

Curriculum Vitae

Dr. Iman ALMomani, BSc, MSc, PhD, MIEEE

Personal Details:

Name: Iman M.J. ALMomani
Nationality: Jordanian
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Address (work): Department of Computer Science
King Abdullah II School for Information Technology
The University of Jordan
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Academic Qualifications:

August 2007 **Ph.D** in Computer Science
Major: Wireless Network Security
De Montfort University, UK, <http://www.dmu.ac.uk>
Thesis Title: Security Solutions for Wireless **Mobile Ad hoc Networks (WMANETs)**
Supervisors: Professor Hussein Zedan, Dr. Amelia Platt
June 2002 **M.Sc.** in Computer Science, Average 3.91 / 4.
The University of Jordan, <http://www.ju.edu.jo>
January 2000 **B.Sc.** in Computer Science, Average 3.91 / 4
UAE University, <http://www.uaeu.ac.ae/>
Graduation Project: CORBA-Based Secure E-Commerce System
1996 General Secondary Education Certificate Exam Scientific Branch, Average 97.5%

Academic Posts

09/2007 –Present Assistant Professor
Department of Computer Science
King Abdullah II School for Information Technology
The University of Jordan
Amman, Jordan
2009- 2010 Head of Computer Science Department
King Abdullah II School for Information Technology
The University of Jordan
Amman, Jordan
2002–2004 Teaching Assistant
The University of Jordan

Professional Membership, Editorial Board and Technical Committees

1. IEEE Member.
2. Technical reviewer – IET Information Security/ IET.
3. Technical reviewer – Wireless Personal Communications/ Springer.
4. Technical reviewer – International Journal of Security and Networks/ Inderscience.
5. Technical reviewer – IET Wireless Sensor Systems/ IET.
6. Technical reviewer – Computar Journal/ Oxford Journals.
7. Technical committee and peer reviewer – International Arab Conference on e-Technology, October 15-16, 2008, Amman, Jordan.
8. Session Chair – Eleventh WSEAS International Conference on Fuzzy Systems (FS'10), 13-15 June, 2010, Iasi, Romania.
9. Technical Program Committee– Mosharaka International Conference on Communications and Electronic Systems, Mesh, Ad Hoc and Sensor Networks (MAS) Track, 4-6 November 2011, Amman, Jordan.
10. Local Organization Committee – Pan Arab Cyber Security Day 2011, 21-23 November 2011, Amman, Jordan.
11. Security Track Chair + Technical Program Committee member – IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2011), 6-8 December 2011.

Prizes – Awards

1. 1st First Lego League Arabia Championship, Dead Sea, Jordan 27-29 of March 2009 – **Proof of Concepts Award.**
2. 1st First Lego League Arabia Championship, Dead Sea, Jordan 27-29 of March 2009 – **Audience Voting 1st Place Award.**
3. Information Technology Student's Activity Fair (ITSAF), University of Petra (UoP), 6-7 of July 2010. **1st Place Award-applicable to the market category**, “*GPS Vehicle Tracking and Management System*”.
4. Information Technology Student's Activity Fair (ITSAF), University of Petra (UoP), 13-14 of July 2011. **1st Place Award-research category**, “*Secure Cluster-Based Protocol for Wireless Sensor Networks with Fair Energy Architecture*”.

Research Interests

Wireless Networks:

- Wireless Mobile Ad hoc Networks (MANETs)
- Wireless Sensor Networks (WSNs)
- WiMAX (IEEE 802.16)

Network Security

- Wireless Network security

Cryptography
Intrusion Detection Systems (IDS)

Multimedia Networking:

Voice over IP (VoIP) & Quality of Speech Aspects
IPTV

Programming Languages and Simulation

C++, Java, VB, NS-2, Qualnet.

Learning Methodologies

Electronic Learning (E-Learning)
Mobile Learning (M-Learning)

Books

1. **Iman Almomani**, Security Solutions for Wireless Mobile Ad hoc Networks, ISBN, 978-3-8465-0839-8, International Book Market Service publisher, Germany, 2011.
2. Mousa AL-Akhras and **Iman ALMomani**, Use of Internet as a research tool, ISBN 978-9957-72-040-7, ZAMZAM publisher and distributor, Amman, Jordan, 2010.

