

Resume of Dr. Mohammad H. Salah

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Department of Mechatronics Engineering
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Education

- **Ph.D. in Electrical Engineering (Mechatronics Program)**, Aug 2007
Clemson University, USA
Dissertation: “*Nonlinear Control Strategies for Advanced Vehicle Thermal Management Systems*”
- **M.S. in Electrical Engineering**, Dec 2003
University of New Hampshire, USA
Thesis: “*Skill Transfer and Improvement Framework for a Simulated Robot*”
- **B.Sc. in Engineering Technology (Electromechanical Systems Program)**, Jun 2000
Al Balqa' Applied University – Amman Collage for Engineering Technology, Jordan
Senior Project: “*Design and Control of a Printed Circuit Boards (PCBs) Machine*”

Professional Experience

- **Head of the Unit of Quality Centers in the Institute for Research and Consultancy**
University of Tabuk, Kingdom of Saudi Arabia, April 2016 – September 2017
- **Head of the Measurement and Evaluation Unit in the Faculty of Engineering**
University of Tabuk, Kingdom of Saudi Arabia, November 2014 – September 2016
- **Associate Professor of Electrical Engineering Department – Sabbatical Leave**
University of Tabuk, Kingdom of Saudi Arabia, August 2014 – August 2018
- **Associate Professor of Mechatronics Engineering Department**
The Hashemite University, Jordan, Oct 2012 - present
- **Chair of the Mechatronics Engineering Department**
The Hashemite University, Jordan, Sep 2009 – Sep 2011
- **Assistant Professor of Mechatronics Engineering Department**
The Hashemite University, Jordan, Sep 2007 – Oct 2012
- **Research Assistant**
Automotive and Hydraulics Research Lab., Clemson University, USA, May 2005 – Aug 2007
Robotics and Vibration Control Lab., University of New Hampshire, USA, Summer 2002 and 2003
- **Teaching Assistant**
Department of Electrical and Computer Engineering, Clemson University, USA, May 2004 – May 2005
Department of Physics, University of New Hampshire, USA, Aug 2003 – Dec 2003
- **Control and Design Engineer**
PIE for Automation and Electronic Control (PALOC Control), Jordan, July 2000 – Jan 2002
- **Engineering Internship**
Industrial Electric and Electronic Arab Center, Jordan, Jun 1999 – Sep 1999

Research Interests

- Nonlinear Control Design for Mechatronics Systems
- Control of MEMS
- Robotic Systems
- Renewable Energy Systems
- Automotive Systems
- Hydraulic and Pneumatic Control Systems
- Applications of PLC in Industrial Automation

Funded Research Projects

- **Modifying the university solar car (Hashimeya 2) to operate on fuel cell and hydrogen for in campus applications**
Funded by The Hashemite University with the amount of 66,000 JD – *Co. Investigator*.
- **Network of ground and aerial vehicles for security purposes inside HU campus: design and development**
Funded by The Hashemite University with the amount of 185,500 JD – *Co. Investigator*.
- **Advanced Control for Ultrasonically Assisted Machining**
Funded by the Deanship of Scientific Research, University of Tabuk with the amount of 19,800 SR – *Pr. Investigator*.
- **4D Entertainment Machine**
Funded by The Hashemite University with the amount of 17,000 JD – *Pr. Investigator*.
- **Powertrain and Control Design for Hybrid Fuel-Cell/Battery Vehicle**
Funded by the Scientific Research Support Fund with the amount of 95,782 JD – *Co. Investigator*.
- **Advanced Automotive Suspension Test Rig**
Funded by The Hashemite University with the amount of 35,500 JD – *Pr. Investigator*.
- **Mechatronics training kit and research tool: Four-Bar Mechanism Driven by a Geared DC Motor (Numerical and Experimental Investigation)**
Funded by The Hashemite University with the amount of 3,580 JD – *Co. Investigator*.

