

CURRICULUM VITAE
MOHAMAD I. AL-WIDYAN

Currently: President of Amman Arab University and
Prof. of Mechanical Engineering - Jordan University of Science and Technology
Irbid 22110, JORDAN

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EDUCATION

- Ph.D.**, Mech. Power & Machinery Engineering (Energy Focus) **1997**
College of Engineering
University of Florida, Gainesville, FL (USA)
- M.S.**, Mech. Power & Machinery Engineering (Energy Focus) **1993**
College of Engineering
Kansas State University, Manhattan, KS (USA)
- B.S.** Mechanical Engineering- Thermal **1985**
Faculty of Engineering
Yarmouk University, Irbid, Jordan
- Exec. Certificate in General Management** **2021**
Harvard Business School
Harvard University, Cambridge/Boston, USA

WORK EXPERIENCE

- **President, Amman Arab University**, Amman, Jordan 10/2020-present
- **Chair, Board of Directors** 06/2022 - present
Arab Council for Sustainable Development
Association of Arab Universities
- **Dean, Scientific Research**, JUST, Jordan 09/19-10/2020
- **Director, Academic Development and QA Center** 09/2014-09/2020
Jordan Univ. of Sci. & Tech. (JUST), Jordan
- **Chair, Department of Biosystems Engineering** 2002-2004
College of Engineering, JUST, Jordan
- **Deputy Director, Consultative and Training Center** 2005-2007
 - Director of Linking with Industry Department
 - Director of Continuing Education DepartmentJUST, Irbid 22110, Jordan

- **Dept. Head and Program Chair (Founding)** 9/2011-9/2014
Mech. Engg. Dept., King Faisal University, Saudi Arabia
- **Faculty Advisor**
Association of Energy Engineers (AEE-USA) Student Club
JUST, Irbid 22110, Jordan
- **Certified Assessor**, King Abdulla II Center for Excellence 11/2018-present
- **Member, Board of Trustees** 01/2019-2023
Arab Commission for Accreditation in Engineering & Tech.
Federation of Engineers, Cairo, Egypt
- **Member, Board of Trustees** 12/2017-present
Amman Arab University, Jordan
- **Member, Board of Trustees** 05/2017-05/2019
Alquds (Luminous) College, Amman, Jordan
- **Member, Board of Trustees**
College of the Royal Jordanian Geographic Center Amman, Jordan 2/2016-9/2019
- **Member, Advisory Board** 10/2017-9/2019
Al-Hijawi College of Engg., Yarmouk Univ., Irbid, Jordan
- **Member, Scientific Council** 3/2020-9/2021
Yarmouk University, Irbid, Jordan
- **Member, Adv. Board of Queen Rania Center** 1/2020-9/2021
Yarmouk University, Irbid, Jordan
- **Member, Editorial Board** 01/2019-2022
Jordan Journal of Mech. & Ind. Engineering
Hashemite University, Zarka, Jordan
- **Member, National Technical Committee Faculty-for-Factory** 2008/2009
USAID-funded National Program, Jordan
- **Faculty Member (Asst./Assoc./Full Prof.)** 9/1997-present
ME Dept., JUST

ACADEMIC SERVICES AND CONTRIBUTIONS

Chair/Member, Various committees at JUST (Strategic Planning; Study Plans; Excellence; ISO 9001; E-Learning; Admin. Development; Quality; ...etc)

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| Editor-in-Chief , JUST Newsletter JUST, Irbid, Jordan | 9/2014-9/2016 |
| Member , KFU Strategic Plan Committee King Faisal Univ. (KFU), Saudi Arabia | 3/2014-9/2014 |
| Jordan Military : Maintenance Engineer | 1987-1989 |
| Teaching Assistant : Mech. Engrg. Dept. Amman Polytechnic (Community College) | 1985-1987 |