Book Chapters

1. Mousa AL-Akhras and **Iman ALMomani**, VoIP Quality Assessment Technologies -Book: VoIP Technologies, ISBN: 978-953-7619-X-X, INTECH Open Access Publisher, Vienna, Austria.

Publications:

• **International Journals**

1. **Iman ALMomani**, Maha Saadeh, “*Energy Efficient Security Model for Tree-based Routing in Wireless Sensor Networks: Structure and Evaluation*”. Submitted.
2. **Iman ALMomani**, Maha Saadeh, Mousa AL-Akhras, Hamzeh AL Jawawdeh, “*A Tree-Based Power Saving Routing Protocol for Wireless Sensor Networks*”, International Journal of Computers and Communications, University Press, Vol. 5, No. 2, 2011, pp. 84-92.
3. **Iman ALMomani**, Mohammed Al-Saruri, Mousa AL-Akhras, “*Secure Public Key Exchange against Man-In-The-Middle Attacks during Secure Simple Pairing (SSP) in Bluetooth*”, World Applied Sciences Journal, Vol. 13, No. 4, 2011, pp.769-780.
Thomson ISI, SCOPUS
4. **I. ALMomani**, O. Karajeh and L. Abdulla, “*Reducing the Vulnerability of Broadcast Authentication against Denial of Service Attacks in Wireless Sensor Networks*”, MEDJCN: Mediterranean Journal of Computers and Networks, Vol. 7, No. 2, 2011, pp. 192-201. **INSPEC (IET)**
5. **Iman M. ALMomani**, Maha K. Saadeh, “*FEAR: Fuzzy-Based Energy Aware Routing Protocol for Wireless Sensor Networks*”, International Journal of Communications,

Network and System Sciences (IJCNS), Scientific Research Publishing, Vol. 4, No. 6, 2011, pp.403-415.

6. Mousa AL-Akhras, **Iman ALMomani** and Azzam Sleit, “*An Improved E-Model Using Artificial Neural Network VoIP Quality Predictor*”, Neural Network World, (ISSN 1210-0552), Vol. 21, Issue 1, pp. 3-26, 2011. **ISI Journal Citation Report.**
7. **Iman ALMomani**, “*Copyrights Protection Schema: A Secure PDF Reader*”, International Journal of Computer science and Network Security (IJCSNS) (ISSN: 1738-7906, Vol. 10, No. 12, December 2010, pp. 15-25.
8. **Iman Almomani**, Emad Almashakbeh, “*A Power-Efficient Secure Routing Protocol for Wireless Sensor Network*”, WSEAS TRANSACTIONS on COMPUTERS (ISSN: 1109-2750), Vol. 9, Issue 9, pp. 1042-1052, September 2010.
9. Mousa T. AL-Akhras and **Iman M. ALMomani**, “*Design and Implementation of a SIP-based E-Learning System*”, International Journal of Internet Education (IJIE) (ISSN 1687-6482), Vol. 4. July 2009.
10. M. AL-Akhras, H. Zedan, R. John, I. **ALMomani**, “*Non-Intrusive Speech Quality Prediction in VoIP Networks using a Neural Network Approach*”, Neurocomputing (ISSN: 0925-2312), Vol. 72 Issue 10-12, June 2009, pp. 2595-2608. **ISI Journal Citation Report**
11. **Iman Almomani**, Hussein Zedan, “*Heterogeneous Certificate Authority for Wireless Mobile Ad hoc Networks (WMANETs)*”, International Journal on Computer Science and Information System (IJCSIS Journal), Volume 2, Number 1, pp.1-17, April 2007.
12. **I. Almomani**, M. Al-Akaidi, P. Reynolds and J. Ivins, “*Architectural Framework for Wireless Mobile Ad hoc Networks (AF WMANETs)*”, COMPUTER COMMUNICATIONS (ISSN: 0140-3664), Volume 30, Issue 1, pp.178-191, 15 December 2006. **ISI Journal Citation Report.**