Funded Graduation Projects and Collaboration with the Industry

Dr. Mohammad Salah has supervised many funded graduation (senior) projects in the field of robotics and mechatronics such as:

- **PLC-based Automated Iron Tubes Production Line**
Funded by the Industry (Techno Steel, Inc.) for the academic year 2010/2011 with the amount of 1000 JD.
TEAM: Mo'ayyad Jouri, Mohammad Zraiqee, Mu'taz Nayroukh, Amr Okush.
- **Two-Wheeled Human Transportation System (2WHTS)**
Funded by the Applied Scientific Research Fund (ASRF) for the academic year 2011/2012 with the amount of 1000 JD. The project earned the first place in the funded graduation projects competition, first place in the ninth scientific day of engineering college at Hashemite University within the mechatronics theme, April 2012, and first place in the fifth National Technology Parade within the robotics theme at Hashemite University, May 2012.
TEAM: Haneen Abu Arrub, Islam Abu Awadh, Aseel As'ad, and Wafa' Khudruj.
- **Automated Core Cutting Machine (ACCM)**
Funded by the Industry (Digital Labels, Inc.) for the academic year 2012/2013 with the amount of 3500 JD.
TEAM: Mu'taz Tayseer, Abderrahman Zraiqee, Abdelazeez Zain, Aseel Srouer, Shayma Alhaj Ali.

Research Visits

- Consultative Research Visit via the DFG Program, Electrical and Computer Engineering Department, University of Kaiserslautern, Germany, June 2012 – August 2012. **Research Topic:** *Thermal Management System for Passengers Comfort in Vehicle Cabins*

Academic Visits

- Machine Drive Systems Course Design for EU TEMPUS IV Project “Modernizing Undergraduate Renewable Energy Education: EU Experience in Jordan (MUREE)”, project number 530332-TEMPUS-1-2012-1-JO-TEMPUS-JPCR, grand agreement number 2012-3324/001-001, Electric Drives and Machines Institute, Graz University of Technology, Austria, February 2014.

Professional Activities

- **Member of the technical committee of the 1st/2nd International Conference on Renewable Energy and Environment Engineering (REEE), Paris, France, 10/2018, Munich, Germany 8/2019.**
- **Member of the technical program committee of the IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), Amman, Jordan 4/2019.**
- **Member of the technical committee of the 3rd/4th International Conference on Sustainable and Renewable Energy Engineering (ICSREE), Salamanca, Spain 5/2018, Beijing, China 5/2019.**
- **Member of the technical committee of the 6th/7th International Conference on Mechatronics and Control Engineering (ICMCE), Petersburg, Russia, 12/2017, Amsterdam, Netherlands, 11/2018.**
- **Member of the international program committee of the 3rd/4th/5th International Conference on Control, Decision, and Information Technologies (CoDIT), Saint Julian's, Malta, 4/2016, Barcelona, Spain, 4/2017, Thessaloniki, Greece, 4/2018**

