa0c67d0589850c81bf9f6cd
AFFILIATIONS: Institut für Anorganische Chemie, Universität Tübingen, Auf der Morgenstelle 18, D-72076 Tübingen, Germany;
Department of Pharmacy, University of Petra, P. O. Box 961343, Amman, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, P. O. Box (130), Amman, Jordan
ABSTRACT: The crystal structure of 5-bis(thiomethyl)methylene Meldrum's Acid (2) reveals a zwitterionic nature of the compound apparently influenced by both steric and electronic factors (triclinic space group P1̄, Z = 2, a = 5.489(1), b = 7.402(2), c = 14.329(3) Å; α = 82.25(3), β = 82.08(3), γ = 78.59(3)°; V = 561.7(2) Å). © 2007 Verlag der Zeitschrift für Naturforschung.

Iskandarani, M., El-Refae, G.
Numerical modeling of economical market forces for an intelligent delivery of dynamical optimal impact solution (DOI)
(2007) American Journal of Applied Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-34547484514&doi=10.3844%2fajassp.2007.102.105&partnerID=40&md5=7d3d6b9bd9c6248064395ddb7e515a09
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah University of Jordan, P.O.Box 911597, 11191 Amman, Jordan;
Faculty of Economics and Administrative Sciences, Al-Zaytoonah University of Jordan, P.O.Box 911597, 11191 Amman, Jordan
ABSTRACT: An intelligent model for the purpose of evaluating and affecting delivery of services as a function of initial capital investment is developed and discussed. The algorithm associated with such a model, maps the principles of sustainability of business success as dependent not only on the content of the business but also on the impact that it has on the beneficiaries and users of its outputs. Such modeled functions take into account surrounding factors and diverse forces that influence the delivery of services, goods or in general any desired output. An evidence of accumulative market forces and their impact on optimal delivery of goods and services is proved and illustrated. The obtained curves proved that the general collective effect of surrounding market forces is power based, which does agree with witnessed practical cases. Using intelligence in the model greatly assisted in determining and predicting vital critical points and breaking points of optimal service delivery.

Abu Sheikha, G.M., Bkhaitan, M.M., Al-Hourani, R.A., Qaisi, A.M., Loddo, R., La Colla, P.
Synthesis and in vitro antiviral studies of bis (pivaloyloxymethyl) ester derivative of 9-{((phosphonomethyl) aziridin-1-yl)methyl} adenine (PMAMA) and analogues
(2007) Saudi Pharmaceutical Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33947397679&partnerID=40&md5=79af8badebbc1da87f7677f4be55698b
AFFILIATIONS: Department of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman 11733, Jordan;
Department of Pharmaceutical Chemistry and Pharmacognosy, Jordan University, Amman, Jordan;
Dipartimento di Biologia Sperimentale, Università di Cagliari, 09124 Cagliari, Italy
ABSTRACT: Bis(pivaloyloxymethyl) ester derivative of 9-{((Phosphonomethyl)aziridin-1-yl)methyl}adenine, (bis(POM)PMAMA) (1), is an analogue of adefovir dipivoxil and tenofovir

disoproxil. Compounds 2, 3, and 4 were prepared in similar way to 1.They were tested in vitro against a wide range of viruses, in particularly against HIV-1 and hepatitis viruses.

Flamini, G., Cioni, P.L., Morelli, I., Bader, A.
Essential oils of the aerial parts of three Salvia species from Jordan: Salvia lanigera, S. spinosa and S. syriaca
(2007) Food Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33745232747&doi=10.1016%2fj.foodchem.2005.10.032&partnerID=40&md5=d09744a478f320765beea2b6abeba58f
AFFILIATIONS: Dipartimento di Chimica Bioorganica e Biofarmacia, Universita di Pisa, Via Bonanno 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, Amman, 11733, Jordan
ABSTRACT: The compositions of the essential oils of three Jordanian Salvia species, S. lanigera and S. spinosa from a desert climate, and S. syriaca from a Mediterranean habitat, were studied. All three oils are rich in monoterpene derivatives (68-73%). S. lanigera and S. spinosa showed a very high content of thymol, 54.9% and 68.9%, respectively. The main constituents of S. syriaca were thymol, α-pinene and isobornyl acetate (15.5%, 12.6% and 12.0%, respectively). © 2005 Elsevier Ltd. All rights reserved.

Al-Alak, B.A.M.
The impact of marketing actions on relationship quality in the higher education sector in Jordan
(2006) Journal of Marketing for Higher Education, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33847004749&doi=10.1300%2fJ050v16n02_01&partnerID=40&md5=240e9e7d904ffc911b0d2ee74318de26
AFFILIATIONS: Department of Marketing, Faculty of Economics and Administrative Sciences, AL-Zaytoonah Private University of Jordan, Amman, Jordan
ABSTRACT: This field/analytical study examined the marketing actions (antecedents) and performance (consequences) of relationship quality in a higher education setting. To analyze data collected from a random sample of 271 undergraduate students at AL-Zaytoonah Private University of Jordan, the linear structural relationship (LISREL) model was used to identify structural characteristics of relationship management between the University employees, including academic and administrative staff and students. The empirical results of this study were fourfold. First, greater employees' relational and student orientation resulted in higher relationship quality. Second, better education providers' (employees') attributes resulted in higher relationship quality. Third, higher relationship quality resulted in better relationship continuity. Fourth, committed student relationships resulted in student satisfaction, loyalty, positive word of mouth, and promotion. These in turn contributed to the enhancement of university image. © by The Haworth Press, Inc. All rights reserved.

Kanaan, R.A., Aldwaik, M., Al-Hanbali, O.A.
The role of connective tissue growth factor in skeletal growth and development
(2006) Medical Science Monitor, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33845483368&partnerID=40&md5=c75bdf2b46671a2271847a6d2c44b206
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University, Jordan;
Gloucestershire Royal Hospital, United Kingdom;
University of Pennsylvania, School of Medicine, Philadelphia, PA 19104-6021, United States
ABSTRACT: Connective tissue growth factor (CTGF) is a secreted, extracellular matrix-associated protein that regulates diverse cellular functions in different cell types. CTGF gene belongs to a larger CCN gene family that also includes Cyr61 and NOV. It modulates many cellular functions, including proliferation, migration, adhesion, and extracellular matrix production, and it is involved in many biological and pathological processes. CTGF has special importance in skeletal development. During Meckel's cartilage development, CTGF acts as a down-stream molecule of TGFβ to stimulate cellcell interactions and the expression of condensation-associated genes. CTGF promotes endochondral ossification and articular cartilage regeneration. During the healing of experimental bone fracture, CTGF was expressed in periosteal cells and hypertrophic chondrocytes. It promotes the proliferation of chondrocytes and osteoblasts. CTGF is a down-stream mediator for prostaglandin E2 (PGE2) in osteoblast-induced proliferation. It also regulates signaling through the Wnt pathway, in accord with its ability to bind to the Wnt co-receptor LDL receptor-related protein 6 (LRP6). Constitutive expression of CTGF was shown to inhibit both BMP-9- and Wnt3A-induced osteogenic differentiation. © Med Sci Monit, 2006.

Shilbayeh, N.F., Iskandarani, M.Z.
Analysis of PVT composite structure images using a Search Through algorithm
(2006) WSEAS Transactions on Systems, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-

33749073833&partnerID=40&md5=5c5d795d3c8a3a5ab88c9a7a9fd64e5b
AFFILIATIONS: Faculty of Computer Science and Information Technology, The University of Graduate
Studies, P.O.BOX 42, 11610 Amman, Jordan;
Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O.BOX
911597, 11191 Amman, Jordan

ABSTRACT: An effective NDT (Non-Destructive Testing) image analysis technique for detecting materials
damage and defects existence has been developed successfully and applied to PVT images of composite
structures. The developed technique is based on converting an image to its equivalent pixel values
and then applying Search Through (ST) algorithm to the converted image such that the presence of
damage in the composite structure and its extent can be easily verified. The technique has a novel
approach to data analysis by employing intensity, RGB signal re-mix. and wavelength variation of a
thermally generated IR-beam onto the specimen under test which can be sensed and displayed on a
computer screen as an image. Specimen inspection and data analysis are carried out through pixel
level re-ordering and shelving techniques within a transformed image file using a sequence grouping
and regrouping software system, which is specifically developed for this work.

Sabri, H.A., El-Refae, G.A.
Accreditation in higher business education in the private sector: The case of Jordan
(2006) Journal of Marketing for Higher Education, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33750145737&doi=10.1300%2fJ050v16n01_03&partnerID=40&md5=d4d9d91d5fda6e091d4f132c6ca7bffb
AFFILIATIONS: Department of Business Administration, Al-Zaytoonah Private University, Amman 11733,
Jordan;
Department of Economics and Finance, Al-Zaytoonah Private University, Amman 11733, Jordan

ABSTRACT: This study explores the development of a quantitative research designed to examine the
accreditation system of undergraduate Business Administration program in private universities in
Jordan, in comparison with the standards of the Quality Assurance Agency (QAA) in the United Kingdom.
The research has set out a description of Jordanian accreditation process of private universities and
the QAA system of quality assurance. It has drawn out some distinctions in terms of similarities and
differences. The findings suggest that although the current arrangements for accreditation in
Jordanian private universities are making some progress in determining and assuring quality standards
in the Business Administration program; however, they are still inadequate. Accreditation should
apply to all institutions of higher education in Jordan. It is also important that the accreditation
council in Jordan should be strengthened and its formation changed to incorporate universities,
government, employers, and professional bodies. doi:10.1300/ J050v16n01_03. Copyright © by The
Haworth Press, Inc. All rights reserved.

Shilbayeh, N.F., Iskandarani, M.Z.
A neural based intelligent interpretation system of detected gases using PbPc gas sensor array
(2006) Information Technology Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33750194714&doi=10.3923%2fitj.2006.982.987&partnerID=40&md5=535b630be2aca6271fc795e844c70d5a
AFFILIATIONS: Faculty of Information Technology for Graduate Studies, University of Graduate Studies,
P.O. Box 41, 11931, Jordan;
Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O. Box
911597, 11191 Amman, Jordan;
Faculty of Information Technology for Graduate Studies, University of Graduate Studies, P.O. Box 41,
11931 Amman, Jordan

ABSTRACT: The voltage/current characteristics and the effect of NO 2 gas on the electrical
conductivity of a PbPc gas sensor array is investigated. The gas sensor is manufactured using vacuum
deposition of gold electrodes on sapphire substrate with the lead-phathalocyanine vacuum sublimed on
the top of the gold electrodes. Two versions of the PbPc gas sensor array are investigated. The
tested types differ in the gap sizes between the deposited gold electrodes. The sensors are tested at
different temperatures to account for conductivity changes as the molecular adsorption/desorption
rate is affected by heat. The obtained results found to be encouraging as the sensors shoed stability
and sensitivity towards low concentration of applied NO 2 gas. © 2006 Asian Network for Scientific
Information.

