



Email: binash.imteyaz@kfupm.edu.sa
Contact: +966 56 114 9833



Dr. Binash Imteyaz (PhD, CEM) Research Engineer III/ Assistant Professor

Interdisciplinary Research Center for Renewable Energy and Power Systems (IRC-REPS)
King Fahd University of Petroleum & Minerals, Saudi Arabia

Executive Summary

A mechanical engineer with research experience in energy efficiency and clean energy. Excellent track record of research success with published articles in reputed international journals. Has a strong background in:

- ✓ **Energy Efficiency:** thermodynamic analysis of the integrated systems, process simulation, thermo-economic analysis.
- ✓ **Carbon Capture:** work in oxy-fuel combustion, flame stability, hydrogen enriched flames.
- ✓ **Optimization:** Heuristic optimization algorithms, such as genetic algorithm, differential evolution, particle swarm optimization.

Education

- ☐ PhD Mechanical Engineering (KFUPM, 2019)
- ☐ MS Mechanical Engineering (KFUPM, 2015)
- ☐ BSc Production Engineering (BIT Mesra, 2012)

Distinguished Projects

- Energy Efficiency Improvement in KFUPM Mosques
- Numerical and experimental investigations of an oxy-combustion carbon-free power generation system.
- Oxy-fuel combustion of liquid fuel in a typical water tube boiler
- Developing a numerical model to study the effect of radiation heat transfer on natural convection flow with participating and non-participating media.
- Evaluation of the performance of a humidification-dehumidification cycle by developing a mathematical code.
- Determination of the optimum parameters of an air gap membrane distillation system using heuristic optimization algorithm like ACO and PSO.
- Techno-economic evaluation of a large-scale PV based power generation system in view to replace diesel plants in KSA

Research Summary

- Number of Published Papers: 15
- Citations: 148
- H-Index : 7
- Number of Patents
- Books etc.

Award and Recognitions

Skills and Expertise

- Experienced in CFD modeling of reacting flows
- Process simulation and thermodynamic analysis
- Adept in various software tools
- Strong coding background
- Ability to learn quickly and adapt to new working environment
- Quantitative and qualitative analytical research on energy efficiency, carbon capture and renewable energy development related issues
- Writing of reports, work papers, briefings and other information material