



Curriculum Vitae

Dr. Ahmad Saleh Abuhussein

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Zarqa University - Faculty of Engineering Technology

Mechanical Engineering Department

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PERSONAL DATA

Nationality: Jordanian

Languages: Arabic, English & Italian

Academic Rank: Associate Professor in Mechanical Engineering since 10/11/2009

EDUCATION

- **PhD in Mechanical Engineering (Energy):**
 - From Polytechnic Institute of Milan (Politecnico di Milano), Italy
 - Year: 1997
 - Thesis Title: Utilization of solar energy for cold production in Jordan

- **BSc in Mechanical Engineering from:**
 - University of Genoa (Universita di Genova), Italy
 - Year: 1986
 - Graduation: Excellent 103/110
 - Thesis Title: High Velocity Air Conditioning Systems

EXPERIENCE

- **From Aug 2019 – Now**
 - Dean of the Faculty of Engineering Technology at Zarqa University
- **From Sep 2018 – Now**
 - Faculty member at Zarqa University and Lecturer for many courses
 - Head of Mechanical Engineering Department: Sep 2019 – Now
- **From Aug 2012 – Aug 2018**
 - Faculty member at Jouf University and Lecturer for many courses
- **From Sep 2011 – Aug 2012**
 - Supervisor of Mechanical Engineering Department and Faculty member in Salman Bin Abdulaziz University
- **From Oct 2000 – Aug 2011**
 - Faculty member in Philadelphia University and Lecturer for many courses
 - Head of Mechanical and Mechatronics Engineering Department: Sep 2001–Aug 2002
 - Head of Mechanical Engineering Department: Sep 2005 – Aug 2007
 - Head of Mechatronics Engineering Department: Sep 2008 – Aug 2010
 - Head of Mechanical Engineering Department: Sep 2010 – Aug 2011
- **From Dec 1999 - Jul 2000**
 - Tutor for undergraduate students at Milan (Italy)
- **From Aug 1999 - Nov 1999**
 - Joined UNRWA as a Dean of Wadi El-Sair College

- **From Oct 1998 - Jan 1999**
- Lecturer in Mechanical Engineering Department of Philadelphia University (Part Time).
- **From Feb 1993 - Jul 1997**
- PhD graduate student in Mechanical Energy at Milan Polytechnic University
- **From Feb 1992 – Jan 1994**
- Tutor with an Italian technical institute at Milan – Italy: Labor Institute
- **From Jan 1990 – Oct 1991**
- Joined Jordan Ceramic Industries and Zarqa Municipality as Supervisor of mechanical engineering works
- **From Sep 1987 – Nov 1989**
- Joined Electromechanical Company (EMI), Engineering Services Department (First Class Construction Company)
- **From Jan 1987 – Sep 1987**
- Joined Bright Star Company (Second Class Construction Company)
- **From Jan 1978 – Dec 1986**
- Mechanical Engineering student at University of Studies in Genoa (Italy)

TEACHING EXPERIENCE

Lecturer for the following courses

Power courses

- Design of Thermal Systems
- Power Plants and desalination
- Thermal Power Plants
- Thermodynamics I
- Thermodynamics II
- Heat transfer
- Internal Combustion Engines
- Air Conditioning I
- Air Conditioning II
- Fuels and Combustion
- Solar Energy
- Fluid mechanics
- Fluid Power
- Geothermal Power Plants

Applied Mechanics courses

- Automatic Control
- Statics
- Dynamics
- Machine design I
- Machine design II
- Engineering drawing

General courses

- Numerical methods
- Statistics and Probability
- Engineering Mathematics I
- Engineering Mathematics II
- Differential Equations
- Special Topics in Mechanical Engineering
- Project Management
- Engineering economy
- Automobile Essentials
- Facility Planning

RESEARCH INTEREST

- Thermal power: Renewable Energy, Heat transfer, and Refrigeration and Air Conditioning
- Automatic Control