- **Publicity and Public Relations Chair** of the IEEE Jordan Conference on Applied Electrical Engineering and Computing Technology (AEECT), Amman, Jordan, 10/2017
- **Member of the international advisory board** of the 3rd/4th International Conference on Renewable Energies for Developing Countries (REDEC), Beirut, Lebanon, 7/2016, 11/2018.
- **Member of the reviewers committee** of the 4th Arab Conference of Robotics and Artificial Intelligence, Doha, Qatar, 2/2016.
- **Member of the referees committee of the 5th Student's Scientific Forum** held at University of Tabuk, KSA, 2/2015.
- **Member of the scientific committee** of the 1st/2nd International Conference on Renewable Energies for Developing Countries (REDEC), Beirut, Lebanon, 11/2012, 11/2014.
- **Head of the scientific committee and member of the organizing committee of the 11th Scientific Day of Engineering College** held at Hashemite University, Jordan, 4/2014.
- **Organizing the first robotics competition** at Hashemite Universities, Jordan, 2/2014.
- **Vice chair of the IEEE Young Professionals Affinity Group – Jordan Section**, 1/2014 to 12/2015.
- **Member of the organizing and scientific committees, and chair of control, automation, mechatronics track** of IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), Jordan, 12/2013.
- **Organizing a seminar titled (Unmanned Ground Vehicles: Basics, Applications, and Challenges for Mobile Robots)** at Hashemite Universities via the DL program of IEEE RAS, Jordan, 12/2013.
- **Member of the international editorial board** of "International Journal of Advances in Power Systems" (http://www.ijaps.org/Index/en/left/Editorial_Board) since 2013.
- **Head of the judges committee of the Formula 1 in schools 3rd national competition** held at Jubilee Center for Excellence in Education, 5/2013.
- **Member of the organizing committee, chair of control systems track, publication chair, and webmaster** of IEEE International Symposium on Mechatronics and its Applications (ISMA), 4/2013.
- **Co-organizing the workshop titled (LabVIEW: Introduction and Implementation)** at Princess Sumaya University for Technology, 12/2011.
- **Organizing the workshop titled (Invertors: Principles and Practice)** at Hashemite Universities, 11/2012.
- **Head of the judges committee in the preliminary robotics competition for schools** held at Jubilee Center for Excellence in Education, 11/2012.
- **Member of the steering committee** of the Universities Robotics Competition (URC), since 2012.
- **Chairing a session in the First Arab Robotics Conference** held at Landmark Hotel, 10/2012.
- **Chair of the IEEE Robotics and Automation Society (RAS) Jordan Chapter**, 9/2012 – 12/2014.
- **Member of the judges committee of the Formula 1 in schools 2nd national competition** held at Jubilee Center for Excellence in Education, 5/2012.
- **Giving a lecture about the Technological Graduation Projects in the 5th National Technology Parade** held at Hashemite University, 5/2012.
- **Member of the judges committee to the graduation projects submitted to the 5th National Technology Parade in the robotics theme** held at Hashemite University, 5/2012.
- **Member of the organizing committee of the 5th National Technology Parade** held at Hashemite University, 5/2012.
- **Giving a lecture (as IEEE GOLD Chair) about the STEP program in the IEEE Jordanian Student Branch Congress (JSBC)** held at Princess Sumaya University for Technology, 4/2012.
- **Member of the judges committee in the robotics competition for schools** held at Jubilee Center for Excellence in Education, 2/2012.
- **Member of the organizing and scientific committees, treasurer, registration chair, and chair of control systems track** of IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), 12/2011.
- **Member of the organizing committee** of the IEEE Professional Activities Summit, 11/2011 and 10/2012.
- **Chair of the IEEE Gold Affinity Group – Jordan Section**, 6/2011 – 12/2013.
- **Member of the judges committee to the graduation projects submitted to the 4th National Technology Parade in the robotics theme** held at Philadelphia University, 5/2011.
- **Member of the technical program committee** of Mosharaka International Conference on
 - ▶ Power Engineering, Control, and Mechatronics (Mechatronics and Embedded Systems track + Control, Robotics and Automation track) – 2011, 2012.
 - ▶ Systems, Modeling, and Design (Systems and Control Engineering track) – 2011, 2012.
- **Member of the international editorial board** of "International Review of Applied Sciences and Engineering" (http://akkr.hu/72/journals/products/engineering_sciences/international_review_of_applied_sciences_and_engineering) since 2010.

Books

- **Mohammad Salah**, *Nonlinear Control for Advanced Vehicle Thermal Management Systems*, VDM Verlag Dr. Müller, Feb 2010.
- **Mohammad Salah**, *Imitation-based Skill Learning Simulator for Mobile Robots*, VDM Verlag Dr. Müller, March 2010.