Fiore, G., Nencini, C., Cavallo, F., Capasso, A., Bader, A., Giorgi, G., Micheli, L.
In vitro antiproliferative effect of six Salvia species on human tumor cell lines
(2006) Phytotherapy Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33747264571&doi=10.1002%2fptr.1911&partnerID=40&md5=9d97ce2995ed8f7f1f61b45d76777e67
AFFILIATIONS: Department of Pharmacology 'Giorgio Segre', University of Siena, Siena, Italy;
Department of Pharmaceutical Sciences, University of Salerno, Italy;

Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan;
Department of Pharmacology 'Giorgio Segre', University of Siena, Via Delle Scotte 6, 53100 Siena, Italy

ABSTRACT: This study was designed to examine the in vitro antiproliferative activity of the methanol erode extracts of six Salvia species: Salvia dominica L. leaves, Salvia lanigera Desf. aerial parts, Salvia menthaefolia Ten. roots, Salvia palaestina Benth. aerial parts, Salvia sclarea L. roots and Salvia spinosa L. aerial parts. Extracts were screened for their possible antitumoral activity by MTT test on nine human cancer cell lines: glioblastoma (DBTRG-05MG, T98G, U-87MG), colorectal adenocarcinoma (WiDr and HT-29), prostate adenocarcinoma (MDA Pca2b), choriocarcinoma (JEG-3), endometrium adenocarcinoma (HEC-1A) and B lymphoblast (CIR). IC50 values were determined for only five extracts and ranged from 90 to 400 μg/mL approximately. Salvia menthaefolia extract exhibited marked antiproliferative activity against all tumor cell lines showing lower IC50 values, while S. spinosa, S. sclarea and S. dominica extracts showed a degree cytotoxic activity dependent on the cell line type. Finally S. palaestina extract revealed a moderate antiproliferative effect only against three cell lines. Salvia lanigera extract displayed toxic activity at all concentrations tested. The results strengthen the evidence that the genus Salvia could be considered a natural resource of potential antitumor agents. Copyright © 2006 John Wiley & Sons, Ltd.

Iskandarani, M.Z.
Design, modeling, and implementation of a re-programmable neural switch (RNS)
(2006) Neural Network World, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33746253981&partnerID=40&md5=d2bb00dd60a0724f0d64fafc782291de
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of Jordan, P.O.BOX 911597, 11191, Amman, Jordan

ABSTRACT: The design, build and test of a re-programmable neural switch (RNS) are carried out. The function of such a switch is to operate as a synaptic processor behaving in an adaptive manner and suitable to be used as a compact programmable device with other artificial neural network hardware. Interaction between constituent materials forming the switch is discussed and carrier interaction during the Programming cycles is explained. Programmability of the switch is proved to be bi-directional and reversible with hysteresis effect which is due to excess charge storage. © ICS AS CR 2006.

Shilbayeh, S., Tutunji, M.F.
Possible interethnic differences in omeprazole pharmacokinetics: Comparison of Jordanian Arabs with other populations
(2006) Clinical Pharmacokinetics, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33745907546&doi=10.2165%2f00003088-200645060-00003&partnerID=40&md5=d8e5027756f9e76bf76c965a44c003de
AFFILIATIONS: Pharmacy College, AL-Zytoonah University, Amman, Jordan;
Chemistry Department, Faculty of Sciences, University of Jordan, Amman, Jordan;
Pharmaceutical Research Unit (PRU), Royal Scientific Society, Amman, Jordan;
Pharmacy College, AL-Zytoonah University, P.O. Box 130, Amman, 11733, Jordan

ABSTRACT: Background and objective: Considerable ethnic differences have been reported Abstract in the incidence of the poor metaboliser (PM) genotype of cytochrome P450 (CYP) 2C19. The frequency of this genotype was found to be much higher in Oriental persons (13-23%) than in American or European populations (3-5%). There are, however, no valid data published for Arabic subjects. The present study was conducted to evaluate pharmacokinetic parameters of omeprazole after a single dose in healthy Jordanian Arabic subjects and to compare the results with data published for other populations. Methods: Seventy-four healthy male Jordanian Arabic volunteers contributed to the study, which was performed at Al Essra Hospital in Amman, Jordan. After an overnight fast, omeprazole was administered as a single Losec® 20mg capsule. A total of 20 blood samples were collected over a 10-hour period after administration. Omeprazole pharmacokinetic parameters were determined from the plasma concentration-time profiles using the WinNonlin software. Kolmogorov-Smirnov's test and probit plots of omeprazole area under the plasma concentration-time curve (AUC) data were used to analyse the frequency distribution of phenotypic data. Results: The mean pharmacokinetic parameters and their corresponding coefficient of variation (CV%) for peak plasma concentration (Cmax), AUC from time zero to infinity (AUC∞), time to reach Cmax (t max), apparent oral clearance (CL/F) and elimination half-life (t1/2) were 314.96 ng/mL (56%), 923.2 ng·h/mL (108.6%), 2.1h (44%), 0.66 L/h/kg (92%) and 1.5h (56.6%), respectively. Inter-individual differences in the current study were high for all pharmacokinetic parameters, yet comparable to CVs reported in nonphenotyped subjects identified within other ethnic groups (40.3-159% for AUC and 39-48.2% for Cmax). The frequency distribution of all parameters, particularly the AUC, was shown to be trimodal. This has proposed the presence of three distinct phenotypes, designated as extensive metabolisers (EMs), slow-extensive metabolisers (SEMs), and PMs, with corresponding frequency of 36.5%, 39.2% and 24.3%, respectively. After

stratification, the relative mean AUCs of omeprazole in EMs, SEMs and PMs were 1 : 2.7 : 9.3 (all p < 0.001). Accordingly, the CL/F of omeprazole showed a ratio of 9.8 : 3.6 : 1 for three phenotype groups, respectively. For other pharmacokinetic parameters including Cmax, t1/2, AUC normalised for bodyweight (AUCN), Cmax/dose and AUC/dose, there were also significant differences between the three groups. Conclusions: The current pharmacokinetic study revealed that the majority of the Jordanian Arabics seemed to be more properly classified within the EM phenotype. More specifically, the observed metabolic rates of heterozygous and homozygous Jordanian Arabic EMs were more comparable to those of Caucasian EMs than Oriental EMs. Consequently, higher dosage requirements can be expected among most of the Jordanian Arabics. Yet, the incidence of PMs is significant and they seemed to exhibit a similar pharmacokinetic pattern to Chinese PMs in terms of long-term exposure (clearance and AUC) as well as short-term exposure (C max) parameters, after adjustment for dose and bodyweight. Therefore, further clinical application of CYP2C19 polymorphism is anticipated in Jordanian Arabic mixed population, particularly if long-term use of omeprazole is intended. © 2006 Adis Data Information BV. All rights reserved.

Abu-Samak, M., Mahmoud, F., Khataibeh, M., Hamdan, S., Crevoi, A.
Effects of melanocyte-stimulating hormone on plasma levels of testosterone and estradiol hormones in alloxan-induced diabetic rats
(2006) Pakistan Journal of Biological Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33745764774&doi=10.3923%2fpjbs.2006.1350.1353&partnerID=40&md5=c2f353033b67e78f87c62cb23c872167
AFFILIATIONS: Department of Medical Technology, Faculty of Allied Medical Sciences, Applied Science University, Amman, Jordan;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Medical School, Al-Quds University, Al-Quds, Palestine;
Department of Human and Animal Physiology, Moldova State University, Moldova;
Department of Medical Technology, Faculty of Allied Medical Sciences, Applied Science University, Amman 11931, Jordan
ABSTRACT: This study was designed to investigate the effects of Melanocyte stimulating hormone MSH on serum testosterone T and estradiol E2 hormones concentrations in alloxan-induced diabetic rats. Eighty male and female Sprague Dawley rats, weighing 180-200 g, were divided into four groups of normal rats and four groups of alloxan-induced diabetic rats were given intraperitonially (i.p.) a daily injection of 20 mg alloxan solution/100 g of body weight for 10 days. Two groups, male and female from the normal and 2 diabetic groups served as controls and did not inject with MSH 2 groups, male and female from the normal rats and 2 groups from the diabetic rats injected (i.p) daily with MSH at a dose of 2-microg/100 g of body weight, for 10 days. The control group was only injected with the same volume of normal saline. Serum glucose concentrations were higher and serum insulin, testosterone and estradiol concentrations were lower in diabetic rats than those in the control groups. MSH administration decreased the elevated blood glucose concentrations of the diabetic rats to the normal levels and decreased estradiol concentration in female normal rats while increased the testosterone concentration in male normal rats. Present findings indicate that MSH plays adaptive role during early stages of alloxan induced-diabetes mellitus. Further studies are needed to identify the mechanism. © 2006 Asian Network for Scientific Information.

De Felice, A., Bader, A., Leone, A., Sosa, S., Della Loggia, R., Tubaro, A., De Tommasi, N.
New polyhydroxylated triterpenes and anti-inflammatory activity of Salvia hierosolymitana
(2006) Planta Medica, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33745698227&doi=10.1055%2fs-2006-
931573&partnerID=40&md5=829c72660de5cf4f150e1e6b1f4ad505
AFFILIATIONS: Dipartamento di Scienze Farmaceutiche, Università di Salerno, Fisciano, Salerno, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan;
Dipartimento dei Materiali e delle Risorse Naturali, Università di Trieste, Trieste, Italy;
Dipartimento di Scienze Farmaceutiche, Università di Salerno, Via Ponte Don Melillo, 1, 84084 Fisciano, (SA), Italy
ABSTRACT: Salvia hierosolymitana (Lamiaceae) leaves were investigated for their topical anti-inflammatory properties following a bioassay-guided fractionation. The chloroform extract showed a strong inhibition of the Croton oil-induced ear oedema in mice, comparable to that of indomethacin. Phytochemical and pharmacological investigations of this extract led to the isolation of eight anti-inflammatory polyhydroxylated triterpenes of the ursane and oleanane series. Four of them are new compounds, whose structures were elucidated by NMR and mass spectroscopy as 3β3,6α,23-trihydroxyurs-12,19(29)-dien-28- oic acid, 23-(trans-p-coumaroyloxy)-3β,6α,30-trihydroxyurs-12-en-28- oic acid, 2α,3α-dihydroxyolean-28-oic acid and 24-nor-2α, 3β-dihydroxyolean-4(23),12-ene. © Georg Thieme Verlag KG Stuttgart.

Mghawish, A., Mazur, Z., Michalec, P., Woda, M.

Processing transactions with temporal-probabilistic description
(2006) WSEAS Transactions on Information Science and Applications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33744529608&partnerID=40&md5=c79de74c12720b970e6bc3f35b0099dc
AFFILIATIONS: Al-Zaytoonah University, Amman, Jordan;
Institute of Applied Informatics, Wroclaw University of Technology, Wybrzeze Wyspianskiego 27,
Wroclaw, Poland;
Institute of Computers Engineering, Control and Robotics, Wroclaw University of Technology, Wybrzeze
Wyspianskiego 27, Wroclaw, Poland
ABSTRACT: Real time database systems are used wider and wider in practical solutions. It results from
fact, that there is need of creating distributed applications, which have to deal with specific
requirements applied to task's execution time. In this paper, there are presented regular methods of
transaction scheduling and there is described method of processing transactions with temporal-
probabilistic description. There are also presented results of efficiency tests for transaction
processing with temporal-probabilistic description for different mass distribution functions in
comparison to other priority assigning criteria used in real time database systems.

Al-Husainy, M.A.F.
Image encryption using genetic algorithm
(2006) Information Technology Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33749632318&doi=10.3923%2fitj.2006.516.519&partnerID=40&md5=e2063f29d25082419d3c0c1adeead624
AFFILIATIONS: Department of Computer Science, Faculty of Sciences and Information Technology, Al-
Zaytoonah University of Jordan, P.O. Box 130, Amman (11733), Jordan
ABSTRACT: The security of digital images attracts much attention recently, especially when these
digital images are stored in some types of memory or send through the communication networks. Many
different image encryption methods have been proposed to keep the security of these images. Image
encryption techniques tries to convert an image to another image that is hard to understand. In this
proposed method, Genetic Algorithm (GA) is used to produce a new encryption method by exploitation
the powerful features of the Crossover and Mutation operations of (GA). The proposed encryption
method, in this study , has been tested on some known images and good results are recorded. © 2006
Asian Network for Scientific Information.

