

## PERSONAL INFORMATION

# Seifelislam Marzouk



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**POSITION** University Assistant Lecturer

## PRACTICAL EXPERIENCE

- 07/2020–Present **University Assistant Lecturer**  
Kafrelsheikh University, Kafrelsheikh (Egypt)
- 02/2017–07/2020 **University Teaching Assistant**  
Kafrelsheikh University, Kafrelsheikh (Egypt)
- 02/2017–3/2019 **University Teaching Assistant**  
Higher Institute for Engineering and Technology, Kafrelsheikh (Egypt)

## EDUCATION

- 09/2020–present **Ph.D.** of Mechanical Engineering 3.9 GPA  
Kafrelsheikh University, Kafrelsheikh (Egypt)  
Title of thesis: Performance study of helically tube heat exchanger with novel configurations
- 09/2017–06/2020 **Master** of Mechanical Engineering 3.66 GPA  
Kafrelsheikh University, Kafrelsheikh (Egypt)  
Title of thesis: Thermo-hydraulic Performance Enhancement of Shell-and-tube Heat Exchanger
- 09/2011–07/2016 **Bachelor** of Mechanical Engineering (Power Mechanics) Excellent (Honours) 91%  
Kafrelsheikh University, Kafrelsheikh (Egypt)  
Title of project: Design of 50 TR water chiller for air cooling of a building

## RESEARCH INTERESTS

Heat and Mass Transfer, Heat Exchangers, Energy Applications, Thermal, and Hydraulic Engineering, Solar and Renewable Energy, Computational Fluid Dynamics, Numerical Simulation, Polymeric Fiber

## PERSONAL EXPERIENCE

- SOLIDWORKS-AUTOCAD, ENDNOTE, MATLAB, GRAPHER, MICROSOFT, ANSYS FLUENT, ASPEN PLUS and ASPEN EXCHANGER

## DESIGN AND RATING

- ANSYS Projects
  - Shell and tube heat exchanger
  - Plate heat exchanger
  - Solidification of water inside a bud
- ASPEN PLUS and ASPEN EXCHANGER DESIGN AND RATING projects
  - South Refineries Company -Crude oil Distillation Unit in Iraq
  - State Company of Fertilizers SR -Ammonia Unit in Iraq
  - State Company for Petrochemical Industries-Low Density Polyethylene (LDPE) plant in Iraq

## COURSES

- Heat Transfer, Mechanics (Static and dynamics), Applied Mechanics, Computational Fluid Dynamics, thermodynamics, Heat Transfer, Fluid Mechanics, Internal Combustion Engines I, Internal Combustion Engines II, Measurements, Hydraulic Machines, Industrial Safety, Engineering Drawing and Projection, Machine Design

## PUBLICATIONS

### JOURNAL PAPERS

- 2023
1. **S. A. Marzouk**, M. M. Abou Al-Sood, E. M.S. El-Said, M. M. Younes, and M. K. El-Fakharany, "Evaluating the effects of bifurcation angle on the performance of a novel heat exchanger based on contractual theory," *Renew. Energ.*, vol. 219, p. 119463, 2023/12/01/ 2023, doi: <https://doi.org/10.1016/j.renene.2023.119463>.
- 2023
2. F. B. Baz, E. A. Elshenawy, S. A. El-Agouz, Y. A. F. El-Samadony and **S. A. Marzouk**, Experimental study on air impinging jet for effective cooling of multiple protruding heat sources, *International Journal of Thermal Sciences* 2024 Vol. 196 Pages 108707, DOI: <https://doi.org/10.1016/j.ijthermalsci.2023.108707>
- 2023
3. A. R. Al-darraj, **S. A. Marzouk**, A. Aljabr, F. A. Almealmadi, S. Alqaed, and A. Kaood, "Enhancement of heat transfer in a vertical shell and tube heat exchanger using air injection and new baffles: Experimental and numerical approach," *Applied Thermal Engineering*, vol. 236, p. 121493, 2024/01/05/ 2024, doi: <https://doi.org/10.1016/j.applthermaleng.2023.121493>.
- 2023
4. **S. A. Marzouk**, A. Aljabr, F. A. Almealmadi, S. Alqaed, and M. A. Sharaf, "Numerical study of heat transfer, exergy efficiency, and friction factor with nanofluids in a plate heat exchanger," *Journal of Thermal Analysis and Calorimetry*, 2023/08/16 2023, doi: 10.1007/s10973-023-12441-5.
- 2023
5. **S. A. Marzouk**, M. M. Abou Al-Sood, E. M. S. El-Said, M. M. Younes, and M. K. El-Fakharany, "A comprehensive review of methods of heat transfer enhancement in shell and tube heat exchangers," *Journal of Thermal Analysis and Calorimetry*, vol. 148, no. 15, pp. 7539-7578, 2023/08/01 2023, doi: 10.1007/s10973-023-12265-3.
- 2023
6. **S. A. Marzouk**, M. M. Abou Al-Sood, E. M. S. El-Said, M. K. El-Fakharany, and M. M. Younes, "Study of heat transfer and pressure drop for novel configurations of helical tube heat exchanger: a numerical and experimental approach," *Journal of Thermal Analysis and Calorimetry*, (2023) <https://doi.org/10.1007/s10973-023-12067-7>
- 2023
7. **S.A. Marzouk**, M.M. Abou Al-Sood, E.M.S. El-Said, M.M. Younes, M.K. El-Fakharany, Experimental and numerical investigation of a novel fractal tube configuration in helically tube heat exchanger, *International Journal of Thermal Sciences*, 187 (2023) 108175.
- 2022
8. **S.A.Marouk**, M. elfakharany, and F. Baz, " Heat transfer performance of particle solar receiver: Numerical study," *Heat Transfer Research*, 2022. Available: DOI:

- 2022 9. **S. A. Marzouk**, M. M. A. Al-Sood, M. K. El-Fakharany, and E. M. S. El-Said, "A comparative numerical study of shell and multi-tube heat exchanger performance with different baffles configurations," *International Journal of Thermal Sciences*, vol. 179, p. 107655, 2022/09/01/ 2022. Available: <https://www.sciencedirect.com/science/article/pii/S1290072922001922>
- 2020 10. **S. A. Marzouk**, M. M. Abou Al-Sood, M. K. El-Fakharany, and E. M. S. El-Said, "Thermo-hydraulic study in a shell and tube heat exchanger using rod inserts consisting of wire-nails with air injection: Experimental study," *International Journal of Thermal Sciences*, p. 106742, 2020/11/27/ 2020. Available: <http://www.sciencedirect.com/science/article/pii/S1290072920311868>
- 2019 11. **S.A. Marzouk**, M.M. Abou Al-Sood, E.M.S. El-Said, M.K. El-Fakharany, Effect of wired nails circular-rod inserts on tube side performance of shell and tube heat exchanger: Experimental study, *Applied Thermal Engineering*, (2019) 114696  
<https://doi.org/10.1016/j.applthermaleng.2019.114696>

#### CONFERENCE PAPERS

- 2023 **S.A. Marzouk**, Numerical Study of Heat Transfer Enhancement in Double Tube Heat Exchanger Fitted with Spring Wire, 2<sup>nd</sup> international engineering conference and exhibition (IECE 2023), Riyadh, Kingdom of Saudi Arabia.

#### AWARDS

2020	International Scientific Publishing Award	Kafrelsheikh University, Egypt
2021	International Scientific Publishing Award	Kafrelsheikh University, Egypt
2022	International Scientific Publishing Award	Kafrelsheikh University, Egypt

#### TRAINING, RESEARCH PROGRAMS

	Program	Institution
22-1-2023	Research Methodology	Nature Research Academies
15-1-2023	Writing A Research Paper	Nature Research Academies
4-1-2023	Grant Writing	Nature Research Academies
2-1-2023	Effective Communication	National Center for Faculty and Leadership Development
1-2-2023	Digital transformation	Central Unit of IT Transformation
3-10-2022	Managing Time and Meetings	National Center for Faculty and Leadership Development
12-12-2022	Preparing Competitive Research Projects	National Center for Faculty and Leadership Development
5-6-2021	Credit Hours System	National Center for Faculty and Leadership Development
2-8-2021	University Teacher Preparation	National Center for Faculty and Leadership Development
14-3-2020	Scientific Publication	National Center for Faculty and Leadership Development

#### REVIEW AND ADVISORY PANELS

Peer reviewer for Jordan Journal of Mechanical and Industrial Engineering

Peer reviewer for Journal of Process Mechanical Engineering