Journal Articles

- **Mohammad Salah**, Hazem El-Hageen, Osama Badarneh, Mohammad Ababneh, and Mohammad Abu Mallouh, “Robust output feedback control for uncertain chaotic system,” *Submitted to International Journal of Systems, Control and Communications*, 9/2018.
- **Mohammad Salah**, Ahmad Al-Jarrah, Enver Tatlicioglu, and Suleiman Banihani “Robust backstepping control for a four-bar linkage mechanism driven by a geared dc motor,” *Journal of Intelligent and Robotic Systems*, doi.org/10.1007/s10846-018-0811-y, pp 1-12, 2018.
- **Mohammad Salah**, “A laboratory automotive suspension test rig: design, implementation, and integration,” *Jordan Journal of Mechanical and Industrial Engineering*, vol. 11, no. 2, pp 67-71, 2017.
- Mohammad Abu Mallouh, **Mohammad Salah**, Eman Abdelhafez, Mohammed Hamdan, Brian Surgenor, “Modeling, simulation, and performance comparison of conventional vehicle against three configurations of hybrid vehicles,” *International Review on Modelling and Simulation*, vol. 9, no. 4, pp 238-245, 2016.
- **Mohammad Salah**, Mohammad Abu Mallouh, Mohamed Youssef, Eman Abdelhafez, Mohammed Hamdan, Brian Surgenor, “Hybrid vehicular fuel cell/battery powertrain test bench: design, construction, and performance testing” *Transactions of the Institute of Measurements and Control*, vol. 39, no. 9, pp. 1431-1440, 2016.
- Ahmad Al-Jarrah, Asma Al-Tamimi, and **Mohammad Salah**, “Applications of various control schemes on hydraulic actuated automotive cooling systems,” *Intelligent Decision Technologies*, vol. 10, no., 1, pp. 37-47, 2016.
- Ahmad Al-Jarrah, **Mohammad Salah**, Suleiman Banihani, Khalid Al-Widyan, and Anas Ahmad, “Applications of various control schemes on a four-bar linkage mechanism driven by a geared dc motor,” *WSEAS Transactions on Systems and Control*, vol. 10, pp. 584-597, 2015.
- Tarek Tutunji, **Mohammad Salah**, Ahmad Al-Jarrah, Anas Ahmad, and Rabei Alhamdan, “Modeling and identification of a four-bar linkage mechanism driven by a geared dc motor,” *International Review of Mechanical Engineering*, vol. 9, no. 3, pp. 296-306, 2015.
- Mohammad Abu Mallouh, Eman Abdelhafez, **Mohammad Salah**, Mohammad Hamdan, Brian Surgenor, and Mohamed Youssef, “Model development and analysis of a mid-sized hybrid fuel cell/battery vehicle with a representative driving cycle,” *Journal of Power Sources*, vol. 260, pp. 62-71, 2014.
- Asma Al-Tamimi, Ahmad Al-Jarrah, and **Mohammad Salah**, “Intelligent control techniques for electrical actuated automotive cooling systems,” *Control and Intelligent Systems*, vol. 42, no. 2, pp. 1-11, 2014.
- Erhun Iyasere, **Mohammad Salah**, Darren Dawson, John Wagner, and Enver Tatlicioglu, “Robust Nonlinear Control Strategy to Maximize Energy Capture in a Variable Speed Wind Turbine with an Internal Induction Generator,” *Journal of Control Theory and Applications*, vol. 10, no. 2, pp. 184-194, 2012.
- **Mohammad Salah**, Michael McIntyre, Darren Dawson, John Wagner, and Enver Tatlicioglu, “Charge feedback-based robust position tracking control of piezoelectric actuators,” *IET Control Theory and Applications*, vol. 6, no. 5, pp. 615-628, 2012.
- Erhun Iyasere, **Mohammad Salah**, Darren Dawson, John Wagner, and Enver Tatlicioglu, “Optimum seeking-based nonlinear controller to maximize energy capture in a variable speed wind turbine,” *IET Control Theory and Applications*, vol. 6, no. 4, pp. 526-532, 2012.
- Mohammad Ababneh, **Mohammad Salah**, and Khalid Alwidyan, “Linearization of nonlinear dynamical system: a comparative study,” *Jordan Journal of Mechanical and Industrial Engineering*, vol. 5, no. 6, pp. 657-571, 2011.
- **Mohammad Salah**, Michael McIntyre, Darren Dawson, John Wagner, and Enver Tatlicioglu, “Sensing of the time-varying angular rate for MEMS z-axis gyroscopes,” *Mechatronics*, vol. 20, no. 6, pp. 720-727, 2010.
- **Mohammad Salah**, Thomas Mitchell, John Wagner, and Darren Dawson, “A Smart multiple-loop automotive cooling system – model, control, and experimental study,” *IEEE/ASME Transactions on Mechatronics*, vol. 15, no. 1, pp. 117-124, 2010.
- **Mohammad Salah**, Peyton Frick, John Wagner, and Darren Dawson, “Hydraulic actuated automotive cooling systems – nonlinear control and test,” *Control Engineering Practice*, vol. 17, no. 5, pp. 609-621, 2009.
- Thomas Mitchell, **Mohammad Salah**, John Wagner, and Darren Dawson, “Automotive thermostat valve configurations – enhanced warm-up performance,” *ASME Journal of Dynamic Systems, Measurement, and Control*, vol. 131, no. 4, pp. 044501-1 to 044501-7, 2009.
- **Mohammad Salah**, Thomas Mitchell, John Wagner, and Darren Dawson, “Nonlinear control strategy for advanced vehicle thermal management systems,” *IEEE Transactions on Vehicular Technology*, vol. 57, no. 1, pp. 127-137, 2008.
- Jian Chen, Darren Dawson, **Mohammad Salah**, and Timothy Burg, “Cooperative control of multiple vehicles with limited sensing,” *International Journal of Adaptive Control and Signal Processing*, vol. 21, no. 2-3, pp. 115-131, 2007.