Ali, A.-D., Belal, M.A.
Partitions redistribution in distributed databases based on creative evolutionary systems approach
(2006) WSEAS Transactions on Computers, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33744544937&partnerID=40&md5=d8efe6294ea5282337286fe56ca15bef
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah University, Amman, Jordan
ABSTRACT: The replication of partitions, in Distributed Data Bases (DDB), into multiple hosts helps
in reducing the average remote access requests, however, the replication of partitions would add an
initial cost of transmitting replicas and an overhead of updating them. Therefore, there is a trade-
off between replicating partitions into multiple hosts and maintaining remote requests. If we
increase the number of replicas, the remote requests will be decreased, on the other hand,
redistributing partitions will cost both space and time. In this paper, a proposed mod el is
introduced in which a wide range of data redistributing schemes is evolved, in a distributed
database, using the Creative Evolutionary Systems (CES) approach. By evolution of such data
replication schemes, a near optimal design of these schemes can be obtained. A novel formulation of
the problem of data redistributing in DDB is provided. Additionally, in the proposed CES model, a
novel genotype to phenotype transformation, and crossover operation, are provided. Finally, the
performance of the proposed model is compared with different replicas redistribution schemes and the
results are discussed and analyzed.

Iskandarani, M.Z.
Mathematical modeling of the programing field in A neural switch using the semi-infinite coplanar
electrode approximation
(2006) Advances in Complex Systems, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33845326723&doi=10.1142%2fS021952590600080X&partnerID=40&md5=913c437cc9bb417941e3c1abf116cf12
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah Private University of
Jordan, P.O. Box 911597, 11191, Amman, Jordan
ABSTRACT: The design and mathematical modeling of the programing electric field in a neural switch is
carried out. The specified function for the switch is to operate as a synaptic processor behaving in
an adaptive manner and suitable to be used as a compact programable device with other artificial
neural network hardware. Modeling of the switch is carried out by means of complex mathematical

analysis employing the Schwarz-Christoffel transform. The effect of inter-electrode separation on the field strength is analyzed in two dimensions. The realized power law function of the programing field is discussed and explained. © World Scientific Publishing Company.

Ali, A.-D., El Emary, I.M.M.
An advanced approach for improving the performance of CSMA/CD LANS
(2006) WSEAS Transactions on Communications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
33645143728&partnerID=40&md5=24503488a9762566b84d3edd3c533e57
AFFILIATIONS: Computer Science Department, Al-Zaytoonah University, Amman, Jordan;
Al-Ahlyia University, Amman, Jordan
ABSTRACT: The main objective of this paper is to present a new approach for improving the performance of LAN that uses CSMA/CD as an access protocol. The proposed approach depends on continuously monitoring the performance of the LAN in viewpoint of network throughput, and makes a relation between the output performance and the parameters which affect on it. Among the parameters which are of important effect on the performance is the offered traffic on the network. Our approach try to get the optimum performance by automatically adjust the level of the offered traffic through increasing or decreasing it depending on the observed performance. Output results show that our approach performs better than the standard approach that is used in traditional CSMA/CD LANs.

Iskandarani, M.Z., Yaha, A.A.
Neural network based optical character recognition system
(2005) Proceedings of the 2005 International Conference on Computer Vision, VISION'05, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
60749096903&partnerID=40&md5=ac66c14a6e40d604c7646544686592fd
AFFILIATIONS: Facutly of Science and Information Technology, Azaytoonah Private University of Jordan, P. O. BOX: 911597, Amman, Jordan
ABSTRACT: A neural based mouse gesture system is designed and tested successfully. The system incorporates a sufficiently large automatically generated weight matrix, which contributes to the overall accuracy of recognition. The designed algorithm is accurately able to translate discrete and continuous gesture moves. The implemented algorithm takes into account character size variations; hence, an intelligent zooming window algorithm is designed and implemented. The system is implemented in Visual Basic code on a standard PC. Using a simple two-dimensional model, it employs a highly efficient, single-pass algorithm to segment and extract its model parameters. Tracking and feature extraction is remarkably fast and robust. Morphological operations are used to smooth the image and remove the noise.

Safadi, R.
Jordanian women: Perceptions and practices of first-time pregnancy
(2005) International Journal of Nursing Practice, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33644829604&doi=10.1111%2fj.1440-
172X.2005.00534.x&partnerID=40&md5=a1e520c7da114ecc912509b152711c16
AFFILIATIONS: Al Zaytoonah Private University, Amman, Jordan
ABSTRACT: A woman's child-bearing encounter is an experience that reflects the cultural beliefs and practices of the society. The purpose of this study was to describe the perceptions and practices of urban, low socioeconomic, Jordanian women (aged 18- 30 years) in relation to their pregnancy career. Anopportunistic sample consisting of 67 Muslim first-time pregnant women who followed up antenatal care at two maternity-care centres in East Amman was selected. A qualitative approach, including ethnographic semistructured interview, participant observation data from the households and clinics and oblique interviewing in random conversations initiated by the primigravidae, was conducted over 18 months. Women gave elab-orative accounts of their pregnancy and childbirth expectations in narrative, phenomenological forms. Qualitative data analysis was performed concurrently with data collection, revealing the essential themes of immediacy of pregnancy; familial support and changing networks, especially for the after-birth period; fear of pain and medical interventions, all emphasizing the traditional and religious perceptions and practices in a familial context. ©2005 Blackwell Publishing Asia Pty Ltd.

Prieto, J.-M., Bader, A., Martini, F., Ríos, J.-L., Morelli, I.
Screening of some rare endemic Italian plants for inhibitory activity on 5-lipoxygenase
(2005) Fitoterapia, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
28044454796&doi=10.1016%2fj.fitote.2005.07.003&partnerID=40&md5=8a7fe4b820196678731d29200cc4c83a
AFFILIATIONS: Departament de Farmacologia, Facultat de Farmàcia, Universitat de València, Av. Vicent Andres Estelles, s/n, 46100 Burjassot, Valencia, Spain;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, P.O. Box 130, 11733-Amman, Jordan;

Dipartimento di Chimica Bioorganica e Biofarmacia, Universita degli Studi di Pisa, Via Bonanno, 33, 56126 Pisa, Italy
ABSTRACT: The extracts of four rare plants found on the islands of Sicily, Vulcano and Marettimo, Southern Italy, were screened for their inhibitory effect on the production of leukotriene B4 by 5-lipoxygenase in intact cells. The methanol extracts of pods of Cytisus aeolicus and aerial parts of Thymus richardii were the most active extracts, inhibiting almost completely the leukotriene B4 production at 200 and 50 µg/ml, respectively.

El Emary, I.M.M., Ali, A.-D.
New strategies for scheduling tasks in field Bussystems
(2005) WSEAS Transactions on Communications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-24344459134&partnerID=40&md5=c756253309ac7dc4e98305a1f0e3183b
AFFILIATIONS: Computer Engineering Department, Faculty of Computer Engineering, Al- Ahliyya University, Amman, Jordan;
Computer Science Department, Faculty of Information Technology, Al Zaytoonah University, Amman, Jordan
ABSTRACT: The technological evaluation of process control systems has led to a great increase in both the number of field devices (e. g. sensors and actuators) and the flow of information exchanged between them and the control systems. In this paper, a strategy for an industrial standard, the SP-50 FieldBus, is proposed to support the intracell and Local Area Network (LAN) to support the intercell real time communications. Two levels of scheduling are presented: one for fieldbus communication and the other for tasks to be executed. Three routines are proposed for scheduling and these are Guarantee, Bidder, and Decision Routines. The Decision-Maker routine is implemented by using two methods, Fuzzy-Logic set and Neurofuzzy system. A comparison between the two methods is presented too in this paper.

Iskandarani, M.Z., Shilbayeh, N.F.
Remote meter communication system for reading and billing
(2005) WSEAS Transactions and Communications, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-22944490230&partnerID=40&md5=28fec57bb5182be4ecff28c7c582c600
AFFILIATIONS: Faculty of Science and Information Technology, Al-Zaytoonah University of Jordan, P.O. Box 911597, 11191 Amman, Jordan;
Faculty of Computer Science and Information Technology, Applied Science University, P.O. Box 41, 11931 Amman, Jordan
ABSTRACT: A remote meter reading system is implemented. The system is designed to remotely receive readings from meters and then process them to obtain an accurate bill for the subscriber. The system makes use of modern communication and networking techniques to enable customers to view and pay their bill on-line. In addition, it enables a history trace and consumption analysis with ability to adjust it accordingly. The system offers bills that can be accessed by customers via a collection center connected to the billing system through a communication network. Contribution of such advanced system and its effect on the industry is discussed and explained together with its operational principles.

Siciliano, T., Bader, A., De Tommasi, N., Morelli, I., Braca, A.
Sulfated pregnane glycosides from Periploca graeca
(2005) Journal of Natural Products, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-24744470267&doi=10.1021%2fnp050031d&partnerID=40&md5=f181a55658858761ea73a050b74d5974
AFFILIATIONS: Dipartimento di Chimica Bioorganica e Biofarmacia, Università di Pisa, Via Bonanno 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan;
Dipartimento di Scienze Farmaceutiche, Università di Salerno, Via Ponte Don Melillo, 84084 Fisciano (SA), Italy
ABSTRACT: Six new pregnane glycosides, four of them sulfated derivatives, were isolated from small branches of Periploca graeca. The compounds were identified as 16α-[(6-O-sulfo-β-D-glucopyranosyl)oxy]pregn-5-en-20-ol-3β-yl O-(2-O-acetyl-β-D-digitalopyranosyl)-(1→4)-β-D-cymaropyranoside (1), 16α-[(6-O-sulfo-β-D-glucopyranosyl)oxy]pregn-5-en-20-ol-3β- yl O-β-D-oleandropyranosyl-(1→4)-β-D-oleandropyranoside (2), 16α-[(6-O-sulfo-β-D-glucopyranosyl)oxy]pregn-5-en-20-ol-3β-yl O-β-D-oleandropyranoside (3), 16α-[(6-O-sulfo-β-D- glucopyranosyl)oxy]pregn-5-ene-3β,20-diol (4), 20-O-[(β-D- glucopyranosyl-(1→6)-β-D-glucopyranosyl-(1→2)-β-D-digitalopyranosyl)oxy]pregn-5-en-16β-ol-β-yl O-β-D- digitalopyranosyl-(1→4)-β-D-cymaropyranoside (5), and calogenin 3-O-β-D-digitalopyranoside-20-O-β-D-canaropyranoside (6). Three pregnane glycosides, previously reported from the genus Periploca, were also isolated. Structures were established on the basis of spectroscopic analyses, including 1D and 2D NMR experiments, HRESIMS, elemental analysis,

and chemical degradation. © 2005 American Chemical Society and American Society of Pharmacognosy.

