

Curriculum Vitae

Wael Fawzi Abu Shehab

Date and Place of Birth: 21-05-1972 - Kuwait

Nationality: Jordanian

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Address: DEPARTMENT OF ELECTRICAL ENGINEERING,
FACULTY OF ENGINEERING,
AL-HUSSEIN BIN TALAL UNIVERSITY,
MA'AN 20, 71111, JORDAN.



Education:

Oct. 1997- Feb. 2001 Ph.D. in the Field of Electronics and Telecommunications, Faculty of Electrical Engineering and Informatics, VSB- Technical University of Ostrava, Czech Republic.

Title of the Doctoral Thesis: The Effect of Bending on Light Intensity Distribution in Few-Mode Optical Fiber.

Sept. 1992- June 1997 Diploma in the Field of Electronics and Telecommunications, VSB- Technical University of Ostrava (Excellent at the State Examination).

Title of Diploma Work: Study of a Periodic Bending Effect on a Signal Transmission in an Optical Fiber.

July 1990 General Secondary Education Certificate, Scientific Section, Al-Ahmadi Secondary School, Kuwait, Percentage Average 92.8 %

Other Certificates:

Aug. 2009 ICDL: International Computer Driving License.

May 2009 CCNA 1 Exploration: Network Fundamentals (Part of the Cisco Networking Academy Course for Instructors).

Teaching Experience:

- Nov. 2022- Present Professor at the Department of Electrical Engineering, Al-Hussein Bin Talal University, Jordan
- Nov. 2016- Nov. 2022 Associate Professor at the Department of Electrical Engineering, Al-Hussein Bin Talal University, Jordan
- April 2014- Nov. 2016 Assistant Professor at the Department of Electrical Engineering, Al-Hussein Bin Talal University, Jordan
- Sept. 2010- April 2014 Assistant Professor at the Department of Communications Engineering, Al-Hussein Bin Talal University, Jordan
- Sept. 2001- June 2009 Lecturer at the Department of Electronics, Jazan College of Technology, Saudi Arabia.
- Oct. 1997- Oct. 2000 (During Ph.D. Study) Engineer at the Department of Electronics and Telecommunications, VSB– TU Ostrava, Czech Republic.

Courses Taught:

Electromagnetics I	Optical Communications
Electromagnetics II	Communication Networks
Antenna Engineering	Optoelectronics
Digital Logic Design	Electric Circuits Lab
Engineering Analysis	Communications Lab
Engineering Mathematics 1	Logic Circuit Design Lab
Engineering Mathematics 2	Measurement and Instrumentation Lab
Logic Circuits	Microwave and Antenna Lab
Electronic Devices	Control Systems Lab
Electrical Engineering	Digital Electronics Lab
Computer Applications	Electronics Lab

Administrative and Field Experience:

- Sept. 2022- Aug. 2023, Sept. 2016- Aug. 2020, Sept. 2014- Aug. 2015, Sept. 2011- Aug. 2013
Member of Engineering Faculty Council, Al-Hussein Bin Talal University, Jordan

- Sept. 2014- Aug 2015 Assistant Dean of the Faculty of Engineering for Student Affairs, Al-Hussein Bin Talal University, Jordan
- Dec. 2009- Aug. 2010 Engineer at Technical and Engineering Support Directorate, Audit Bureau, Amman, Jordan
- Sept. 2001- June 2009 Head of the Department of Electronics in the Field of Industrial Electronics and Control, Jazan College of Technology, Saudi Arabia.

Membership of Professional Associations:

- June 1997- Present Member of Jordan Engineers Association

Languages:

Arabic (mother tongue), English, Czech

Publications:

- H. Alashaary, G. Al-Shabaan, **W. Abu Shehab**, S. Ali, "Estimation of harmonic impedance and resonance in power systems", *International Journal of Electrical and Computer Engineering*, Vol. 15, No.1, 2025, pp. 67-75.
- M. Alshrari, M. Ahmed, **W. Abu Shehab**, S. Ali, "Evaluation of Harmonic Currents and Network Impedance using Norton Model in an Unidentified Network Configuration", *Jordan Journal of Electrical Engineering*, Vol. 10, No.1, 2024, pp. 84-95.
- Z. Al-Qudah, **W. Abu Shehab**, K. A. Darabkh, A. Musa, "The road to achieve the capacity of the three-way degraded broadcast channel", *Journal of the Franklin Institute*, Vol. 360, No. 10, 2023, pp. 6693-6711.
- **W. Abu Shehab**, A. Salah, W. Alsawalmeh, H. Alashaary, "Few-Mode Optical Fiber Surface Plasmon Resonance Sensor with Controllable Range of Measured Refractive Index", *International Journal of Electrical and Computer Engineering*, Vol. 13, No.1, 2023, pp. 454-464.
- A. Abu Al Aish, **W. Abu Shehab**, M. Alshrari, S. Nabhan, "Real-Time Performance Monitoring of PV Solar Module based on Wireless Data Acquisition System", *Journal of Al-Hussein Bin Talal University for Research*, Vol. 7, No. 1, 2021, pp. 687-698.
- **W. Abu Shehab**, "Performance Analysis of Optical Fiber Surface Plasmon Resonance Sensor in Single-Mode Operation Region", *Journal of Electrical Engineering*, Vol. 71, No. 5, 2020, pp. 340-346.
- **W. Abu Shehab**, S. A. Ali, M. I. Alsharari, "Lightning Protection for Power Transformers of Aqaba Thermal Power Station", *Archives of Electrical Engineering*, Vol. 69, No. 3, 2020, pp. 645-660.

- **W. Abu Shehab**, S. Althunibat, G. Al Sukkar, "A Practical Method for Performance Estimation for Collaborative Sensing in Cognitive Radio Networks", *Radioengineering*, Vol. 27, No. 1, 2018, pp. 307-312.
- N. Ayyad, N. Alqaramseh, M. Qazzaz, S. Althunibat, **W. Abu Shehab**, "Setup Optimization in Spatial Modulation Systems: A Simulation Study", *2017 8th International Conference on Information and Communication Systems (ICICS)*, 2017, pp. 241-245.
- **W. Abu Shehab**, Z. Al-Qudah, "Singular Value Decomposition: Principles and Applications in Multiple Input Multiple Output Communication system", *International Journal of Computer Networks & Communications (IJCNC)*, Vol. 9, No. 1, 2017, pp. 13-21.
- Z. Al-Qudah, **W. Abu Shehab**, "Bounds on the Achievable Rates of Faded Dirty Paper Channel", *International Journal of Computer Networks & Communications (IJCNC)*, Vol. 9, No. 1, 2017, pp. 71-79.
- Z. Al-Qudah, **W. Abu Shehab**, "Two-Way Multiple Relays Channel: Achievable Rate Region and Optimal Resources", *Advances in Electrical and Electronic Engineering*, Vol. 14, No. 3, September 2016, pp. 279- 286.
- **W. Abu Shehab**, Z. Al-Qudah, "Capacity of Gaussian Relay Channel with Orthogonal Components and Non-causal Interference at the Source", *Innovative Systems Design and Engineering*, Vol. 7, No. 7, 2016, pp. 64-70.
- S. Althunibat, A. Abu-Al-Aish, **W. Abu Shehab**, W. Alsawalmeh, "Auction-based Data Gathering Scheme for Wireless Sensor Networks", *IEEE Communications Letters*, V. 20, Issue 6, June 2016, pp. 1223-1226.
- G. Al-Shabaan, **W. Abu Shehab**, A. Abu-Al-Aish, W. Al-Sawalmeh, M. Al-Shaweesh, "Effects of Dust Grain Size and Density on the Monocrystalline PV Output Power", *International Journal of Applied Science and Technology*, Vol. 6, No. 1; February 2016, pp. 81-86.
- **W. Abu Shehab**, G. Al-Shabaan, W. Al-Sawalmeh, "RFID-Based Inventory and Security System", *Innovative Systems Design and Engineering*, Vol. 6, No. 10, 2015, pp. 53-58.
- **W. Abu Shehab**, S. A. Ali, "Harmonics Elimination in Industrial Networks using Filters", *European Journal of Scientific Research*, Vol. 56, No.3, 2011, pp.326-335.
- **W. Abu Shehab**, V. Vasinek, "Vidové pole v zakřiveném optickém vlákne podporujícího šíření malého počtu vidů", *Elektrorevue Journal*, ISSN 1213-1539, www.elektrorevue.cz, June 2000.
- **W. Abu Shehab**, V. Vasinek, "Ohybové ztráty v zakřiveném málovidovém optickém vlákne", *Elektrorevue Journal*, ISSN 1213-1539, www.elektrorevue.cz, July 2000.
- **W. Abu Shehab**, V. Vasinek, "Bending Losses in Bent Optical Fiber Supporting Few Guided Modes", *International Conference: Research in Telecommunication Technology, RTT 2000*, Ostrava-Reka, The Czech Rep., September 2000.
- **W. Abu Shehab**, V. Vasinek, "Bending Effects in Few-Mode Optical Fiber with Step-Index Profile", *23rd International Conference: Telecommunications and Signal Processing - TSP 2000*, Brno, The Czech Rep., September 2000.