PUBLICATIONS

1. A. Saleh and M. A. Al-Nimr, "A Modified Air Jet Refrigeration System", *Int. J. Heat Technol.*, 2006, 25(2), 23-27, ISSN: 0392-8764.
2. A. Saleh and A. Badran, "A Solar Still Augmented with a Flat-plate Collector and a Reflector", *Proceedings of GCREADER*, 2006, 120-128, Amman.
3. A. Saleh and A. Badran, "Solar Cooker Utilizing Satellite Dish Technology", *Proceedings of GCREADER*, 2006, 615-620, Amman.
4. A. Saleh and M. A. Al-Nimr, "Evaporative System for Water and Beverage Refrigeration in Hot Countries", *Journal of Power and Energy – Part A*, 2007, 221 No A8, 1099-1105, ISSN: 0957-6509.
5. A. Saleh and M. A. Al-Nimr, "Variational Formulation of Hyperbolic Heat Conduction Problems Applying Laplace Transform Technique", *International Communications in Heat and Mass Transfer*, 2008, 35 (2), 204-214. ISSN: 0735-1933.
6. A. Saleh and M. A. Al-Nimr, "The Effectiveness of Multi-Stage Dehumidification-humidification for Improving the Cooling Ability of Evaporative Air Conditioning", *Proc. IMechE, Part A: J. Power and Energy*, 2009, 223(A1), 11-20, ISSN: 0957-6509.
7. A. Saleh and I. Badran, "Modeling and Experimental Studies on a Domestic Solar Dryer", *Renewable Energy*, 34 (2009) 2239–2245.
8. MH Dado, A Saleh, THE 7th JORDANIAN INTERNATIONAL MECHANICAL ENGINEERING CONFERENCE: GUIDE FOR PREPARATION OF MANUSCRIPTS
9. A. Saleh, J. A. Qudeiri and M. A. Al-Nimr, Performance investigation of a salt gradient solar pond coupled with desalination facility near the Dead Sea, *Energy*, 36 (2011) 922-931.
10. A. Saleh, M. Mosa, Optimization study of a single-effect water–lithium bromide absorption refrigeration system powered by flat-plate collector in hot regions, *Energy Conversion and Management*, 87(2014) 29-36.
11. A. Saleh, M. Mosa, Analysis of control strategies and Simulation of heating Systems using Simulink/Matlab Potential, CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2015 (ICAME15), 13-15/5/2015.
12. A. Saleh, M. Mosa, Analysis of control strategies and Simulation of heating Systems using Simulink/Matlab Potential, *Journal of Thermal Engineering*, Vol. 2, No. 5, pp. 921-927, October, 2016
13. M. Mosa, A. Saleh "Variations of Air and Water Temperatures Across and Along the Pads of Direct Evaporative Coolers and Their Effect on the Performance", *SSRG International Journal of Thermal Engineering (SSRG - IJTE)*, V2(6),1-8 November to December 2016. ISSN:2395 – 0250
14. A. Qandil, S. Alyounis, A. Saleh, M. Hasson, Experimental Study of the performance of a Box Solar Cooker, *International Journal of Scientific & Engineering Research* Volume 9, Issue 4, April-2018, ISSN 2229-5518
15. Jaber E. Abu Qudeiri, Ahmad Saleh , Aiman Ziout, Abdel-Hamid I. Mourad, Mustufa Haider Abidi , Ahmed Elkaseer, *Advanced Electric Discharge Machining of Stainless Steels: Assessment of the State of the Art, Gaps and Future Prospect*, *Materials* 2019,12(907).
16. A. Saleh and M. A. Al-Nimr, "A novel vacuum wastewater treatment plant integrated with a solar absorption system", *Int J Energy Res.* 2020;44:1685–1697, DOI: 10.1002/er.4984.

PAPERS UNDER PREPARATION

1. Experimental performance of Geothermal Heat Pump in heating application
2. Experimental performance of Geothermal Heat Pump in cooling application
3. Heat Recovery Systems in Air conditioning Applications

CONFERENCES, SYMPOSIUMS, SEMINARS & WORKSHOPS

- Supervising the organization of a seminar to promote the culture of innovation in the Faculty of Engineering at Jouf University, 2016.
- Participation with a research paper in the conference ' CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2015 (ICAME15)', 13-15/5/2015
- Participation in the "The First Symposium On Teaching Basic Science (STBS)" organized by Salman Bin Abdulaziz University at 06/03/2012
- Participation in the workshop organized by British Council and NCAAAA at 15/11/2011 entitled "Programme and Course learning Outcomes Bases on NQF for Medical, Science, Eng. and Humanities"
- General chair of The Seventh Jordanian International Mechanical Engineering Conference JIMEC7: 9/2009 – 9/2010
- Member of Organizing and Reception Committees of the conference GCREADER 2009
- Participation in the First Middle East Organizational Maturity Conference organized by Organizational maturity at 24/11/2008
- Participation in the workshop organized by Higher Council for Science and Technology (HCST) at 25/10/2008 entitled "Building Envelop Energy Efficiency Technology Cooperation"
- Organizing a scientific day in Mechanical Engineering Department (Philadelphia University) in collaboration with Arab Group Company about "Solar collectors" and "Under floor heating", 11/8/2008
- Participation in the workshop organized by Higher Council for Science and Technology (HCST) at 18/6/2008 entitled "Thematic Foresight on Solar Energy in Jordan"
- Member of Organizing Committee and Treasurer of the conference JIMEC'6, 2008
- Participation in the 13th scientific week organized by Higher Council for Science and Technology (HCST), 11/2007
- Participation in the 24th Engineering Conference organized by Federation of Arab Engineers and JEA, 14-16/5/2007
- Participation in the scientific day organized by JEA about solar energy at 20/2/2007 with a paper entitled "Solar Cooling"
- Participation in the monthly Seminars "Building Energy Saving" organized by Energy Saving and Nature Sustainability Society
- Member of Organizing and scientific Committees of the conference GCREADER 2006

TRAINING ACTIVITY

- Provide training courses during each semester for the students of Automatic Control course in the Department of Mechanical Engineering at Jouf University from 1437 until 1439

