

CURRICULUM VITAE

**DR.
ABDULLAH
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Associate Professor

PERSONAL INFORMATION

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1.

EDUCATION AND EMPLOYMENT INFORMATION

1.1 Education

PhD Mechanical Engineering

University of Stuttgart, Germany.

Faculty of Energy Technology, Process Engineering and Biological Engineering

M. Sc. Mechanical Engineering

The University of Jordan, Amman, Jordan.

Faculty of Engineering and Technology, Mechanical Engineering Department

B. Sc. Mechanical Engineering

University of Baghdad, Iraq.

Faculty of Engineering, Mechanical, Engineering Department

1.2 Employment History

*Associate Professor**

2022-present

Department of Mechanical and Industrial Engineering,

Sultan Qaboos University, Muscat, Oman

*Assistant Professor**

2015-2022

Department of Mechanical and Industrial Engineering,

Sultan Qaboos University, Muscat, Oman

*Visiting Researcher**

July 2016

ITW, University of Stuttgart

Baden-Württemberg, Germany

*Assistant Professor**

2013-2015

Department of Mechanical & Mechatronics Engineering

Dhofar University, Salalah, Dhofar, Oman

*Chief Technology Officer**

2011-2013

Nexergen Holding GmbH, Münster, Germany

(Daughter Company of greenpartnersllc, USA)

*Research Fellow (International Project with GM of USA)**

2009-2011

ITW, University of Stuttgart

Baden-Württemberg, Germany

*Research Assistant***

2004-2005

Mechanical Engineering Department, the University of Jordan, Amman, Jordan

*Teaching Assistant***

2000-2003

Mechanical Engineering Department, the University of Jordan, Amman, Jordan

*Full time employment

**Part time employment



2.

UNIVERSITY TEACHING AND LEARNING

2.1 Courses Taught

| <u>Undergraduate</u> | | <u>Postgraduate</u> |
|----------------------|-------------------------------|----------------------------------|
| ■ Thermodynamics | ■ Thermal Sciences | ■ Thermal Energy Storage Systems |
| ■ Fluid Mechanics | ■ Internal Combustion Engines | ■ Renewable Energy |
| ■ Heat Transfer | ■ Thermofluids | |

2.2 Management of Teaching Processes

2.2.1 Management Duties

- ✚ Coordinator of Department Undergraduate/Postgraduate Timetable.
- ✚ Chair of Department Curriculum and Timetable Committee.
- ✚ Leader of Thermofluids focus group.
- ✚ Member of Continuous Assessment and Evaluation Committee, 2018-present.
- ✚ Member of Remote Learning Committee, 2020-2021

2.2.2 Developing Teaching Process

- ✚ Using Revised Bloom's Taxonomy (RBT)
- ✚ Using Critical Thinking Models
- ✚ Developing the Remote Teaching (RT) Guidelines
 - ✓ Contributed in the process of developing the Remote Teaching (RT) guidelines. The guidelines cover relevant aspects of course delivery and assessment methods to consider in Remote Teaching (RT) approach for Spring 2019 and Fall 2020 semesters, as a consequence of the pandemic COVID-19.
- ✚ Reviewing of the Remote Teaching recovery document called "Ta'afi"
 - ✓ As a consequence of the pandemic COVID-19: Participated in the process of reviewing of the Remote Teaching recovery document called "Ta'afi" (which in English means Vision) that is used as a guide to control academic breaches of behavior in the e-learning system.

2.3 Curriculum Development and Accreditation

2.3.1 Curriculum Activities

- ✚ Member of the Department Accreditation Committee (DCAC).
- ✚ Developing Mechanical Engineering (ME) Curriculum:
 - ✓ Participated in the process of developing/modernization the Mechanical Engineering (ME) curriculum to be modern and adaptive to the current and future industry needs and inclusion of 21st century skills and knowledge to be in line with Oman's strategic vision 2040.
- ✚ Reviewing training program called "Cooperative Training Program"
 - ✓ Participated in the process of implementing the new training program called "Cooperative Training Program" which is a structured educational strategy, integrating the theoretical knowledge learned in the classrooms and laboratories with real-world experiences.

2.3.1 ABET Accreditation Activities

- ✚ Participated in the process of preparing Self-Study Report (SSR) for ABET accreditation.



- ✍ Serving in accreditation committees in charge of coordinating course assessment and setting performance indicators for Thermofluids courses.
- ✍ Participated in preparing the college academic catalog for quality audit (ABET accreditation and Oman Authority for Academic Accreditation and Quality Assurance of Education (OAAAQA)).
- ✍ Evaluated some courses to judge the attainment of Performance Indicators (PIs) for the ABET accreditation.
- ✍ Participated in the process of implementing the mapping matrix of the PIs (1-7) of ABET accreditation.