Conference Proceedings (Refereed)

- **Mohammad Salah**, and Ahmad Al-Jarrah, “Robust Backstepping Control for Tracked Vehicles Under the Influence of Slipping and Skidding,” *Submitted to the 20th International Conference on Research and Education in Mechatronics*, FH Upper Austria, Wels Campus, Austria, 2019.
- Ahmad Al-Jarrah, **Mohammad Salah**, “Controlling a Skid-Steered Tracked Mobile Robot with Slippage Using Various Control Schemes,” *Submitted to the 20th International Conference on Research and Education in Mechatronics*, FH Upper Austria, Wels Campus, Austria, 2019.
- Mohammad Abu Mallouh, Brian Surgenor, Eman Abdelhafez, **Mohammad Salah**, and Mohammad Hamdan, “Development of driving cycle for Amman city with performance evaluation for ICE vehicle,” in *Proceedings of the ASME 12th Biennial Conference on Engineering Systems Design and Analysis*, Copenhagen, Denmark, 2014, pp V001T02A022; 5 pages.
- Mohammad Abu Mallouh, Brian Surgenor, **Mohammad Salah**, Eman Abdelhafez, Amer Hamdan, and Mohammad Hamdan, “Performance comparison of different power management control strategies for a hybrid fuel cell/battery vehicle,” in *Proceedings of the ASME 12th Biennial Conference on Engineering Systems Design and Analysis*, Copenhagen, Denmark, 2014, pp V001T02A021; 5 pages.
- Mohamed Youssef, Mohammad Abu Mallouh, **Mohammad Salah**, Mohammad Hamdan, Eman Abdelhafez, and Brian Surgenor, “A superior hybrid fuel cell vehicle solution for congested urban areas,” in *Proceedings of the IEEE 23rd International Symposium on Industrial Electronics*, Istanbul, Turkey, 2014, pp. 1600–1604.
- Ashraf Saleem, **Mohammad Salah**, Naseer Ahmad, and Vadim Silberschmidt, “Component based modeling of piezoelectric ultrasonic actuators for machining applications,” in *Proceedings of the International Symposium on Dynamic Deformation and Fracture of Advanced Materials - Journal of Physics: Conference Series*, vol. 451, no. 1, Loughborough, UK, 2013, pp. 1-8.
- **Mohammad Salah**, Mohammad Abu Mallouh, Eman Abdelhafez, and Mohammad Hamdan, “Artificial neural networks-based modeling for electrical actuated automotive cooling system,” in *Proceedings of the 9th International Symposium on Mechatronics and Applications*, Amman, Jordan, 2013, pp. 1-5.
- Ashraf Saleem, **Mohammad Salah**, Naseer Ahmad, and Vadim Silberschmidt, “Control of ultrasonic transducers for machining applications,” in *Proceedings of the 9th International Symposium on Mechatronics and Applications*, Amman, Jordan, 2013, pp. 1-5.
- **Mohammad Salah**, Sa'ed Abed, Ezya Khader, and Shatha Ahmad, “Four-dimensional entertainment machine,” in *Proceedings of the 9th International Symposium on Mechatronics and Applications*, Amman, Jordan, 2013, pp. 1-5.
- Tarek Tutunji, Ashraf Saleem, **Mohammad Salah**, Naseer Ahmad, “Identification of piezoelectric ultrasonic transducers for machining processes,” in *Proceedings of the 9th International Symposium on Mechatronics and Applications*, Amman, Jordan, 2013, pp. 1-5.
- Ahmad Al-Jarrah, **Mohammad Salah**, and Asma Al-Tamimi, “Variable Structure Control Schemes for hydraulic actuated automotive cooling systems,” in *Proceedings of the 9th International Symposium on Mechatronics and Applications*, Amman, Jordan, 2013, pp. 1-7.
- Asma Al-Tamimi, **Mohammad Salah**, and Ahmad Al-Jarrah, “Neural Network-based Optimal Control for Vehicular Thermal Management Systems,” *SAE paper 2011-01-2184*.
- **Mohammad Salah**, Alper Bayrak, and Enver Tatlicioglu, “Filter-based Control for Parallel Plate Micro Electrostatic Actuators,” in *Proceedings of the 2011 International Conference on Communications, Computing and Control Applications*, Le Royal Hammamet Hotel, Hammamet, Tunisia, 2011, pp. 1-6.
- Ahmad Al-Jarrah, **Mohammad Salah**, and Asma Al-Tamimi, “Fuzzy Logic Control Design for Advanced Vehicle Thermal Management System,” in *Proceedings of the 13th IASTED International Conference on Control and Applications*, Vancouver, BC, Canada, 2011, pp. 200-204.
- **Mohammad Salah**, Ahmad Al-Jarrah, and Enver Tatlicioglu, “Nonlinear Control Techniques for Parallel Plate Micro Electrostatic Actuators in the Presence of Parasitics and Parametric Uncertainties,” in *Proceedings of the 13th IASTED International Conference on Control and Applications*, Vancouver, BC, Canada, 2011, pp. 36-41.
- Alper Bayrak, **Mohammad Salah**, Nitendra Nath, and Enver Tatlicioglu, “Neural network-based nonlinear control design for twin rotor MIMO systems,” in *Proceedings of the International Symposium of Mechanism and Machine Science (ISMMS)*, Izmir, Turkey, 2010, pp. 172-178.
- Erhun Iyasere, Darren Dawson, John Wagner, **Mohammad Salah**, and Enver Tatlicioglu, “Nonlinear robust control to maximize energy capture in a variable speed wind turbine using an induction generator,” in *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics*, San Antonio, TX, 2009, pp. 4071-4076.
- Erhun Iyasere, **Mohammad Salah**, Darren Dawson, and John Wagner, “Nonlinear robust control to maximize energy capture in a variable speed wind turbine,” in *Proceedings of the American Control Conference*, Seattle, WA, 2008, pp. 1824-1829.
- **Mohammad Salah**, Michael McIntyre, Darren Dawson, and John Wagner, “Robust tracking control for a piezoelectric actuator,” in *Proceedings of the American Control Conference*, New York City, NY, 2007, pp. 106-111.
- **Mohammad Salah**, Michael McIntyre, Darren Dawson, and John Wagner, “Time-varying angular rate sensing of a z-axis gyroscope,” in *Proceedings of the 45th IEEE Conference on Decision and Control*, San Diego, CA, 2006, pp. 2165-2170.
- Jian Chen, Darren Dawson, **Mohammad Salah**, and Timothy Burg, “Multiple UAV navigation with finite sensing zone,” in *Proceedings of the American Control Conference*, Minneapolis, MN, 2006, pp. 4933-4938.