- **International Conferences**

1. **Iman ALMomani**, Enas Ahmad, Nour Alkhalil, Rania Judi, “*Ubiquitous GPS Vehicle Tracking and Management System*”, 2011 IEEE Jordan Conference on Applied Electrical Engineering and Computer Technologies, 6-8 Decemeber, 2011, Amman, Jordan.
2. **Iman Almomani**, Mousa Al-Akhras, “*Internet Skills in Scientific Research*”, The Fifth Conference on Scientific Research in Jordan, 19 October 2011, Amman, Jordan.
3. **Iman ALMomani**, Maha Saadeh, Hamzeh Al Jawawdeh, Mousa Al-Akhras, “*Energy Awareness Tree-Based Routing Protocol for Wireless Sensor Networks*”, The 10th WSEAS International Conference on Applied Computer and Applied Computational Science (ACACOS '11), 8-10 March, 2011, Venice, Italy. **ISI CONFERENCE**
4. First Regional Conference for IPR and Cyber Crimes in Cooperation with Department of National Library, Adobe System & Co., 24-25 October, 2010, Grand Hyatt Hotel, Amman, Jordan – **Attendant.**

5. **Iman Al-Momani**, Asma' Abdel Aziz and Mousa AL-Akhras, "Secure and Power Saving Routing Protocol for Wireless Sensor Networks", 11th WSEAS International Conference on FUZZY SYSTEMS (FS'10), 13-15 June, 2010, Iasi, Romania. **ISI CONFERENCE**
6. **Iman Al-Momani**, Ola Karajeh and Lamya Abdulla, "Pre-Authenticator and Adaptive Window-Based DoS Containing Scheme for Broadcast Authentication In Wireless Sensor Networks". The 3rd Mosharaka International Conference on Communications, Networking and Information Technology (MIC-CNIT 2009), 21-23 December, 2009, Amman, Jordan. ISBN 978-9957-486-09-9.
7. **Iman Almomani**, Maryam Al-Sharief and Rawa'a Al-Jabaly, "Building Reputation Of Suspicious Nodes In Cluster-Based Intrusion Detection System For Wireless Sensors Networks", The 3rd Mosharaka International Conference on Communications, Networking and Information Technology (MIC-CNIT 2009), 21-23 December, 2009, Amman, Jordan. ISBN 978-9957-486-09-9.
8. **I. Almomani**, "Secure Wireless Communication for Mobile Surgical Army Hospitals", The 2008 International Conference on Wireless Networks (ICWN'8: July 14-17, 2008). Monte Carlo Resort, Las Vegas, Nevada, USA, pp. 628-633. **SCOPUS**
9. **I. Almomani** and M. Al-Akhras, "Statistical Speech Quality Prediction in Voice over IP Networks", The 2008 International Conference on Communications in Computing (CIC'8: July 14-17, 2008). Monte Carlo Resort, Las Vegas, Nevada, USA, pp. 146-152. **SCOPUS**
10. **Iman Almomani**, Hussein Zedan, "Secure Distributed Key Management for Wireless Mobile Ad hoc Networks (WMANETs)", IADIS International Conference Applied Computing 2007, Salamanca, Spain,
11. **Iman Almomani**, Hussein Zedan, "End-to-End Security Solution for Wireless Mobile Ad hoc Network (WMANET)", IADIS International Conference Applied Computing 2007, Salamanca, Spain, pp.624-629. ISBN: 978-972-8924-30-0.
12. **I. Almomani**, M. Al-Akaidi, J. Ivins, P. Reynolds, "Architectural Framework for Wireless Mobile Ad hoc Networks (WMANETs)", The 6th IEE INTERNATIONAL CONFERENCE ON 3G & BEYOND (3G 2005), 7-9 November 2005, The IEE, Savoy Place, London, UK.

Attended Workshops, Training Courses with Certificates

Research Training Program - with certificates (De Montfort University, UK)

Research Students Induction Event	-29/03/2004
Planning and Managing Research	-02/05/2004
Writing Skills	-24/05/2004
Intellectual Property Rights and Ethics	-15/06/2004
English Language For Academic Research Purposes	-22/06/2004
Literature Searching and Reference Management	-23/06/2004
Research Methods	-22/10/2004-23/10/2004
Presenting Your Research to and Audience	-02/03/2005
Writing For Publication	-20/06/2005
Written Application Skills and Job Interview Skills	-14/06/2005
Managing Data Using Excel	-23/02/2006
Finishing Your Thesis and Preparing for the Viva	-09/03/2006
Using SPSS	-10/03/2006
Effective Presentation Using Powerpoint	-27/03/2006
Creating and Managing Large Documents	-04/04/2006