2.4 Reviewing Reports/Programs in University Teaching & Learning

- Reviewed Bachelor of Engineering Program
Participated as a peer reviewer in a panel formed by the Ministry of Higher Education (MoHE) as a part of the program licensing process to assess the program of Bachelor of Engineering (BEng) in Mechanical Engineering, National University of Science and Technology, Muscat, Oman, 2019.
- Reviewed Master of Engineering Program
Involved in the development process of the "Master Program in Sustainable Energy" representing the Department of Mechanical and Industrial Engineering.
- Reviewed Academic Policy
Participated in reviewing of Undergraduate Academic Assessment Policy UAAP, SQU.
- Reviewed:
 - ✓ The mission & vision of the department of Mechanical and Industrial Engineering, College of Engineering, SQU.
 - ✓ The operation plan to achieve the strategic goals of the department of Mechanical and Industrial Engineering, College of Engineering, SQU.
 - ✓ The MIE section of the College Bulletin 2019 and 2020.
 - ✓ Architect program (AREN), ABET Personal Indicator of thermodynamics course, SQU, Oman.
- Creating and implementing midterm exam schedule guidelines for the department to avoid conflict in exams that could enhance the performance of the students. The regulation has been used on both department and college levels.
- Participated in the process of preparing the final exam schedule of the college of engineering with the collaboration of the Admissions and Registration office, department of Timetabling & Academic Degree Plan.
- Revising and updating the course description of Mechanical Engineering courses through checking the SIS system, Department website, and the courses datasheets.
- Developing a comprehensive courses database for the department including degree plans, offered courses and their pre/co-prerequisites, course description, equivalent courses, course category, etc.
- Participated in preparing the operation plan of the department of mechanical and industrial engineering, college of engineering, SQU.
- Developing the ADD/DROP procedure to be done in a smooth and efficient way for both the students and the instructors.



2.5 Participating in Professional Workshops/Training Programs

I participated in many courses/workshops, training programs, and seminars to enhance my capabilities and skills in teaching and learning.

- Curriculum Modernization for Different Programs
Workshop "Retreat" organized by the College of Engineering, Sultan Qaboos University, Muscat, 20th October 2022.
- OQF Workshop
Capacity Building Workshop on Listing Qualifications on the Oman Qualification Framework (OQF), Muscat, 10th -12th October 2022.
- Introduction to CHETL and Educational Philosophy
Introduction to CHETL and Educational Philosophy course, conducted by Mr. Dave Paquin, SEO Delta Business Training, Organized by CETL, Sultan Qaboos University, Oman, October-November 2022.
- Outcome-based learning objectives
Outcome-based learning objectives course conducted by Mr. Dave Paquin, SEO Delta Business Training, Organized by CETL, Sultan Qaboos University, Oman, October-November 2022.
- Teaching Critical Thinking
Teaching Critical Thinking course conducted by Mr. Dave Paquin, SEO Delta Business Training, Organized by CETL, Sultan Qaboos University, Oman, October-November 2022.
- Active Learning
Integrated Course Design through Active Learning course conducted by Dr. Stewart Ross, Organized by CETL, Sultan Qaboos University, Oman, 20th march-7th April 2022.
- Education during Pandemic
The Sharjah International Conference on Education in post-Covid-19", 14th – 16th March 2022.
- Digital Learning Summit:
International Business and Economic Forum, Doha, Qatar, 2nd-3rd June 2021.
- Remote Teaching
Virtual International Seminar on Remote Teaching caused by the pandemic COVID-19, 1st-2nd September 2020.
- Improving Teaching and Learning
Training Program on Improving Teaching and Learning with Technology, SQU, 25th-26th April 2018.
- Research Base Teaching
Workshop on Research Base Teaching, conducted by Dr. Peter Looker, Director of Teaching, Learning & Pedagogy at Nanyang Technological University, SQU, 27th February 2018.
- Technology to Engage Students in Deeper Learning
Workshop on Using Technology to Engage Students in Deeper Learning at SQU, conducted by Dr. Patrick Guilbaud, Associated Professor at Winthrop University in South California, SQU, 26th December 2017.
- Critical Thinking Skill



Workshop on Critical Thinking Skill for the 21st Century, conducted by Prof. Nikos Mourtos, Chair of Aerospace Engineering Department at San State University in California, SQU, 16th May 2017.

➤ CDIO Initiative

Workshop on Introduction to CDIO Initiative, presented by Dr. Juha Kontio, SQU, 16th-17th May 2016.

➤ Preparing Engineers for a Globalized Economy

Workshop on Preparing Engineers for a Globalized Economy: How to teach engineering students process skill, conducted by Prof. Nikos Mourtos, Chair of Aerospace Engineering Department at San State University in California, SQU, 26th-28th May 2015.



3.

SCHOLARLY ACHIEVEMENTS

3.1 Scholarly Publications

Published Refereed Journal Papers

- [1] Aal Khlaifin S., ***Al-Janabi A.**, Al-Rawahi N., Al-Azri N., 2023, 'Phase Change Materials for Better Thermal Performance of Central Processing Units (CPUs), Journal of Fluid Flow, Heat and Mass Transfer (JFFHMT), 10, 01-09. [DOI: 10.11159/jffhmt.2023.001](https://doi.org/10.11159/jffhmt.2023.001).
- [2] ***Al-Janabi A.**, Alsalmi O., Alsubhi E., Alhadhrami A., 2023, "Thermoelectric Generators as a Heat Recovery System for Exhaust Gases of Vehicles Driving at Low Speeds, *Engineering and Technology Journal*, 41 (01), 185-195.
- [3] ***Al-Janabi A.**, Al-Hajri G., Al-Maashani T., 2021, "Investigate the Technical-Economical Feasibility of Utilizing the Available Industrial Waste Thermal Energy in Oman", *Thermal Science and Engineering Progress*, 21, 100778. (<https://doi.org/10.1016/j.tsep.2020.100778>), [SJ: Q1, H-index: 27, IF: 4.95 – Scopus CiteScore 2020: 5.7].
- [4] Mahmood RA., Ali OM., **Al-Janabi A.**, Al-Doori G., Noor, MM., 2021, "Review of Mechanical Vapor Compression Refrigeration System Part 2: Performance Challenge", *International Journal of Applied Mechanics and Engineering*, 26, 119-130. (<https://doi.org/10.2478/ijame-2021-0039>), [SJ: Q4, H-index: 8, IF: 0.77 – Scopus CiteScore 2020: 1.2].
- [5] ***Al-Janabi A.**, Al-Azri, N., 2020, "Effect of Recovering the Industrial Waste Heat in Oman on Energy and Environment", *Energy Reports*, 6, 526-531. (<https://doi.org/10.1016/j.egyr.2020.11.203>), [SJ: Q1, H-index: 33, IF: 7.37 – Scopus CiteScore 2020: 2.7].
- [6] Nikoo, A. H., Malayeri, M. R., **Al-Janabi, A.**, 2020, "Fouling Propensity of Modified Heat Transfer Surfaces", *Heat Transfer Engineering*, 41 (111), 919-933. (<https://doi.org/10.1080/01457632.2019.1589982>), [SJ: Q1, H-index: 63, IF: 1.693 – Scopus CiteScore 2020: 3.4].
- [7] ***Al-Janabi, A.**, Malayeri, M. R., 2019, "Innovative Non-Metal Heat Transfer Surfaces to Mitigate Crystallization Fouling", *International Journal of Thermal Sciences*, 138, 384-392. (<https://doi.org/10.1016/j.ijthermalsci.2019.01.003>), [SJ: Q1, H-index: 119, IF: 3.744 – Scopus CiteScore 2020: 6.5].