- " Participation in the training course " Generic Course Design" delivered by University of Strathclyde (UK), organized by Jouf University during the period 7-10/12/2015
- Participation in the training course "Programme of Staff Development" delivered by University of Strathclyde (UK), organized by Jouf University during the period 8-11/12/2014
- Participation in the course "Testing systems and evaluate the students' organized by Jouf University on 12/30/2013
- Attending the training program "Developing Research Abilities: Idea Formulation and Research Management" organized by King Abdulaziz City for Science and Technology General Directorate of Research Grants held at Aljouf University on 10 October 2012.
- Participation in the two workshops organized by Salman Bin Abdulaziz University at 03 - 04/11/2011 entitled "Programs and Courses Specifications Reports" and "Programme Self-study"
- Participation in the training course 'Introduction to renewable energy technologies' organized by InWent group from Germany and Al-Balqa' Applied University: 2-6 /12/2010
- Participation in the course: Skills in the use of smart board, organized by Jouf University.
- Basic training in modeling of building window door system organized by HCST, 26-27/10/2008
- ICDL course at Philadelphia University: 2006
- MATLAB training course at Philadelphia University: 2006
- MECHANICAL DESKTOP training course at Philadelphia University: 2006
- Design of solar collectors course organized by National Energy Research Center, 30/6-3/7/2005
- FLUENT introductory Course with GAMBIT, Philadelphia University, 4-7/9/2004

CULTURAL, INTELLECTUAL AND ACADEMIC ACTIVITIES

- Membership of the Scientific Committee at college level at Zarqa University during the academic year 2019/2010
- Membership of the ABET Committee at college level at Zarqa University during the academic year 2019/2010
- Membership of the Scientific Research Committee at Jouf University level since 3/2018
- Participate in the preparation of a new study plan for the Department of Mechanical Engineering at Jouf University during the academic year 2017/2018
- Membership of the Program Specification Committee for the Department of Mechanical Engineering at Jouf University during the academic year 2017/2018
- Participate in the preparation of academic accreditation documents for the Faculty of Engineering at Jouf University during the academic year 2017/2018
- Chairman of the Committee of innovations and inventions in the Faculty of Engineering at Jouf University for the academic year 2016/2017
- Chairman of the Graduate Students Committee at the Faculty of Engineering at Jouf University for the academic year 2017/2018
- Membership of the Committee of bioethics at Jouf University for the academic year 1437/1438
- Membership of the Committee for Specification of Laboratory Equipment in the Department of Mechanical Engineering at Jouf University for the academic year 1437/1438
- Supervising a number of innovative projects at the Faculty of Engineering at Jouf University

- Supervisor of the Development and Quality Unit in The College of Engineering in Salman Bin Abdulaziz University from 05/04/2012 until the end of the academic year.
- Design and building of prototypes of many graduation project systems at Philadelphia University: biodiesel processor, solar distillation stills, satellite dish solar cooker, box solar cookers, evaporative refrigerator, solar dryer.
- One founder of Mechatronics Engineering Department at Philadelphia University
- Dean of Wadi Al-Sir College (UNRWA), 8/1999-11/1999
- Reviewer for many international conferences such as GCREADER 2006, JIMEC'6, and GCREADER 2009 and for Energy Conversion and Management Journal.
- Reviewer for the national award of best book (Philadelphia University)
- Reviewer for Abdul-Hameed Shoman Award for Young Arab Researchers
- Reviewer for the national award of best invention (Philadelphia University)
- Reviewer of many Master thesis
- Reviewer for many projects presented to the incubators of the Jordan Innovation Center (Philadelphia University)
- Chairman of student regulation committee for four academic years at Engineering Faculty (Philadelphia university)
- Chairman of student training committee at Engineering Faculty (Philadelphia university): 9/2009 – 9/2010
- Member of many committees at Engineering Faculty (Philadelphia University) such as scientific committee, study plan committee, quality assurance committee, and best invention committee
- Supervision of maintenance program for laboratory equipment in Mechanical Engineering department (Philadelphia University)
- Coordinator between Philadelphia University and JEA: 2008 – 9/2011
- Member of Faculty Council, 2005-9/2011
- Member of JEA since 1987
- Coordinator for Exam of Achievement in Mechanical Engineering department (Philadelphia University)
- Member of the JEA council (Zarqa branch), 1990-1992

AWARDS & MERITS

- Award of Excellence and Quality of Publishing for the year 1435/1436, (The presented research has the highest Impact factor at the university level)
- Awarded as Outstanding reviewer as being within the top 10th percentile of reviewers for the Journal Energy Conversion and Management, June 2015.
- Awarded as Recognized reviewer by the Journal Energy Conversion and Management, April 2015.
- Certificate of appreciation and emblem for the presidency of JIMEC'7 (Seventh Jordanian International Conference of Mechanical Engineering)
- Certificate of appreciation and emblem for the participation in the organization of JIMEC'6
- Certificate of appreciation for membership at council of Zarqqa branch of JEA
- Certificate of appreciation for the participation of the scientific day of solar energy organized by JEA

PROFESSIONAL AFFILIATION

- One founder and member of 'Global Network for Renewable Energy Approaches in Desert Regions – GNREADER' since 2006
- Member of ASME
- Member of JEA since 1987
- Member in ResearchGate networking

- **LinkedIn Corporation**