Zaidi, S.M.K.R., Al-Qirim, T.M., Banu, N.
Effects of antioxidant vitamins on glutathione depletion and lipid peroxidation induced by restraint stress in the rat liver
(2005) Drugs in R and D, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-22244483452&doi=10.2165%2f00126839-200506030-00004&partnerID=40&md5=ba1f7701fd4f3994dd8140e55cddc56d
AFFILIATIONS: Department of Biochemistry, Faculty of Life Science, Aligarh Muslim University, Aligarh, India;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, Amman, Jordan;
Department of Biochemistry, Faculty of Life Science, 202002, UP AMU Aligarh, India
ABSTRACT: Background and aim: Stress as a cofactor has been reported to affect the progression and severity of several diseases. The influence of stress on the liver is of interest from the clinical point of view because stress plays a potential role in aggravating liver diseases in general and hepatic inflammation in particular, probably through generation of reactive oxygen species. The present study was undertaken to investigate the potential of the antioxidant vitamins A (retinol), E (tocopherol) and C (ascorbic acid) individually and in combination (vitamin E + C) to modulate restraint stress-induced oxidative changes. These effects were determined by measuring changes in hepatic levels of free radical scavenging enzymes such as superoxide dismutase (SOD), glutathione-S-transferase (GST) and catalase, as well as levels of total glutathione (GSH), malondialdehyde (MDA), aspartate aminotransferase (AST) and alanine aminotransferase (ALT). Methods: Immobilisation was achieved by placing the animals in wire mesh cages of their size. The rats were orally administered vitamins A, E and C individually and in combination (E + C) prior to and after 6 hours of immobilisation stress exposure. The hepatic levels of SOD, GST, catalase, GSH and MDA were determined by spectrophotometric methods. Liver SOD activity was assayed by monitoring the amount of enzyme required to inhibit autoxidation of pyrogallol by 50%. Hepatic GST was monitored by following the increase in absorbance at 340nm of CDNB-GSH conjugate generated due to GST catalysis between GSH and CDNB. Catalase activity in liver tissues was determined using peroxidase as the substrate. Lipid peroxidation was measured by determining the level of thiobarbituric acid reactive substances. ALT and AST were determined by commercial kits. Results: Six hours of immobilisation stress caused a decrease in liver levels of SOD ($p = 0.001$), catalase ($p = 0.031$), GST ($p = 0.021$) and GSH (0.013), while levels of MDA ($p = 0.0015$), AST ($p = 0.05$) and ALT ($p = 0.046$) were increased compared with non-stressed control rats. Both pre-vitamin stress and post-vitamin stress treatments either alone or in combination were associated with increased normalisation of these parameters towards control values, with post-vitamin treatment being the more effective of the two. Vitamins E and C individually were found to be more effective in restoring the endogenous antioxidant system than vitamin A. The combined vitamin (E + C) post-stress treatment was found to be effective but not additive in combating hepatic oxidative stress. The beneficial effects of these vitamin treatments were also reflected in reversions of altered AST and ALT levels towards their control values. Conclusion: Vitamins E or C alone or in combination can be given as prophylactic/therapeutic supplements for combating scavenging free radicals generated in liver tissue. This approach may reduce oxidative stress caused by diseases such as cirrhosis. © 2005 Adis Data Information BV. All rights reserved.

Mula-Abed, W.-A.S., Aughsteen, A.A.
Biochemical analysis of serum pancreatic amylase and lipase enzymes in patients with type 1 and type 2 diabetes mellitus (multiple letters) [1]
(2005) Saudi Medical Journal, .
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AFFILIATIONS: Department of Chemical Pathology, Royal Hospital, PO Box 1331, Seeb 111 Muscat, Oman;
Faculty of Pharmacy, Al-Zaytoonah University, PO Box 130, Amman 11733, Jordan

Siciliano, T., De Leo, M., Bader, A., De Tommasi, N., Vrieling, K., Braca, A., Morelli, I.
Pyrrolizidine alkaloids from Anchusa strigosa and their antifeedant activity
(2005) Phytochemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-21844444294&doi=10.1016%2fj.phytochem.2005.05.002&partnerID=40&md5=31bb2105b609ce5d824fa0057e92a4a7
AFFILIATIONS: Dipartimento di Chimica Bioorganica e Biofarmacia, Università di Pisa, Via Bonanno 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Private University of Jordan, P.O. Box 130, 11733 Amman, Jordan;
Dipartimento di Scienze Farmaceutiche, Università di Salerno, Via Ponte Don Melillo, 84084 Fisciano, SA, Italy;
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Netherlands

ABSTRACT: The pyrrolizidine alkaloid (PA) content of flowers, leaves, and roots of Anchusa strigosa (Boraginaceae) was analysed by ESI-LC-MS. Six PAs, including two new natural compounds, were detected, characterized by NMR spectroscopy, and quantified in each plant organ. The results indicated that the highest total concentration of PAs was in the leaves (23.63 mg/g of dried part), followed by the flowers (19.77 mg/g), and finally by the roots (1.80 mg/g). All PAs isolated were subjected to Spodoptera exigua and Pieris brassicae larvae. Feeding activity by both herbivore species using a bioassay was inhibited up to circa 75% depending on PA and applied concentration. © 2005 Elsevier Ltd. All rights reserved.

Sabri, H.
Knowledge management in its context: Adapting structure to a knowledge creating culture
(2005) International Journal of Commerce and Management, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-33845787116&doi=10.1108%2f10569210580000191&partnerID=40&md5=12a1fa0ea2c5c8bfb8ffefbc19c097b7
AFFILIATIONS: Zytoonah University of Jordan, Jordan
ABSTRACT: This study focuses on knowledge management in relation to its organizational context. It argues that knowledge management is not just computer and information systems; it embodies organizational processes that seek to augment the creative, innovative capacity of human beings. Specifically, the study regards the compatibility between the organizational structure and corporate culture essential for activating a knowledge base culture in modern organizations. The study sets a proposed framework on how to transform Arab bureaucracies into knowledge creating cultures by means of designing the right structure in which information sharing, learning, and knowledge formation should be parts of the organizational norm. © Emerald Backfiles 2007.

Testai, L., Silvio, C., Ammar, B., Luisa, P., Vincenzo, C., Martinotti, E.
Vasorelaxant effects of the chloroformic crude extract of Bupleurum fruticosum L. (Umbelliferae) roots on rat thoracic aorta
(2005) Journal of Ethnopharmacology, .
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AFFILIATIONS: Department of Psichiatry, Neurobiology, Pharmacol. Biotech., Univ. Pisa, V., Italy; Dept. Bioorg. Chem. and Biopharmacy, University of Pisa, Via Bonanno 33, 56126 Pisa, Italy, Italy; Faculty of Pharmacy, Al-Zaytoonah Priv. Univ. of Jordan, P.O. Box 130, 11733-Amman, Jordan, Jordan
ABSTRACT: The chloroformic crude extract of roots of Bupleurum fruticosum L. (Umbelliferae) showed a concentration-dependent vasorelaxing effect on aortic rings endothelium-deprived and pre-contracted by norepinephrine (NE). The pharmacological effect was not produced through the stimulation of cyclooxygenase, adenyl cyclase, or guanylyl cyclase, since selective inhibitors did not prevent the extract-induced responses. The incubation of the aortic rings with the chloroformic extract (10 -4 g/ml) produced a depression of the concentration-contractile response curve to NE, in normal conditions, and this effect was more evident in Ca 2+-free Tyrode solution, suggesting an action on the intracellular mobilization of Ca 2+ ions. Moreover, the vasodilator action of Bupleurum fruticosum extract was resistant to the pre-treatment with nifedipine and to the pre-treatment with cyclopiazonic acid (blocker of Ca 2+/ATPase). Finally, the chloroformic extract of Bupleurum fruticosum produced a reduction of the contraction obtained by caffeine, an opener of ryanodine-sensitive receptors, suggesting that the plant could elicit the vasorelaxing response by the blockade of ryanodine-sensitive Ca 2+ channels of the sarcoplasmic reticulum. © 2004 Elsevier Ireland Ltd. All rights reserved.

Elmasry, A., Hammad, A.
An empirical study for inversions-sensitive sorting algorithms
(2005) Lecture Notes in Computer Science, .
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AFFILIATIONS: Dept. of Computer Engineering and Systems, Alexandria University, Egypt; Faculty of Science and Information Technology, Al-Zaytoonah University, JOR, Jordan
ABSTRACT: We study the performance of the most practical internal adaptive sorting algorithms. Experimental results show that adaptive AVL sort performs the least number of comparisons unless the number of inversions is fewer than 1%. In such case, Splaysort performs the fewest number of comparisons. On the other hand, the running time of Quicksort is superior unless the number of inversions is fewer than 1.5%. In such case, Splaysort consumes the smallest running time. © Springer-Verlag Berlin Heidelberg 2005.

Aughsteen, A.A., Abu-Umair, M.S., Mahmoud, S.A.
Biochemical analysis of serum pancreatic amylase and lipase enzymes in patients with type 1 and type

2 diabetes mellitus
(2005) Saudi Medical Journal, .
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14944369940&partnerID=40&md5=b47aa537546bdb78cd73700688efee46
AFFILIATIONS: Department of Pharmacy, Al Zaytoonah University, PO Box 130, Amman 11733, Jordan;
Department of Medical Laboratories, Islamic Hospital, Amman, Jordan

ABSTRACT: Objectives: To examine the pancreatic exocrine insufficiency in patient with diabetes mellitus by estimating serum pancreatic amylase and lipase enzymes in healthy subjects and in type 1 and type 2 diabetic patients. Methods: The study was conducted on 20 normal healthy volunteers and 39 diabetic patients referred to Al-Isra Medical Laboratory, Amman, Jordan during the period from April - November 2003 after recording their age and gender. The age of onset of diabetes and the type of treatment were determined and the patients were categorized into type 1 and type 2 diabetics. Blood samples were collected and analyzed for fasting blood sugar (FBS), glycosylated hemoglobin (HbA1C), serum insulin, and serum pancreatic amylase and lipase enzymes. All biochemical tests were carried out in the medical laboratories of Islamic Hospital, Amman, Jordan. All estimates were presented as means ± SD, and statistical treatment of data were performed using student t-test. Results: The FBS and HbA1C estimates were consistently higher in type 1 and type 2 diabetic patients, while no significant changes were observed in the estimates of serum insulin between the normal and diabetic patients. The reduction in serum pancreatic amylase was recorded in both types of diabetes, which amounted to 71 % for type 1 diabetics and 49% for type 2 diabetics. On the other hand, reduction in serum lipase was only detected in type 1 diabetics amounting to 31%. Correlation of the reduction in serum amylase and lipase levels with the duration of disease revealed a remarkable decrease in both enzymes in patients with long-standing disease (76% and 39%) in type 1 diabetic patients. Whereas, patients with very low serum insulin estimates the reduction in serum amylase was 77% while serum lipase level was reduced by 42%. Similarly, the reduction in serum amylase in type 2 diabetes was higher in patients with longer duration of illness (59%) and in patients with low serum insulin value (79%), while reduction in serum lipase was only detected in patients with very low serum insulin (34%). No differences in all measured parameters between males and females were recorded in type 1 and type 2 diabetics. Conclusion: Although most of diabetic research has been focused on dyslipidemia as a major risk factor for cardiac, cerebral and renal complications, the present study clearly illustrates an impairment of pancreatic exocrine function in type 1 and type 2 diabetes. We suggest that analysis of serum pancreatic enzymes could be an additional informative parameter for the assessment of chronicity and progress of the illness as well as the response to therapy.

Siciliano, T., Bader, A., Vassallo, A., Braca, A., Morelli, I., Pizza, C., De Tommasi, N.
Secondary metabolites from Ballota undulata (Lamiaceae)
(2005) Biochemical Systematics and Ecology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
14144250681&doi=10.1016%2fj.bse.2004.10.013&partnerID=40&md5=50bacb9c940ced62f7eef897f00bcd7e
AFFILIATIONS: Dipto. Chim. Bioorganica Biofarmacia, Università di Pisa, Via Bonanno, 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Priv. Univ. of Jordan, P.O. Box 130, 11733 Amman, Jordan;
Dipto. di Scienze Farmaceutiche, Università di Salerno, Via Ponte Don Melillo, 84084 Fisciano (SA), Italy

ABSTRACT: Four phenylpropanoids, forsythoside B 1, lysionotoside 2, verbascoside 3, betonyoside F 4, an iridoid, verminoside 5, seven flavonoids, compounds 6-12, and two betaine derivatives 13 and 14 were isolated from the aerial parts of Ballota undulata. The structures of the isolated compounds were established by high resolution NMR and ESI-MS. The antioxidant activity of all compounds was determined by measuring free radical scavenging activity by TEAC test. © 2004 Elsevier Ltd. All rights reserved.

