

FUNCTIONAL C.V

Islam T.Almalkawi

Date of Birth: 21 August, 1982

Place of Birth: Abu Dahabi, U.A.E

Nationality: Jordanian

Marital status: Married

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CAREER OBJECTIVE:

Contributing into an organization that will utilize my qualifications and skills that have been excelled throughout my university years and training into a practical and technical implementation, hence giving me the opportunity to improve my capabilities and abilities.

Research Interest:

- Computer Networks
- Wireless Sensor Networks
- Multimedia Networks
- Cross-Layer Optimization Design
- Security and Key Management
- Energy Efficiency and Green Computing
- Distributed Systems

Languages

Arabic : Fluent

Ability:

English: Very good in reading, writing, speaking (TOEFL 240/300 CBT& GRE).

Spanish: Beginning level.

Academic Data:

- PhD degree in Computer Architecture department (DAC) in the field of Distributed & Embedded and Computer Networks in Polytechnic University of Catalunya UPC, Barcelona, Spain with Distinction rating. Thesis title: Wireless Multimedia Sensor Networks, Security and Key Management.
- Master of Science in Information Networking (MSIN) Program in Athens, which is jointly offered by Carnegie Mellon University (USA) and AIT (Greece) with GPA: 3.54/4.0 rating Excellent. Thesis title: Patient health monitoring and Real-Time response system using Wireless Sensor Networks.
- BSc in Electrical & Computer Engineering at Hashemite University with GPA: 3.79/4.0 rating Excellent.
- High school diplomas (Scientific Branch), Al - Manarah School Tawjihi (High School equivalent scored 92.3/100).

Practical & scientific Experience:

Summer 2002:	Complete course in Mat lab. Complete course in C & C#.
Summer 2003:	Summer Training for four months in FASTLINK (ZAIN) company which specialized in mobile communication systems (System, Microwave & Optimization).
Spring 2004:	BSc Graduating project: Designing a simple model of a fiber coupler manufacturing station (FCMS).
8 - 10/ 2004:	Working at The Ministry of Information and Communications Technology (MoICT) as a Microsoft Interns in the field of the Secure Government Network (SGN) which is the first step in enabling e-Government for Jordan.
10/2004-9/2006:	University lab supervisor (at the Hashemite University in Jordan): <ul style="list-style-type: none">- Teaching the following labs:<ol style="list-style-type: none">1. Electrical Circuits Lab2. Electronics I & II Lab3. Communication Lab4. Digital Logic & Microprocessors Lab- Writing the specifications and experiment manual of the first three labs.
Spring 2007:	Projects in Sensor Network master course: <ul style="list-style-type: none">- Working in some security issues in Wireless Sensor Networks, I involved in launching a "Sink Hole Attack" to a wireless sensor network.- Working in Classification Based Localization Application for Wireless Sensor Networks.- Working in Routing & Wavelength Assignment Project that aims to apply and compare proposed routing and wavelength assignments (RWA) algorithms and heuristics in various types of WDM network topologies.
Summer 2007:	The Independent Study master course: <ul style="list-style-type: none">- Building a sensor network for risk management and detecting hazards using different type of sensors and operating systems- Wireless Sensor Network simulation, WSNSim, using C#.net.
Fall 2007:	<ul style="list-style-type: none">- MSIN Graduating Project: building a real sensor network for medical health monitoring system using medical sensors, mica2 sensors, and PDAs.
Spring 2008:	<ul style="list-style-type: none">- Working in I3CON EU project that enables the transformation towards a sustainable European construction industry delivering Industrially produced, Integrated processes and Intelligent building systems using distributed control systems with embedded sensors, wireless connections, ambient user interfaces and autonomous controllers.
Summer 2008:	<ul style="list-style-type: none">- Summer school in embedded networked systems: theory and application, held at the Onassis Foundation in Heraklion, Crete, Greece.

