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Assistant professor/ Mechanical Engineering

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Areas of Interest

- Sustainable Power Engineering and Renewable Energy Sources
- Air-Conditioning and Refrigeration
- Energy Storage Systems
- Computational Heat Transfer and Fluid Dynamics

Education and Qualifications

Oct 2021	Ph.D. in Mechanical Engineering, McGill University: CGPA 3.73/4.00. Thesis Title: Investigations of Ice-Water Systems in Rectangular Plate-Fin Enclosures for Potential Applications to Solar-Assisted Cooling	
Feb 2014	M.Sc. in Mechanical Engineering, University of Jordan, CGPA: 3.53/4.00 Thesis Title: Exergy and Energy Analysis of Hybrid Inverted Trickle Photovoltaic/Thermal (PV/T) Solar System in the Collector and Desalination Modes	
Feb 2010	B.Sc. in Mechanical Engineering, University of Jordan, CGPA: 3.38/4.00	

Work Experience

Nov 2021– Now	Assistant Professor at the Department of Mechanical Engineering, the University of Jordan
(Jan – April) 2023	Former Part Time Lecturer at the Department of Mechanical Engineering, Concordia University, teaching HVAC Course (MECH 453/6181)
(Jan – April) 2023	Former Part Time Lecturer at the Student Success Center, Concordia University, teaching UNSS 201 Course
(Jan – April) 2023	Former Part Time Lecturer at the Department of Mining & Materials Engineering, McGill University, teaching Mathematical Applications Course (MIME 209)
(Aug – Dec) 2022	Former Part Time Lecturer at the Department of Mechanical Engineering, McGill University, teaching Measurement Lab and Statistics (MECH 261/262)

- Jan 2015– Dec 2021 Former Head of Teaching Assistants at McGill University, Montreal for Mechanical Lab. Course (MECH 362):
This course consists of a set of experiments that support the theoretical background covered the following topics: Thermodynamics, Vibrations, Fluid Mechanics, and Heat Transfer. It aims to expose students to experimental equipment, data collection, and reporting which would support the theoretical background obtained in these topics.
- Jan 2015 – Dec 2021 Teaching Assistant, Graduate Student Assistant, and Grader at McGill University, Montreal:
- Teaching Assistant in Heat Transfer course (MECH 346)
- Graduate Student Assistant in Machine Element Design course (MECH 393)
- Grader in the following courses: Machine Element Design (MECH 393), Measurements Lab. (MECH 262) and Principles of Manufacturing (MECH360)
- Sept 2011– Aug 2014 Teaching Assistant at the University of Jordan in the following courses: Computer Programming Language (MATLAB), Measurements Lab., Strength of Material Lab., and Engineering Drawing
- July 2010 – Aug 2011 Procurement (Local and External Purchasing) Engineer at KADDB (King Abdulla II for Development Design Bureau)

Scientific/Academic Activities and Honors

- 2018– 2019 H.S. Ewing & Heirs Demonstratorship Award from the Mechanical Engineering Department, McGill University
- Nov 2016 Workplace Hazardous Materials Information System (WHMIS) Training at McGill University
- 2014 – 2018 Scholarship from the University of Jordan that covered my Ph.D. Studies at McGill University
- 2012 – 2014 Jordan National Committee (JNC) Member /International Institute of Refrigeration (IIR) in France
- Sept 2012 Trophy from Jordan National Committee (JNC) for working as Secretary of the 4th Jordanian IIR International Conference on Refrigeration and Air-Condition, Amman, Jordan
- Sept 2012 Certificate of Recognition from the International Institute of Refrigeration (IIR)/ Paris-France, for working as Secretary of the 4th Jordanian IIR International Conference on Refrigeration and Air conditioning, Amman, Jordan
- June 2012 Trophy from Golden Gate for Organization of Exhibitions and for serving as a representative of the University of Jordan at the 9th JIMEX Exhibition
- June 2012 Representative of the University of Jordan at the 9th JIMEX Exhibition, Amman, Jordan
- 2011 – 2014 Point of Contact between the Mechanical Engineering Department and the University of Jordan Website Office

- 2011 – 2013 Scholarship from the University of Jordan that covered my M.Sc. Studies at the University of Jordan
- (May – July) 2010 Training at Izzat Marji Group Company
- 2010 – Now Jordan Engineering Association (JEA) Member
- Sept 2009 Participation in Green Energy Conference that was held at the Le-Royal Hotel, Amman, Jordan
- (Jun – Aug) 2009 Summer Training Course at Royal Jordanian in International Queen Alia Airport
- (Jan – Dec) 2009 Graduation Project: An Experimental Study for Under-Floor Heating and Ceiling-Cooling Panel System

Skills

- Languages: Arabic: Mother tongue; English: Fluent (spoken and written)

- IT skills:
 - 1- ANSYS (Finite Element Analysis and Simulation), Level of Familiarity: Very Good
 - 2- Comsol Multiphysics Software, Level of Familiarity: Very Good
 - 3- Abaqus Software (Finite Element Analysis and Simulation), Level of Familiarity: Very Good
 - 4- MATLAB (Computer Programming Language), Level of Familiarity: Very Good
 - 5- Fortran (Computer Programming Language), Level of Familiarity: Very Good
 - 6- AUTOCAD (2D & 3D), Level of Familiarity: Excellent
 - 7- SOLIDWORKS, Level of Familiarity: Very Good
 - 8- LabVIEW (Systems Engineering Software), Level of Familiarity: Very Good
 - 9- Microsoft Office (Excel, Word, PowerPoint), Level of Familiarity: Very Good

Presentations & Publications

Matar, O. (2021), Investigations of ice-water systems in rectangular plate-fin enclosures for potential applications to solar-assisted cooling, Ph.D. Thesis, McGill University, Montreal, QC, Canada.

Baliga, B.R., Medvescek J. I., Matar O., Likhmanets I., and Mydlarski L. (2021), Cost-effective approaches to predictions of thermofluid phenomena in engineering systems, Plenary Lecture, Proceedings of 8th International Symposium on Advances in Computational Heat Transfer (CHT-21), Rio de Janeiro, Brazil, August 15 – 19.

Matar, O. and Baliga, B.R. (2019), Observations on Fixed-grid numerical simulations of steady ice-water systems in rectangular plate-fin geometries with laminar natural convection in the liquid, Proceedings of 14th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2019), Wicklow, Ireland, July 22 – 24.

Matar, O. (2013), Exergy and Energy Analysis of Hybrid Inverted Trickle Photovoltaic / Thermal (PV/T) Solar System in the Collector and Desalination Modes, M.Sc. Thesis, University of Jordan, Amman, Jordan.

References: *Upon request*