Teaching - Previously Taught Courses

Computer Network -1
Computer Network – 2
Computer Security
Network Security (Master)
Wireless Networks (Master)
Computer Networks (Master)
Network Programming
Distributed Systems
Data Structure
Discrete Mathematics
C++
Advanced C++
Java
Advanced JAVa
Computer Skills

Selected Graduation Projects Supervision

1. KASIT Attendance System, 2007.
2. Robot Library Assistant System (RLAS), 2008- **Funded Project**.
3. Multimedia Voice and Video Conferencing System using SIP Protocol Using Java programming language, 2007.
4. Mobile Quiz System using J2ME, 2008.
5. Mobile Lecuturing System, 2008.
6. Mobile Blackboard System, 2009.
7. Mobile Shopping System (MobiShop), 2009.
8. Landmine Detection System (Bamboozleing Bot), 2010.
9. Iris Recognition System, 2010.
10. GPS tracking System, 2010.
11. Energy Efficient Intrusion Detection System for Wireless Sensor Networks (WSNs), 2011.

Master Thesis Supervision:

1. Eman Alwadiya, “*Multipath Quality of Service Routing Protocol for Mobile Ad hoc Networks*”, Department of Computer Science, The University of Jordan, 2009.
2. Anas Liswi, “*Collaborative Mobile Learning Architecture Based on Mobile Agents*”, Department of Computer Science, The University of Jordan, 2009.

3. Ala' Fahad Aburumman, "*Securing SIP over Ad hoc Network*", Department of Computer Science, The University of Jordan, 2009.
4. Mohammed Al-Saruri, "*Enhanced Scheduling Scheme for IEEE 802.16 traffic To Achieve Quality Of Service*", Department of Computer Science, The University of Jordan, 2009.
5. Ola Karajeh, "*Securing Wireless Sensor Networks against Denial of Service Attacks*", Department of Computer Science, The University of Jordan, 2010.
6. Lamyia Omar, "*Distributed Secure SIP Service over Ad Hoc Networks*", Department of Computer Science, The University of Jordan, 2010.
7. Maha khaled Saadeh, "*Secure Routing Protocol for Wireless Sensor Networks*", Department of Computer Science, The University of Jordan, 2011.
8. Eman Albanna, "*Interference-aware Multipath Routing Protocol for Wireless Mobile Ad hoc Networks*", Department of Computer Science, The University of Jordan, 2011.
9. Katrina Sundus, "*Mobility Effect on Broadcast Authentication for Wireless Sensor Networks*", Department of Computer Science, The University of Jordan, 2011.

Master Thesis Committees

1. Ghada Bader, "*Efficient Power Control routing protocol in Ad Hoc Network*", Department of Computer Science, The University of Jordan, 2008.
2. Mustafa Ahmad Bani Khalaf, "*Smart Probabilistic Broadcasting in Mobile Ad-hoc Networks*", Department of Computer Science, Jordan University of Science and Technology, 2009.
3. Rahmeh Jabai, "*Object Recognition Based on Dominant Points Identification*", Department of Computer Science, The University of Jordan, 2009.
4. Iman Ibrahim Badran, "*An Adaptive Backoff Algorithm For Mobile Ad-Hoc Networks*", Department of Computer Science, Jordan University of Science and Technology, 2010.
5. Affaf Omar Tareef, "*Improving the Robustness of Image Watermarking Against Attack*", Department of Computer Science, The University of Jordan, 2010.
6. Yacoub Elias Massad, Performance Evaluation of Transmission Power Control (TPC) in Mobile Wireless Ad Hoc Networks, Department of Computer Science, The University of Jordan, 2010.
7. Rasha Beidas, "*Skin Cancer Recognition by using Neuro-Fuzzy System*", Department of Computer Science, The University of Jordan, 2010.
8. Maryam Al-sharief, "*Evaluation of Automatic Human Identification Algorithm using facial Features*", Department of Computer Science, The University of Jordan, 2010.
9. Fatima Abo Alsauwd, "*Dual Recognition of Multi-Script License Plates*", Department of Computer Science, The University of Jordan, 2010.
10. Rodwan Shalalfeh, "*Best Utilization of Mirroring Server Resources using Artificial Neural Networks*", Department of Computer Information Systems, The University of Jordan, 2011.

11. Muhammad Adnan Jassim, "*A Multi-function Energy-Efficient System Model for Location-Aware Wireless Sensor Networks*", Department of Computer Information Systems, The University of Jordan, 2011.