ALI MOHAMMED HUSSEIN MOHSEN

Scopus: https://www.scopus.com/authid/detail.uri?authorId=55635108600
Google Scholar: https://scholar.google.com/citations?user=7Fc4sGgAAAAJ&hl=en
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A committed lecturer with more than 6 years of experience at academic institutions. Teaching students from various social and cultural backgrounds. Possessing excellent administrative, verbal communication and written skills along with constructive and effective teaching methods that promote a stimulating learning environment. Able to work in a managerial role or as part of team and having the proven ability to successfully work to tight schedules and deadlines. I am interested in developing a career which combines teaching and research. My principal research interests lie in the field of convective heat transfer enhancement, two-phase flow, and supersonic/ hypersonic flow.

Education

2012 – 2017 **PhD in Mechanical Engineering** 'Numerical and Experimental Study on High Speed Transient Flow In Complete Shock Tunnel and Gun Tunnel'

Malaysia, Universiti Tenaga Nasional, Center of Advanced Computational Fluid Dynamics.

Supervisor: Prof. Dr. Mohd Zamri Yusoff, Deputy Vice-Chancellor Universiti Tenaga Nasional.

2012 – 2014 **Graduate Research Assistant (GRA)**, Universiti Tenaga Nasional, Malaysia.

2010 – 2012 **Master in Mechanical Engineering** 'Numerical and Experimental Study on the Effects of Area Contraction on Shock Tube Performance'

Malaysia, Universiti Tenaga Nasional, Center of Advanced Computational Fluid Dynamics.

Overall CGPA 3.52 out of 4.0

Supervisor: Prof. Dr. Mohd Zamri Yusoff, Deputy Vice-Chancellor Universiti Tenaga Nasional.

2002 – 2007 **Bachelor in Mechanical Engineering**

Iraq, University of Baghdad.

Professional Bodies/Professional Recognition

- Board of Engineers Malaysia (BEM) – Graduate Engineer – since 2018
- Iraqi Engineers Union (IEU) - Member- since 2007
- Iraqi Academics Syndicate – General Authority Member – since 2021

Relevant Skills

- ✓ Leadership and Team Management, Coordinating, Scientific Research, Lecturing, English Proficiency, Mechanical Design, Mechanical Drawing, Training and Development.
- ✓ Extensive knowledge in ANSYS FLUENT, PLC (CX-Programmer), Solid Works, AutoCAD, PTC Creo, Microsoft Office (Word, Excel, etc.).
- ✓ Programming ability in FORTRAN.

Academic Experience

- **5/2/2023 – Present** **Head of Scientific Affairs Department and Senior Lecturer, University of Warith Al-Anbiyaa, Iraq.**

- **13/12/2022 – 31/01/2024** **Senior Lecturer, School of Engineering, Taylor's University, Malaysia.**

Teaching the following courses:

o Engineering Dynamics; Automatic Control and Instrumentation.

Other duties

- Member of the Organising Committee, Finance Team Head, EURECA 19 Conference, School of Engineering, Taylor's University., 01/06/2023 to 03/07/2023.
- Member of the Organising Committee, PERMINDA 2023, a landmark symposium on waste management and sustainable development, 20th and 21st of November 2023.
- Internal Examiner, Doctoral Thesis Proposal Defence, May 2023.
- Judge, 19th and 20th EURECA International Engineering and Computing Research Conference, 2023.
- Judge, Project Design Competition during the Taylor's Engineering Fair 2023, July 2023.

