

Mohammad Mousa Shalby

Experience

September,2019–Now

Chair of Mechanical Engineering Department • Al-Hussein Bin Talal University Ma'an, Jordan.

July 2019–Now

Assistant professor • Al-Hussein Bin Talal University Ma'an, Jordan.

March,2019–June,2019

Teacher Assistant • University of Technology Sydney, Sydney, Australia

- 1-Mechanical Design.
- 2-Material Handling.
- 3-Advanced Manufacturing.
- 4-Fundamentals of Mechanical Engineering.

February 2006-June 2015

Technical Support Engineer • Al-Hussein Bin Talal University Ma'an, Jordan.

- 1- Carry out regular inspections for the laboratory equipment performance. Moreover, ensure that all devices are working well, and maintain the suitability to conduct scientific experiments.
- 2- Calibration the tools and the equipment according to the manufacturer's recommendations.

June 2010- January 2015

Director of Engineering Workshops Department • Al-Hussein Bin Talal University Ma'an, Jordan.

I am one of the founding members of the university's engineering workshops. I led the production team at the workshops to fabricate all kinds of furniture needed by the university. I improved the production plans to cover the local market by furniture with competitive prices and high qualities. I encouraged local industries and corporations to present their industrial problem as engineering graduation project and subsidize them. I managed this department according to the recent management and quality standards such as ISO.

June 2010- January 2015

Associate Lecturer • Al-Hussein Bin Talal University Ma'an, Jordan.

- 1- Teaching a project management topic
- 2- Teaching a statics topic
- 3- Teaching an Engineering drawing topic



Ma'an - Jordan p. B (20)
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References

- 1- Prof. Ahmed Abo Jrrai
Al-Hussein Bin Talal University
Vice President For Administration
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ahmad_abujrai@ahu.edu.jo
- 2- Paul Walker School of Mechanical,
and Mechatronic Systems
University of Technology Sydney
Sydney, NSW 2007, Australia
Paul.Walker@uts.edu.au
- 3- David G. Dorrell
School of Engineering, Howard
College Campus
University of KwaZulu-Natal
Durban 4041, South Africa
dorrelld@ukzn.ac.za
- 4- Ahmed Elhanafi
National Centre for Maritime
Engineering and Hydrodynamics
Australian Maritime College
University of Tasmania, Launceston
Tasmania, Australia
Ahmed.Elhanafi@utas.edu.au

- 4- Thermodynamic and Heat Transfer laboratory supervisor
- 5- Fluid Mechanics Laboratory supervisor

Education

University of Technology Sydney, Sydney, Australia

- PhD Mechanical Engineering.

Mu'tah University, Karak, Jordan

- M.Sc. Degree in Engineering Management

University of Science and Technology Irbid – Jordan

- B.Sc. Degree in Mechanical Engineering

Communication skills

I was a key speaker for the following conferences:

- 1- 3rd Asian Wave and Tidal Energy Conference – AWTEC 2016, 24-28 October, Singapore.
- 2- 4th International Conference on Energy and Environment Research ICEER 2017, ISEP (Polytechnic of Porto, Portugal), in Porto, Portugal, July 17-20, 2017.
- 3- The 13 Pacific-Asia Offshore Mechanics Symposium, October 14-17, Jeju, Korea; 2018.
- 4- IEEE-ECCE 2019, CONFERENCE & EXPO, Baltimore, MD | Sept. 29 – Oct. 3, 2019.
- 5- Frontiers of Science in Jordan Symposium, Renewable Energy issues in South Jordan held at the Royal Scientific Society (RSS), 2021.

