

Omar A. Saraereh, Ph.D



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PERSONAL DATA:

Date of Birth: 02-December-1976

Place of Birth: Karak/Jordan

Nationality: Jordanian

Gender: Male

Marital Status: Married

Address: The Hashemite University
Electrical Engineering Department
Jordan- Zarqa
13115-P.O.Box 150459

EDUCATION:

Last University Degree: Ph.D. Electrical and Electronic Engineering / Mobile Communications

University: Loughborough University / England

Dissertation Title: The design of Multi-band planar inverted-F antennas for mobile handsets with the aid of genetic algorithms and their specific absorption rate

Graduation Year: July/2005

Second University Degree: MSc. Electrical Engineering / Digital Communication Systems

University: Loughborough University / England

Dissertation Title: In-Building Reception Using Frequency Selective Surfaces

GPA: High Distinction [A]

Graduation Year: September/2001

First University Degree: BSc. Electrical Engineering/ Communication

University: Mutah University / Jordan

Graduation Project: Suitability of Differentially Encoding and Gray Coding for Binary Phase Shift Keying (BPSK)

GPA: Good [73.01%]

Graduation Year: September/1999

General Secondary Education Certificate: Bacculaureate

School: Ja'afer Bin AbeTaleb Secondary school Karak / Jordan

GPA: Very Good [83.6%]

Graduation Year: October/1994

Graduate Level Courses:

Antennas and Theory, Communication Channels, Communication Networks, Digital Signals & Communication Theory, Coding, ATM & Wireless Networks, Communication Network & E-Commerce, Personal Radio Communications, Mobile Communications, Error Control Coding and Audio Visual Communications.

RESEARCH INTERESTS:

- Handset Antennas, Wearable Antennas, MIMO Antennas and Ultra-Wide Band Antennas (UWB)
- Array Antennas
- Electromagnetic Band-Gap Structures (EBG)
- Metamaterials
- Frequency Selective Surfaces (FSS)
- Optimization Techniques Using Genetic Algorithms
- Biomedical Engineering Applications Using Antennas
- Specific Absorption Rate (SAR) & Radiation Health Effect
- Image Processing and Pattern Recognition
- Modeling and simulation
- Renewable Energy

TEACHING INTERESTS:

- Electromagnetism
- Antennas and wave propagation
- Electronics
- Signal analysis
- Bio-electromagnetism
- Electrical circuits theory
- Engineering analysis
- Wireless communications
- Electronic and electrical circuits laboratories
- Simulation softwares (CST MW Studi, HFSS Ansoft and Matlab)
- Supervising final year projects, Building prototypes, Measurements and Calibration

AWARDS:

- Scholarship awarded by the Jordanian Royal Court in 1994 to study Electrical Engineering (First Degree) at Mu'tah University. It was based on competition and covered both tuition fees and living expense for five years.
- Scholarship awarded by Loughborough University/ England 2001 to obtain Ph.D degree at Center for Mobile Communications Research (CMCR)/School of Electronic, Electrical & Systems Engineering. It was based on a high distinction achieved at Loughborough University during Master Degree 2000 and covered both tuition fees and living expense for four years.
- Scholarship awarded by The Hashemite University in Jordan to cover Ph.D degree living expenses for four years.

WORK EXPERIENCE:

- **Assistance Professor**, Electrical Engineering Department at The Hashemite University / Jordan (September 2005 – Now)
- **Chairman of Electrical Engineering Department** at The Hashemite University / Jordan (September 2013 – Now)

Responsibilities include:

- Leading the department council
 - Administering the curriculum development process
 - Administering course scheduling process
 - Formulation of the strategic plans of the department
 - Preparation of the annual report on the academic activities of the department
 - Communicating with local industries with regard to joint research projects
 - Supervising the practical training of engineering students
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- **Building prototypes and Carrying out Measurements**, using RF anechoic chamber and DASY4 system for Specific Absorption Rate (SAR) at Center for Mobile Communications Research (CMCR) at Loughborough University for several telecom companies such as: SENDO Phone Company and SARANTEL Company in UK. (2003 – 2005)

CONFERENCES, WORKSHOPS AND PRESENTATION:

1. Loughborough Antennas & Propagation Conference (LAPC2013) representative for the Middle East and Gulf regions.
2. Chair of Organizing Committee and Co-chair of the 3rd International Middle East Conference on Antennas and Propagation (MECAP 2014), 22-24 April 2014, Hashemite University, Zarqa, Jordan.
3. Reforming and Supporting Higher Education Strategy in Jordan Workshop, British Council, 23 April 2013, Amman, Jordan.
4. Joined several workshops and forums at The Jordanian Telecommunications Regulatory Commission (TRC) on mobile licensing and efficiency of frequency spectrum, March/December 2011, Amman, Jordan.
5. International Conference on Energy, Water & Environment - ICEWE 2012, Faculty of Engineering, The Hashemite University, 27-30 November 2012, Jordan.
6. Scientific Day, Faculty of Engineering, The Hashemite University, Zarqa, Jordan, Yearly.

