Samer Husni Jaloudi, Senior Member, IEEE Sun Certified Java Programmer

Personal Information

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Education

• PhD in Electrical Engineering (2009 – 2013):

University of Bolton, United Kingdom and NR Westphalia University of Applied Sciences, Germany Subject of Thesis: Development of Information and Communication Technology Strategies for Smart Grids

• Master's Degree in Microelectronics – Design of Integrated Systems (2004 – 2005):

Grenoble Institute of Technology (INPG), France

Subject of Thesis: CAD environment for the injection of faults in the digital circuits using VHDL & C

• Bachelor's Degree in Electrical Engineering (1993 – 1998):

An-Najah National University, Palestine

Final Project: Measurements for Fiber Optics Networks (in cooperation with PALTEL)

Experience

Professional Experience:

Networks Engineer in PALTEL (1998 – 2003). Main Duties:

- 1. Fibre optics cables installation, splicing, fusion, and measurements
- 2. Case studies in network planning of public switched telephone networks (PSTN)
- 3. Installation, administration & maintenance of S-12 ALCATEL telephone switches
- Academic Experience:

Part–time instructor at Arab-American University (2006 – 2009), Department of Telecommunications Full–time employee at Al Quds Open University (2006 – present), Department of ICT

Rank: Associate Professor

Duties based on embedded-learning:

- 1. Dean of the TAS faculty at QOU (2023)
- 2. Head of the ICT department at QOU (2016 2018, and 2019 2022)
- 3. Curricula development, course materials preparation, and book review
- 4. Supervision of lab courses, students projects, and Bachelor theses
- 5. Manage students' Internships with local institutions
- 6. Teaching Responsibilities (Bachelors and Masters):
 - Master Level Courses: Computer Communications and Networks, Internet of Things, Special Topics in IT
 - Telecommunications: Telecoms I, Telecoms II, Telecoms Networks, Electromagnetic II, Antenna
 - Circuits and Electronics: Electric Circuits I, Electronics I, Electronics II, Digital Design Lab
 - ICT: Java, Network Programming using Java, Multimedia, Web Design

IT and Engineering Skills

• Internet-based Technologies using Standard Protocols:

Internet of Multimedia (IoMM) using Protocol XMPP

Internet of Things (IoT) for Smart City Sectors using MQTT, and JSON/HTTP

Industrial Internet of Things (IIoT) using MODBUS/TCP, and MQTT Protocol

Internet of SCADA Systems using IEC 60870-5-104, and IEEE 754 Short Floating Point

Internet of Energy using IEC 61850 for the Integration of Renewable Energy Sources in Electric Grids

• Programming Languages:

Compiled Languages: Java, C, C#

Web Languages: HTML, JavaScript, PHP, JSP

Industrial PLC Languages: PLC Structured Text (Standard IEC 61131-3)

• Software Development Tools:

Software IDE Tools: MATLAB, Android Studio

Other Software: Linux-Ubuntu Operating System, and MySQL Databases

• Embedded Systems:

Development Platforms: FPGA Cyclone IV, Arduino, Raspberry PI

Protocols and Communication Systems: UART, SPI, Bluetooth, Wi-Fi, ZigBee

Languages

• Arabic, English, French

Main Publications

• Journal Papers:

- 1. Generation of Multiple Frequency PWM Signals using FPGA (*QOU PJTAS 2021*) https://journals.gou.edu/index.php/PJTAS/issue/archive
- 2. Communication Protocols of an Industrial Internet of Things Environment (*Future Internet 2019*, <u>Citations: 78</u>) https://www.mdpi.com/1999-5903/11/3/66
- 3. MQTT for IoT-based Applications in Smart Cities (*QOU PJTAS 2019*, *Citations: 17*) http://journals.qou.edu/index.php/PJTAS/article/view/1550/
- 4. A bridge between legacy wireless communication systems and internet of things (*IJEEI 2019*, *Citations: 3*) http://section.iaesonline.com/index.php/IJEEI/article/view/979/419
- 5. Software-defined radio for modular audio mixers (*IEEE CEMAG 2017*, *Citations: 11*) https://ieeexplore.ieee.org/document/8048739/

• Conference Papers:

- 1. Open source software of smart city protocols (*International OSSCOM Conference Jordan, 2015, <u>Citations: 10</u>) https://ieeexplore.ieee.org/document/7372690*
- 2. Communication strategy for grid control and monitoring of distributed generators in smart grids using IEC and IEEE standards (*IEEE ISGT Conference UK*, 2011) https://ieeexplore.ieee.org/document/6162689/
- 3. Integration of distributed energy resources in the grid by applying international standards to the inverter as a multifunctional grid interface (*IEEE PowerTech Conference Norway*, 2011) https://ieeexplore.ieee.org/document/6019288/
- Employment of programmable controllers, control systems and service oriented architecture for the integration of distributed generators in the grid (*IEEE ISIE Conference – Poland*, 2011) https://ieeexplore.ieee.org/document/5984302/
- 5. Investigation and comparison between international standards for information integration and control of ECSs based on RESs over IP-based Networks (*ICREPQ Conference Spain*, *2011*) http://www.icrepq.com/icrepq'11/238-jaloudi.pdf

• Books:

- Authorship:
 - 1. Telecommunications I, in Arabic, for QOU 2021.
- Revision:
 - 1. Analysis of Electrical and Electronics Circuits, in Arabic, for QOU 2020.
 - 2. Networks Programming, in Arabic, for QOU 2019.
 - 3. Web Pages Design, in Arabic, for QOU 2019.

Research Profile and Societies

• IEEE Profile:

- Membership:
 - 1. Level: Senior Member (https://ieee-collabratec.ieee.org/app/p/DrSamerJaloudi)
 - 2. Society Memberships: IEEE Industrial Informatics, and IEEE Consumer Electronics
- Reviewing:
 - 1. TPC of IEEE Sensors 2015-2017, 2021-2022
 - 2. Reviewer for the IEEE Consumer Electronics Magazine, IEEE Access, and IEEE IoT Journal

• Google Scholar Profile

- Link: https://scholar.google.com/citations?user=0tavruwAAAAJ&hl=en
- h-index: 9
 Citations: 285

Research Interests

- Information and Communication Technologies of Renewable Energy Integration in Smart Grids
- Internet of Things (IoT) of Smart City Sectors, Consumer Electronics, and Industrial Applications
- Applications of Software-Defined Radio (SDR) in Engineering Education and Consumer Electronics

Scholarships, Awards, and Grants

- Grant from Erasmus+, Academic Staff Mobility, for one-week training at University of Ljubljana (2022)
- Grant from Erasmus+, Academic Staff Mobility, for one-week visiting Professor at Open University of Cyprus (2017)
- Fund for one-year project from the Deanship of Scientific Research at QOU about Smart Cities (2017)
- Master's Degree scholarship from the French Consulate in Jerusalem (2003 2005)