- [8] ***Al-Janabi, A.**, Malayeri, M. R., Badran, O. O., 2017, "Performance of Shot Peened Surfaces Subject to Crystallization Fouling", *International Journal of Thermal Sciences*, 111, 379-389. (<https://doi.org/10.1016/j.ijthermalsci.2016.09.023>), [SJ: Q1, H-index: 119, IF: 3.744 – Scopus CiteScore 2020: 6.5].
- [9] ***Al-Janabi, A.**, Malayeri, M. R., 2017, "Turbulence Induced Structures in Exhaust Gas Recirculation Coolers to Enhance Thermal Performance", *International Journal of Thermal Sciences*, 112, 118-128. (<https://doi.org/10.1016/j.ijthermalsci.2016.10.005>), [SJ: Q1, H-index: 119, IF: 3.744 – Scopus CiteScore 2020: 6.5].
- [10] Nikoo, A. H., Malayeri, M. R., **Al-Janabi, A.**, 2017, "Revamp of Heat Transfer Surfaces for Reduction of Crystallization Fouling Based on Polar Component of Surface Energy", *J. Iranian Chem. Eng.*, 88, 48-58.
- [11] **Al-Janabi, A.**, Malayeri, M. R., 2015, "A Criterion for the Characterization of Modified Surfaces During Crystallization Fouling Based on Electron Donor Component of Surface Energy", *Chemical Engineering Research and Design*, 100, 212-227. (<https://doi.org/10.1016/j.cherd.2015.05.033>), [SJ: Q1, H-index: 99, IF: 3.35 – Scopus CiteScore 2020: 6.3].
- [12] **Al-Janabi, A.**, Malayeri, M. R., 2015, "Environmentally Friendly Solvent- and Water-Based Coatings for Mitigation of Crystallization Fouling", *Chemical Engineering & Technology*, 38(1), 147-154. (<https://doi.org/10.1002/ceat.201400457>), [SJ: Q2, H-index: 81, IF: 3.742 – Scopus CiteScore 2020: 2.8].
- [13] **Al-Janabi, A.**, Malayeri, M. R., 2015, "Nano-Coated Surfaces to Mitigate Fouling in Thermal Water Services", *Desalination and Water Treatment*, 55(11), 2909-2917. (<https://doi.org/10.1080/19443994.2014.940205>), [SJ: Q3, H-index: 60, IF: 0.854 – Scopus CiteScore 2020: 1.6].
- [14] **Al-Janabi, A.**, Malayeri, M. R., Guillen-Burrieza, E., Blanco, J., 2013, "Field Evaluation of Various Coated Plates of a Compact Heat Exchanger to Mitigate Crystallization Fouling in an MD Desalination Plant", *Desalination*, 324, 21-33. (<https://doi.org/10.1016/j.desal.2013.05.020>), [SJ: Q1, H-index: 184, IF: 9.51 – Scopus CiteScore 2020: 14.3].
- [15] **Al-Janabi, A.**, Malayeri, M. R., Müller-Steinhagen, H., 2011, "Minimization of CaSO₄ Deposition Through Surface Modification", *Heat Transfer Engineering*, 32(3-4), 291-299. (<https://doi.org/10.1080/01457632.2010.495628>), [SJ: Q1, H-index: 63, IF: 1.693 – Scopus CiteScore 2020: 3.4].
- [16] **Al-Janabi, A.**, Malayeri, M. R., Müller-Steinhagen, H., 2010, "Experimental Fouling Investigation with Electroless Ni-P Coatings", *International Journal of Thermal Sciences*, 49(6), 1063-1071. (<https://doi.org/10.1016/j.ijthermalsci.2009.05.009>), [SJ: Q1, H-index: 119, IF: 3.744 – Scopus CiteScore 2020: 6.5].
- [17] Malayeri, R. M., **Al-Janabi, A.**, Müller-Steinhagen, H., 2009, "Application of Nano-Modified Surfaces for Fouling Mitigation", *International Journal of Energy Research*, 33(13), 1101-1113. (<https://onlinelibrary.wiley.com/doi/abs/10.1002/er.1599>), [SJ: Q1, H-index: 95, IF: 3.741 – Scopus CiteScore 2020: 5.0].



