

Asst.Prof.Dr.: - Saif Watheq Mohammed Ali Al Tareehee



University of Kufa
Faculty of Engineering
The Department of Mechanical Engineering.
Email1: - saifw.ali@uokufa.edu.iq
Email2: - saifw.alturaihi@uokufa.edu.iq
Email3: - swa213@alum.lehigh.edu
Phone No. +9647733910416
Najaf, Iraq,
ZIP: - 54001

Academic Preparation:

- **PhD, Mechanical Engineering** **GPA 3.7/4.0**
Lehigh University, Bethlehem, PA, USA, 18015 08/2019 - present
- **MS, Mechanical Engineering** 11/2008 - 04/2011
University & College: University of
Baghdad – College of Engineering-
Mechanical Engineering, Iraq
- **BSc, Mechanical Engineering** 09/2003-07/2007
College of Engineering/Kufa
University- Mechanical Engineering, Iraq

Research Interest:

Computational Fluid Dynamic (CFD), Aerodynamic, Turbomachines, Power plant energy and exergy analysis, Cooling systems, carbon capture analysis, Renewable energy resources and technologies.

Teaching Interest:

- 1- **Thermodynamic (Basic and Advance Level).**
- 2- **Gas Dynamic (Basic and Advance Level).**
- 3- **Turbomachinery (Basic and Advance Level).**
- 4- **Math (Basic and Advance Level).**
- 5- **Heat Transfer (Basic and Advance Level).**

Institutional Profile ID Link:- <https://staff.uokufa.edu.iq/en/profile.html?saifw.alturaihi>

Selected Publications: -

1. Karima E. Amori., and Saif W. Mohammed Ali, 2012, Experimental and Numerical studies of Solar Chimney for Natural Ventilation in Iraq, *Journal of Energy and Building*, Vol. 47, Pp. 450-457.
2. Saif W. Mohammed Ali, Vahedi N., Romero C., Banerjee A., 2019, Water Usage and Energy Penalty of Different Hybrid Cooling System Configurations for a Natural Gas Combined Cycle Power Plant – Effect of Carbon Capture unit Integration, *Int J Energy Res.* Vol. 43, Pp. 5879-5896.
3. Saif W. Mohammed Ali, Vahedi N., Romero C., Oztekin A., 2020, An Optimization for Water Requirement in Natural Gas Combined Cycle Power Plants Equipped with Once Through and Hybrid Cooling Systems and Carbon Capture unit, *Journal of Water-Energy Nexus*, Vol. 3, Pp. 117-134.
4. Saif W. Mohammed Ali, Sahib S. Ahmed, Nabeel A., Ghayadh, 2020, Solar Integrated Unit to Reduce Power and Cooling Penalty of a Natural Gas Combined Cycle Plant Integrated with a Carbon Capture, *IOP Conference Series; Materials Science and Engineering*, Vol. 978, 012021.
5. Muhannad Altimemy, Justin Casper, Saif Watheq, and Alparslan Oztiken, 2020, Francis Turbine Operation at Excess Flow Rate Using Large Eddy Simulation-The Effect of Water Injection, *ASME 2020; International Mechanical Engineering Congress &Exposition (IMECE 2020)*, Nov. 13-19/2020, Orlando, USA.
6. Muhannad Altimemy, Justin Casper, Saif Watheq, and Alparslan Oztekin, 2020, Large Eddy Simulations of Francis Turbine Operating at Ultra-Low Loads, *ASME 2020; International Mechanical Engineering Congress &Exposition (IMECE 2020)*, Nov. 13-19/2020, Orlando, USA.
7. Altimemy, M, Watheq, S, Caspar, J, & Oztekin, A. "Performance of Kaplan Turbine Operating at Design Condition." *Proceedings of the ASME 2021 Fluids Engineering Division Summer Meeting. Volume 3: Fluid Mechanics; Micro and Nano Fluid Dynamics; Multiphase Flow.* Virtual, Online. August 10–12, 2021. V003T05A018. ASME.
8. Altimemy, M, Caspar, J, Watheq, S, & Oztekin, A. "Flow Characterization of an Industrial Size Francis Turbine Operating at Ultra-Low Load – The Effect of Water Injection." *Proceedings of the ASME 2021 Fluids Engineering Division Summer Meeting. Volume 3: Fluid Mechanics; Micro and Nano Fluid Dynamics; Multiphase Flow.* Virtual, Online. August 10–12, 2021. V003T05A017. ASME.

9. T. M. Mansoor, Saif W. Mohammed Ali, H. H. Jabbar, 2023, Investigating the Thermal Performance of Air-Cooling System Integrated with TEC Module: Transient Numerical Simulation, Case Studies in Thermal Engineering, Vol. 45, Pp. 102696.
10. H. J. Jaber, Q. A. Reshack, Q. A. Abed, Saif W. Mohammed Ali, 2023, Investigating the Thermal Behavior of a Double Slope Solar Still System Integrated with a Basin of Phase Change Material Supported by an Experimental Data, AIP Conference Proceedings, Vol. 2776, Pp. 050012.
11. **Hussam H Jabbar, Mohammed A Al-Tayyar, Taif M Mansoor, Saif W Mohammed Ali, 2023**, Assessment of Thermal Performance of Non-Evaporative Cooling System Assisted with TEC Models at High Temperature Climate, Applied Mechanics and Materials, Vol. 914, pp.41-52.
12. Mohammed A Al-Tayyar, Saif W Mohammed Ali, Wisam JK Al-Obaidi, Haroun AK Shahad, 2023, Premixed flame characteristics for LPG/air mixture with CO2 dilution, AIP Conference Proceedings, Vol. 2977, Pp. 020024.
13. Saddam K. Al-Raheem, Hayder Zuhair Zainy , Aziz D. Almawash , Luay S. Alansari , Saif W. Mohammed Ali, 2024, Static deflection of pre-twisted beam subjected to transverse load, Results in Engineering, Vol. 21, Pp.101953.
14. Saif W. Mohammed Ali, Muhannad Altimemy, Hazim J. Jaber and Nabeel A. Ghayadh, 2024, Transient numerical simulation to investigate pressure fluctuation spectrum and deficit in the near wake of a horizontal axis wind turbine, Heliyon, Vol. 10 (11), Pp. e32340.

In addition, there is one other publications in progress and process of publishing.