

## CURRICULUM VITAE

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**ABDELLATIF ABU DALHOUM**

*The University of Jordan  
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Computer Science Department  
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### PERSONAL INFORMATION

- Nationality: Jordanian.
- Marital Status: married.
- Date of Birth: June 21, 1971.
- Place of Birth: Amman – Jordan.

### RESEARCH INTERESTS

Computation & evolutionary algorithms, Complex systems such as cellular automata & Lindenmayor systems, DNA Computation models , Data Mining, Software Clustering & Testing, and e-Learning.

### EDUCATION

- **Ph.D.**  
The University of Autonoma de Madrid(Madrid-Spain), 2004.  
Computer Science
- **Master of Science**  
The University of Autonoma de Madrid (Madrid Sapin), 2000.  
Computer Science.
- **Bachelor of Computer Science**  
The University of AL-Mosul-IRAQ, 1996.

## EMPLOYMENT & POSITIONS HELD

- Currently an **associate professor** at the department of computer science.
- **Human Resource Director**, University of Jordan, October 2009 till August 2010.
- **Assistant Dean For Lab affairs** (Faculty of King Abdullah School For Information Technology (KASIT), University Of Jordan, September 2007 till October 2009.
- **Assistant Dean For student affairs** (Faculty of King Abdullah School For Information Technology (KASIT), University Of Jordan, September 2011 - October 2012.
- **Assistant Dean For student affairs** (Faculty of King Abdullah School For Information Technology (KASIT), University Of Jordan, September 2015 - till now.

## COMMUNITY SERVICE

- Member of Sanad Association for Youth Thought and Action.
- Member of the administrative body of Al-Faisaly Sport Club 2012-2015.
- Head of Himah association for volunteer work and youth thought.
- Consultant at the Autism Academy of Jordan.

## TEACHING EXPERIENCE

- **Associate Professor**, Computer Science Department, University of Jordan, September 9, 2009 till **Present**.
- **Assistant Professor**, Computer Science Department, University of Jordan, September 9, 2004 – September 2009.

## RESEARCH EXPERIENCE

*Member of investigation Group for Interactive Tools and Applications (GHIA)- Department of Computer Engineering; University of Autónoma de Madrid. The Group concerned in several research lines of Interactive Tools and Application to education, groupware, graphical user interfaces, continuous simulation, Theoretical computer science, and object orientation. (2000 – Till now).*

## COMMITTEES MEMBERSHIP

- **The University of Jordan, King Abdullah II School for Information Technology, (2004 – Present):**
  - Member of the Scientific Research, Conferences, Seminars, and Expositions Committee.
  - Member of the Curriculum Planning Committee.
  - Member of the e-Learning Committee.
  - Member of the Broadcasting Committee.

- Member of the I-Lab Committee.
- **The University of Jordan, Computer Science Department, (2004 – Present):**
  - Member of the Higher Studies Committee.
  - Member of the Appointment and Promotion Committee.
  - Member of the Curriculum Planning Committee.
  - Member of the Seminars and Expositions Committee.
  - Member of the Quality Assurance Committee.
  - Member of the M.Sc. Theses Examination Committees.
  - Member of the Graduation Projects Committee.
  - Member of the Training Committee.
  - Member of the Graduation Committee.

<b>GRADUATE STUDENTS SUPERVISION</b>
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**Supervisor of the following P.hd Thesis:**

[3] Alia Madain, “*computational modeling of proteins using cellular automata*”, Department of Computer Science, The University of Jordan, 2016.

**Supervisor of the following M.Sc. Thesis:**

[1] Mustafa Al Sukar “*Identifying the addict person using Artificial Neural Networks*” Department of Computer Science, The University of Jordan, 2015.

[2] Ahmad Al Hwaitat, “*A Web Threats Detection and Prevention Framework (WTDPF)*” Department of Computer Science, The University of Jordan, 2014.

[3] Alia Madain, “*Audio Scrambling Technique Based on Cellular Automata*”, Department of Computer Science, The University of Jordan, 2012.

[4] Ahmad Ramadan, “*Digital Image Enhancement Using Cellular Automata*”, Department of Computer Science, The University of Jordan, 2010.

[5] Aiman Awad, “*Digital Image Scrambling Method Based on Two Dimensional Cellular Automata: a Test of the Lambda Value*”, Department of Computer Science University of Jordan, 2009.