QUALITY-RELATED CONTRIBUTIONS

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| Member, Yemeni University Ranking Experts Team Created a National Yemeni University Ranking System Republic of Yemen | 07/2018 |
| Chair , Quality Certificate Application Eval'n. Committee Middle East University, Amman, Jordan | 4/2018-present |
| JUST Representative (Speaker) WorldClass Conference on World University Rankings | 2015-2019 |
| Chair , National Committee for General Program Quality Criteria | 9/2017- present |
| Chair , National Competency Exam Committee Engineering Family | 8/2017-12/2017 |
| Chair , Quality Committees for HTU, and Albalqa'a U. | 8/2017-1/2017 |
| Member , Jordanian <i>University Ranking System</i> Committee HEAC, Amman, Jordan | |
| Chair , Jordanian <i>Program Ranking System</i> Committee HEAC, Amman, Jordan | |
| Member , Committee for <i>ASU Quality Application</i> Evaluation | 6/2017-10/2017 |
| Member of ISO 9001:2008(2015) Steering Committee JUST, Irbid Jordan | 09/2014-09/2016 |
| Coordinator , ABET Committee Mech. Engr. Dept., JUST | 9/2014-present |
| Chair of College Quality Committee College of Engineering, KFU, <i>Saud Arabia</i> | 9/2009-8/2014 |

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| Member , HEAC National Committee QA Standards for Engineering Programs | 2015 |
| Selected Trainee The HEAC, British Council, and UK QAA-Organized a 5-day Workshop on Preparing Nationally Certified Academic Reviewers, Amman, Jordan | 03/2015 |

AWARDS AND SCHOLARSHIPS

1. The Jordan Ministry of Education **Scholarship for the B.S. Degree**, Yarmouk University, 1980-1984.
2. Jordan University of Science and Technology **Scholarship for Grad Studies**, 1991-96.
3. Kansas State University **RA Scholarship**, 1991-1993.
4. The University of Florida **RA Scholarship**, 1993-1997.
5. **USAID TATWEER** Certificate of Appreciation for the Valuable Contribution to the Faculty-for-Factory National Program, Amman, 2007.
6. **SAUDI ENGINEERS COUNCIL** Certificate of Appreciation for Distinction in Engineering Professional Contribution. Al-Ahsa, July, 2013, KSA.
7. **BEST TRANSLATED BOOK AWARD** (Year 2014) Philadelphia University National Award (Jordan)
8. Supervisor of the best MS thesis in MDRIC competition in the theme of *energy-water nexus*.

SCIENTIFIC MEETINGS AND CONFERENCES

- The **IASTED Conference** – Renewable Energy and Power Systems – Crete, Greece, Summer, 2002.
- Attended a Workshop on **Renewable Energy Technology and Energy Efficiency** funded by the **US Department of State, AUB, Beirut, Lebanon**, April, 2004.
- Group Leaders Workshop on **Renewable Energy Technology and Energy Efficiency** funded by the US Department of State, **AUB, Beirut, Lebanon**, Jan. 24-25, 2005 (*Attended as leader of Group III*).
- The **IASTED Conference** – Renewable Energy and Power Systems – Krabi, Thailand, April 2005.

- Attended a training Workshop on **Small-Scale Biogas and Geothermal Technology**. The Biogas Research and Training Center, **BRTC, Chengdu, Sichuan Province, China**, November, 2005.
- **Invited Speaker** at the NATO-Funded Advanced Workshop "Enhancing Security in the Middle East by Cooperation in *Renewable Energy*." London School of Economics, London, UK. Jan. 16-18, 2008.
- Many energy- and academic quality-related workshops and events. Saudi Arabia, 2010-2014.
- QS Conferences on World University Rankings, 2015-2019.
- The HEAC, British Council, and UK QAA-Organized 5-day Workshop on Preparing Nationally Certified Academic Reviewers. March 2015, Amman, Jordan
- Attended the Entrepreneurial University Seminar. Sept., 2015, British Council, Amman, Jordan.
- The "European Commission TAIEX **Expert Mission on Geothermal Heating and Cooling**." Higher Council for Science and Technology, 24-26 July, 2017. Amman, Jordan.
- "**Smart Control Systems for Energy Management: New Master Degree [SEM-SEM]: 561703-EPP-1-2015-1-UK-EPPKA2-CBHE-JP.**" This project is funded by the European Union under the ERASMUS +. Lisbon, Portugal, April 24-29, 2017.
- Times Higher Education International University Ranking Summit, Khalifa University Abu Dhabi, May 2019.
- National Representative of the Jordan Engineers Association to the First Meeting of the Arab Commission of QA and Accreditation of Engineering Education, Beirut, Lebanon, July 2019.
- National Representative of the Jordan Engineers Association to the Second Meeting of the Arab Commission of QA and accreditation of Engineering Education, Cairo, Egypt, 8/2019.