PROFESSIONAL ACTIVITIES

- Member at the Jordanian Engineers Association since 1999.
- Member of the Institute of Engineering (IET) since 2001.
- Member of the Higher Education Accreditation Commission/Universities Accreditation Directorate 2011-2012.
- Member of University Proficiency Exam Committee for graduates from Jordan universities in electrical engineering.
- Thesis committee Member for Master Courses in communication at Mutah University and Jordan University of Science and Technology (JUST).
- Coordinator; The Undergraduate Practical Training Committee in the EE Department at HU, 2008.
- Member; Evaluation Committee of the 8th Engineering Scientific Day, Faculty of Engineering (FOE) at HU, 2012.
- Chair; The Promotion and Appointment Committee in the EE Department at HU, 2013.
- Member; Entrepreneurship Committee, at HU, 2013.

COMPUTER SKILLS

- Advanced programming in Visual Basic, MATLAB, MATHCAD.
- Good command of computer simulation programs (CST Microwave Studio™, HFSS ANSOFT, FEKO).
- Good command of Internet, Search Engines, Microsoft Office™ tools (Word™, Excel™ and PowerPoint™) and Windows™.
- Excellent communication, presentation, and analytical skills. Work well individually, as well as, in team oriented terms

PUBLICATION:

1. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “Handset Antenna optimisation Using A Genetic Algorithm”, National URSI Symposium, University of Leeds, 7-8 July 2003, Leeds, UK.
2. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “Multi-band Handset Antenna Design Using A Genetic Algorithm”, INICA 2003 International ITG-Conference on Antennas, pp. 141-144, September 17-19, 2003 in Berlin, Germany.
3. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “Optimisation Technique for Mobile Handsets Antennas”, Fifth IEE International Conference on Computation in Electromagnetics CEM 2004, pp. 97-98, 19-22 April 2004, Stratford-upon-Avon, UK.
4. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “L and S Shape PIFA Antenna for Triple-Band (DCS/PCS/UMTS) Mobile Handset”, 2004 IEEE AP-S International Symposium And USNC/URSI National Radio Science Meeting, Vol. 3, pp 3107-3111, June 20-26, 2004 Monterey, California, USA.
5. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “Simulation and Experimental SAR and Efficiency Study for a Dual-band PIFA Handset Antenna (GSM900/DCS1800) at Varied Distances From a Phantom Head”, IEE Technical Seminar on Antenna Measurements And SAR (AMS 2004), pp. 5-8, 25–26 May 2004, University of Loughborough, UK.
6. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “Quad-Band Handset Antenna Operation for GSM900/DCS1800/PCS1900/UMTS”, IEE Technical Seminar on Wideband and Multi-band Antennas and Arrays, 7th September 2005, University of Birmingham, UK.
7. **Omar. A. Saraereh**, M. Jayawardene, P. McEvoy and J. C. Vardaxoglou, “Quad-Band Handset Antenna for GSM900/DCS1800/PCS1900/UMTS Bands”, IEEE International Workshop on Antenna Technology: Small Antennas and Novel Metamaterials, 2006, New York, USA.
8. Junfeng Wu, Panagamuwa C.J, McEvoy P, Vardaxoglou J.C, **Saraereh O. A**, "Switching a Dual Band PIFA to Operate in Four Bands", Antennas and Propagation Society International Symposium 2006, IEEE2006, Page(s):2675 - 2678.
9. Mahmoud A. Smadi, Jasim A. Ghaeb Saleh, O. Al-Jazzar, **Omar A. Saraereh**, “Confidence Intervals Verification for Simulated Error Rate Performance of Wireless Communication System”, Wireless Personal Communications International Journal, V. 67, No. 4, December 2012.
10. Anas Al Tarabsheh, Spyros Voutetakis, Athanasios I. Papadopoulos, Panos Seferlis, Issa Etier and **Omar Saraereh**, “Investigation of Temperature Effects in Efficiency Improvement of Non-Uniformly Cooled Photovoltaic Cells”, Chemical Engineering Transactions Journal, V. 35, pp. 1387-1392, 2013.

11. **O. A Saraereh**, C. J Panagamuwa, J. C Vardaxoglu and Q. H Alsafasfeh, “Study on the Appropriate Dimensions and Positions of Slots and Notches in the Ground plane of Planar Monopole Handset Antenna for Bandwidth Enhancement”, ICEAA-IEE APWC-EMS 2013, Torino, September 9-13, 2013.
12. **O. A Saraereh**, C. J. Panagamuwa and J. C. Vardaxoglu, “Low Correlation Multiple Antenna System for Mobile Phone Applications Using Novel Decoupling Slots in Ground Plane”, Loughborough Antennas & Propagation Conference (LAPC2013), 11-12 November 2013, Loughborough, UK.

REFERNCES:

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