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# CURRICULUM VITAE

## Mohammed Walid Mahmoud Elbes

*Computer Science Department/ Faculty of Science and Information Technology,*

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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**

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**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.

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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

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### 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

- COVD-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 *Acheived*- 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.

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## 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. Hamadneh, 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**

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**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

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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