WORKSHOPS

ATTENDED WORKSHOPS - SELECTED

- Attended JICA Workshop on Jordanian Industry and Education Sector-University of Jordan, Amman, Sept., 2005.
- Appointed by JUST president as member of the "**Master's Program Committee in Energy Technology**." Mech. Engineering Dept., JUST, Sep., 005-2007.

- Attended a workshop on "**Modern University Instructional Methods-Electronic Learning.**" The Academic Development Center, Jordan Univ. of Science and Technology. November 4 -5, 2007.
- Attended a Workshop on *Strategic Planning in Academic Institutions.* April 18-20, 2009. Al-Hasa Intercontinental, Al-Hofuf, Eastern Province, KSA.
- Attended a Workshop on *Development of Skills for Academic Leaders: Strategic Planning, Academic Accreditation, and Management of Change.* May 9-13, 2009. Al-Hasa Intercontinental, Al-Hofuf, Eastern Province, KSA.
- Attended "**Smart Control Systems for Energy Management: New Master Degree [SEM-SEM]: 561703-EPP-1-2015-1-UK-EPPKA2-CBHE-JP.**" This project is funded by the European Union under the ERASMUS +. Lisbon, Portugal, April 24-29, 2017.

DELIVERED WORKSHOPS

- Conducted a training workshop on *Training Needs Assessment and Planning.* Consultative Center for Science and Technology, JUST, and Irbid Chamber of Commerce, Irbid, Jordan. March, 2006.
- Conducted a Workshop on *Training of Trainers.* January 13-18, 2007. Abu Dhabi, UAE.
- Conducted a Workshop on *Training of Trainers* for Abu Dhabi Air Force Staff, Abu Dhabi, March 13-18, 2007. Abu Dhabi, UAE.
- Conducted a Workshop on *Maintenance Management* for Abu Dhabi Air Force Staff. June 9-13, 2007. Abu Dhabi, UAE.
- Conducted a Workshop (Training Course) on *Heat Exchangers: Operation, Maintenance, and Troubleshooting.* April 25-28, 2009. SABIC HQ, Riyadh, KSA.
- Conducted a Workshop (Training Course) on *Heat Exchangers: Operation, Maintenance, and Troubleshooting.* July 04-07, 2009. SABIC HQ, Riyadh, KSA.
- Conducted a Workshop (Training Course) on *Heat Exchangers: Operation, Maintenance, and Troubleshooting.* Jan., 2010. SABIC HQ, Riyadh, KSA.
- Conducted a Workshop (Training Course) on *Boilers: Operation, Maintenance, and Troubleshooting.* Jun., 2010. SABIC HQ, Riyadh, KSA.
- Conducted a Workshop (Training Course) on *Hydraulic and Pneumatic Systems: Operation, Maintenance, and Troubleshooting.* Dec. 10-14, 2011. SABIC, Al-Khubar (Holiday Inn), KSA.

- Conducted a Workshop (Training Course) on *Heat Exchangers: Operation, Maintenance, and Troubleshooting*. April 01-03, 2012. Oman-India Petrochemical Co., Sur, Oman.
- Conducted a Workshop (Training Course) on *Rotating Equipment: Pumps and Compressors: Operation, Maintenance, and Troubleshooting*. SABIC, May 27-30, 2012, Al-Khubar, KSA.
- Conducted a Workshop (Training Course) on *Process Plant: Startup, Commissioning and Troubleshooting*. SABIC, Nov. 24-28, 2012, Al-Khubar (Holiday Inn), KSA.
- Conducted a Workshop (Training Course) on *Mechanical Integrity and Safety*. Dubai, UAE, Oct. 22-24, 2013, Dubai Elect. and Water Authority.
- Conducted a Workshop (Training Course) on *Machinery Vibration & Condition Monitoring (ADNOC)*. Abu Dhabi, UAE, Jan. 12-16, 2014.
- Conducted a **3-day Workshop on “Energy Audits”** for Izzat Marji Group (A leading energy company). Amman, Jordan, May 2015.
- Conducted a Workshop on **ABET Accreditation**. Organized by HEAC on the PSUT Campus, May 31st 2015, Amman. Deans and Dean Assistants in Jordanian Universities.
- Conducted a Workshop on **ABET Accreditation** (Philadelphia University, March 2016; Hashemite University, Summer, 2016; Al-Hijjawi College of Engineering, Yarmouk University, Oct. 2017; Jadara University, March, 2020).