Zhuravkov, M., Pavlov, S., Amjed, A.-I.
Applied theory of cracks behavior in rock massifs
(2004) ECCOMAS 2004 - European Congress on Computational Methods in Applied Sciences and Engineering, .
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84893489572&partnerID=40&md5=660f5f9add4a3b8eb56df778f65ce53a
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Al-Zaytoonah Jordanian University, P.O. Box 130, Amman 11733, Jordan

ABSTRACT: In this paper is described the applied theory and its computer realization of estimation of cracks behavior in rock massifs in regions of macro and micro disturbances acting. The model of cracks system spread and various scenarios of this spread are considered in the paper.

Buchanan, L.M., El-Banna, M., White, A., Moses, S., Siedlik, C., Wood, M.

An exploratory study of multicomponent treatment intervention for tobacco dependency
(2004) Journal of Nursing Scholarship, .
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AFFILIATIONS: Gamma Pi, United States;
University of Nebraska Medical Center College of Nursing, Omaha, NE, United States;
Al-Zaytoonah Private University, Amman, Jordan;
College of Nursing, 985330 Nebraska Medical Center, Omaha, NE 68198-5330, United States

ABSTRACT: Purpose: To conduct an exploratory study of two interventions to help smokers abstain over a period of 3 months. The specific aims were to describe the outcomes, test feasibility of the study design, and evaluate effect size. Design and Methods: A randomized experimental design was used in a sample of 42 patients who received multicomponent treatment intervention (MTI) or standard care (SC) in a midwestern city in the United States. Variables were behavioral (quit rate, self-efficacy, motivation), psychosocial (depression, partner interaction), and symptom management (use of nicotine replacement therapy [NRT]). Data analysis included descriptive statistics and repeated measures ANOVA. Results: The typical participant was Caucasian, middle aged, nicotine dependent, married or partnered, and employed, and had a high school education. Participants in the MTI group were more likely to use NRT and to have higher self-reported quit rates at follow-up. Statistically significant differences were found between groups over time for self-efficacy and positive to negative behavior ratio. Barriers to quitting were relapse, stress, weight gain, lack of support, and depression that were more frequent in the SC group. For effect size (0.25), probability level (.05), and power (.80), a sample size of 140 patients was calculated. Conclusions: The MTI group had higher quit rates, more NRT, higher self-efficacy, and more positive behavioral interactions. Limitations of the study included self-report of tobacco use, small sample, and attrition. The investigators suggest a future study with a larger sample to test whether multicomponent interventions with telephone calls after discharge are more effective than is standard care in helping patients to quit and continue to abstain from smoking. ©2004 Sigma Theta Tau International.

Shilbayeh, S.
Risk factors of coronary heart disease among Jordanians
(2004) Saudi Medical Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-7244257702&partnerID=40&md5=3f176af2388ff46c67e1b0ec1d9ebb8b
AFFILIATIONS: Department of Clinical Pharmacy, Faculty of Pharmacy, Al-Zytoonah University, PO Box 130, Amman 11733, Jordan

Iskandarani, M.Z., Shilbayeh, N.F.
Classification of herbs using an electronic nose system
(2004) Neural Network World, .
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AFFILIATIONS: Fac. of Sci. and Info. Technology, Alzaytoonah University of Jordan, P. O. Box 911597, 11191, Amman, Jordan;
Department of Computer Science, Applied Science University, P. O. Box 41, 11931, Amman, Jordan

ABSTRACT: An electronic nose system for herbs classification is designed and tested. The system uses the Figaro TGS800 series sensors with an integrated heating element. The testing of the system was carried out using different types of herbs where it was proved to be successful in classifying them into different classes. Database-based software was designed to interface the built hardware and to process the electronic nose signals before being classified.

Sabri, H.M.
Socio-cultural values and organizational culture
(2004) Journal of Transnational Management Development, .
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AFFILIATIONS: Faculty of Economics and Administrative Sciences, Al-Zaytoonah University of Jordan, Amman, Jordan

ABSTRACT: This exploratory study examines if certain dimensions of the socio-cultural values could explain certain types of organizational culture. The proposition merits investigation because it has important implications for local as well as international and global companies. The study first investigates employees' perceptions of the existing and preferred cultural orientations in four Jordanian organizations, and then it compares the results with other studies conducted in other cultures (American and South African). In Jordan data were collected by means of Harrison and Stokes survey for diagnosing organizational culture, the same instrument used in the USA and in South Africa. The study concludes by suggesting that in certain countries the national culture's effects

may appearin a particular dominant organizational culture, that is desired by the management, but not actually preferred by employees. This implies that it is more beneficial for international and transnational corporations to develop "strong" cultures ratherthan to encourage local units to adapt to their national cultures. © 2004 Taylor & Francis Group, LLC.

Shilbayeh, S., S-Zumeili, A., Hilow, H.M.
The efficacy and safety of Calidron tablets for management of osteoporosis in Jordanian women: A randomised clinical trial
(2004) Saudi Pharmaceutical Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-3543037603&partnerID=40&md5=1850a6f09ffbca184457406e789e7881
AFFILIATIONS: Department of Clinical Pharmacy, Faculty of Pharmacy, Al-Zytoonah University, P.O. Box 130, Amman 11733, Jordan;
Islamic Hospital, Menopause and Osteoporosis Clinic, Amman 11181, Jordan;
Department of Statistics, Faculty of Science, University of Jordan, P.O. Box 785, Amman, 11942, Jordan
ABSTRACT: The aim of this study was to evaluate the efficacy and safety of daily alendronate (Calidron®) 5 and 10 mg for treatment and prevention of osteoporosis in postmenopausal Jordanian women. Subjects were randomly assigned to receive oral treatment with alendronate in the form of Calidron® 5mg or 10 mg; or identically appearing oral placebo pills. Bone mineral density (BMD) was measured by dual energy X-ray absorptiometry at lumbar spine, femoral neck, trochanter and wards at baseline and 12-month visits. After 12 months of treatment, 20 women (74%) in 10 mg/d Calidron®, 18 (50%) in 10 mg/d placebo, 11 (55%) in 5 mg/d Calidron®, and 13 (38%) in 5 mg/d placebo arms remained in the study and had BMD measurements. Much greater effect of Calidron® 5 mg tablets was observed at other sites of the hip; 3.9% (vs YA), 6.4% (vs AM), 7.13% (vs YA), 10.9% (vs AM), 10.1% (vs YA), and 12% (vs AM) increase at the femoral neck, wards and trochanter ($p<0.01$). In conclusion, our study generally support the conclusion that Calidron® 10 mg is relatively effective for maintenance of BMD and it possess real clinical value for preserving and normalizing bone mass in menopausal women with or without osteoporosis or osteopenia.

Flamini, G., Bader, A., Cioni, P.L., Katbeh-Bader, A., Morelli, I.
Composition of the Essential Oil of Leaves, Galls, and Ripe and Unripe Fruits of Jordanian Pistacia palaestina Boiss.
(2004) Journal of Agricultural and Food Chemistry, .
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AFFILIATIONS: Dipto. Chim. Bioorganica/Biofarmacia, University of Pisa, Via Bonanno 33, 56126 Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah Priv. Univ. of Jordan, P.O. Box 130, Amman 11733, Jordan;
Department of Plant Protection, Faculty of Agriculture, University of Jordan, Amman, Jordan
ABSTRACT: Pistacia palaestina Boiss. (Pistacia terebinthus L. var. palaestina (Boiss.) Engl.) is a medicinal and foodstuff plant, The ripe fruits are used largely in the Middle East as a component of the so-called Zaatar, a mix of aromatic and food plants. Results of GC and GC-MS analyses of the essential oils of leaves, galls produced by Baizongia pistaciae (L.), and ripe and unripe fruits of Pistacia palaestina Boiss. collected in Jordan are reported. Both qualitative and quantitative differences between different parts of the plant were observed. The oil was rich in monoterpenes, and the main constituents were α-pinene (63.1%) and myrcene (13.3%) in the leaves and α-pinene (49.4%), sabinene (22.8%), and limonene (8.1%) in the galls. (E)-Ocimene (33.8-41.3%), sabinene (20.3-24.1%), and (Z)-ocimene (3.8-13.0%) were the main ones in both unripe and ripe fruits. Sesquiterpenes have been detected in small quantities in leaves and fruits and in trace amounts in galls.

Abuleil, S., Evens, M.
Named Entity Recognition and Classification for Text in Arabic
(2004) 13th International Conference on Intelligent and Adaptive Systems and Software Engineering 2004, IASSE 2004, .
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AFFILIATIONS: Computer Information Systems Department, Al-Zaytoonah University of Jordan, Amman, Jordan;
Computer Science Department, Illinois Institute of Technology, 10 West 31 Street, Chicago, IL 60616, United States
ABSTRACT: Tagging and classifying proper names is an important key for many areas in natural language processing. The proper names in Arabic do not start with capital letter as in many other languages so special treatment is needed to find them in a text. Little research has been conducted in this area; most efforts have been based on a number of heuristic rules used to find names in the text. In this

paper we present a new technique to tag well-known names by building a database and graphs to represent the words that might form a name and the relationships between them. First we mark the phrases that might include names, second we build graphs to represent the words in these phrases and the relationships between them, third we apply rules to find the names. © 2004. 13th International Conference on Intelligent and Adaptive Systems and Software Engineering 2004, IASSE 2004. All rights reserved.

El-Banna, M.M., Berger, A.M., Farr, L., Foxall, M.J., Friesth, B., Schreiner, E.
Fatigue and depression in patients with lymphoma undergoing autologous peripheral blood stem cell transplantation.
(2004) Oncology nursing forum, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-22144475622&doi=10.1188%2f04.onf.937-944&partnerID=40&md5=94ba8d88198796f699e749532e6f41ca
AFFILIATIONS: Al-Zaytoonah University, Amman, Jordan
ABSTRACT: PURPOSE/OBJECTIVES: To describe the patterns of depression and fatigue, including its dimensions, and the relationship between these two variables in patients with lymphoma undergoing autologous peripheral blood stem cell transplantation (PBSCT). DESIGN: Prospective, descriptive, correlational, repeated measures. SETTING: Midwestern university National Cancer Institute-designated clinical cancer center. SAMPLE: 27 patients with lymphoma aged 19 to 71 undergoing autologous PBSCT. METHODS: The revised Piper Fatigue Scale was used to measure fatigue and its dimensions. The Center for Epidemiologic Studies' Depression Scale was used to measure depression on selected days at baseline and during chemotherapy and recovery. MAIN RESEARCH VARIABLES: Fatigue and its four dimensions (behavioral/severity, sensory, cognitive/mood, and affective meaning) and depression. FINDINGS: Total fatigue, fatigues four dimension scores, and depression scores changed significantly over time, with the highest scores at day + 7 after transplant. Total fatigue and the four dimension scores were highly and positively correlated with depression, with the highest correlation reported between the affective fatigue dimension and depression. CONCLUSIONS: The findings support the importance of assessing fatigue and depression in patients undergoing autologous PBSCT at baseline, during chemotherapy, and throughout recovery. IMPLICATIONS FOR NURSING: Routine clinical assessment with close observation around day +7 after transplant and patient education about the patterns of fatigue and depression will help the healthcare team to intervene at the appropriate time and may help patients to better manage these symptoms.