Supervision

- ✓ Abdoulfatah Said Omar, Bachelor's Degree (Main Supervisor)
- ✓ Teh Aun Yao, Bachelor's Degree (Main Supervisor)
- ✓ Kim Shi Xian, Bachelor's Degree (Main Supervisor)
- ✓ Maiwand Alam Noor Ahmad, Bachelor's Degree (Main Supervisor)
- ✓ Ng Min Hui, Bachelor's Degree (Co-Supervisor)
- ✓ Kavineswaren A/L Selvarasan, Bachelor's Degree (Co-Supervisor)
- ✓ Suren A/L Krishnan, Bachelor S Degree (Co-Supervisor)

- **11/10/2021 – 30/11/2022** **Head of Department, the Air Conditioning and Refrigeration Techniques Engineering, College of Engineering, University of Warith Al-Anbiyaa, Iraq.**

Teaching the following courses:

o Heat Transfer.

Other duties

- Member of the Examination Committee
- Member of the University board Committee
- Head of the Scientific Committee of the Department
- Member of the Strategic plan preparation committee
- Member of College of Engineering Self-Assessment Report preparation committee

- **12/01/2021 – 10/10/2021** **Program Coordinator, the Air Conditioning and Refrigeration Techniques Engineering, College of Engineering, University of Warith Al-Anbiyaa, Iraq.**

  Teaching the following courses:

  o Mechanics of Fluids I & II

  Other duties

  - Member of the Examination Committee
  - Member of the College of Engineering board Committee
  - Member of the Scientific Committee of the Department
  - Member of the Strategic plan preparation committee
  - Member of College of Engineering Self-Assessment Report preparation committee

- **01/10/2019 – 11/01/2021** **Lecturer at the Air Conditioning and Refrigeration Techniques Engineering Department, College of Engineering, University of Warith Al-Anbiyaa, Iraq.**

  Teaching the following courses:

  o Heat Transfer; Mechanics of Fluids I & II

  Other duties

  - Member of the Quality Assurance Division
  - Member of the Examination Committee

- **14/10/2017 - 30/09/2019** **Lecturer at the Air Conditioning and Refrigeration Techniques Engineering Department, Al-Mustaqbal University College, Iraq.**

  Teaching the following courses:

  o Advanced Mathematics I, Mechanical Drawing; Heat Transfer

  Other duties

  - Member of the Scientific Committee of the Department
  - Member of the Examination Committee

- **28/05/2013 - 29/01/2016** **Tutor at the College of Engineering, University Tenaga Nasional.**

  Tutoring the following courses:

  o Mechanics of Fluids I; Engineering Graphics and CAE (PTC Creo + AutoCAD)

- **15/01/2012 - 28/02/2014** **Graduate Research Assistant (GRA), Universiti Tenaga Nasional, Malaysia.**

- **23/11/2010 - 04/02/2011** **Tutor at the College of Engineering, Universiti Tenaga Nasional.**

  Tutoring the following courses:

- Heat Transfer

Industrial Experience

- **02/06/2008 - 10/6/2009 Site Engineer, Ministry of Industry & Mineral State Industrial Design and Consultation Company SIDCCO, Iraq.**
  Job Details: Supervising the construction and testing process of crude oil tanks and piping network of a crude oil refining plant in Al-Diwaniya Province.

- **01/07/2007 - 01/06/2008 Site Engineer, Al-Tathamen Al-Iraqi company, Iraq.**
  Job Details: dealing with the mechanical installation process of SIEMENS 8BT2 Air-Insulated Medium Voltage Switchgears (33 KV) in Old al Kut substation.

Grants and Fellowships

- ✓ 2012 > 2014 - Graduate Research Assistant, Universiti Tenaga Nasional, Malaysia.

Awards and Honors

- ❖ 2023 - 2024: Excellent Teaching Engagement Award (three times in a row), Taylor's University, Malaysia.
- ❖ 2022 - Three Letters of Appreciation from the Dean of College, three from the Chancellor of the University of Warith Al-Anbiyaa, and one letter of Appreciation from the Ministry of Higher Education, Iraq.
- ❖ 2021 - Three Letters of Appreciation from the Dean of College, three from the Chancellor of the University of Warith Al-Anbiyaa, and two letter of Appreciation from the Ministry of Higher Education, Iraq.
- ❖ 2020 - Two Letters of Appreciation from the Dean of College, one from the Chancellor of the University of Warith Al-Anbiyaa, and one letter of Appreciation from the Ministry of Higher Education, Iraq.
- ❖ 2019 - Certificate of Excellence, Al-Mustaqbal University College.
- ❖ 2019 - Three Letters of Appreciation, Al-Mustaqbal University College.