ACTIVITIES

RESEARCH GRANTS

- Using energy dispersive x-ray fluorescence (EDXRF) for analysis and evaluation of the composition of thin film solar cells. A \$100,000+ grant from the National Res Fund. 09/2020 (ongoing)
- The team member of Phase I (\$100, 000.00) of the National Biogas UNDP-funded Project-The JUST Component, Jan., 2004 to Jan. 2006. (The team was the Coordinator and one member only).
- Team member of Phase II (\$100, 000.00) of the National Biogas UNDP-funded Project-The JUST Component, Dec., 2006 to Dec., 2008. (The team consists of the Coordinator and one member only).
- A € 25, 000.00 DAAD (The German Agency for International Academic Cooperation) - funded Technical Collaboration with and Visit to the Companies and Labs of Renewable (Geothermal) Energy (Prof. Markus Brautach) Univ of Applied Sciences at Amberg, Germany, September 2004.
- PI: Improving the mechanical design of long vehicles chassis for a small size local enterprise. Funded by Jordan Higher Council for Sci & Tech (JD 5,000.00 = US\$7500.00)

- The PI of work for exploring heat recovery from combined geothermal and olive cake composting in a closed fermenter under controlled conditions. A study funded by Tatweer (JD 3,500.00 = \$5000.00).
- Tatweer is a USAID-funded project aimed at developing Jordanian small- and medium-sized enterprises (SMEs) – completed-.

Professional Activities and Consultations

- Member of the **JUST Energy Center** delegate in the visit to the **Swedish Institute of Technology (KTH), Stockholm, Sweden**, Feb. 4 to Feb. 10, 2006. Part of a **EU TEMPUS-funded** project.
- The co-author of a funded project from the Jordan Higher Council of Science and Technology for designing and installing a combined system of a ground well, a partially buried olive cake covered tank, and an olive cake compost pile embedded with a heat exchanger for the production of hot water for olivemill use – completed-.
- Member of the **National Technical Committee** for evaluating the proposals submitted to the 6th (2008) Cycle of the FFF National Program (June, 2008-2009).
- Invited scholar to an EU-funded training program on “**Renewable and Geothermal Energy Management**,” Lisbon, Portugal. April, 2017.
- HEBA Steering Committee project meeting organized by the University of Cyprus in the framework of EU-funded project HEBA in Nicosia, Cyprus, between 19/09/2019 - 20/09/2019.

Publications – Selected

1. Abu-Qudais, M. and **M.I. Al-Widyan**. 2002. Performance and emissions characteristics of a diesel engine operating on shale oil. *Energy Conversion and Management*, V 43: 673-682.
2. **Al-Widyan, M.I.** and Al-Jalil, H.F. 2002. Stress-density relationship and energy requirement of compressed olive cake. *Applied Engineering in Agriculture*, V 17(6): 749-753.
3. **Al-Widyan, M.I.**, G. Tashtoush, and M. Abu-Qudais. 2002. Utilization of ethyl ester of waste vegetable oils as fuel in Diesel engines. *Fuel Processing Technology*, V 76: 91-103.
4. **Al-Widyan, M.I.**, G. Tashtoush, and A.I. Khedair. 2002. Briquettes of olive cake as a potential source of thermal energy. *Journal of Solid Waste Technology and Management*, 28(2): 51-59.
5. **Al-Widyan, M.I.**, H.F. Al-Jalil, M. Abu-Zreig, and N.H. Abu-Hamdeh. 2002. Physical durability and stability of olive cake briquettes. *Journal of the Canadian Biosystems Engineers*, V. 44: 3.41-3.45.