- Tom Mitchell, **Mohammad Salah**, John Wagner, and Darren Dawson, “Decision making for complex systems under uncertainty and risk: application to an engineering selection problem,” in *Proceedings of the 12th Annual ARC Conference*, Ann Arbor, MI, May 2006.
- Tom Mitchell, **Mohammad Salah**, John Wagner, and Darren Dawson, “Advanced thermal management system: design, control, and testing,” in *Proceedings of the 12th Annual ARC Conference*, Ann Arbor, MI, May 2006.
- **Mohammad Salah**, and Andrew Kun, “Transferring skills to a simulated robot,” in *Proceedings of the ANNIE International Conference on Smart Engineering System Design*, Saint Louis, MO, 2004, vol. 14, pp. 119-124.

Posters

- Mohammad Abu Mallouh, and **Mohammad Salah**, “Intelligent control systems for hybrid vehicles,” posters of *The International Conference and Exhibition on Green Energy and Sustainability for Arid Regions and Mediterranean Countries*, Le Royal Hotel, Amman, Jordan, Nov 2009.
- Suleiman Banihani, and **Mohammad Salah**, “Multi-objective fuzzy genetic optimal controller for advanced vehicle thermal-management systems,” posters of *The International Conference and Exhibition on Green Energy and Sustainability for Arid Regions and Mediterranean Countries*, Le Royal Hotel, Amman, Jordan, Nov 2009.