- [18] Malayeri, M. R., **Al-Janabi, A.**, Müller-Steinhagen, H., 2009, "Impact of Surface Treatment on the Fouling of Modified Heat Transfer Surfaces", *Netsu Shori - Journal of the Japan Society for Heat Treatment*, 49, 288-291.
- [19] **Al-Janabi, A.**, Malayeri, R. M., Müller-Steinhagen, H., 2009, "Experimental Investigation of Crystallization Fouling on Grooved Stainless-Steel Surfaces during Convective Heat Transfer", *Heat Transfer Engineering (Special Issue)*, 30(10-11), 832-839.
(<https://www.tandfonline.com/doi/full/10.1080/01457630902751510>), [SJ: Q1, H-index: 63, IF: 1.693 – Scopus CiteScore 2020: 3.4].
- [20] **Herz**, A.**, Malayeri, R. M., Müller-Steinhagen, H., 2008, "Fouling of Roughened Stainless Steel Surfaces during Convective Heat Transfer to Aqueous Solutions", *Energy Conversion and Management*, 49(11), 3381-3386.
(<https://doi.org/10.1016/j.enconman.2007.09.034>), [SJ: Q1, H-index: 192, IF: 9.707 – Scopus CiteScore 2020: 15.9].

* Corresponding Author

** Herz is my previous family name

Conference Papers and Presentation

1. Aal Khlaifin S., **Al-Janabi A.**, Al-Rawahi N., Al-Azri N., "Heat Transfer Enhancement for better Cooling System of Electronic Components, The 3rd International Conference on Fluid Flow and Thermal Science (ICFFTS'22), 27th – 29th October 2022, South Korea.
2. **Al-Janabi A.**, Al-Busaidi H., Alsawafi A., Al-Yahmadi A., Almahruqi A., "Enhancing the Thermal Performance of Electronic Components using Phase Change Materials", the 2nd *International Conference on Engineering and Applied Natural Sciences on 15-18 October in 2022, Konya, Turkey*.
3. Muhalla M., Hamed A., **Al-Janabi A.**, "Legal legislation and environmental protection to promote sustainable development - Omani legal applications as a model", the 4th *International Conference "Social Sciences and Sustainable Development: Challenges, Experiences and Alternatives, College of Art and Scola Sciences, SQU, 21-22 February 2022*.
4. **Al-Janabi A.**, Haitham H, Al-Nabhani K, Al-Hakamani N, Al Hammadi A, "Solar Chimney as a Natural Cooling System for Eco-Houses Applications in Oman", the 15th *International Conference Applied Thermal Engineering, 26th-28th July 2021, South Africa*.
5. **Al-Janabi A.**, Al-Azri N., "Energy Saving Potential and Environmental Impact Associated with Recovering Industrial Waste Heat in Oman", 7th *International Conference on Power and Energy Systems Engineering (CPESE 2020), 26th-29th September 2020, Fukuoka, Japan*.
6. **Al-Janabi A.**, "Green Transport Sector for Better Environment in Oman", 8th *Global Summit and Expo on Pollution Control, Exploring Innovative Technologies to Reduce Pollution, 24th-25th August, 2020, Prague, Czech Republic*.
7. **Al-Janabi A.**, Summad E., Al-Kindi M., Mohareb O., Grimm M., Reuss HC., "Electro-Mobility in Oman: Examine the Current Available Infrastructure", 2nd *International Conference on Smart Grid and Renewable Energy, SGRE, Texas A&M University, 19th-21st November 2019, Doha, Qatar*.



8. **Al-Janabi A.**, Al-Azri N., Mohareb O., Grimm M., Reuss HC., "Real-World Driving Cycle: Case Study Muscat", the *2nd International Conference on Smart Grid and Renewable Energy, SGRE, Texas A&M University, 19th-21st November 2019, Doha, Qatar.*
doi: 10.1109/SGRE46976.2019.9020675, IEEE Xplore, (2019).
9. **Al-Janabi, A.**, Al-Hajri G., Al-Maashani T., "Potentiality of Converting Low-Grade Industrial Waste Heat into Power in Oman", *11th International Conference on Computational Heat, Mass and Momentum Transfer (ICCHMT2018), 21st-24th May 2018, Cracow, Poland.*
10. Shaaban A., **Al-Janabi, A.**, "Effect of Shell Configuration on Surface Temperature Profile", *The 1st National Conference on Civil and Architectural Engineering, 26th-28th March 2018, SQU, Oman.*
11. **Al-Janabi, A.**, Mohareb O., Huynh P., Grimm M., Reuss H., "Utilization of Electric Vehicle in Oman: Energy and Environment Enhancement", *9th International Conference on Thermal Engineering: Theory and Applications, 24th March 2016, Abu Dhabi, UAE.*
12. Mohareb O., Huynh P., **Al-Janabi, A.**, Grimm M., Reuss H., "Electric Vehicles in the Gulf Region: Performance and Potential", *SAE 2015 World Congress, Detroit, Michigan, USA.*
13. **Al-Janabi, A.**, Malayeri, R. M., "Nano-Coated Surfaces to Mitigate Fouling in Thermal Water Services", *Desalination for the Environment: Clean Water and Energy, 11th-15th May 2014, Limassol, Cyprus.*
14. **Al-Janabi, A.**, Malayeri, R. M., Müller-Steinhagen, H., "Precipitation Fouling on Low Energy Surfaces: Advantages and Limitations", *Tagungsband VDI Conf. on "Thermodynamik" und "Ingenieurdaten", 5th-7th October 2009, TU Berlin, Germany.*
15. **Al-Janabi, A.**, Esawy, M., Malayeri, M. R., Müller-Steinhagen, H., "Consideration of Dynamic Uncertainty in Fouling Experimentation", *EUROTHERM Int. Conf. on Heat Exchanger Fouling and Cleaning, 2009, Schlading, Austria.*
16. **Al-Janabi, A.**, Malayeri, M. R., Müller-Steinhagen, H., Badran, O. O., "Precipitation Fouling on Various Austenitic Alloys", *EUROTHERM Int. Conf. on Heat Exchanger Fouling and Cleaning, 2009, Schlading, Austria.*
17. **Al-Janabi, A.**, Malayeri, R. M., Müller-Steinhagen, H., "Minimization of CaSO₄ Deposition through Surface Modification", *Proceeding of Heat Exchanger Fouling and Cleaning: Challenges and Opportunities, 2009, Schlading, Austria.*
18. Malayeri, M. R., **Al-Janabi, A.**, Müller-Steinhagen, H., "Fouling of Nano-Modified Surfaces", *the 4th International Conf. on Surfaces, Coatings and Nanostructured Materials (NANOSMAT), 2009, Rome, Italy.*
19. **Al-Janabi, A.**, Malayeri, M. R., Müller-Steinhagen, H., "Experimental Investigation of Fortified PTFE and PFA Coatings for the Mitigation of Crystallization Fouling", *the 17th International Federation for Heat Treatment and Surface Engineering (IFHTSE) Congress, 2009, Kobe, Japan.*
20. **Al-Janabi, A.**, Malayeri, M. R., Müller-Steinhagen, H., Meyer, F., Nonninger, R., "Application of Environmentally-Friendly Organic/Inorganic Coatings for the Mitigation of Crystallization Fouling", *International Congress of Condition Monitoring and Diagnostic Engineering Management (COMADEM), 2008, Prague, Czech Republic.*