Delivered Training Courses and Seminars

- ✓ Extensive Training course (14 - 16 March 2022) entitled "Three-point flexural test using ANSYS software" held in the College of Engineering, the University of Warith Al-Anbiyaa, Iraq.
- ✓ Extensive course (23 - 26 January 2022) entitled "How to be ready for the annual evaluation process for the teaching and administrative university staff" held in the University of Warith Al-Anbiyaa, Iraq.
- ✓ Three-day seminar (4 - 6 October 2021) entitled "Instruction on the work principle of the examination committee in the college of engineering, while highlighting some common misinterpretations" held in the College of Engineering, the University of Warith Al-Anbiyaa, Iraq.
- ✓ Three-day seminar (5 - 7 May 2021) on "Using modern technological advancement and smart-boards to deliver and assess online lecturing" held in the University of Warith Al-Anbiyaa, Iraq.

- ✓ Extensive course (March 2019) on "Recent Advancement in AutoCAD template preparation and implementation for multiple switch-board projects" held in Powerwell International Sdn. Bhd., Malaysia.

Attended Courses and Seminars (selected):

- ✓ Supervision Essentials Training – Taylor's University, Malaysia – 2023.
- ✓ Writing Programme Learning Outcomes and Module Learning Outcomes – Taylor's University – 2023.
- ✓ Outcome Based Education CQI Workshop for Module Leaders – Taylor's University, Malaysia – 2023.
- ✓ The Purpose Driven University (Webinar) – Taylor's University, Malaysia – 2023.
- ✓ Reflective Practice for Teaching & Learning Development – Taylor's University, Malaysia – 2023.
- ✓ Empowering Student Growth Through Meaningful Learning Reflections – Taylor's University – 2023.
- ✓ Stepping Out of Your Research Comfort Zone – Taylor's University, Malaysia – 2023.
- ✓ Administrative communication methods - University of Warith Al-Anbiyaa, Iraq – 2022.
- ✓ Good Laboratory Practice GLP - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq 2022.
- ✓ Safety Measures in laboratories - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq 2022.
- ✓ Accreditation requirements and application process for engineering programs - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq – 2021.
- ✓ Finite Element Analysis using SolidWorks Simulation Programs - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq – 2021.
- ✓ Camtasia Studio in E-learning - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq – 2021.
- ✓ Managing online classes using Google Classroom - Technical Instructors Training Institute, Iraq – 2020.
- ✓ Google Meet in E-learning - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq – 2020.
- ✓ Short Course on CATIA - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq – 2019.
- ✓ Central Air-conditioning systems for Modern Buildings - Continuing Education Center, University of Warith Al-Anbiyaa, Iraq – 2019.
- ✓ Modern Teaching Methods - Continuing Education Center/ Wasit University, Iraq – 2018
- ✓ ISI Publication Workshops - College of Engineering/ University Tenaga Nasional, Malaysia – 2013.
- ✓ Technical information course for Air-Insulated Medium voltage switchgear - SIEMENS, Turkey – 2008.

Completed Research Projects

- ✓ Heat Transfer and Water Flow over Scalene Triangular Shaped Ribs in a Rectangular Channel –Taylor's University, Malaysia, 2023.
- ✓ Numerical Investigation on the Effects of Driver/Driven Length Ratio on the Compressible Highly Transient Flow Conditions in Shock Tubes – Taylor's University, Malaysia, 2023.
- ✓ Numerical Analysis of Pin Fins Effectiveness for Heat Transfer Enhancement in Double Pipe Heat Exchanger: Comparison of Conical and Cylindrical Pin Fins – Taylor's University, Malaysia, 2023.