Reviewed Publications in

- Springer Books
- Automatica - A Journal of International Federation of Automatic Control
- ASME Journal of Dynamic Systems, Measurement, and Control
- Sensors and Actuators A: Physical
- IEEE/ASME Transactions on Mechatronics
- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Robotics
- IEEE Transactions on Automatic Control
- IEEE Transaction on Vehicular Technology
- IEEE Transactions on Industrial Electronics
- IET Control Theory and Applications
- Transactions on Mechatronics
- Transactions of the Institute of Measurement and Control
- International Journal of Control
- International Journal of Systems Science
- International Journal of Robotics Research
- International Journal of Robotics and Automation
- International Journal of Adaptive Control and Signal Processing
- International Journal of Green Energy
- Part C: Journal of Mechanical Engineering Science
- Journal of Optimal Control Applications and Methods
- Journal of Vibration and Control
- Journal of Intelligent and Fuzzy Systems
- Journal of Intelligent and Robotic Systems
- Journal of Intelligent Material Systems and Structures
- The Journal of the Franklin Institute
- Control Engineering Practice
- The European Journal of Control
- Jordan Journal of Mechanical and Industrial Engineering
- Mathematics of Control, Signals, and Systems
- Measurement and Control
- International Mechanical Engineering Congress and Exposition
- International Symposium on Mechatronics and its Applications
- IEEE Conference on Decision and Control
- IEEE Multi-conference on Systems and Control
- 3rd IFAC Symposium on Mechatronic Systems

Teaching Experience

The Hashemite University

- Technical Writing
- Control Systems I + its Laboratory
- Control Systems II
- Digital Control Systems
- Electrical Machines + its Laboratory
- Motor Drive Systems
- Transducers and Interfacing + its Laboratory
- Automation + its Laboratory
- Robotics + its Laboratory
- Design of Mechatronics Systems
- Digital Logic and Digital Electronics Laboratory

German-Jordanian University

- Electrical Machines (Fall 2008)

Applied Science Private University

- Advanced Engineering Mathematics II (Summer 2013)

University of Tabuk

- Automatic Control and Systems + its Laboratory
- Programmable Logic Controller + its Laboratory
- Industrial Automation + its Laboratory
- Electrical Drives
- Industrial Motor Control
- Mechatronics I + its Laboratory
- Power System Operation and Control
- Electrical Machines
- Special Types of Electric Machinery

Institutional Service

Dr. Mohammad Salah has participated in many institutional entities.

At the Hashemite University

- Chair of the Engineering Collage Budget Committee (2011 – 2014)
- Chair of the Engineering Collage Laboratory Equipment Committee (2013 – 2014)
- Member of the Engineering Collage Tenders Committee (2013)
- Member of Engineering Collage Graduate Studies Committee (2009 – 2011)
- Member of Engineering Collage Scientific Research Committee (2009 – 2011)
- Member of Engineering Collage Strategic Plan Committee (2009 – 2012)
- Member of Engineering Collage ABET Committee (2009 – 2011)
- Member of Engineering Collage Scientific Day Committee (2009 – 2014)
- Chair of Department ABET Committee (2008 – 2011)
- Chair of Department Computer and Electronic Learning Committee (2008 – 2012)
- Chair of Department Curriculum Committee (2009 – 2012)
- Chair of Department Library Committee (2008 – 2011)
- Chair of Department Qualification Exam Committee (2008)
- Supervisor for Department Practical Training (2008)
- Supervisor for many Department Graduation Projects (2007 – 2014, 2018 – present)
- Supervisor of Engineering Club in Engineering Collage (2012)
- Advisor of IEEE Robotics and Automation Student Chapter at the Hashemite University (2013 – 2014)

At the University of Tabuk

- Member of Department ABET Accreditation Committee (3/2016 – 8/2018)
- Member of Department Senior Design Projects Committee (9/2014 – 3/2016)
- Member of Department Academic Plan Committee (2/2015 – 8/2017)
- Supervisor for many Department Senior Design Projects (9/2014 – 8/2018)

Awards

- Fellowship, The Hashemite University, Jordan, to pursue graduate studies in the US, 1/2002 – 7/2007.
- Best Senior Project, Al Balqa' Applied University, Jordan, 2000.
- Scholarship in Mechatronics Engineering program, Al Balqa' Applied University, Jordan, academic year 1995/1996.

