

**CURRICULUM VITAE**  
**MOHAMAD I. AL-WIDYAN**

Department of Mechanical Engineering - College of Engineering  
Jordan University of Science and Technology (JUST)  
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**EDUCATION**

**Ph.D.**, Mech. Power & Machinery Engineering **1997**  
College of Engineering  
**University of Florida**, Gainesville, Florida (USA)  
Ph.D. Dissertation: *Formation Mechanics and Combustion Characteristics of Elephantgrass and Energycane Wafers.*

**M.S.**, Mech. Power & Machinery Engineering **1993**  
College of Engineering  
**Kansas State University**, Manhattan, Kansas (USA)  
Master's Report: *AUS-DOE-funded project on "Utilization of Biodiesel in CI Engines."*  
Master's Report: *Oxides of Nitrogen (NOx) Emission from Diesel Engines.*

**B.S.** Mechanical Engineering- Thermal **1985**  
Faculty of Engineering  
**Yarmouk University**, Irbid, Jordan

**WORK EXPERIENCE**

**Academic Administrative Positions**

- **Member, Scientific Council** 03/2020-present  
Yarmouk University, Irbid, Jordan
- **Member, Adv. Board of Queen Rania Center** 01/2020-present  
Yarmouk University, Irbid, Jordan
- **Member, University Quality Committee** 12/2019-present  
Jadara University, Irbid, Jordan
- **Member, Research Council** 01/2020-present  
Jadara University, Irbid, Jordan
- **Dean, Deanship of Research** 09/2019-present  
JUST, Irbid, Jordan
- **Member, Board of Trustees** 09/2019-present  
Arab Commission of QA and Accreditation  
of Engineering Education  
*Federation of Arab Engineers, Cairo, Egypt*

- **Certified Assessor** 11/2018-present  
King Abdulla II Center for Excellence
- **Member, *Editorial Board*** 01/2019-present  
Jordan Journal of Mech. & Ind. Engineering  
Hashemite University, Zarka, Jordan  
(A SCOPUS-indexed International Journal)
- **Director, *Academic Development and QA Center*** 09/2014-09/2016 and 01/2018-present  
**JUST, Jordan**
- **Member, *Board of Trustees*** 12/2017-present  
**Amman Arab University, Jordan**
- **Member, *Advisory Board*** 10/2017-present  
**Al-Hijawi College of Engg., Yarmouk Univ., Irbid, Jordan**
- **Member, *Board of Trustees*** 05/2017-05/2019  
**Alquds College, Amman, Jordan**
- **Member, *Board of Trustees*** 02/2016-present  
College of the Royal Jordanian Geographic Center  
Amman, Jordan
- **Dept. Head and Program Chair** 09/2011-09/2013  
Mech. Engg. Dept., King Faisal University, Saudi Arabia
- **Member, National Technical Committee** 2008/2009  
Faculty-for-Factory National Program, Jordan
- **Member, National Coord'n. and Follow-up Committee, and  
The *General Coordinator of the Program at JUST*** 2007/2008  
Faculty-for-Factory National Program, Jordan
- **Deputy Director, Consultative Center for Sci & Tech** 09/05 – 09/07  
*Director of Linking with Industry Department*  
*Director of Continuing Education Department,*  
JUST, Irbid 22110, Jordan
- **Department Head** 09/01 – 09/03  
Biosystems Engineering Dept. - Faculty of Engineering  
JUST, Irbid 22110, Jordan
- **Faculty Advisor**  
Association of Energy Engineers (AEE) Student Club  
JUST, Irbid 22110, Jordan

### Academic Services and Contributions

- **Chair/Member**, Various committees at JUST (Strategic Planning; Study Plans; Excellence; ISO 9001; Newsletter; E-Learning; Admin. Development; Quality; ...etc) 01/2018- present
- **Member**, JUST Newsletter Chief Editor JUST, Irbid, Jordan 09/2014-09/2016
- **Member**, KFU Strategic Plan 2016-2020 Committee King Faisal Univ. (KFU), Saudi Arabia 03/2014-09/2014
- Jordan Military: Maintenance Engineer 1987-1989
- Teaching Assistant: Mech. Engrg. Dept. Amman Polytechnic (Community College) 1985-1987