- ✓ Enhancing Heat Removal and H2O Retention in Passive Air-Cooled PEM Fuel Cell by Altering the Flow-Field Geometry – Taylor's University, Malaysia, 2023.
- ✓ Theoretical study to develop new simplified-sheet to estimate air conditioning cooling load in Iraq using TETD method - University of Warith Al-Anbiyaa, Iraq, 2021.
- ✓ Experimental Investigation of Heat Transfer of Nanofluid in Elliptical and Circular Tubes - University of Warith Al-Anbiyaa, Iraq, 2020.
- ✓ Experimental facility to study two-phase fluid flow over a rectangular obstruction located inside enlarged rectangular channel – Mustaqbal University, Iraq, 2018.
- ✓ Numerical and Experimental Study on High Speed Transient Flow in Complete Shock Tunnel and Gun Tunnel – Universiti Tenaga Nasional, Malaysia, 2017.
- ✓ Numerical and Experimental Study on the Effects of Area Contraction on Shock Tube Performance – Universiti Tenaga Nasional, Malaysia, 2012.

Undergoing Research projects:

- o Augmentation of Natural Convection Heat Transfer in Trapezoidal Solar Collector of Corrugated Walls and Inner Bodies by Utilizing Water Based Nanofluids.

Research Publications

2023

[1] Naseer H. Hamza, Ammar Abdulkadhim, **Ali M. Mohsen**, Azher M. Abed. 2023, “Analysis of double-diffusive hydrothermal flow in a domestic stack: The effect of side walls patterns”, Heat Transfer. **(Scopus, Q1).** doi:10.1002/htj.22972.

[2] Oleiwi, A., **Mohsen, A.M**., Abdulkadhim, A., Abed, A.M., Laidoudi, H. & Abderrahmane, A. 2023, "Experimental and numerical study on the heat transfer enhancement over scalene and curved-side triangular ribs", Heat Transfer, Vol. 52, No. 5, pp. 3433-3452. **(Scopus, Q1).** https://doi.org/10.1002/htj.22835.

[3] **Mohsen A.M.**, Oleiwi A., Tukkee A.M., Al-Kayiem H.H. 2023 “Experimental Investigation of Heat Transfer Enhancement in Shell and Tube Heat Exchanger Using Discontinuous Curved and Longitudinal Straight Fins”, Journal of Engineering Science and Technology, vol. 18, No. 5, pp. 2327-2339. **(Scopus, Q3).**

[4] Ali M. Tukkee, **Ali M. Mohsen**, Ali Abdul Wahab, Hussain H. Alkayiem. 2023, “An Assessment of the Effects of the Top Cover Plate Material on the Performance of the Solar Vortex Engine”, Journal of Engineering Science and Technology, Vol. 15, No. 6. **(Scopus, Q3).**

[5] Adil Akram Mahmood, Samer A Kokz, **A. M. Mohsen**, 2023, “The Influence of Ultrasonic Impact Peening (UIP) on the Mechanical Properties and Fatigue Life of the AA1100 Alloy”, Journal of Applied Engineering Science, Vol. 21, No. 2. **(Scopus, Q3).** https://doi.org/10.5937/jaes0-38125.

