



Email: almerbati@kfupm.edu.sa
Contact: +966-13-8604496



Dr. Abdulrahman Almerbati

Assistant Professor

Mechanical Engineering Department and Interdisciplinary
Research Center for Renewable Energy and Power Systems
(IRC-REPS)

King Fahd University of Petroleum & Minerals, Saudi Arabia

Executive Summary:

Experienced university professor with excellent educational skills demonstrated by more than 10 years teaching experience. Participated in several energy-related projects throughout my study at KFUPM and Duke University. Interested in analyzing and designing thermal-fluid systems toward improving its performance. Currently working on the development of volumetric solar receivers using Constructal design method. Certified Energy Manager (CEM) and an executive committee member in the Center of Excellence in Energy Efficiency at KFUPM. Worked on multiple energy efficiency projects within KFUPM campus such as the energy auditing of the campus high-school building and mosques. Involved in energy auditing training program provided to KFUPM undergraduate and graduate students.

Education:

- Ph.D. Mechanical Engineering [Duke University, US, 2018]
- M.S. Civil & Environmental Engineering [Duke University, US, 2018]
- M.S. Mechanical Engineering [KFUPM, Saudi Arabia, 2012]
- B.S. Mechanical Engineering [KFUPM, Saudi Arabia, 2009]

Distinguished Projects

- *Project title “ Hexagonal and Mixed Arrays of Flow Channel Design in Counterflow Heat Exchanger”* funded by *DSR KFUPM*, Dhahran, Saudi Arabia, Role: *PI*.
- *Project title “Energy Auditing of KFUPM Mosques”* funded by *DSR KFUPM*, Dhahran, Saudi Arabia, Role: *Co-PI*.

Research Summary

- Number of Published Papers: 12
- Citations : 250
- H-Index : 7
- Number of Patents : 1

Award and Recognitions

Skills and Expertise

- Renewable energy system, Volumetric solar receivers, Thermodynamics, Heat transfer enhancements.
- Numerical analysis (via COMSOL) of multiphysics systems including heat exchanger, cooling of PV panel, and arrays of flow channels.
- Analytical and numerical analysis of Thermoelectric power generator.
- Energy audits, energy management ~ saving opportunities
- Energy efficiency training courses.