

CURRICULUM VITAE

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1. Personal Data

Date of Birth: 4/1/1980
Nationality: Jordanian

2. Education

- Ph.D. in Computer Science, Western Michigan university–USA.
- Master in in Computer Science, Western Michigan university–USA.
- B.Sc. Computer Engineering, JUST University, Irbid, Jordan.

3. Ph.D. Dissertation

Rule-Based Precise Localization Services In Mobile Environments

4. Employment

Academic Positions

2012 - now Alzaytoonah University of Jordan Amman , Jordan

Associate Professor



QFG11/0110 - 3.1E

Curriculum Vitae Form - Procedures of Appointment and Promotion Committee

Responsibilities:

Teaching Electronic Commerce, Human-Computer Interaction, Programming Languages,
System Programming, Network Programming, Algorithms, Multimedia Programming, and basic
computer skills in the department of Computer Science.

2010— 2012 Auxiliary Enterprises Kalamazoo, MI
Programmer Analyst

Responsibilities:

- Developing .Net applications for the departments of WMU based on VB .Net/ASP/SQL
- Maintaining the previously developed applications at Auxiliary Enterprises
- This page <http://www.wmich.edu/auxiliary/resources/index.html> has a list of projects that I participated in developing at AE.

2007 – 2010 WMU Kalamzoo. MI

Research Assistant**Responsibilities:**

- Worked as a team member in a project with the Boeing company implementing the Particle Swarm Optimization algorithm for Trajectory Planning in Non-Autonomous Mobile Ad-Hoc Networks
- Worked as a team member in a project with Michigan Department of Transportation (MDoT) and developed an application that measures the quality of the ride using sensory data acquired from an accelerometer.

2007 – 2010 WMU Kalamzoo. MI

Teaching Assistant**Responsibilities:**

- Teaching Assistant in the department of Computer Science at WMU teaching Excel, Matlab and C language.
- Grading computer networks and network programming course in the computer science department.



2004— 2007

Jordan University of Science and Technology Irbid, Jordan

Lab supervisor and Teaching Assistant in the department of Computer Engineering

Responsibilities:

- Team leader for the installation and maintenance of the E-learning system in the college of Information Technology using the free source Moodle software. This software replaced six digits blackboard software and provided same functionality after major customizations.
- Installation and maintenance of the HP high performance cluster (\$200,000) value and made it available for the students to run parallel programs.
- Trained the faculty in the English department in Jordan University of Sci. & Tech. and the faculty in the Computer Science department in Alzaytoonah University to use Moodle as an E-learning system.
- Teaching computer security, digital logic design and system programming labs

5. Research Interests

1. Indoor/outdoor localization
2. Mobile Ad Hoc Networks
3. Inter-vehicular communication

6. Teaching Experience

- *Undergraduate Courses*
 - Algorithms
 - Human Computer Interaction
 - E-Commerce
 - System Programming
 - Network Programming
 - AI programming 1
 - AI programming 2
 - Programming in C++
 - Graduate Project



7. Supervision of Graduate Research

- Supervising a master student, "Extract the impact of crisis on citizen using deep learning and machine learning techniques in Arabic social media contents", Al-Zaytoonah University of Jordan, Jordan.

8. Grants

- COVID-19 platform detection from X-rays images and coughing sounds using machine learning methods, **In Progress** , Alzaytoonah University of Jordan. Amman-Jordan
- A novel indoor localization technique controlled by artificial intelligence for smart buildings **Achieved**- Alzaytoonah University of Jordan. Amman-Jordan 2017
- Implementation of modified open source operating system for Alzaytoonah University of Jordan. Amman-Jordan (**Achieved**)- 2015.
- Affordable Smart Lighting Control Module with the Higher Council of Science and Technology in Cooperation with the European Union. Amman-Jordan (**Achieved**) - 2014
- Quality of Ride assessment with the Michigan Department of Transportation (MDOT). Michigan -USA (**Achieved**)-2012
- Trajectory Planning in Non-Autonomous Mobile Ad-Hoc Networks with Boeing Company. Michigan-USA (**Achieved**) -2011

9. Membership of Committees

University

- College Council Member.
- Member in University Computer Center Council in ZUJ.
- Member of the Study Plan and Educational Resources Committee in CIS Department.



10. Publications

Journals:

1. Hawashin, Bilal; Aqel, Darah; Alzubi, Shadi; Elbes, Mohammad; **Improving recommender systems using co-appearing and semantically correlated user interests** ,Recent Advances in Computer Science and Communications (Formerly: Recent Patents on Computer Science) ,13 ,2 ,240-247 ,2020 ,Bentham Science Publishers
2. Elbes, Mohammed; Alrawashdeh, Thamer; Almaita, Eyad; AlZu'bi, Shadi; Jararweh, Yaser; **A platform for power management based on indoor localization in smart buildings using long short-term neural networks** ,Transactions on Emerging Telecommunications Technologies , , e3867 ,2020 ,John Wiley & Sons, Ltd. Chichester, UK
3. Muhairat, Mohammad; ALZu'bi, Shadi; Hawashin, Bilal; Elbes, Mohammed; Al-Ayyoub, Mahmoud; **An Intelligent Recommender System Based on Association Rule Analysis for Requirement Engineering.** ,J. UCS ,26 ,1 ,33-49 ,2020
4. Alkhatib, Ahmad AA; Elbes, Mohammed W; Maria, Eman M Abu; **Improving accuracy of wireless sensor networks localisation based on communication ranging** ,IET Communications ,14 ,18 ,3184-3193 ,2020 ,IET Digital Library
5. Hamadne, T; Zraiqat, A.; Al-Zoubi, H.; Elbes, M.; **Sufficient Conditions and Bounding Properties for Control Functions Using Bernstein Expansion** ,Applied Mathematics and Information Sciences ,14 ,6 ,985–993 ,2020
6. AlZu'bi, Shadi; Jararweh, Yaser; Al-Zoubi, Hassan; Elbes, Mohammed; Kanan, Tarek; Gupta, Brij; **Multi-orientation geometric medical volumes segmentation using 3d multiresolution analysis** ,Multimedia Tools and Applications ,78 ,17 ,24223-24248 ,2019 ,Springer US
7. Elbes, Mohammed; Alzubi, Shadi; Kanan, Tarek; Al-Fuqaha, Ala; Hawashin, Bilal; **A survey on particle swarm optimization with emphasis on**