Shilbayeh, S.A., Jarrai, H.J.
Integration of hospital-based training in the clinical pharmacy and therapeutics course: "A reality or an illusion"
(2003) Jordan Journal of Applied Sciences - Natural Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-1342268254&partnerID=40&md5=d2ba010fb653bf9d6b49f45d9dc42032
AFFILIATIONS: Dept. of Pharmacology/Therapeatics, College of Pharmacy, Al-Zaytoonah University, Amman, Jordan;
Department of Information System, Coll. Computer Sci./Info. Technol., Applied Science University, Amman-11931, Jordan
ABSTRACT: Over the past four decades the evolution of pharmaceutical health care concept has moved the pharmacy career from the traditional product orientation to more patient-focused approach. Consequently, the colleges of pharmacy worldwide have updated their curricula to include more clinical coursework to meet the modern profession demands. In response to this trend, the faculty of pharmacy at the Applied Science University has introduced a new course format including: traditional classroom seminars, case-studies, hospital visits, and case presentations. The aim was to build on the existing theoretical content related to areas such as therapeutics, pharmacology, pharmacokinetics, and clinical biochemistry. Therefore, a homogenous integration between these areas was attempted. The basic scenario of the new course framework involving various instruction methodologies was that clinical practitioners and pharmacists will often argue over the best way to treat a patient, and some may disagree with the approach taken by another. This is particularly true as new discoveries are made or new drugs become available. Therefore, our attempt to integrate the practical application in real life situations was thought to provide our students with the following opportunities: to assess current therapy, to recommend a new patient-specific therapy based on careful weighting of risk versus benefit for each individual case, to monitor therapy, and to provide patient education. This paper describes the results of a survey from graduate pharmacy students who completed the novel Clinical Pharmacy and Therapeutics course including the theoretical and practical credit hours. 400 four hundred students completed the practical course since year 1999 till 2002 and 308 students participated in the survey provided at the end of the course. The overall Mean score and Median of the questionnaire were 3.15 and 4, respectively on a 4 point scale. It was revealed that recently implemented hospital visits has provided several benefits. The students self-reported level of confidence in counseling patients about common diseases and medications was significantly

improved. In addition, students indicated that collaboration of medicine and pharmacy provided an educational model that should be duplicated for future course. Details of multidimensional end-course questionnaire are described further in the article.

Shilbayeh, S.
Prevalence of osteoporosis and its reproductive risk factors among Jordanian women: A cross-sectional study
(2003) Osteoporosis International, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0347518985&doi=10.1007%2fs00198-003-1458-4&partnerID=40&md5=1ac465731839b8bc7b1c88f5c2cc3c95
AFFILIATIONS: Faculty of Pharmacy, Al-Zytoona University, PO Box 130, 11733, Amman, Jordan
ABSTRACT: Extensive differences in the osteoporosis epidemiological pattern among geographic and ethnic groups have been reported. The evidence concerning association of multiple pregnancies, lactations, and other menstrual history factors with low bone mineral density (BMD) remains inconclusive. Previous local studies addressing these issues in Jordan are very restricted. We present a cross-sectional study of Jordanian women who visited outpatient clinics between August 2000 and August 2002 at two community hospitals in Amman City. BMD measurement was performed for all subjects, while comprehensive appraisal of clinical issues related to reproductive status and past medical history was carried out using a structured questionnaire administered to 50% of the subjects. We also attempted to examine the current hypothesis of possible influence of hyperlipidemia and thyroid abnormalities on decreased BMD. According to WHO criteria, 119 (29.6%) were identified as having osteoporosis, 176 (43.8%) were osteopenic, and 107 (26.6%) had normal BMD. The multiple-linear regression analyses at different bone sites revealed that age, years of menopause, low-density lipoprotein (LDL), and follicle-stimulating hormone (FSH) have strong independent associations with decreased BMD at all lumbar and femoral neck regions. The negative effect associated with number of children (live births) and frequency of lactations was only evident at femoral neck. Although years of menstruation, age at menopause, days of menstrual cycle, number of pregnancies, and duration of hormone replacement therapy (HRT) were positively correlated with BMD, they had weaker associations than previous variables. Moreover, in the final multivariable logistic regression model, variables which rendered significantly independent risk factors after adjustment for age and BMI were: current smokers of more that 25 cigarettes/day, postmenopausal women irrespective of HRT use, menopausal years of ≥5 year intervals, natural early menopause, gastrointestinal disease, rheumatoid arthritis, osteoarthritis, hypertension, and thyroid replacement therapy. Ever-lactation, frequent lactation of 4 or more times, duration of lactation interval of 1-6 months and clinical hyperthyroidism were significant protective factors. Hysterectomy with or without oophorectomy, premature ovarian failure, gravidity, menstrual flow pattern, family history of osteoporosis, clinical hypothyroidism, hyperlipidemia, HRT, and corticosteroids therapy were not independent predictors of osteoporosis among our population. It was concluded that the prevalence of this worldwide public health problem among the Jordanian female population is extremely high, and is even found in younger age categories compared to previous international surveys. Though, the number of pregnancies in our multiparous female population showed a negative impact on femoral neck BMD, no evidence of increased risk of osteoporosis among ever-pregnant women was noted. Conversely, the current data analysis highlight many potential risk factors including associated medical illnesses, and other hormonal alterations experienced during menopausal period. Therefore, increased health awareness and intensive screening programs are mandatory for early detection of low bone mass.

Bader, A., Caponi, C., Cioni, P.L., Flamini, G., Morelli, I.
Composition of the essential oil of Ballota undulata, B. nigra ssp. foetida and B. saxatilis
(2003) Flavour and Fragrance Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0345328709&doi=10.1002%2fffj.1257&partnerID=40&md5=6ee2254b57a737bdc2a4b386022d8686
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan; Dipto. Chim. Bioorgan. e Biofarmacia, via Bonanno 33, 56126 Pisa, Italy
ABSTRACT: The essential oil composition of Ballota nigra ssp. foetida, B. undulata and B. saxatilis, collected during the flowering phase in Amman (Jordan), Naur (Jordan) and Pisa (Italy) respectively, was investigated. The chemical composition of the essential oil of B. nigra and B. undulata shows some similarities: monoterpenes are little represented, while sesquiterpenes are present in large amounts. In both cases germacrene D is the main compound. B. saxatilis essential oil is quite different from B. nigra and B. undulata ones: sesquiterpenes are still the main class of compounds but monoterpenes are much more represented; moreover, in this case the main compound is the oxygenated monoterpene, linalool. Copyright © 2003 John Wiley & Sons, Ltd.

Shilbayeh, S.
Management of hyperlipidemia and the urgency for effective therapeutic drug monitoring
(2003) Jordan Journal of Applied Sciences - Natural Sciences, .

https://www.scopus.com/inward/record.uri?eid=2-s2.0-
0042009208&partnerID=40&md5=f3a42f0637713f92e76cdd80c37ffc80

AFFILIATIONS: Dept. of Pharmacology/Therapeutics, Alzaytoonah University, Amman, Jordan

ABSTRACT: Clinical practice guidelines for management of various medical fields are usually validated by expert committees prior critical appraisal of well-designed research. The National Cholesterol Education Program (NCEP) Expert Panel has declared clinical criteria mandatory for initiating lipid-lowering agents and has established optimal therapeutic goals that should be achieved to minimize the risk of coronary heart disease (CHD) and stroke. However, several recent studies have demonstrated limited physicians' recognition and adherence to these guidelines in everyday practice. In addition, the quality of care of patients with hyperlipidemia has varied widely among different health professionals and institutions. The objectives were to assess the physicians' compliance with NCEP guidelines at two community hospitals and to identify the role of clinical pharmacists and their impact on achieving the NCEP goals. A cross-sectional surveys of patients who underwent diagnostic cardiac catheterization between 1995- 2000. A total of 200 patient charts were reviewed. Data obtained included demographic criteria, chief complaints, primary diagnosis, data concerned with risk factors of CHD, diet therapy and whether lipid-lowering agents were prescribed. History of diet and/ or pharmacological lipid lowering therapy was elicited in a total of 141 patients (70%); of which 116 (57.7%) patients had low-cholesterol diet instructions and 81 (40.3%) had drug therapy. An inconsistent pattern was noticed to be followed by physicians in prescribing of various lipid lowering drug groups when stratifying the frequency of treated cases according to various statin types, fibrates, resins, niacin, and combination drug therapy on different LDL-C serum levels. The univariate and multivariate association with initiating lipid lowering drugs was significantly dependent on number of hospital admissions (P=0.025), frequency of recording follow-up lipid profiles (P<0.001), documented diagnosis of CHD (P<0.001), baseline LDL-C risk categories (P<0.001), PTCA/ Stent interventions (P=0.006) and CABG surgery (P=0.03). Furthermore, significant predictors of achieving NCEP goals obtained by multiple logistic regression analysis were diabetes type I (insulin-dependent), PTCA and the unavailability of baseline lipid panel screening. Although 48% of total 145 CHD patients received lipid lowering agents, only 33.8% had a secondary follow-up lipid panel record of LDL-C which revealed that 13% (n=19) met the 1993 successful therapeutic goal of < 100 mg/dL and 10% (n=15) met the previously recommended 1988 goal of < 130 mg/dL. Hence, a "treatment gap" of estimation of 87% was identified in this 200 CHD patients survey which was considered clinically and statistically significant. The extremely limited physicians' adherence to NCEP guidelines despite its wide broadcasting since 1998 and its sooner 1993-update is striking. Therefore, urgent improvement in initiation and titration to goal is mandatory. Finally, The participation of clinical pharmacists is essential to fill the gap between physicians'convictions and "best practice" guidelines.

Al-Essa, L.Y.M.
Cellular calcium changes in human polymorphonuclear leukocytes during inhibition of superoxide anion generation by dibutyryl cAMP
(2003) Jordan Journal of Applied Sciences - Natural Sciences, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-
0042009207&partnerID=40&md5=fe0540fa343a480dc5016fd30c8a3e8b

AFFILIATIONS: Al-Zaytoonah University, Faculty of Pharmacy, P.O. Box 130, Amman 11377, Jordan

ABSTRACT: Superoxide anion generation by polymorphonuclear leukocytes (PMNs) plays a role in host defense against infecting bacteria. It has also been implicated in the pathogenesis of many diseases. Consequently, it is of significance, therefore, to evaluate some of the factors that regulate and modulate superoxide generation. In the present work, the role of cellular calcium changes in the cAMP-induced inhibition of superoxide anion generation was investigated. Stimulation of PMNs by formyl-methionyl-leucyl-alanine (fMLP) increased intracellular free calcium level. This increase exhibited an initial spike phase followed by a plateau phase. Chelation of the extracellular calcium by EGTA inhibited the plateau phase but not the spike phase. Dibutyryl cAMP (dbcAMP) inhibited the plateau phase of the free calcium elevation. Cytochalasin B (a calcium-dependent phospholipase D stimulant) primed PMNs for higher superoxide anion generation in response to fMLP. Cytochalasin B priming of PMNs did not attenuate dbcAMP-induced inhibition of superoxide anion generation. It can be concluded that spike phase of fMLP-induced elevation of free calcium is due to the release of intracellular stored calcium, while the plateau phase is due to the influx of extracellular calcium, and dbcAMP inhibited calcium influx but not the release of stored intracellular calcium. Moreover, dbcAMP-induced change of intracellular free calcium level may affect phospholipase D contribution to the superoxide anion generation.

