

Mohammed Qadeer Mohammed Taheer

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EDUCATION:

- **Doctor of Philosophy**, 8, Indian Institute of Technology Patna, 2023- Present

Objective: To identify and evaluate low-GWP refrigerants as eco-friendly alternatives in refrigeration and air conditioning systems, aiming to reduce greenhouse gas emissions and environmental impact.

- **Master of Technology in Mechanical Engineering**, 8.19, University of Mumbai, 2022

On the importance of fluidic manifold design and orientation on flow boiling instability in microchannel heat sinks

Objective: To propose simple modifications in the design of inlet and outlet plenums and port orientations to suppress instabilities in two-phase micro channel heat sinks.

Result: Larger inlet plenums reduce vapor backflow, while increased outlet plenum size minimizes fluctuations in upward flow. Large outlet manifolds amplify vapor backflow in downward flow orientations.

- **Bachelor of Engineering in Mechanical Engineering**, 7.49, SPPU, 2019

Experimental and simulation of Design of Spherical Turbine to generate energy from waste water for rural area development

Objective: Spherical turbine design contributed to rural development with sustainable wastewater energy generation and efficient resource utilization.

Result: Study confirmed feasibility of spherical turbine for wastewater energy generation, demonstrating efficient performance and rural area development potential.

- **Diploma in Mechanical Engineering**, 72.65%, MSBTE, 2016

Design of Thermo electric cooler for small volume

Objective: To develop an efficient and compact cooling system that can effectively regulate temperature in limited spaces, providing practical cooling solutions for small-scale applications.

Result: Designed thermoelectric cooler achieved efficient cooling, effective temperature regulation in limited spaces, providing compact practical solution.

RESEARCH EXPERIENCE:

Junior Research Fellow, Indian Institute of Technology, Bombay, September 2022- August 2023

- Thermo-hydraulic performance evaluation of radial tree-branching microchannel heat sinks for electronic cooling applications
- Development and Characterization of a Solid-Solid-Phase Change Material for Low-Temperature Applications
- **Enhancing heat transfer** in single-phase laminar flow micro-channel heat sinks through **nanostructure development**: A comparative analysis of pressure drop
- Advancing **two-phase energy** systems with **ionic liquid**-based **coating technologies**

INTERNSHIP:

- Jr. Design Engineer, Wisetech MEP Consultant Pvt Ltd, Mumbai, Aug 2020 – Jan 2021
- Renewable Energy Resources, INSTITUTE OF ADVANCED MATERIALS, Sweden, Nov 2021 – Jan 2022
- Privacy lost on Education Website and its impact on Students and Learning, University of Copenhagen, Denmark, Dec 2021 – Jan 2022

CERTIFICATION AND CONFERENCE:

- RAC Product Design (IIT Madras)
- Principles of Hydraulic Machines and System Design (IIT Guwahati)
- Product Design and Development (IIT Roorkee)
- Inspection and Quality Control in Manufacturing (IIT Roorkee)
- Steam and Gas Power System (IIT Roorkee)
- Foundation of Computational Fluid Dynamics (IIT Madras)
- Paper presentation in TRPCS 2K19,
- Design of Heat Exchanger for HVAC Applications, Vel-Tech R&D Institute of Science and Technology

SKILLS:

AutoCAD	Expert	MS-Office	Expert
Solid Works	Expert	MATLAB	Expert
ANSYS	Expert	Lab View	Proficient