6. **Al-Widyan, M.I.**, A.O. Al-Shyoukh. 2002. Experimental evaluation of the esterification of waste palm oil into biodiesel. *Bioresource Technology*, V 85: 253-256.
7. Tashtoush, G. and **Al-Widyan, M.I.** 2003. Combustion performance and emissions of ethyl ester of waste vegetable oil in a water-cooled furnace. *Applied Thermal Engineering*, V23(3): 285-293.
8. Tashtoush, G., M. I. Al-Widyan, and M. Al-Jarrah. 2004. Experimental study on evaluation and optimization of conversion of waste animal fat into biodiesel. *Energy Conversion and Management*, V45:697-2711.
9. Abdalla, F., **M. Al-Widyan**, et al. 2004. Status of Jordan Energy Sector: Problems, Needs and Challenges. A paper presented at the Workshop on Renewable Energy Technology and Energy Efficiency funded by the US Department of State, AUB, Beirut, Lebanon.
10. **Al-Widyan, M.I.**, G. Tashtoush, and A.M. Hamasha. 2006. Combustion and Emissions of Pulverized Olive Cake in a Tube Furnace. *Energy Conversion and Management*, V 47(11&12):1588-1590.
11. Tashtoush, G., **M.I. Al-Widyan**, and A. Albatayneh. 2007. Factorial analysis of diesel engine performance using different types of biofuels. *Journal of Environmental Management*, V 84 (4): 401- 411.
12. Al-Mahasneh Majdi, **Al-Widyan, M.I.**, Ababneh, H., Rababah, T., and Eriefej, K. 2008. Grain dust as an energy and food resource. *Natural Resources Research*, V17 (1): 13-20.
13. AlEssa, A, and **Al-Widyan, M.I.** 2008. Enhancement of natural convection heat transfer from a fin by triangular perforation of bases parallel and toward its tip. *Applied Mathematics and Mechanics* V 29(8):1033-1044.
14. **Al-Widyan, M.I.**, Al-Mahasneh, M., Ababneh, H. 2008. Heat recovery opportunities from a grain dust composting pile. *Journal of Solid Waste Technology and Management*, V34(3): 140-148.
15. **Al-Widyan, M.I.**, and Al-Muhtaseb, M. 2010. Experimental investigation of Jojoba as a renewable energy source. *Energy Conversion and Management*, 51: 1702–1707.
16. Abu-Ashour, J., Abu Qdais, H., and **Al-Widyan, M.I.** 2010. Estimation of animal and olive solid wastes in Jordan and their potential as a supplementary energy source: An overview. *Renewable and Sustainable Energy Reviews* 14: 2227–2231.
17. **Al-Widyan, M.I.**, Oweis, R., Abu-Qdais, H., Al-Muhtaseb, M., and Hamasha, S. 2010. Composition and energy content of dental solid waste. *Resources, Conservation and Recycling*, 55: 155–160.