Braca, A., Bader, A., Siciliano, T., Morelli, I., De Tommasi, N.
New Pyrrolizidine Alkaloids and Glycosides from Anchusa strigosa
(2003) Planta Medica, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0242383456&doi=10.1055%2fs-2003-
43202&partnerID=40&md5=2794de9917c935b9e144d87d10ee1dcc

AFFILIATIONS: Dipto. Chim. Bioorganica Biofarmacia, Università di Pisa, Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Dipto. di Scienze Farmaceutiche, Università di Salerno, Fisciano (SA), Italy;
Dipto. Chim. Bioorganica Biofarmacia, Università di Pisa, Via Bonanno, 33, 56126 Pisa, Italy
ABSTRACT: Six new pyrrolizidine alkaloids, a new carboxylic acid, a new phenolic and a new oleanane glycoside, together with the known compounds 7,7'-bis-(4- hydroxy-3,5-dimethoxyphenyl)-8,8'-dihydroxymethyltetrahydrofuran 4'-O-β-D-glucopyranoside, rosmarinic acid, caffeic acid, tormentic acid 28-O-β-D-glucopyranoside, euscaphic acid 28-O-β-D- glucopyranoside, euscaphic acid, and allantoin were isolated from Anchusa strigosa roots. Their structures were established by high resolution NMR, MS, elemental analysis, and chemical reactions.

Mostafa, M.M.
Attitudes towards women who work in Egypt
(2003) Women in Management Review, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-84986156570&doi=10.1108%2f09649420310485096&partnerID=40&md5=356eb9dc86d09270ea97126887cbc89c
AFFILIATIONS: College of Economics and Business, Al-Zaytoonah University of Jordan, Amman, Jordan
ABSTRACT: This study investigates Egyptian society's attitudes towards women who work held by a sample of 217 participants. The subjects completed the newly developed multidimensional aversion to women who work scale (MAWWWS). The study validates the scale in a non-western context. The results reveal that, contrary to our expectation, Egyptian students have very similar attitudes towards women who work to those of the older generations. There are significant differences between males' and females' perceptions towards women's roles and participation in society. The study predicts that modernity may diminish patriarchal attitudes towards women in Arab societies. Finally, the study detects no significant difference between Muslims and non-Muslims in Egypt regarding their attitudes towards women who work. © 2003, MCB UP Limited

Maslat, A.O., Al-Hamdany, R., Fataftah, Z., Mahrath, A.J., Abussaud, M.J.
Genotoxicity, antifungal and antibacterial activity of newly synthesized N-(3-phthalidyl)amines and o-benzoyl benzamide derivatives
(2003) Toxicological and Environmental Chemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-1842530210&doi=10.1080%2f02772240410001665490&partnerID=40&md5=4aaba4d170e0a37f1ded684b14e79f06
AFFILIATIONS: Department of Biological Sciences, Yarmouk University, P.O. Box 4538, Irbid-211-63, Jordan;
Chemistry Department, Yarmouk University, P.O. Box 4538, Irbid-211-63, Jordan;
Sabbatical Leave Al-Zaytoonah Univ., Amman, Jordan
ABSTRACT: A number of newly synthesized phthalidylamines and o-benzoylbenzamide derivatives were evaluated for some biological activities. Synthesis was established by condensation of 3-acetoxyphthalide 1 with morpholine, piperidine, N,N-diisobutyl-N,N-dibenzylamines and piperazine, which afforded N-(3-phthalidyl)amines 3a-d, and 4 respectively, while with N,N- diisopropylamine, o-formyl-N,N-diisopropyl benzamide 5a is formed exclusively. On the other hand, the reaction of 3-acetoxy-3-phenylphthalide 2 with secondary amines afforded o-benzoylbenzamide derivatives 5b-c, 6 in a high yield. The structure of the reaction products was established from their spectral data. These products were screened for antifungal, antibacterial and genotoxic effect. It was found that all tested compounds have antifungal activity. Compounds 1, 2, 3d and 5b were found to be active against Escherichia coli, Bacillus subtilis and Staphylococcus aureus. Genotoxic effects using Ames test showed that Compounds 1 and 2 have a weak base-pair substitution mutagenicity while a clear base-pair substitution mutagenic activity was shown by 3a using TA100-strain of Salmonella typhimurium. Compound 4 showed a frameshift mutgenicity while a weak oxidative mutagenic action was revealed by 6. No change on the mutagenicity of the tested chemicals was observed after using the S9 metabolic activation system.

Bader, A., Braca, A., De Tommasi, N., Morelli, I.
Further constituents from Caralluma negevensis
(2003) Phytochemistry, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0037381167&doi=10.1016%2fS0031-9422%2802%2900678-7&partnerID=40&md5=58c10d4b73aba592ca6212b69f0d8065
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Dipto. di Scienze Farmaceutiche, Universita degli Studi di Salerno, Via Ponte Don Melillo, I-84084 Fisciano (SA), Italy
ABSTRACT: Two new megastigmane glycosides (1 and 2) and two new flavone glycosides (3 and 4) were

isolated from the methanol extract of the whole plant of Caralluma negevensis Zohary (Asclepiadaceae). The structures of the isolated compounds were characterized as (9R)-2β,9-dihydroxymegastigma-4,7-dien-3-one-9-O-α-L- rhamnopyranosyl-(1→6)-β-D-glucopyranoside (1), 2β,9-dihydroxymegastigma-4-en-3-one 9-O-α-rhamnopyranosyl-(1→6)-β-D-glucopyranoside (2), luteolin 3'-O-β-D-glucopyranoside-4'-O-α-L- rhamnopyranosyl-(1→2)-β-D-glucopyranoside (3), and luteolin 3',4'-di-O-β-D-glucopyranoside (4). The structures of the isolated compounds were established on the basis of spectral evidence and chemical transformation. © 2003 Elsevier Science Ltd. All rights reserved.

Bader, A., Caponi, C., Cioni, P.L., Flamini, G., Morelli, I.
Acorenone in the essential oil of flowering aerial parts of Seseli tortuosum L
(2003) Flavour and Fragrance Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0037239534&doi=10.1002%2fffj.1154&partnerID=40&md5=fc47fe51328315f1a77b02a81653babd
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, PO Box 130, 11733 Amman, Jordan;
Dipto. Chim. Bioorganica/Biofarmacia, via Bonanno 33, 56126 Pisa, Italy
ABSTRACT: The essential oil composition of a population of Seseli tortuosum, collected on the coasts of Marina di Vecchiano (Pisa) Italy, was studied for the first time. The essence, obtained from leaves and flowering tops of the plant, was characterized mainly by the presence of myrcene (29.2%), α-pinene (18.6%), β-pinene (13.2%) and limonene (10.6%). Among sesquiterpenes, only acorenone is quantitatively represented (6.3%). This is a rare sesquiterpene, isolated for the first time in Acorus calamus, quite uncommon in essential oils. Copyright © 2002 John Wiley & Sons, Ltd.

Bader, A., Flamini, G., Cioni, P.L., Morelli, I.
Essential oil composition of Achillea santolina L. and Achillea biebersteinii Afan. collected in Jordan
(2003) Flavour and Fragrance Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0037239404&doi=10.1002%2fffj.1147&partnerID=40&md5=4f61f13764c1b290346a922bcda95a5d
AFFILIATIONS: Faculty of Pharmacy, Al-Zaytoonah University of Jordan, PO Box 130, 11733 Amman, Jordan;
Dipto. Chim. Bioorganica/Biofarmacia, Via Bonanno 33, 56126 Pisa, Italy
ABSTRACT: The essential oils of Achillea santolina L. and A. biebersteinii Afan., collected in Jordan, have been studied. The former has never been previously investigated, while the latter evidenced from a literature survey a high variability. The two oils were quite different: A. santolina oil showed mainly 1,8-cineole, camphor, 4-terpineol and trans-carveol, while A. biebersteinii oil contained cis-ascaridole, p-cymene, carvenone oxide and camphor among its principal constituents. This is the second report of carvenone oxide from a natural source. Copyright © 2002 John Wiley & Sons, Ltd.

Aughsteen, A.A., Mohammed, F.I.
Insulin enhances amylase and lipase activity in the pancreas of streptozotocin-diabetic rats. An in vivo study
(2002) Saudi Medical Journal, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0036631149&partnerID=40&md5=9c98270c5b7555ee629b919a0e91f97f
AFFILIATIONS: Pharmacy and Medical Laboratories, Al-Zaytoonah University, Amman, Jordan;
Department of Physiology and Biochemistry, Faculty of Medicine, University of Jordan, Amman, Jordan;
Faculty of Pharmacy and Medical Laboratories, Al-Zaytoonah University, PO Box 130, Amman 11733, Jordan
ABSTRACT: Objectives: To analyze the biochemical effect of in vivo insulin therapy on the amylase and lipase activities in the pancreatic acinar cells of streptozotocin-diabetic rats, and to detect any possible regeneration in the beta cells of the islets of Langerhans using transmission electron microscopy. Methods: Adult male albino Fischer-344 rats were divided into 3 groups, the first group received drug vehicle and served as controls, the 2nd group was made diabetic with a single intravenous dose of streptozotocin (75 mg/kg body weight), while the 3rd group was made diabetic as in its 2nd group but the rats were treated with Lente human insulin. Their body weight, blood glucose and glucosuria were regularly recorded, and blood samples for serum immunoreactive insulin assay were taken from each rat at sacrifice. The largest part of each excised pancreas was homogenized for biochemical assay of amylase, lipase and insulin, while only a small part of the gland was used for morphological survey. The study was conducted in the Faculty of Medicine, University of Jordan, Amman, Jordan. Results: The serum immunoreactive and pancreatic-homogenate insulin levels of the untreated diabetic rats were reduced by 85% and 37% compared with those of the controls. Their pancreatic amylase and lipase levels were also reduced by 66% and 43%. Insulin treatment of diabetic rats resulted in a 65-fold increase in serum immunoreactive insulin, and approximately 61%, 47%, and

25% increase in the pancreatic-homogenate levels of amylase, lipase, and insulin. Electron microscopic examination of the pancreas of untreated and insulin-treated diabetic rats showed no evidence of beta cell regeneration. Conclusion: Inspite of the controversies in an extensively studied field of in vivo and in vitro influence of insulin on pancreatic enzymes, our present biochemical data clearly indicates that in vivo insulin administration has a stimulant effect on both amylase and lipase activity in the pancreatic acinar cells of streptozotocin-diabetic rats. It also proposes that insulin might play an important role in beta cell regeneration although no morphological evidence of beta cell mitosis was demonstrable. We finally suggest that the biochemical assay of pancreatic enzymes might be of value in determining the severity and chronicity of human insulin-dependent diabetes, and can be used as a parameter in evaluating the response to treatment.

Bader, A., Flamini, G., Cioni, P.L., Morelli, I.
The composition of the root oil of Salvadora persica L
(2002) Journal of Essential Oil Research, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0036496532&doi=10.1080%2f10412905.2002.9699795&partnerID=40&md5=31ce464b68b11989a55994c02b12e92d
AFFILIATIONS: Fuculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Dipartimento di Chimica Bioorganica e Biofarmacia, Universita di Pisa, Via Bonanno 33, 56126-Pisa, Italy
ABSTRACT: The composition of the essential oil from the roots of Salvadora persica L. (Salvadoraceae), collected in Jordan. was analyzed by GC and GC/MS. Seventeen compounds were detected, the main constituents being benzyl isothiocyanate (70%), limonene (9.4%) and α-pinene (8.7%).