2009 – 2013:	- PhD student in Computer Architecture department in UPC University in the major of Wireless Multimedia Sensor Networks, and Security & Key Managements, Barcelona, Spain.
Summer 2010:	- PhD Thesis Proposal & Presentation, 9.0/10. - ACACES 2010 summer school in Advanced Embedded Systems, Torrasa, Barcelona, Spain
Fall 2011:	- HiPEAC Computing Systems Week and the BMW Barcelona Multicore Workshop, Barcelona, Spain.
Fall 2012:	- Multicore Architectures and Their Effective Operation (MATEO2012) Workshop, Barcelona, Spain.
Spring 2012:	- IEEE 8th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'12), Barcelona, Spain.
Fall 2013- till now	- Assistance Professor in the Computer Engineering Department at the Hashemite University, Zarqa- Jordan. - Participating in different committees at department, faculty, and university levels at HU. - Taking the responsibility of maintaining the Engineering faculty website and the connection with Computer Information Technology center at HU. - Participating in different local and international conferences. - ABET committee head of CPE department. - Participating in EU funded refugees' project: HOPES (Higher and Further Education Opportunities and Perspectives for Syrians) to lessen the Syrian's suffering and to improve the situation of refugees of post-secondary age in the surrounding and local community.

<i>Publications & Fututre Submissions:</i>	<ul style="list-style-type: none"> - Al-Karaki, J.N.; Al-Malkawi, I.T.; , "On energy efficient routing for wireless sensor networks," . International Conference on Innovations in Information Technology. IIT 2008, pp.465-469, 16-18 Dec. 2008 - Almalkawi I.T., Guerrero Zapata M., Al-Karaki J.N., Morillo-Pozo J. "Wireless Multimedia Sensor Networks: Current Trends and Future Directions." Sensors. 2010; 10(7):6662-6717. - Almalkawi I.T., Guerrero Zapata M., Al-Karaki J.N. "A Secure Cluster-based Multipath Routing Protocol for WMSNs." In Sensors Journal 2011, 11(4), 4401-4424. - Almalkawi I.T., Guerrero Zapata M., Al-Karaki J.N. "Cross-layer Design between Clustered Multipath Routing and QoS-aware Scheduling for WMSNs." In International Journal of Distributed Sensor Networks Volume 2012 (2012), Article ID 392515 - Islam T. Almalkawi, Mohammad Alaei, Manel Guerrero-Zapata, Jose M. Barcelo-Ordinas, and Julian Morillo-Pozo "Energy Efficiency in Wireless Multimedia Sensor Networks"; In IEEE COMSOC MMTC E-Letter. PP.17-20. Vol. 6, No. 12, 2011. - Islam T. Almalkawi, Manel Guerrero-Zapata, and Jamal N. Al-Karaki "Event Unobservability in Wireless Sensor Networks: A Survey"; to the Journal of Networks and Computer Applications (JNCA), July 2013. - Rami Halloush, Ahmed Musa, Haythem Bany Salameh, Mohammed Halloush, Islam Almalkawi "A resource sharing platform for resource-
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constrained software defined cognitive radio networks". IEEE Fifth International Conference on Software Defined Systems (SDS), PP 32-39, Barcelona, 2018.