### Quality –Related Contributions

- Representative of Jordan Engineers Association Member**, Academic Accreditation Commission for QA in Engineering Education *Federation of Engineers*, Cairo, Egypt 01/2019-present
- Certified Assessor** King Abdulla II Center for Excellence 11/2018
- 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** b/w 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. 8/2017-11/2017
- Member**, Jordanian *University Ranking System* Committee HEAC, Amman, Jordan
- Chair**, Jordanian *Program Ranking System* Committee HEAC, Amman, Jordan
- Member**, Committee for *ASU Quality Application* Evaluation 6/2017-10/2017
- Member** of ISO 9001:2008(2015) Steering Committee JUST, Irbid Jordan 09/2014-09/2016

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|---|------------------|
| <b>Member</b> of JUST Central Admin. & Academic Quality Committee<br>JUST, Irbid, Jordan  | 10/2015-09/2016  |
| <b>Coordinator</b> , ABET Committee<br>Mech. Engr. Dept., JUST  | 09/2014-present  |
| <b>Chair</b> of College Quality Committee<br>College of Engineering, KFU, <i>Saud Arabia</i>  | 09/2009-08/2014  |
| The HEAC, British Council, and UK QAA-Organized<br>5-day Workshop on Preparing Nationally Certified Academic Reviewers  | 03/2015          |
| <b>Member</b> , HEAC National Committee<br>QA Standards for Engineering Programs  | 2015 (completed) |
| <b>Selected Trainee</b><br>The HEAC, British Council, and UK QAA-Organized a 5-day Workshop<br>on Preparing Nationally Certified Academic Reviewers, Amman, Jordan                  | 03/2015          |
| <i>PI of Accepted book chapter</i> “Quality Assurance at JUST: Integrating<br>Administrative Quality and Academic Accreditation.” Springer Book Chapter.                            | 02/2017          |
| Conducted a Workshop on <i>ABET Accreditation</i> . Organized by HEAC on the PSUT Campus, May 31 <sup>st</sup><br>2015, Amman. Deans and Dean Assistants in Jordanian Universities. |                  |
| Conducted a 1-day Workshop on <i>ABET Accreditation</i> . Philadelphia University, March 2016.  |                  |
| Conducted a 3-day Workshop on <i>ABET Accreditation</i> . Hashemite University, Summer 2016.  |                  |
| - Conducted a 1-day Workshop on <i>ABET Accreditation</i> . Al-Hijjawi College of Engineering, Yarmouk<br>University, Oct. 2017.  |                  |
| -Conducted a 1-day Workshop on <i>ABET Accreditation</i> . Jadara University, Irbid, Jordan, March, 2020.   |                  |

**- 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 Study, 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*.

9. Among the TOP 150 HIGH IMPACT JORDANIAN RESEARCHERS for the last three years in a row.

## 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, SI Chuan 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, August 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., 2005-2007.
- 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 (Holiday Inn), 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 31<sup>st</sup> 2015, Amman. Deans and Dean Assistants in Jordanian Universities.
- Conducted a 1-day Workshop on **ABET Accreditation**. Philadelphia University, March 2016.
- Conducted a 3-day Workshop on **ABET Accreditation**. Hashemite University, Summer, 2016.
- Conducted a 1-day Workshop on **ABET Accreditation**. Al-Hijjawi College of Engineering, Yarmouk University, Oct. 2017.
- Conducted a 1-day Workshop on **ABET Accreditation**. Jadara University, March, 2020.