Examining/Advisory Committees

Member of master's thesis- examination committee for the following dissertations:

1. MSc in Renewable Energy Engineering, Department of Mechanical Engineering, College of Engineering, Reem Ahmad At-Tawarah, Al Hussein Bin Talal University, Ma'an 2020, Thesis Title: Investigation and evaluation of Wind Energy Potential For Selected Areas In Jordan.
2. MSc in Renewable Energy Engineering, Department of Mechanical Engineering, College of Engineering, Wala'a Farouq Zaid Alomary, Al-Hussein Bin Talal University, Ma'an 2021, Thesis Title: Geothermal Energy Harvesting In Jordan And Its Applications.
3. MSc in Renewable Energy Engineering, Department of Mechanical Engineering, College of Engineering, Jehad Tawfiq Al Bdour, Al-Hussein Bin Talal University, Ma'an 2021, Thesis Title: Analysis and Study of Hybrid Renewable Energy System for Green Building to Improve Efficiency and Reduce GHG Emissions.
4. MSc in Renewable Energy Engineering, Department of Mechanical Engineering, College of Engineering, Laith Mohammad Arrfou', Al-Hussein Bin Talal University, Ma'an 2021, Thesis Title: Development of Sustainable Renewable Energy System to Reduce Carbon Emission in Irrigation Stations at Off Grid Remote Area by Hybrid System.

Publications

• Journal Papers

- [1] **Shalby**, M., Elhanafi, A., Walker, P., Dorrell, D.G., Salah, A. and Gomaa, M.R., 2021. Experimental Investigation of the Small-scale Fixed Multi-chamber OWC Device. *Chinese Journal of Mechanical Engineering*, 34(1), pp.1-14.
- [2] Gomaa, M.R., Al-Dmour, N., AL-Rawashdeh, H.A. and **Shalby**, M., 2020. Theoretical model of a fluidized bed solar reactor design with the aid of MCRT method and synthesis gas production. *Renewable Energy*, 148, pp.91-102.
- [3] **Shalby** M, Elhanafi A, Walker P, Dorrell DG. CFD modelling of a small-scale fixed multi-chamber OWC device. *Applied Ocean Research*. 2019;88:37-47.
- [4] **Shalby** M, Dorrell DG, Walker P. Multi-chamber oscillating water column wave energy converters and air turbines: A review. *Int J Energy Res*. 2018;1-16. <https://doi.org/10.1002/er.4222>.
- [5] Marashli, A., Alburdaini, M., Al-Rawashdeh, H. and **Shalby**, M., 2021. Statistical Analysis of Wind Speed Distribution Based on Five Weibull Methods for Wind Power Evaluation in Maan, Jordan.
- [6] Gomaa, M.R., Ghayda' A, M., **Shalby**, M. and AL-Rawashdeh, H.A., A State-of-the-art Review on a Thermochemical Conversion of Carbonaceous Materials: Production of Synthesis Gas by Co-gasification Process-Part I.

• Conference Proceedings

- [1] Ismail, F.B., Mahdi, M.N., Salah, A.A., Al-Muhsen, N.F., **Shalby**, M.M. and Al Nafie, Y.K., 2021, October. Feasibility Study of Wind Energy Generation Systems in Masirah Island: Real Case Study. In 2021 International Conference on Electrical Engineering and Informatics (ICEEI) (pp. 1-6). IEEE.
- [2] **Shalby**, M., Dorrell, D.G., Walker, P. and Elhanafi, A., An Experimental Investigation into the Wave Power Extraction of a Small-Scale Fixed Multi-Chamber OWC Device. In 2019 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 4982-4987). IEEE.
- [3] **Shalby** M, Walker P, Dorrell DG, Elhanafi A. Validation of a Numerical Model for a SmallScale Fixed Multi-Chamber OWC Device. In: Proceedings of the Thirteenth Pacific-Asia Offshore Mechanics Symposium, October 14-17, Jeju, Korea; 2018.
- [4] **Shalby** M, Walker P, Dorrell DG. Modelling of the multi-chamber oscillating water column in regular waves at model scale. In: Proceedings of the 4th International Conference of Energy and Environmental Research, Energy Procedia, July 17-20, Porto, Portugal; 2017.
- [5] **Shalby** M, Walker P, Dorrell DG. The investigation of a segment multi-chamber oscillating water column in physical scale model. In: Proceedings of the 5th International Conference on Renewable Energy Research and Applications, November 20-23 Birmingham, UK; 2016.
- [6] **Shalby** M, Walker P, Dorrell DG. The Characteristics of the Small Segment Multi-Chamber Oscillating Water Column. In: Proceedings of the 3rd AsianWave and Tidal Energy Conference, October 24-28 Singapore; 2016.