**Books & Book Chapters**

-  Impact of Surface Temperature of a Photovoltaic Solar Panel on Voltage Production, chapter in *Energy and Environment in the Tropics*, Al-Doori G., Mahmood RA., Al-Janabi A., Hassan AM., Chala GT. 2023

Selected Poster and Technical Report

- ⊕ **Al-Janabi, A.**, Abu Mohareb, O., Phan-Lam Huynh, Michael Grimm, Hans-Christian Reuss, 2017, "Energy Saving Potential Using EV in Oman, German-Oman Cooperation on Sustainable Energy" Concepts workshop, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences and The Research Council TRC Oman under the auspices of the Embassy of the Federal Republic of Germany Muscat 18th May 2017, Muscat, Oman.
- ⊕ Shaaban A., **Al-Janabi, A.**, 2017, "Double-Shell Building Thermal Performance: Theoretical and Experimental Study", Eco-House Stage-2, SQU, Oman
- ⊕ Shaaban A., **Al-Janabi, A.**, 2017, "Thermal Performance of Double-Shel Test Model: Experimental Study", Eco-House Stage-2, SQU, Oman.
- ⊕ Shaaban A., **Al-Janabi, A.**, 2017, "Influence of Bio-Shading on Walls Thermal Performance", Eco-House Stage-2, SQU, Oman.
- ⊕ **Al-Janabi A.**, Al-Azri, N., Al-Hinai, A., 2021, "Study the Socio-Economic Factors Affecting the Energy Demand of Residential Sector in Oman", *Research proposal submitted to Deanship of Research, Sultan Qaboos University, Oman.*
- ⊕ **Al-Janabi A.**, Al-Azri, N., Al-Hinai, 2021, Investigate the Technical-Economical Feasibility of Electric Vehicles as an Eco-Friendly Transport Sector in Oman, *Research proposal submitted to The Research Council (TRC), Oman.*
- ⊕ Hagos, F., Al-Rawahi, N., **Al-Janabi, A.**, 2021, "The Role of Phase Change Materials (PCM) on Battery Thermal Management of Electric/Plug-in Hybrid Vehicles", *Research proposal submitted to The Research Council (TRC), Oman.*
- ⊕ **Al-Janabi A.**, Summad E., 2019, "Diffusion of Electrical Vehicles (EVs) in Oman: Requirements and Challenges", *Deanship Research Grant Technical Report (RF/ENG/MIED/18/01), Sultan Qaboos University, Oman.*
- ⊕ **Al-Janabi A.**, Al-Azri, N., 2019, "Utilization of Electrical Vehicles in Muscat-Oman: Potential and Challenges", *Internal Research Grant Technical Report (IG/ENG/MIED/17/01), Sultan Qaboos University, Oman.*
- ⊕ Hosseinzadeh, N., Tarhuni, N., **Al-Janabi, A.**, 2019, "A Horizontal Internet of Things Framework for Energy Management in Smart Residential Areas" *Deanship Research Grant Technical Report (RF/ENG/ECED/18/03), Sultan Qaboos University, Oman.*
- ⊕ Shaaban, A., **Al-Janabi, A.**, 2018, Comparative Performance of Ventilated and None Ventilated Cavities in Double -Shell Systems in Hot-Climate Regions. Eco-House competition 2, The Research Council (TRC), Oman. *The highlighted report was a part of the technical report submitted to the TRC related to the Eco-house competition-2.*