[6] Ibrahim Al Thamari, “*fMRI Time Series Analysis: The Cellular Automata Approach*”, Department of Computer Science, University Of Jordan ,2010.

[7] Mohand Al Khalailah, “*Automatic Arabic Text Classification*”, Department of Computer Science, University OF Jordan, 2010.

[8] Hani AL-Amir. ” *Intelligent Vehicular Systems Using Ad-hoc Wireless Networks*”, Department of Computer Science, University OF Jordan, 2010.

[9] Buthina Rushdeah, “*JPEG2000 compression improvement using pattern search methods*”

”, Department of Computer Science, The University of Jordan,2007.

[10] Bader Mustafa, “*Comparative Performance Study for Ultrasound Image Compression Techniques Dedicated to Telemedicine Applications*”, Department of Computer Science, The University of Jordan,2007.

[11] Thaer Al Obisi, “*Network Intrusion Detection Using DNA Sequence Alignment*”, Department of Computer Science, The University of Jordan,2008.

[12] Hiba Hourani, “*Optimized DNA sequence generation of normal activities applied to intrusion detection systems*”, Department of Computer Science, The University of Jordan,2007.

[13] Hiam Bader, “*A genetic Algorithm Gabor filtered Optimization for Blood Vessels Detection of Digital Retinal Images*”, Department of Computer Science, The University of Jordan,2009.

[14] Nida Al-Omari, “*Efficient iris recognition using reduced iris code method*”, Department of Computer Science, The University of Jordan,2009.

[15] Hiba Sadeha, “*Cancer Diagnosis using Microarray Gene Expression Data Clustering*”, Department of Computer Science, The University of Jordan, 2009.

[16] Yasemin AL-Majaly,” *Music Composition via Genetic algorithms*”, Department of computer Science , The University of Jordan, 2006.

[17] Yuosef-Al Natsha” *Improving the quality of JPEG2000 image compression via Genetic Algorithms*”, computer Science Department, The University of Jordan, 2006.

[18] Ali Saleh,” *Image retrieval based on Shape Similarity*”, Computer Science, University Of Jordan, 2006.

[19] Yasmen AL-Zoqari, “*Computer Intrusion Detection System via Pattern Recognition* ”, Department of Computer Science, The University of Jordan, 2010.

[20] Rana Samhan, “*Automatic test data generation for regular expressions predicates*”, Department of Computer Science, The University of Jordan, 2009.

[21] Yasmin Khiero, “*Membrane Computing Simulation for Secure Hierarchy Clustered Mobile Ad-Hoc Networks*”, Department of Computer Science, University OF Jordan.

[22] Abdullah Al-Zaqamim,” *Estimation of Affine Invariants via Genetic Algorithms*”, Department Of Computer Science , University Of Jordan, 2006.

## SELECTED GRADUATION PROJECTS SUPERVISION

- [1] Genetic Algorithms and Cellular Automata Application.
- [2] Agent Based Meeting Scheduling.
- [3] Clinics Management System.
- [4] Health Care Insurance system.
- [5] Children Programming Language.
- [6] Banking System through the Internet.

- [7] E-learning System(Handicap Eduaction).
- [8] e-Shipment System.
- [9] Merath in Islam
- [10] Online Pharmacy
- [11] Automation Library System.
- [12] University Students Council Elections.
- [13] Human Resources System.
- [14] Jordan Book Center
- [15] Perfect Trip

**LOCAL GRANTS**

- Project Title: A remote controlled vehicle for handling security breaches (some kind of a robot).University of Jordan
- Project Title: A biometric based distributed electronic election system, University of Jordan

**COURSE TAUGHT**

<b>UNDERGRATUTED COURESES</b>
Discrete mathematics
Computer Skills
Data structure
Programming in C++
Programming Languages and Design
Formal Languages and Automata Theory
Compilers
Design and Analysis of Algorithms
<b>GRATUTED COURESES</b>
Bioinformatics - Master
Theory of Computation (complexity and Decidability ) -Master
Programming Languages and Design-Master
Computational models inspired of Biology -PhD
Theory of Computation -PhD