2022

[6] Basem, A., Hammoodi, K.A., Al-Tajer, **A.M., Mohsen**, A.M. & Omar, I. 2022, "A numerical investigation of the increase in heat transfer in a half-cylindrical container filled with phase change copper rods", Case Studies in Thermal Engineering, vol. 40. **(ISI, Scopus Q1)**

[7] Ammar M. AL-Tajer, Abdulhassan A. Kramallah, **Ali M. Mohsen**, Nabeel Sameer Mahmoud, “Experimental Investigation of Heat Transfer of Nanofluid in Elliptical and Circular Tubes”, Mathematical Modelling of Engineering Problems, Vol. 8, No. 4, pp. 665-671. **(Scopus, Q2).**

2021

[8] **A. M. Mohsen**, M.Z. Yusoff, Hakim S. Sultan Aljibori, A. Al-Falahi, Abdul Amir H. Kadhum, “Two-Dimensional Numerical Study of the Transient Flow Conditions in Complete Shock Tunnel”, Journal of Applied and Computational Mechanics, Vol. 7 (2), 2021, pp. 956-964. **(Scopus, Q1).**

[9] Karrar A. Hammoodi, **Ali M. Mohsen**, Ihab Omar,. 2021. “Simplified-Sheet to Estimate Air Conditioning Cooling Load in IRAQ Using TETD Method”. *Design Engineering*, September, 12324-36.

[10] Ali K. Jasim, Hasan Q. Hussein, Hakim S. Sultan, **A. M. Mohsen**, "Numerical Study of Improved Heat Transfer with Phase Change Material Inside Rectangular Cells Using Copper Rods", IOP Conf. Series: Materials Science and Engineering, Vol. 1094, 2021, pp. 1-10.

2012 - 2019

[11] Dhuha Radhi, **A. M. Mohsen**, Ammar Abdulkadhim, "Experimental Investigation of Two-Phase Fluid Flow Over a Rectangular Obstructions Located Inside Enlarged Rectangular Channel", Mathematical Modelling of Engineering Problems, Vol. 6 (2), 2019, pp. 183–187. **(Scopus Q2).**

[12] Ammar Abdulkadhim, Azher M. Abed, **A.M. Mohsen**, K. Al-Farhany, *"Effect of partially thermally active wall on natural convection in porous enclosure"*, Mathematical Modelling of Engineering Problems, Vol. 5 (4), 2018, pp. 395–406. **(Scopus Q2).**

[13] **A. M. Mohsen**, M. Z. Yusoff, Hasril Hasini, A. Al-Falahi, *"Two-dimensional computational modeling of high-speed transient flow in gun tunnel",* Shock Waves, Vol. 28:335, 2018, pp. 335–348. **(ISI, Springer, Scopus Q1)**

[14] **A. M. Mohsen**, M. Z. Yusoff and A. Al-Falahi*, "Area Contraction Effect on Shock Tube Performance, Numerical And Experimental Study",* Journal of Engineering and Applied Sciences (ARPN), Vol.10 (20), 2015, pp.9614-9620. **(Scopus).**

[15] **A. M. Mohsen**, M Z Yusoff, A Al-Falahi, "*The Effects of Area Contraction on The Performance of UNITEN's Shock Tube: Numerical Study*", 4th International Conference on Energy and Environment 2013 (ICEE2013), UNITEN. **(Scopus).**

[16] **A. M. Mohsen**, M. Z. Yusoff, A. Al-Falahi, N. H. Shuaib, "*The Effects of Area Contraction on Shock Wave Strength and Peak Pressure in Shock Tube"*, International Journal of Automotive and Mechanical Engineering (IJAME), Vol. 5, 2012, pp. 587–596. **(Scopus).**

References

- **Associate Professor Dr Abdulkareem Sh. Mahdi Al-Obaidi**
  School of Engineering, Faculty of Innovation & Technology, Taylor's University, Malaysia.
  H.P. +6017-395 5578, Email: abdulkareem.mahdi@taylors.edu.my.
- **Associate Professor Dr Choo Hui Leng**
  Programme Director, Mechanical Engineering, School of Engineering, Faculty of Innovation & Technology, Taylor's University, Malaysia.
  H.P. +6012-303 4955, Email: huileng.choo@taylors.edu.my.
- **Professor Dr. Hakim Samawi Sultan**
  Professor at the College of Engineering, University of Warith Al-Anbiyaa, Karbala, Iraq.
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