**3.2 Funded Research Projects (Principle/Co-Principle/Co-Investigator)**

- ▲ *Solar-driven gasification of municipal solid waste for waste-to-value generation*, US\$51000. 2023
- ▲ *Study the Socio-Economic Factors Affecting Energy Demand of Residential Sector in Oman*, US\$7540.
- ▲ *Utilization of Electrical Vehicles in Muscat-Oman: Potential and Challenges*, US\$13800.
- ▲ *Diffusion of Electrical Vehicles (EVs) in Oman: Requirements and Challenges*, US\$6000.
- ▲ *A Horizontal Internet of Things Framework for Energy Management in Smart Residential Areas*, US\$7800, SQU-DRG.
- ▲ *A Generic Efficient Algorithm for Developing Typical Weather and Solar Radiation Behavior for Energy Simulation Applications*, US\$11300, SQU-DRG.
- ▲ *A Hybrid Nonlinear Vibration Energy Harvester for Remote Sensing Applications*. US\$72150, SQU-Qatar University Joint Fund (IRCC program).
- ▲ *Utilizing Solar Energy for Power Production Using Parabolic Trough with Organic Rankine Cycle*. US\$77920, British Petroleum Oman.
- ▲ *Natural Ventilation for Cooling Efficiency of SQU Eco-House*, US\$13000, The Research Council, Oman.
- ▲ *Double-Shell Building Thermal Performance of Full-Scale Building*, US\$11700, The Research Council, Oman.
- ▲ *Thermal Performance of Double-Shell Test Model: Experimental Study*, US\$16900, The Research Council, Oman.
- ▲ *SQU Zero Emission Campus*, US\$30000, Collaboration project with Institute for Applied Material I Flow Management, Ifas, Umwelt-Campus Birkenfeld, Germany.
- ▲ *Construction a Crystallization-Fouling Test Rig*, Consultation project, TU-Dresden, Germany.
- ▲ *Oman Seawater Irrigation Project*, Consultation project, DGALR, Ministry of Agriculture & Fisheries, Oman and AquaMa Ltd, UK

3.3 Supervision/Co-Supervision of Postgraduate Students (last Five years)

- ▲ *Experimental and Numerical Analysis of Convective Heat Transfer Coefficient from Ground Mounted Photovoltaic Solar Panels in Hot Climates*, Ph.D., Co-supervisor. *In progress*.
- ▲ *Experimental and Computation Investigation of Multi-Phase Flow in Air Cooled Condenser using R134a in an Air Conditioning system*, Ph.D. Co-supervisor. *In progress*.
- ▲ *Solar Thermal Conversion of Plastic Waste into Useful Resources*. *In progress*.
- ▲ *Viscosity Reduction of Omani Crude Oil Using Innovative Renewable Thermal Approach*. *In progress*.
- ▲ *Develop an Efficient Cooling System Using Phase Change Materials for Thermal Management of a Central Processing Unit (CPU)*, 2022.
- ▲ *Utilization of the heat pump in water-cooled chiller in Oman: Potential and Challenges*. MSc thesis-Supervisor, 2018.



3.4 Demonstration of Quality Scholarly Achievements

3.4.1 Selected National and International Recognition in Scholarship

- ▲ BEST PAPER AWARD: *"Heat Transfer Enhancement for better Cooling System of Electronic Components"*, The 3rd International Conference on Fluid Flow and Thermal Science (ICFFTS'22), 27th – 29th October 2022, South Korea.
- ▲ BEST PAPER AWARD: *"Energy Saving Potential and Environmental Impact Associated with Recovering Industrial Waste Heat in Oman"*. The 7th International Conference on Power and Energy Systems Engineering (CPESE 2020), September 2020, Fukuoka, Japan.
- ▲ 1st Place in Mechanical Engineering among 55 universities that participated with 320 projects from across the GCC and MENA region, the 9th Undergraduate Research Competition, Abu Dhabi University, UEA, Abu Dhabi University, UEA, 26th May 2022.
- ▲ 2nd place in Design Competition for Final Year Projects, Department of Mechanical & Industrial Engineering. *"Design, Manufacture, and Investigate an Energy Efficient Cooling System for Thermal Management of Electronics Systems"*, Muscat Engineering Consultancy LLC, 16th May 2022.
- ▲ BEST STUDENT PAPER AWARD: *"Investigation of the Solar Chimney System as a Natural Passive Cooling Technique"*, 11th National Symposium on Engineering Final Year Projects, Nizwa University, Oman. Nizwa University, 10th May 2022.
- ▲ BEST STUDENT INDUSTRIAL PROJECT: *"DW-Eco-Friendly PVC Cleaning System"*, Solar Panel Energy Cleaner Competition (Decathlon Competition) sponsored by BP Oman and implemented by Shams Global Solutions and in partnership with the German University of Technology (GUTech), Muscat, Oman. BP Oman & Shams Global Solutions, 29th June 2021.
- ▲ BEST FYP PROJECT, *"Design, Manufacture, and Investigate an Energy Efficient Cooling System for Thermal Management of Electronics Systems"* Design Competition for Final Year Projects, Department of Mechanical & Industrial Engineering, 15th June 2021, SQU, Oman.
- ▲ BEST STUDENT PAPER AWARD: *"Investigation of the Solar Chimney System as a Natural Passive Cooling Technique"*, The 9th National Symposium on Engineering Final Year Projects, Nizwa, Oman. 1st May 2019. The presented work was part of the research project in Eco-House at SQU.
- ▲ BEST STUDENT PRESENTATION AWARD: *"The Performance of Converting Industrial Waste Heat to Power using Organic Rankine Cycle Technology"*, The 6th National Symposium on Engineering Final Year Projects Nizwa, Oman, 4th May 2016. The presented work was part of the research project dealing with enhancing energy management at the industrial sector in Oman.

