Name Asmaa Ramadan Elsayed Ramadan

Current Title Assistant Professor – Mechanical Power Engineering Dept. – Faculty of Engineering – Ain Shams University

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FIELDS OF SPECIALIZATION

- Refrigeration and air-conditioning
- Energy management
- Numerical Analysis in Heat Transfer

DEGREES

Dec. 2018 Ph.D., Mechanical Engineering, Faculty of Engineering, Ain Shams University, Cairo, Egypt
Feb. 2014 M. Sc., Mechanical Engineering, Faculty of Engineering, Ain Shams University, Cairo, Egypt
June 2009 B. Sc. In Mechanical Power Engineering Dept., Faculty of Engineering, Ain Shams University, Cairo, Egypt

ACADEMIC AND INDUSTRIAL POSITIONS

December 2018 – current

- Assistant Professor, Mechanical Power Engineering Dept., Faculty of Engineering, Ain Shams University.
- Adjunct Faculty, Mechanical Engineering Dept., American University in Cairo.
- Academic advisor for undergraduate students – Energy & Renewable Energy Dept.
- Academic advisor for postgraduate students – Mechanical Power Engineering Dept.
- Department representative member at the "Postgraduate & Research Committee"; following the Faculty of Engineering General Committee – Ain Shams University.
- Member of "E-learning Committee" representing all Mechanical Engineering Departments to adapt for hybrid learning.

July 2022 – December 2022

- Assisted in the course update activities with the "Curriculum Development Committee" for Mechanical Engineering Energy courses update in cooperation between Ain Shams University, USAID and Arizona State University as a part of USAID Fund with "Center of Excellence in Energy-COE/E" in Egypt.

Apr. 2014 – Dec. 2018

- Teacher Assistant, Mechanical Power Engineering Dept., Faculty of Engineering, Ain Shams University.
- Research assistant - Mechanical Power Engineering Dept., Faculty of Engineering - Ain Shams University. **Field of research:** Retrofitting refrigeration systems operating with R22 to be operated with hydrocarbons - Control of refrigeration systems
- Teacher Assistant, Mechanical Engineering Dept., American University in Cairo.

Feb. 2010 – Apr. 2014

- Demonstrator, Mechanical Power Engineering Dept., Faculty of Engineering, Ain Shams University.
- Research assistant - Mechanical Power Engineering Dept., Faculty of Engineering - Ain Shams University. **Field of research:** Numerical analysis of different type of constructions to calculate the cooling load of all types of building materials and building applications – Comparing all the cooling load calculation methods proposed by ASHRAE Handbooks to the numerical analysis.
- Demonstrator, Mechanical Engineering Dept., American University in Cairo.
- Demonstrator, Mechatronics Engineering Dept., Arab Academy of Sciences, Technology and Maritime Transportation.

RESEARCH PROJECTS

Supervising Master degree students (Not funded) – Thesis Titles:

- Investigating the Energy Efficiency in Buildings using different thermal integrated systems.
- Separate Sensible and Latent Cooling System Selection Using Life-Cycle Cost Analysis.
- Design and Modeling of a centralized PV-Hybrid station to power an isolated residential city.
- Green Hydrogen generation from renewable energy sources: A case study.
- Economic and environmental analysis of solar-hydrogen supply system.
- Optimization of Ejector Configuration Used in a Simple Refrigeration Cycle.
- Cost Optimization of Pipelines Networks for Oil and gas Wells.
- HFOs Assessment as Low GWP Drop-in Alternatives for R134a in Domestic Refrigeration.
- Retrofitting an air-conditioning system initially operated with R134a to select a drop-in replacement substitute.

CONSULTANT

- Academic Mentor in "Americana Young Leaders Marathon Competition", organized by John D. Gerhart Center, American University in Cairo and winning 1st and 2nd place. October 2022 – February 2023.
  Responsibilities: Academic mentorship for 4 undergraduate student teams. Each team is responsible of one of Americana's food factories (ICAPP, Farm Frites, Seniorita and ECC factories) to apply Energy management techniques to reduce the factory total energy, water and fuel bills.
- Consultant Engineer in "Ma'an Arab University Alliance Social Entrepreneurship Competition", organized by John D. Gerhart Center, American University in Cairo, 2018.
  Responsibilities: Academic mentorship for 12 undergraduate student teams working on waste management for Savola Factory.

AWARDS

2019	Best Ph.D. thesis on "Science Day" organized by the Faculty of Engineering, Ain Shams University.
2014 – 2018	Ph.D. Scholarship, Faculty of Engineering, Ain Shams University.
2010 – 2014	M.Sc. Scholarship, Faculty of Engineering, Ain Shams University.
2004 – 2009	Merit Scholarship, Faculty of Engineering, Ain Shams University.

PROFESSIONAL RECOGNITION

PATENTS, PUBLICATIONS

Journal Papers

Scopus link: https://www.scopus.com/authid/detail.uri?authorId=57203713928

Total publications: 6 papers, Citations: 29, h-index: 2

- **Asmaa R. El-Sayed**, Abdalla Talaat, and Mohamed Kohail, "The Effect of Using Phase-Changing Materials on Non-Residential Air-Conditioning Cooling Load in Hot Climate Areas". Ain Shams Engineering Journal, 2023.
- Medany, M & **El-Sayed, Asmaa**, "A Study of a Refrigeration Cycle with Liquid Suction Heat Exchanger (LSHX) using Eco-Friendly Alternatives to R22 from environmental and thermodynamic perspectives". International Journal of Air-Conditioning and Refrigeration, 2021.
- Zain, Mohamed R.; El-Morsi, Mohamed; **El-Sayed, Asmaa**, "LCCP Assessment of R1234yf as a Low GWP Alternative for R134a in Domestic Refrigerators". ASHRAE Winter Conference, 2022.
- **A. R. EL-Sayed**, M. El-Morsi, and N. A. Mahmoud, "Experimental Investigation of a Walk-in Refrigerator Performance using R290 as a Retrofit for R22", *International Journal of Air-Conditioning and Refrigeration*, vol.26 no.4, 2018, doi:10.1142/S2010132518500293.
- **A. R. EL-Sayed**, M. El-Morsi, and N. A. Mahmoud, "A Review of the Potential Replacements of HCFC/HFCs Using Environmental Friendly Refrigerants", *International Journal of Air-Conditioning and Refrigeration*, vol.26 no.3, 2018, doi:10.1142/S2010132518300021.

- **A. R. EL Sayed**, M. EL Morsi, and N. A. Mahmoud, “Thermodynamic Analysis of a Simple Refrigeration Cycle Using Hydrocarbon Refrigerants as Substitute to R22,” *Int. J. Adv. Eng. Manag. Res.*, vol. 2, no. 2-pp.245-274, 2017.