- Rami Halloush, Mohammed Halloush, **Islam T Almalkawi**, Ahmed Musa, Haythem Bany Salameh "A rate-maximizing spectrum sharing algorithm for cognitive radio networks with generic resource constraints". Transactions on Emerging Telecommunications Technologies Journal, Vol. 30, 2019.
- **Islam T Almalkawi**, Jamal N Al-Karaki, Ayoub Alsarhan, Randa Abu-Ajamiyah, Deena Al-Mughrabi "An Efficient Digital Image Encryption Using Pixel Shuffling and Substitution for Wireless Networks". IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), PP 266-271, Amman 2019.
- **Islam T Almalkawi**, Rami Halloush, Ayoub Alsarhan, Ahmed Al-Dubai, Jamal N Al-karaki "A lightweight and efficient digital image encryption using hybrid chaotic systems for wireless network applications". Journal of Information Security and Applications, PP 102384, Vol. 49, 2019.
- **Islam T Almalkawi**, Jafar Raed, Nawaf Alghaeb, Manel Guerrero Zapata "An Efficient Location Privacy Scheme for Wireless Multimedia Sensor Networks". 24th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA), PP 1615-1618, Zaragoza, 2019.
- Awni Itradat, **Islam Al-Malkawi**, Heba Khraismah, Nabeel Al-Masaedeh, Enas Abu AL-Zalaf, Qesmah Al-Rabbaqeen, Odai Al-Omouh "A Low-Cost Smart Microcontroller Based Hazardous Gas Detecting System Suitable for Camps", International Journal of Engineering Research and Technology, Vol. 12, 2019.
- Jamal N Al-Karaki, Amjad Gawanmeh, **Islam T Almalkawi**, OmarAlfandi "Probabilistic analysis of security attacks in cloud environment using hidden Markov models", Transactions on Emerging Telecommunications Technologies Journal, 2020.
- Ayoub Alsarhan, Abdel-Rahman Al-Ghuwairi, **Islam T. Almalkawi**, Mohammad Alauthman, Ahmed Al-Dubai "Machine Learning-Driven Optimization for Intrusion Detection in Smart Vehicular Networks", Wireless Personal Communications Journal, Vol. 9, 2020.
- **Islam T Almalkawi**, Jafar Raed, Ayoub Alsarhan, Alaa Attar, Emad E Attar "A Novel and Efficient Priority-based Cross-layer Contextual Unobservability Scheme against Global Attacks for Wireless Multimedia Sensor Networks". International Journal of Interactive Mobile Technologies iJIM, Vol. 15, 2021.
- Alaa Eddien Abdallah, Ebaa Fayyumi, Emad Eddien Abdallah, Ahmad Qawasmeh, **Islam Almalkawi** "Spherical based routing protocols for three-dimensional MANET" Accepted on the International Journal of Computing Science and Mathematics, 2021.

Course Work & Skills:

COMMUNICATION & ELECTRICAL FIELD	<ul style="list-style-type: none">- Wireless Communication & Networks.- Multimedia.- Advance Topics in Wireless Communications (MIMO)- Communication circuits and systems.- Embedded system.- Digital electronic.- Fiber optic systems.- Microprocessor& Embedded Systems.- Digital Signal Processing and Encoding.- Instruments and Measurements.- Design analog & digital dedicated electronic circuit boards (PCB).
COMPUTER & PROGRAMMING FIELD	<ul style="list-style-type: none">- Wireless Sensor Networks.- Multimedia Networks.- Microprocessor based Systems.- Distributed and Embedded Systems.- Optical Networks.- Packet Switching, Computer and Communication Networks.- Information System Modeling.- Algorithms.- Artificial Intelligence.- Computer Organization.- C/C++ & C# language compiler (programming & interface).- nesC over TinyOs.- Assembly Language.- Matlab.- LabVIEW software.- OPNET.- NS2.- WorkBench (analog & digital electronic simulation program).

Memberships:	<ul style="list-style-type: none">- Institute of Electrical and Electronics Engineers (IEEE) .- Jordan Engineers Association (JEA).- Reviewer for several international journals and conferences.- HiPEAC-PhD.- Distributed Systems & Computer Networks Research Group (DSCN).- CMU/UPC Alumni Group.- The scientific club, Hashemite University 2002-2005.- king Abdullah II office committee, Hashemite University 2004-2005.- European construction industry delivering Industrially produced, Integrated processes and Intelligent building systems- I3CON, 2007–2008.
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Scholarships & Academic Honors:

- **Higher education ministry scholarship for first rank students at Municipality** (covered four years Bachelor degree studies at Hashemite University 2000-2004)
- **Higher education ministry scholarship for first rank student at Hashemite University** (2001)
- **Department Honor** three times at the Hashemite University (2001 - 2003).
- **Carnegie Mellon University (CMU) joint with Athens Information Technology (AIT) scholarship** for MSIN Master Program (covered the tuition fees) (2006-2008).
- **Technical University of Catalunya (UPC) and F1 catalunya government grants** for PhD Program (Full) (2009-2013).
- **Hashemite University scholarship** for master and PhD study (covered the living expenses) (2006-2013).

Personality:

- Innovative, willing to learn and hard working.
- Flexible & energetic team player.
- Excellent communication skills.
- Having driving license.
- Sport: swimming, football, basketball and walking.

References:

- Prof. Constantinos B. Papadias
 - Prof. Manel Guerrero Zapata
 - Prof. Antonis Kalis
 - Prof. Tassos D. Dimitriou
 - Prof. Jamal Al-Karaki
 - Prof. Ahmad Al-Manasreh
- References & transcripts will be supplied upon request.