3.4.2 Ranking of Journals

I urge myself to be published my scholarly achievements in high-ranking scientific journals as shown in the table.



| Journal Name | Impact Factor | Quartile | H Index | Publisher |
|---|---------------|----------|---------|-------------------------|
| Energy Conversion and Management | 9.707 | Q1 | 192 | Elsevier Ltd. |
| Desalination | 9.501 | Q1 | 184 | Elsevier Ltd. |
| Energy Reports | 6.87 | Q1 | 33 | Elsevier Ltd. |
| Thermal Science and Engineering Process | 4.395 | Q1 | 27 | Elsevier Ltd. |
| International Journal of Thermal Sciences | 3.744 | Q1 | 119 | Elsevier Ltd. |
| International Journal of Energy Research | 3.741 | Q1 | 95 | John Wiley & Sons Ltd |
| Chemical Engineering Research & Design | 3.35 | Q1 | 99 | Inst. of Chemical Eng. |
| Heat Transfer Engineering | 1.693 | Q1 | 63 | Taylor and Francis Ltd. |
| Chemical Engineering & Technology | 1.543 | Q2 | 81 | Wiley-VCF-Verlag |
| Desalination & Water Treatment | 0.854 | Q3 | 60 | Desalination |

3.4.3 Reviewer Duties

Reviewing Journal Papers: I have been invited to review journal papers by the following academic journals:

- Energy Reports. [Q1 Journal]
- International Journal of Heat and Mass Transfer. [Q1 Journal]
- Sustainable Energy Technologies and Assessments. [Q1 Journal]
- Thermal Science and Engineering Progress. [Q1 Journal]
- International Journal of Thermal Sciences. [Q1 Journal]
- Chemical Engineering Science Journal. [Q1 Journal]
- Heat Transfer Engineering Journal. [Q1 Journal]
- Reviewer for the Journal of Energy and Power Engineering
- Reviewer for the Journal of Engineering Research (TJER)

Reviewing Research Proposals/Projects:

- External Reviewer for The Research Council (TRC) project titled "Concentrated solar collectors with Desert-sand thermal storage system for applications in Oman", Oman, March 2022.
- Internal Reviewer, participating in the review process of the SQU internal grant proposals for the academic years 2020 and 2021.
- External Reviewer for The Research Council (TRC) project titled "Development of Low Cost and Metal-Free Counter Electrode for Dye-Sensitized Solar Cells (DSSCs) Using Biomass of *Ziziphus mauritiana*", Oman, May 2021.
- External Reviewer for The Research Council (TRC) project titled "Design and development of energy harvesters based on hybrid halide perovskites", Oman, May 2020.
- Project evaluation of the 10th Engineering Forum organized by the Engineering Society at SQU (first virtual version), 5th-9th June 2020.
- Project evaluation of the 9th Engineering Forum organized by the Engineering Society at SQU, Oman, 5th-9th June 2019.



- Project evaluation of the 14th Chemical Engineering Gathering (ASORA) organized by the Society of Chemical Engineering (SCHEME) at SQU, Projects evaluator at the 10th Engineering Gathering, SQU, 2018.

3.4.4 Examination Committees (External & Internal Examiner)

- Thesis Examining Committee External Examiner & member, "Impact of Courtyard Typologies on Thermal and Energy Performance of Residential Buildings in the Hot Climate of Oman", SQU, Oman, 2023.
- External Examiner for the architectural engineering students, final year graduation projects, December, SQU, Oman, 2021.
- Thesis Examining Committee External Examiner & member, "Impacts of PV Systems Integration on PDO-MAF Distribution Network", SQU, Oman, 2020.
- Thesis Examining Committee member, "Designing and Testing a Spray-type Direct-Contact Dehumidifier for the Seawater Greenhouse (SWGHE)", SQU, Oman, 2019.
- External Examiner for the architectural engineering students, final year graduation projects, December, SQU, Oman, 2019.
- Chair of examination committee "Optimization of PV/Battery System for Street Lighting and Feasibility Study in Oman", SQU, Oman, 2018.
- Thesis Examining Committee External Examiner & member, "Experimental and Theoretical Aspects of Phase Change Materials in Solar Desalination", SQU, Oman, 2018.
- Thesis Examining Committee Supervisor & member "Utilization of the Heat Pump in Water Cooled Chiller in Oman: Potential and Challenges", Supervision, 2018.
- Thesis Examining Committee External Examiner & member "Experimental and Theoretical Aspects of Phase Change Materials in Solar Desalination". SQU, Oman, 2018.
- External Examiner for the architectural engineering students, final year graduation projects, December, SQU, Oman, 2018.
- Thesis Examining Committee member, "Effect of CO₂/Water Ratio on CO₂-Based Enhanced Oil Recovery Development and Comparison of TMYs for Renewable Energy Applications in Oman Using Ground and Satellite Meteorological Data", SQU, Oman, 2017.
- Thesis Examining Committee member, "Development and Comparison of TMYs for Renewable Energy Applications in Oman Using Ground and Satellite Meteorological Data", SQU, Oman, 2017.
- External Examiner for the architectural engineering students, final year graduation projects, December, SQU, Oman, 2017.
- Thesis Examining Committee member, "Modeling and Optimization of Organic Rankin Cycle in the Sultanate using vacuum tube solar collectors", SQU, Oman, 2016.



- External examiner of PhD thesis “Modelling and Experimental Analysis on Thermal Performance of Single Solar Still”, Faculty of Mechanical Engineering, College of Engineering, ANNA University, Tamil Nadu, India, 2016.
- Final Year Projects FYP report and presentation examiner at the department of Mechanical and Industrial Engineering, SQU, Oman.