Professional Membership

- Jordanian Professional Engineering since 2017.
- Senior Member, Institute of Electrical and Electronic Engineers (IEEE) since 2014.
- Member, IEEE Robotics and Automation Society since 2012.
- Member, Institute of Electrical and Electronic Engineers (IEEE) since 2002.
- Member, Jordanian Engineers Association (JEA) since 2000.

Training and Workshops Taken

Workshops

- College of Engineering Professional Development for ABET Accreditation, *Faculty of Engineering at University of Tabuk*, twelve (12) hours, March 2016.
- Utilization of faculty members comprehensive evaluation in administrative decisions, *Measurement and Evaluation Unit at University of Tabuk*, two (2) hours, June 2015.
- Creating and maintaining courses exams using X-Pro Mileston software tool, *Measurement and Evaluation Unit at University of Tabuk*, three (3) hours, March 2015.
- Measurement and evaluation at universities between theory and practice, *University of Tabuk*, nine (9) hours, March 2015.
- Faculty Member's performance evaluation, *Prince Sultan Cultural Center at University of Tabuk*, eight (6) hours, Dec 2014.
- Peer learning workshop on service learning in higher education: concepts and application, *Service Learning Center at the Hashemite University*, six (6) hours, Dec 2011.
- Solving problems and making decisions, financial analysis, customer services, human resources management, non-verbal communications, oral communications, cost accounting, crises leadership, negotiation skills, change management skills, work management system, feasibility studies, business planning process, outdoor leadership and teambuilding, marketing, total quality management, organization and organizational development, gender, meet management, persuasion skills, e-commerce, ISO 9000, and website development, *Jordan-United States Business Partnership (JUSBP)*, three hundreds and eighty four (384) hours, 2001.

Training

- Analysis of course scores using SPSS, *Measurement and Evaluation Unit at University of Tabuk*, eight (8) hours, Dec 2014.
- Self study reporting (SSR), *Training Center at University of Tabuk*, four (4) hours, Dec 2014.
- Learning management system, virtual class room capturing tools, and authoring tools, *e-Learning Center at the Hashemite University*, thirty (30) hours, Jan 2009.
- Education technology and academic assessment, *Center of Academic Quality Assurance at the Hashemite University*, ten (10) hours, Nov 2007.
- PLCs (Advanced Level), *Engineering Training Center at JEA*, sixteen (16) hours, Jan 2001
- Technical writing, *Engineering Training Center at JEA*, twenty (20) hours, Oct 2000
- PC control using Delphi language, *Computer aided Manufacturing Company*, thirty (30) hours, Jun 1999
- PLCs (Beginners Level), *Engineering Development Center*, twenty (20) hours, Jul 1998
- Electrical panel design, installation, and troubleshooting, *Engineering Development Center*, thirty (30) hours, Jun 1998
- Maintenance of television and video cassette recorder, *Ibn Al-Ameed Center*, sixty four (64) hours, Nov 1996
- Maintenance of radio and audio cassette recorder, *Ibn Al-Ameed Center*, ninety six (96) hours, July 1996

Training Courses Given

- PLC and SCADA for Automation and Process Control, *organized by SOS Center at Millennium Plaza Hotel*, Dubai, UAE, Eighteen (18) hours, February 2018.
- Practical Troubleshooting for Electrical Equipment and Control Circuits, *organized by WideView at Raffles Hotel*, Dubai, UAE, Eighteen (18) hours, April 2015.
- PLC and SCADA for Automation and Process Control, *organized by SOS Center at Millennium Plaza Hotel*, Dubai, UAE, Eighteen (18) hours, February 2014.
- PLC and SCADA for Automation and Process Control, *organized by SOS Center at Millennium Plaza Hotel*, Dubai, UAE, Eighteen (18) hours, May 2013.
- PLC and SCADA for Automation and Process Control, *organized by SOS Center at Monarch Hotel*, Dubai, UAE, Eighteen (18) hours, March 2012.
- Programmable Logic Controllers and SCADA Systems, *organized by SimTech Center at Al-Quds Hotel*, Amman, Jordan, Sixteen (16) hours, October 2008.