## PUBLICATIONS

- [1] **Abdel Latif Abu Dalhoum**, Alia Madain, and Hazem Hiary. "Digital image scrambling based on elementary cellular automata." *Multimedia Tools and Applications* (2015): 1-16.
- [2] Madain, Alia, **Abdel Latif Abu Dalhoum**, Hazem Hiary, Alfonso Ortega, and Manuel Alfonseca. "Audio scrambling technique based on cellular automata." *Multimedia tools and applications* 71, no. 3 (2014): 1803-1822.
- [3] Adwan, Omar, Ammar Huneiti, Aiman Ayyal Awwad, Ibrahim Al Damari, Alfonso Ortega, **Abdel Latif Abu Dalhoum**, and Manuel Alfonseca. "Utilizing an enhanced cellular automata model for data mining." *International Review on Computers and Software* (2013).
- [4] **Abdel Latif Abu Dalhoum**, Basel Ali Mahafzah, Aiman Ayyal Awwad, Ibraheem Aldhamari, Alfonso Ortega, and Manuel Alfonseca. "Digital image scrambling using 2D cellular automata." *IEEE Multimedia* (2012).
- [5] AL-Akhras, M., **Abdel Latif Abu Dalhoum**, and H. Saadeh. "A genetical-optimised artificial neural network approach for automatic detection of blood vessels using Gabor filter." *International Journal of Computer Science and Network Security* 7, no. 2 (2011): 88-90.
- [6] Mousa T.AL-Akras, Heyam M.Bader, **Abdellatif I.Abu-Dalhoum**. "Genetic Algorithm Gabor Filter Optimaization for Automated Detection of Blood Vessels from Digital Retinal Images" *Dirasat, Pure Sciences*, Volume 37, No. 2, 2010.
- [7] Azzam Sleit, **Abdel latif Abu Dalhoum**, Ibraheem Al-Dhamari, Afaf Tareef. "An Edge Detection Algorithm for Online Image Analysis," *Proceedings of the 10th American Conference on Applied Mathematics*, p.565-569, January 27-29, 2010, Harvard University, Cambridge, USA.
- [8] H. Bader, M. AL-Akhras, **A. Abu-Dalhoum**, "Improved detection of blood vessels from digital retinal images using optimised gabor filter", in: *Third Mosharaka International Conference on Communications, Computers and Applications (MIC CCA 2009)*, Amman, Jordan, 2009.
- [9] **Abdel latif Abu Dalhoum**, Ibraheem Al-Dhamari. "fMRI Brain Data Classification using Cellular Automata", *WSEAS Conferences Proceedings in Taipei, Taiwan*, August 20-22, 2010.
- [10] **Abdel latif Abu Dalhoum**, Azzam Sleit, Ibraheem Al-Dhamari, Aiman Awwad, "Efficient Enhancement on Cellular Automata for Data Mining", *Proceedings of the 13th WSEAS international conference on Systems*, p.616-620, July 22-24, 2009, Rodos, Greece.
- [11] **Abdel latif Abu Dalhoum**. "A comparative survey on the fast computation of Geometric Moments". *European Journal of Scientific Research*. Vol 24 No.1, pp.104-111.
- [12] Thaer Al\_Ibaisi.; **Abdel latif Abu Dalhoum**.; Mohammad Al Rawi.; Manuel Alfonseca.; Alfonso Ortega. "Network Intrusion Detection Using Genetic Algorithm to Find Best DNA signature", *WSEAS TRANSACTIONS on SYSTEMS*, Issue 7, Volume 7, July 2008.
- [13] Hamido Hourani.; Mohammad Al Rawi.; **Abdel latif Abu Dalhoum**.; Sabina Jeschke. "The Human Face Semantic Web". *International Journal of Computers*, Issue 3, Volume 2, pp:218:230, 2008.
- [14] **Abdel latif Abu Dalhoum**.; Mohammad Al Rawi. "Non-Linear Data for Neural Networks Training and Testing ". *WSEAS TRANSACTIONS on INFORMATION SCIENCE AND APPLICATIONS*, Issue 2, Volume 3, pp:410:415, Feb 2006.