- engineering and network applications** ,Evolutionary Intelligence ,12 ,2 ,113-129 ,2019 ,Springer Berlin Heidelberg
8. Elbes, Mohammed; Alkhatib, Ahmad; Al-Fuqaha, Ala; Qadir, Junaid; **Using phase shift fingerprints and inertial measurements in support of precise localization in urban areas** ,Personal and Ubiquitous Computing ,23 ,5 ,861-872 ,2019 ,Springer London
 9. AlZu'bi, Shadi; AlQatawneh, Sokyna; ElBes, Mohammad; Alsmirat, Mohammad; **Transferable HMM probability matrices in multi-orientation geometric medical volumes segmentation** ,Concurrency and Computation: Practice and Experience ,2019
 10. Elbes, Mohammed; Aldajah, Amal; Sadaqa, Odai; **P-stemmer or NLTK stemmer for arabic text classification?** ,2019 Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS) , 516-520 ,2019 ,IEEE
 11. Alrawashdeh, Thamer A; Elbes, Mohammad W; Almomani, Ammar; ElQirem, Fuad; Tamimi, Abdelfatah; **User acceptance model of open source software: an integrated model of OSS characteristics and UTAUT** ,Journal of Ambient Intelligence and Humanized Computing , ,41275 ,2019 ,Springer
 12. Elbes, Mohammed; Al-Fuqaha, Ala I; Anan, Muhammad T; **A Precise Indoor Localization Approach based on Particle Filter and Dynamic Exclusion Techniques.** ,Netw. Protoc. Algorithms ,5 ,2 ,50-71 ,2013
 13. Elbes, Mohammed; Al-Fuqaha, Ala; **Design of a social collaboration and precise localization services for the blind and visually impaired** ,Procedia Computer Science ,21 ,282-291 ,2013 ,Elsevier
 14. Al-Fuqaha, Ala; Elbes, Mohammed; Rayes, Ammar; **An intelligent data fusion technique based on the particle filter to perform precise outdoor localization** ,International Journal of Pervasive Computing and Communications , 2013 ,Emerald Group Publishing Limited



15. Elbes, Mohammed; Al-Fuqaha, Ala; Rayes, Ammar; **Gyroscope drift correction based on TDoA technology in support of pedestrian dead reckoning** ,2012 IEEE Globecom Workshops ,314-319 ,2012 ,IEEE

Conferences

1. Hawashin, Bilal; Mansour, Ayman; Abukhait, Jafar; Khazalah, Fayez; AlZu'bi, Shadi; Kanan, Tarek; Obaidat, Mohammad; Elbes, Mohammed; **Efficient texture classification using independent component analysis** ,2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT) 544-547 ,2019 ,IEEE
2. AlZu'bi, Shadi; Mughaid, Alaa; Hawashin, Bilal; Elbes, Mohammed; Kanan, Tarek; Alrawashdeh, Thamer; Aqel, Darah; **Reconstructing Big Data Acquired from Radioisotope Distribution in Medical Scanner Detectors** ,2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT) ,325-329 ,2019 ,IEEE
3. Elbes, Mohammed; Almaita, Eyad; Alrawashdeh, Thamer; Kanan, Tarek; AlZu'bi, Shadi; Hawashin, Bilal; **An indoor localization approach based on deep learning for indoor location-based services** ,2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT) , 437-441 ,2019 ,IEEE
4. Kanan, Tarek; Sadaqa, Odai; Aldajeh, Amal; Alshwabka, Hanadi; AlZu'bi, Shadi; Elbes, Mohammed; Hawashin, Bilal; Alia, Mohammad A; **A review of natural language processing and machine learning tools used to analyze arabic social media** ,2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT) ,622-628 ,2019 ,IEEE
5. Shadi AlZu'bi , Bilal Hawashin, Mohammed Elbes, Mahmoud Al-Ayyoub; **A Novel Recommender System Based on Apriori Algorithm for Requirements Engineering** ,2018 Fifth International Conference on Social Networks Analysis, Management and Security (SNAMS) ,2018



6. Lilien, Leszek T; Elbes, Mohammed W; ben Othmane, Lotfi; Salih, Raed M; **Simulation of emergency response operations for a static chemical spill within a building using an opportunistic resource utilization network** ,2013 IEEE International Conference on Technologies for Homeland Security (HST) ,408-413 ,2013 ,IEEE
7. Al-Fuqaha, A; Kountanis, D; Cooke, S; Elbes, M; Zhang, J; **A genetic approach for trajectory planning in non-autonomous mobile ad-hoc networks with qos requirements** ,2010 IEEE Globecom Workshops , 1097-1102 ,2010 ,IEEE
- Elbes, Mohammed; Al-Fuqaha, Ala; Guizani, Mohsen; Rayes, Ammar; Oh, Jun S; **A new hierarchical and adaptive protocol for minimum-delay v2v communication** ,GLOBECOM 2009-2009 IEEE Global Telecommunications Conference ,44348 ,2009 ,IEEE