3.4.5 Professional Membership

- Editorial Board Member of the Journal of Technology Innovations in Renewable Energy.
- Editorial Board Member of Digital Manufacturing Technology (DMT).
- Member of the International Association of Engineers (IAENG). (Membership ID: 266260)
- Member of the World Society of Sustainable Energy Technologies (WSSET). (Membership ID: 2289)
- Member of the International Solar Energy Society (ISES), Germany. (Membership ID: 1010495)
- Member of the Asian Council of Science Editors. (Membership ID: 968.26364)
- Member of the International Association of HydroEnvironment Research and Engineering- Baden Württemberg (IAHR-BW), Germany.

3.4.6 National & International Contributions “Member of Scholarly Committees”

- *Cahir of Session:* ATE-HEFAT, the 15th International Conference Applied Thermal Engineering, 2021.
- *The Technical Programming Committee:* ATE-HEFAT, the 15th International Conference Applied Thermal Engineering, 2021.
- *The Scientific and Technical Committee:* The 2nd International Conference on Comfort At The Extremes, CATE'21, 2021.
- *The Organizing Committee:* 8th Global Summit and Expo on Pollution Control webinar, 2020.
- *The Technical Program Advisory Committee (TPAC):* International Conference on Marine Engineering and Technology Oman 2019, ICMET 2019, Military Technological College, Muscat Oman, 2019.
- *The Program Committee:* 5th International Conference on Machine Design and Manufacturing Engineering (ICMDME2018), January 2018, Jakarta, Republic of Indonesia, 2019.
- *The Scientific and Technical Committee:* International Conference on Metal Material Processes and Manufacturing ICMMPM 2018, Jeju National University, South Korea, 2018.
- *The Scientific Program Committee:* The 1st symposium in Technology of Renewable Energy Systems, SQU, Oman, 2018.
- *Cahir of Session:* International Conference on Applied Mechanics and Industrial Systems (ICAMIS), SQU, Oman, 2016

3.5 Professional Development in Scholarship

Attended several scientific workshops, symposium, and Forum as follow:

- Renewable Energy & Energy Efficiency Training Program, EU-GCC Clean Energy Technology Network, 29th-30th March 2021.
- Challenges in Fourth Industrial Revolution (4IR) *Symposium*, National University, Oman, 11th December 2019.
- 9th National Symposium on Engineering Final Year Projects, 1st May 2019, Nizwa, Oman.
- Advanced Octave Workshop, SQU, Oman, 30th April 2019.
- The 2nd International QU-SQU Workshop on Engineering in Medicine, SQU, Oman, 23rd December 2018, SQU.



- 8th National Symposium on Engineering Final Year Projects, 2nd May 2018, Nizwa, Oman.
- Taiwan Green Energy Solution Day, 29th March, 2018, Radisson Blu Muscat, Oman.
- Forum-1 R & D of Eco-House Competition-2, 1st March 2018, GUTech, Muscat, Oman.
- Research Base Teaching, *workshop*, SQU, Oman, 27th February 2018.
- Annual research forum of the TRC, Muscat, Oman, December 2017.
- Numerical Optimization Software, *workshop*, SQU, Oman, 8th-9th November 2017.
- 2nd Omani Desalination Network Meeting & 2nd MEDRC Alumni Lecture Series, at Middle East Desalination Research Center (MEDERC), *workshop*, Oman, Muscat, 23th May 2017.
- Numerical Optimization Software, *workshop*, SQU, Oman, 8-9 January 2017.
- Oman Desalination Research Network (OMDEREN), *workshop*, Muscat, Oman, April 2016.
- Water and Energy Research *Symposium*, Muscat, Oman, 16th -17th March 2016.
- Training program/ANSYS, *workshop*, Muscat, Oman, 21st-25th February 2016.
- "Start-up Oman" A joint project of TRC and SQU, Muscat, Oman, February 2016.
- 6th National *Symposium*: Engineering Final Year Project, Nizwa, Oman, 4th May 2016.
- The 2nd Arab-American Frontiers of Science, Engineering and Medicine *Symposium*, December 13-15, 2014, in Muscat, Oman.



4.

UNIVERSITY AND COMMUNITY SERVICES

4.1 Administrative Positions

| | | |
|----|---|-------------------------|
| 1. | Head of University Project (#1844/2021) | Aug. 21 -present |
| 2. | Acting Assistant Dean for Undergraduate Studies, College of Engineering, SQU. | Several times |
| 3. | Acting Head of Mechanical and Industrial Department (MIE), College of Engineering, SQU. | 10 July-20 August 2020. |

4.2 Department Committees

| No. | Committee Name | Role | Duration |
|-----|---|--------------------------------|-----------------------|
| 1. | Department Curriculum & Timetabling Committee | Chair & Coordinator | Sep. 2016 - Present |
| 2. | Student-Staff Liaison Committee | <i>member</i> | Sep. 2016 - Present |
| 3. | Social Activities Committee | <i>member</i> | Sep. 2016 - Aug. 2017 |
| 4. | Social Activities Committee | Chair | Sep. 2017 - Present |
| 5. | Thermofluids Focus Group | Leader | Sep. 2017 - Present |
| 6. | Department Curriculum and Accreditation Committee | <i>member</i> | Sep. 2018 - Present |
| 8. | Recruitment Committee | <i>member</i> | Sep. 2019 - Aug. 2022 |

4.3 College Committees

| No. | Committee Name | Rule | Duration |
|-----|-------------------------------------|---------------|-----------------------|
| 1. | Media Committee | Chair | Sep. 2020 - Aug. 2022 |
| 3. | Undergraduate Studies Committee | <i>member</i> | Sep. 2016 - Present |
| 4. | College Social Activities Committee | <i>member</i> | Sep. 2017 - Present |