18. **Al-Widyan, M.I.** and F. AL-Oqla. 2011. Utilization of supplementary energy sources for cooling in hot arid regions via decision-making model. *International Journal of Engineering Research and Applications (IJERA)*, 1(4): 1610-1622.
19. **Al-Widyan, M.I.** and A. Al-Shaarawi. 2012. Numerical Investigation of Heat Transfer Enhancement for a Perforated Fin in Natural Convection. *International Journal of Engineering Research and Applications (IJERA)*, 2(1): 175-183.
20. M. Kilani, **Al-Widyan, M.I.** and A. Al-Halhouli, 2013. Analytical and computational fluid dynamics (CFD) investigation of the applicability of a ferrofluidic magnetic micropump for fluids with stress- sensitive microparticles. *Journal of Scientific Research and Essays*, 8(19): 754-766.
21. **Al-Widyan, M.I.**, and F. AL-Oqla. 2013. Selecting the most appropriate corrective actions for energy saving in existing building A/C in hot arid regions. *Building Simulation: An International Journal*, V7: 537-545.
22. R. J. Oweis, B. A. Albiss, **Al-Widyan, M.I.** and M Al-Akhras. 2014. Hybrid zinc oxide nanorods carbon nanotubes composite for nitrogen dioxide gas sensing. *J Electron Mater.*, 43(9): 3222–8.
23. Abu Qdais, H. and **Al-Widyan, M.I.** 2015. Anaerobic digestion of low- and high-solids food waste under mesophilic conditions. *IJEES*, V7(1): 91-98.
24. Albiss, B., **Al-Widyan, M.I.**, and Obaidat, I. 2016. Influence of loadings of single-walled carbon nanotubes on the performance of ZnO nanorod-based dye-sensitized solar cells. *Ceramics International*, V42(2, Prt. B): 3563-3568.
25. Abu Qdais, H., and **Al-Widyan, M.I.** 2016. Evaluating composting and co-composting kinetics of various agro-industrial wastes. *Int. J. Recycl. Org. Waste in Agriculture*, 5(3): 273-280.
26. Al-Mahasneh, M., **Al-Widyan, M.I.**, et al. 2017. Moisture sorption thermodynamic properties of bermudagrass. *Bulgarian Journal of Agricultural Science*, 23(4): 682–687.
27. Jawarneh, A., **Al-Widyan, M.** et al. 2017. Double vortex generators for increasing the separation efficiency of the air separator. *International Journal of Heat and Technology*, V35(3): 529-538.
28. **Al-Widyan, M.I.**, Taha M. Rababah, and Majdi Al-Mahasneh. 2018. A Combined system of ground well and composted olive cake for hot water production at olive mills. *Journal of Food Quality*, Vol. 2018, Article ID 3967961, 6 pages.
29. **Al-Widyan, M.I.** et al. 2018. Energy performance assessment of a non-domestic service building in Jordan. *JJMIE*. V12(2): 69-75.

30. Abu Qdais, H., Saadeh, O., **Al-Widyan M.I.**, et al. 2019. Environmental Sustainability Features in Large University Campuses: JUST as a model of green university. *Int. J. of Sustainability in Higher Education*, V20(2): 214-228.
31. Almomani, M., **Al-Widyan, M.I.**, S.M. Mohaidat. 2020. Thermal shock resistance of Y3Al5O12TBC for titanium alloy. *JMES*, 14(1): 6514-6525.
32. **M.I. Al-Widyan**, B.A. Albiss, M.S. Ali. 2021. Effect of Alkaline Nitrates and Operating Temperature on the Performance of Dye Sensitized Solar Cells. *JJMIE*, V15(3): 309-318.
33. M.I. **Al-Widyan**, Moh'd Al-Nimr, Al-Oweiti, Q. 2021. A hybrid TEG/thermal radiator system for space heating and electric power generation. *J. of Building Engg.* V41(1).
34. Asem Alemam, **M.I. Al-Widyan**. 2021. Technical, economic, and environmental assessment of integrating solar thermal systems in existing district heating systems under Jordanian climatic conditions.
35. *J. sustain. dev. energy water environ. Syst.*, V10(3), DOI:10.13044/j.sdewes.d9.0395
36. **M.I. Al-Widyan**, M. Khasawneh, Muna Abu Dalo. 2022. Potential of floating PV tech and their effects on energy output, water quality and supply in Jordan. *Energies* V 14(24).
37. Muath, Jada'n, **M Al-Widyan**, B. Albiss. 2023. Energy harvesting from the natural temperature difference b/w the soil surface and depth by TEG. *JSDEWES* V11(1).

Book Chapters

1. Mason, M., Al-Muhtaseb, M., and **Al-Widyan, M.I.** 2009. The energy sector in Jordan - current trends and the potential for renewable energy. *In: Michael, M. and Amit, M. (eds.) Renewable Energy in the Middle East. Springer Netherlands, Dordrecht, Netherlands, ISBN 9781402098901.*P. 41-54.
2. Al-Widyan, M.I., and Al-Muhtaseb, M. 2009. Institutional Aspects of a Regional Energy System. *In: Mason, Michael and Mor, Amit, (eds.) Renewable Energy in the Middle East. Springer Netherlands, Dordrecht, Netherlands, ISBN 9781402098901. Pages 177-195.*
3. **Al-Widyan, M.I.**, and Abu Qdais, H. 2017. Quality Assurance at Jordan University of Science and Technology (JUST): Integrating Administrative Quality and Academic Accreditation, Habib M. Fardoun et al. (Eds): *The Future of Higher Education in the Middle East and Africa (Springer).*

TRANSLATED BOOKS (FROM ENGLISH TO ARABIC)

1. John Krigger, and Chris Dorsi. **The Homeowner's Handbook to Energy Efficiency: A Guide to Big and Small Improvements.** Saturn Resource

Management, Inc. Helena MT 59601, USA. A KACST-funded project for translating the book from English to Arabic (completed: 416 p). Published.