## **ACTIVITIES**

### **Research Grants**

- The team member of Phase I (US\$ 100, 000.00) of the National Biogas UNDP-funded Project-The JUST Component, Jan., 2004 to Jan. 2006. (*The team consisted of the Coordinator and one member only*).
- Team member of Phase II (US\$ 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 Brautch) Univ of Applied Sciences at Amberg, Germany, September 2004.
- The PI of work for improving the mechanical design of long vehicles chassis for a small size local enterprise. A study funded by *The Jordan Higher Council for Science and Technology* (**JD 5,000.00 = US\$7500.00**) – completed- .
- 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-.

- The PI of a proposal submitted to **Tatweer** for designing and installing a heat exchanger for a local plastic co. (SME) and utilizing *geothermal* energy for cooling. The proposal was approved. Fund: JD 4,000.00 = \$6000.00 – completed-.

- The PI (4 projects) and Co-PI (1 project) of 5 research projects funded by KFU (Saudi) Deanship of Research for a **total of about \$50,000.00**.

- Supervisor of **No. 1 winning** MS thesis national fellowship competition from **MEDRC** on the theme of “*Energy in the Water Sector.*” USD 5000.00. Nov. 2017.

### **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 the **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 olive mill 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-present).

- 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.

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### **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. Khdaif. 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.** and A.O. Al-Shyokh. 2002. Experimental evaluation of the transesterification 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 a 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, April, 2004.
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. **Al-Widyan, M.I.**, S. Amourah, L. Hilles, R. Malkawi, and A. Abu-Al Ragheb. 2007. Design and testing of a small-scale solar crop dryer. *Agricultural Mechanization in Asia, Africa and Latin America (AMA)*, Japan. Vol. 38(4): 9-12.
12. Al-Jalil, H. J. Amayreh and **M.I. Al-Widyan**. 2007. Feasibility of collecting ambient air moisture by forced condensation. *Agricultural Mechanization in Asia, Africa and Latin America (AMA)*, Japan. Vol. 38 (1): 51-54.
13. 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.
14. 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.
15. 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.
16. **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.
17. **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.
18. 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.
19. **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.
20. **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.
21. **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.

22. M. Kilani, **Al-Widyan, M.I.** and A. Al-Halhoul, 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.
23. **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.
24. Rami J. Oweis, B. A. Albiss, **Al-Widyan, M.I.** and M-Ali Al-Akhras. 2014. Hybrid zinc oxide nanorods/carbon nanotubes composite for nitrogen dioxide gas sensing. *J Electron Mater.*, 43(9): 3222–8.
25. 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.
26. 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, Pt. B): 3563-3568.
27. 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.
28. 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.
29. 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.
30. 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. <https://doi.org/10.1155/2018/3967961>.
31. **Al-Widyan, M.I.** et al. 2018. Energy performance assessment of a non-domestic service building in Jordan. *JJMIE*. V12(2): 69-75.
32. Abu Qdais, H., Saadeh, O., **Al-Widyan M.I.**, et al. 2019. Environmental Sustainability Features in Large University Campuses: Jordan University of Science and Technology as a model of green university. *Accepted for Publication*. *Int. J. of Sustainability in Higher Education*, V20(1).
33. Almomani, M., **Al-Widyan, M.I.**, S.M. Mohaidat. 2019. Thermal shock resistance of Y3Al5O12TBC for titanium alloy. *Accepted for Publication (JMES)*.
30. **M.I. Al-Widyan**, B.A. Albiss, M.S. Ali. 2019. Effect of Alkaline Nitrates and Operating Temperature on the Performance of Dye Sensitized Solar Cells. Submitted for Publication (*JJMIE*).

### **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).

2. Albert Thuman, Terry Niehus, and W. Younger. **Handbook of Energy Audits,** 9<sup>th</sup> 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 Spay.**” 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. “Current Status and Potential Energy Efficiency Improvement in Water Sector in Jordan.”**  
Completed, 2019.

**13. A combined thermoelectric/heating system for heating and electric power generation.** Ongoing.

**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** (Currently Active)

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

**REFERENCES:** Available upon request.