Nostro, A., Cannatelli, M.A., Morelli, I., Cioni, P.L., Bader, A., Marino, A., Alonzo, V.
Preservative properties of Calamintha officinalis essential oil with and without EDTA
(2002) Letters in Applied Microbiology, .
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AFFILIATIONS: Dipartimento Farmaco-Biologico, Sezione Microbiologia, Università di Messina, Italy;
Dipartimento di Chimica Bioorganica e Biofarmacia, Facoltà di Farmacia, Università di Pisa, Italy;
Faculty of Pharmacy, Al-Zaytoonah University of Jordan, Amman, Jordan;
Dipartimento Farmaco-Biologico, Sezione Microbiologia, Università di Messina, Villaggio Annunziata, 98168, Italy
ABSTRACT: Aims: This study was focused on the preserving properties of Calamintha officinalis essential oil, a plant known for its diaphoretic, expectorant and aromatic properties. Methods and Results: The commercial aerial parts of C. officinalis Moench were hydrodistilled and the essential oil analysed by Gas chromatography/Electron impact mass spectrometry (GC/EIMS). The inhibition efficacy of this essence, alone (0.5 and 1.0% v/v) and in combination with 2.0 mM EDTA, was assayed, in culture medium and in cetomacrogol cream, using preservative efficacy testing against standard microrganisms (E. coli ATCC 25922, Ps. aeruginosa ATCC 9027, Staph. aureus ATCC 6538P, C. albicans ATCC 10231 and A. niger ATCC 16404). C. officinalis essential oil in cetomacrogol cream with EDTA showed long-lasting antimicrobial activity, satisfying the European Pharmacopoeia Commission (E. P.) criteria. Conclusion: C. officinalis essential oil could have a potential for a future use as a cosmetic preservative. Impact of the Study: To find natural compounds with antimicrobial activity which could be alternatives to the synthetic chemical preservatives.

Aughsteen, A.A.
The ultrastructure of primary cilia in the endocrine and excretory duct cells of the pancreas of mice and rats
(2001) European Journal of Morphology, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0035760374&doi=10.1076%2fejom.39.5.277.7380&partnerID=40&md5=7565bdd50d97b4d6f9b2426e3df52436
AFFILIATIONS: Department of Anatomy, Faculty of Pharmacy, Al-Zaytoonah University, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: A primary cilium was frequently observed in the endocrine alpha, beta and delta cells, as well as in the excretory duct cells of the pancreas of normal mice and rats. The characteristic components of the cilium including the basal body, axoneme (shaft), and terminal part were clearly recognizable. The basal body or distal centriole surrounded by Golgi vesicles was perpendicularly oriented to the proximal centriole, and a dense striated band was seen filling the gap between them. The microtubules of the basal body consisted of nine peripheral triplets exhibiting a 9 + 0 pattern, an appearance similar to that of the proximal centriole. Rootlets, basal feet and alar sheets associated with the basal body were occasionally seen. The axoneme usually consisted of a 9 + 0 pattern of microtubule doublets, but other irregular patterns of 7 + 2, 7 + 3, and 8 + 1 were also seen. The microtubules in the terminal part of the cilium became fewer in number and had no peculiar

arrangement. The cilium of the endocrine cells always projected into the intercellular canaliculus and was covered by the ciliary sheath, and occasionally, double cilia were visualized in the vicinity of beta cells. In the excretory duct cells, the cilium showed similar features, but it was slightly longer and always projected into the dense secretory content of duct lumen. On the other hand, no primary cilium was ever observed in the acinar cells of mouse and rat pancreas. In conclusion, the present study describes the morphology of primary cilia and its associated components in the endocrine and excretory duct cells of the pancreas of mice and rats. The findings suggest that the primary cilium should be considered as a constant intracellular organelle though its function and significance remain speculative.

Abu-Al-Futuh, I.M., Abdelmageed, O.H., Jamil, R.M., Avato, P.
a piperitenone oxide chemotype of mentha longifolia (L.) Huds. Growing wild in jordan
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https://www.scopus.com/inward/record.uri?eid=2-s2.0-0000823550&doi=10.1080%2f10412905.2000.9712151&partnerID=40&md5=9279c4b7d745e7d022f5aa483513b5a9
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ABSTRACT: The essential oil obtained from Mentha longifolia plants growing wild in Jordan has been analyzed by GC and GC/MS. The main consituent has been isolated and identified as piperitenone oxide (83.7%). © 2000, Taylor & Francis Group, LLC. All rights reserved.

Abu-Elteen, K.H., Abu-Alteen, R.M.
The prevalence of Candida albicans populations in the mouths of complete denture wearers
(1998) New Microbiologica, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0031602735&partnerID=40&md5=134bb9836323e8231c966dfe6ee5e2ba
AFFILIATIONS: Department of Medical Technology, Al-Zaytoonah University, Amman, Jordan;
Dental Clinic, Jordan University Hospital, Amman, Jordan
ABSTRACT: Using imprint cultures, the prevalence of oral candidosis and the frequency of isolation of Candida albicans and its density in oral mucosal sites and denture surfaces was determined in 190 healthy dentate subjects and 230 complete denture wearers. Candida colonization was 36.8% and 78.3% in healthy dentate and complete denture wearers patients, respectively. In the healthy dentate subjects the tongue, palate and cheeks, and in complete denture wearers additionally the upper and lower dentures, were the most frequently and densely colonized oral sites. Oral carrier rate and density of C. albicans were both higher in the denture wearers diabetic group than in the control non-diabetic group. Smoking was associated with an increase in the frequency and density of the yeast in denture wearers. Attention to these predisposing factors could reduce the incidence of oral candidosis particularly in immunocompromised patients.

Abu-Elteen, K.H., Whittaker, P.A.
Effect of sub-inhibitory concentration of chlorhexidine on lipid and sterol composition of Candida albicans
(1997) Mycopathologia, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0031402162&doi=10.1023%2fA%3a1006852207366&partnerID=40&md5=adab3aadcfab1dc53c69919038e0240d
AFFILIATIONS: Department of Medical Technology, Faculty of Allied Health Sciences, Al-Zaytoonah University;
Department of Biology, St. Patrick's College, Maynooth, Co. Kildare, Ireland;
Department of Medical Technology, Faculty of Allied Health Sciences, Al-Zaytoonah University, P.O. Box 130, Amman 11733, Jordan
ABSTRACT: The effect of a sub-inhibitory concentration of chlorhexidine on lipid and sterol composition of Candida albicans was investigated. The total lipid content of this yeast grown in the presence of chlorhexidine was reduced whilst the total sterol content was increased compared with control-grown cells. Lipids and sterol analyses of this yeast grown in the presence and absence of chlorhexidine are presented. Chlorhexidine-grown yeast had a higher level of phosphatidylethanolamine, phosphatidylcholine and monogalactosyldiacylglycerol. Lower proportions of phosphatidylinositol plus phosphatidylserine, phosphatidic acid and cardiolipin were found in C. albicans grown in the presence of the drug when compared with control-grown yeast. The major fatty acids in control-grown cells were C16 and C18. Drug grown-cells had higher proportions of palmitic acid (16:0) and stearic acid (18:0), but lower proportions of palmitoleic acid (16:1) and oleic acid (18:1). Chlorhexidine also decreased the unsaturated to saturated fatty acid ratio, while the C16/C18 ratios increased compared to control-grown cells. Differences in the fatty acid composition of major phospholipids and neutral lipids between drug and control-grown yeast were also detected. Sterol analysis of control-grown cells showed that the major sterol present was ergosterol (55.4% wt). A

significant increase in ergosterol and obtusitoliol was observed in chlorhexidine-treated cells and a significant decrease in squalene and lanosterol. Our results suggested that chlorhexidine affected the lipid and sterol composition of C. albicans.

Abu-Elteen, K.H.
Gastrointestinal distribution of Candida albicans in orally infected infant mice: SEM studies
(1997) Biomedical Letters, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0031330935&partnerID=40&md5=15015369ff491c967e25fdc06e51f52e
AFFILIATIONS: Department of Medical Technology, Faculty of Allied Health Sciences, Al-Zaytoonah University, PO Box 130, Amman 11733, Jordan
ABSTRACT: The infant mouse model was used tc explore by scanning electron microscopy (SEM) the effect of saccharides, known to block the adherence of Candida albicans to epithelial cells in vitro, on gastrointestinal mucosal surfaces in vivo. Pretreatment of infant mice with mannose, N-acetylglucosamine and chitin soluble extract revealed that a remarkable reduction in the numbers of C. albicans was associated with the epithelium of the kidneys, liver, stomach and small intestine compared with control mice. SEM preserved the C. albicans, and the gastrointestinal mucous layer and epithelial surface and made it possible to visualize the association between Candida cells and host tissue. It was evident that C. albicans associated with the mucosa by more than one mechanism.

Abu-Elteen, K.H., Abderrahman, S., Sallal, A.-K.J.
Isolation of Candida species from domestic sewage in Jordan
(1997) Cytobios, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0031304897&partnerID=40&md5=887d611e96452f93b78b9d13a9ef3ed3
AFFILIATIONS: Department of Medical Technology, Al-Zaytoonah University, PO Box 130, Amman 11733, Jordan;
Department of Biological Sciences, Hashemite University, Zarqa, Jordan;
Department of Biological Sciences, University of Science and Technology, Irbid, Jordan
ABSTRACT: Saccharomyces cerevisiae and various species of Candida were isolated and identified from the Al-Baqa'a sewage treatment station. Potentially pathogenic yeasts were detected in sewage samples and Candida krusei was found in the treated effluent. There was a 90-100% reduction in the number of yeast found in treated sewage effluent compared with raw sewage. Seasonal variations of total yeast counts are also reported.

Abu-Elteen, K.H., Abdul Malek, A.M.M., Abdul Wahid, N.A.
Prevalence and susceptibility of vaginal yeast isolates in Jordan
(1997) Mycoses, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-14444278733&doi=10.1111%2fj.1439-0507.1997.tb00211.x&partnerID=40&md5=73fc077ff39805dbeca25629c4eb0343
AFFILIATIONS: Department of Medical Technology, Faculty of Allied Health Sciences, Al-Zaytoonah University, Amman, Jordan;
Private Clinic, Amman, Jordan;
Department of Medical Technology, Faculty of Allied Health Sciences, Al-Zaytoonah University, PO Box 130, Amman 11733, Jordan
ABSTRACT: The prevalence of vaginal yeast species has been studied in 140 women (41 pregnant, 66 infertile and 33 healthy controls) attending a gynaecological private clinic in Amman, Jordan. Yeast species were isolated from pregnant (68.2%), infertile (51.5%) and healthy control (48.4%) women. Patients manifesting one, two or three symptoms of vulvovaginitis were 22.1%, 26.8% or 24.2% respectively. Asymptomatic cases and cases with more than three symptoms were 22.4% and 4.5% respectively. Candida albicans was the dominant species (in 51.3% of the patients) followed by C. glabrata (17.9%). The percentage occurrence as well as the pattern of Candida species differed among the different groups of patients. Candida kefyr was found to be significantly higher in the infertile women. In vitro sensitivity tests using amphotericin B, nystatin, miconazole nitrate and chlorhexidine were carried out; amphotericin B was the most effective and miconazole nitrate the least.

Sallal, A.-K.J., El-Teen, K.H.A., Abderrahman, S.
Effect of date extract on growth and morphology of Candida albicans
(1996) Biomedical Letters, .
https://www.scopus.com/inward/record.uri?eid=2-s2.0-0040657331&partnerID=40&md5=bff676e257d242d307a9948daafb9d21
AFFILIATIONS: Department of Biological Sciences, University of Science and Technology, Irbid, Jordan;
Department of Medical Technology, Al-Zaytoonah University, Amman, Jordan;
Department of Medical Technology, Amman University, Amman, Jordan

ABSTRACT: The effect of Berhi date extract on Candida albicans was investigated. Growth inhibition and a significant reduction n germ tube formation were observed using various concentrations of the date extract. A 5% date extract was shown to have a better growth inhibition on C. albicans when compared with amphotericin B. The date extract caused a leakage of cytoplasmic contents from the yeast cells.