- **W. Abu Shehab**, “Shift of Centre of Field Distribution in Optical Fiber Core Due to Bending”, III. Seminar of Electronics and Telecommunication, Technical University of Ostrava, November 2000.

Participation at Programs, Conferences, Master's Thesis Committees, and Other Activities:

- Member of the discussion committee for the master's thesis entitled "Angle of Arrival Based Decisions Gathering Scheme for Optical Wireless Sensor Networks", Dec. 2024, Al-Hussein Bin Talal University, Jordan.
- Member of the Committee for Reviewing the Jordanian Accreditation Request for the Bachelor's Program in Electrical Engineering at Jordan University of Science and Technology, formed by the Accreditation and Quality Assurance Commission for Higher Education Institutions, 2024.
- Member of the discussion committee for the master's thesis entitled "A New Flexible Rectenna for Wireless RF Energy Harvesting at 915 MHz Band", April 2022, Mutah University, Jordan.
- Participation at the "IREEDER Renewable Energy Training Workshop" co-funded by the Erasmus+ KA2 programme of the European Union, Patras, Greece, 22-26 Nov. 2021.
- Member of the discussion committee for the master's thesis entitled "Path Loss Estimation for Implantable Applications at 433 MHz", Jan. 2022, Mutah University, Jordan.
- Member of the discussion committee for the master's thesis entitled "Localization of Mobile Station using Field Measurements in 4G Cellular System", Jan. 2022, Mutah University, Jordan.
- Member of the discussion committee for the master's thesis entitled "Shading Effects on Photovoltaic Arrays Output: A Proposal Solution to Minimize Effect of Symmetrical Shade on Photovoltaic Solar Systems", Dec. 2018, Al-Hussein Bin Talal University, Jordan.
- Reviewer and Member of Scientific Committee at the 16th Knowledge in Telecommunication Technologies and Optics KTTO 2016 Conference, Czech Republic, September 2016, <https://ktto.vsb.cz>
- Member of Scientific and Program Committee at the 12th International Conference on Research in Telecommunication Technologies 2010, Czech Republic, September 2010, http://homel.vsb.cz/~voz29/Sbornik_Conference_RTT2010.pdf
- Participation at "Training in the Field of Networks Implementation" Program, Development and Training Center, Jazan College of Technology, 1-5 November 2008, (20 Hours).
- Member of Program Committee at the International Conference: Research in Telecommunication Technology, RTT 2008, Slovak Rep., September 2008, <http://www.ktl.elf.stuba.sk/rtt08/english.php>
- Participation at "Mobile Maintenance" Program, Jazan College of Technology, 10-14 February 2007, (20 Hours).
- Participation at "The Fourth Saudi Technical Conference and Exhibition", STCEX 2006, Riyadh, Saudi Arabia, 2-6 December 2006.

- Member of Scientific Committee at the "Total Quality Management Between Education and Application Meeting" Organized by Jazan Province Principality, Saudi Arabia, 26-27 February 2006.
- Participation at the Workshop "Quality Assurance Procedures at Colleges" supervised by Edexcel, Jazan, Saudi Arabia, 28-31 August 2005.
- Member of Refereeing Committee at "The 8th Exhibition of Students Scientific inventions" Organized by the Ministry of Education, Jazan, Saudi Arabia, November 2004.