2. Albert Thuman, Terry Niehus, and W. Younger. **Handbook of Energy Audits**, 9th Ed., 2013. Fairmont Press/CRC, Georgia, USA. A King Faisal Univ-funded project for translating the book from English to Arabic (completed; 550 p). Published.

Master's And Ph.D. Theses Supervised

1. **“Enhancement of thermal performance of fins subjected to natural convection through body perforations”**- Local Co-supervisor. Completed. Ph.D. Dissertation – ME Dept.- Baghdad Univ. 2000.
2. **“Experimental evaluation of the conversion and utilization of waste animal fats as biodiesel”** Master's Thesis – Mechanical Engineering Dept.- JUST, 2002. Completed.
3. **“Experimental study of combustion characteristics of pulverized olive cake in a drop-tube furnace.”** Master's Thesis – Mechanical Engineering Dept.- JUST, 2002. Completed.
4. **“Stabilization of soils using biological converged olive mill by-product”** Master's Thesis – Civil Engineering Dept.- JUST, 2002. Completed.
5. **“Design and building of a small-scale biodiesel plant under optimum conditions”** Master's Thesis – Mechanical Engineering Dept.- JUST, 2003/2004. Completed.
6. **“Effect of Alkaline Nitrates on the Operating Temperature and Performance of Dye Sensitized Solar Cells (DSSCS).”** Master's Thesis (completed)– ME Dept.- JUST, 2016. Completed.
7. **“Synthesis and Characterization of a New High Performance Thermal Barrier Coating for High Temperature Applications Using Atmospheric Plasma Spray.”** Completed. 2018.
8. **“Preparation, characterization and evaluation of encapsulated phase change materials (PCM) enhanced with metal oxide nanoparticle for energy storage.”** Completed. 2018.
9. **“Effect of selected additives on thermal properties of polymer composites.”** Completed. 2018.
10. **“An Analytic Study of Energy Efficiency in Jordanian Higher Education Institutions: Potential Improvements and Barriers to Implementation.”** Completed. 2018.
11. **“A novel optimized design for a comfortable and ultra-low energy refugee shelter.”** Completed. 2019.
12. **Green Building Assessment and Energy Optimization of Public Buildings in Jordan**
13. **Energy harvesting from the natural temperature difference between soil surface and soil depth by thermoelectric generation**
14. **Current Status and Potential Energy Efficiency Improvement in Water Sector in Jordan**
15. **A hybrid thermoelectric/heating system for heating and electric power generation**
16. **Evaluating the potential effects of floating photovoltaic systems on energy output and water quality and supply in Jordan**
17. **Techno-Economic Assessment of Integrating a Solar System in a District Heating System under Jordanian Climatic Conditions: J.U.S.T. Campus an example**
18. **Performance assessment of a double effect absorption cooling system driven by**

parabolic troughsolar collectors with latent thermal storage using Irbid Governorate
19. Enhancing Battery Storage System Performance Using Thermoelectric Generator

COURSES TAUGHT:
UNDERGRAD.

1. Thermodynamics I and II
2. Heat Transfer
3. Thermo-Fluids Lab
4. Energy Economics

GRAD. (MS LEVEL: THE REN. ENERGY AND SUSTAINABILITY MS PROGRAM
@ THE ME DEPT., JUST)

1. Energy Efficiency
2. Energy Economics
3. Energy Conversion Technologies
4. Low Carbon Buildings
5. Renewable Energy Systems
6. Energy Storage Systems

AFFILIATIONS

- Jordan Engineers Association/ME Section (Amman-
- Jordan).American Society of Mechanical Engineers
- (ASME), USA. Association of Energy Engineers (AEE),
Atlanta, GA, USA.

REFERENCES: Available