- [15] **Abdel latif Abu Dlahoum.**; Moh'd Al Zoubi.; Marina de la Cruz.; Alfonso Ortega.;Manuel Alfonseca. "*Agenetic Algorithm for solving the p-Median problem*". In the Proceedings of the European Simulation and Modelling Conference, pp:141:145, 24 -26 October 2005. University of Porto ,Portugal
- [16] Mohammed AL-Rawi.; **Abdel latif Abu Dalhoum.**; Yousef Salah.; Wesam Al-Mobaideen.; Ansar Koury .2008 . "*Using Genetic Algorithm to Find New Color Transformations For JPEG-2000 Image Compression*". WSEAS TRANSACTIONS on COMPUERTS, Issue 3 volume 2, pp:1189:1198, July 2008.
- [17] **Abdel latif Abu Dalhoum.**; Mohammed Al-Rawi.; Ahmed Al Sharieh.; Ayman Najjar.; Maen Najjar.; Saleh Sharieh . 2008 . "*Remotely Controlled Intelligent Vehicle to Handle Public Places Security*". WSEAS TRANSACTIONS on SYSTEMS, Issue 10, Volume 7, October 2008.
- [18] **Abdel latif Abu Dalhoum.**; Manuel Alfonseca.; Manuel Cebrian.; Rafael Sanchez ;. Alfonso Ortega. 2008 . "*Computer Generated Music Using Grammatical Evolution*". In the Proceedings of 9th Middle Eastern Simulation Multiconference, MESM , August 26-28, Philadelphia University ,Amman- Jordan,pp.55-60.
- [19] **Abdel-Latif Abu-Dalhoum** .; Mohammed Al-Rawi . "*A simple N-bit parity neural network* ". In the Proceedings of 6th International Conference on Artificial Intelligence and Machine Learning,(AIML 06). 13-15 Jun ,Sharm El Sheikh, Egypt , 2006,pp. 30-32,2006 url = {www.icgst.com}.
- [20] Saleh H AL Sharaeh.; Ahmad A. Sharieh.; **Abdel latif Abu Dalhoum** .; Reema Hosny .; Fatima Mohammed. . "*Multi-Dimensional Poisson Distribution Heuristic for Maximum Lifetime Routing in Wireless Sensor Network*". World Applied Sciences Journal 5 (2):119-131,2008.
- [21] Alfonso Ortega.; **Abdel latif Abu Dalhoum.**; Manuel Alfonseca "*Cellular Automata equivalent to DIL Systems*". In the Proceedings of 5th Middle East Symposium on Simulation and Modeling (MESM 2003),Eurosims, 5-7. Ene. 2004, Sharjah, UAE .Pub: Proceedings, ISBN: 90-77381-06-6, pp.120-124.
- [22] Alfonso Ortega.; **Abdel latif Abu Dalhoum.**; Manuel Alfonseca,.. "*Grammatical evolution to design fractal curves with a given dimension* ". IBM Journal of Research and Development. Volume 47:4, P.483-493, Jul. 2003.
- [23] Mohammed Al-Rawi.; **Abdel Latif Abu Dalhoum.**; and Abdullah Zagameem. "*Genetic Estimation of Affine Transformation Parameters Applied To Industrial Inspection And Magnetic Resonance Imaging*". In the Proceedings of 37th International Conference on Computers and Industrial Engineering,2007.
- [24] Alfonso Ortega.; **Abdel latif Abu Dalhoum.**; Manuel Alfonseca .2003 "*Cellular Automata equivalent to DIL Systems*". In the Proceedings of 5th Middle East Symposium on Simulation and Modeling (MESM 2003),Eurosims, 5-7. Ene. 2004, Sharjah, UAE .Pub: Proceedings, ISBN: 90-77381-06-6, pp.120-124.
- [25] Mohammed Al-Rawi.; **Abdel Latif Abu Dalhoum.**;Shrooq Allaa Barakat .;Heba Saada "*Algorithms for The Detection of the Pupil and the Iris of The Human Eye*" 2006. Computer Science and Information Technology conference.
- [26] Manuel Alfonseca.; **Abdel latif Abu Dalhoum** .; Alfonso Orteg. "*Evolving the game of life with genetic algorithm*". MESM 2000, Middle East Symposium on Simulation and Modeling Conference, 31-Oct to 2-Nov 2000, Amman-Jordan.
- [27] **Abdel latif Abu Dalhoum** ;Alfonso Ortega; Manuel Alfonseca . "*Cellular Automata equivalent to PD0L Systems*". International Arab Conference on Information Technology (ACIT 2003), 20-23. Dic. 2003, Alexandria, Egypt. Pub: Proceedings, pp.819-825.

## LANGUAGE SKILLS

- Arabic (Native).
- Spanish (Written, Oral, and Understanding: Excellent).
- English (Written, Oral, and Understanding: Very good).