

PUJA RANI PAUL

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WORK EXPERIENCE

Lecturer Aug 2024 - Present
Department of Mechanical Engineering
City University, Savar, Dhaka

Intern Nov 2023 - Dec 2023
British American Tobacco Bangladesh, Dhaka

ACADEMIC CREDENTIALS

Bangladesh University of Engineering and Technology (BUET), Dhaka Apr 2019 - Jun 2024
Bachelor of Science in Mechanical Engineering
Cumulative GPA : 3.87/4.00 | Top 10% of the Department

Holy Cross College, Dhaka Jul 2016 - Jul 2018
Higher Secondary School Certificate (HSC)
GPA : 5.00/5.00 | Obtained Marks: 88.5% | Major: Science
Board scholarship in General category

Savar Girls' High School, Savar, Dhaka Jan 2014 - Jun 2016
Secondary School Certificate (SSC)
GPA : 5.00/5.00 | Major: Science
Board scholarship in Talentpool category

RESEARCH INTERESTS

- Advanced Materials
- Manufacturing
- Molecular Dynamics
- Thermal Engineering

RESEARCH EXPERIENCES

Undergraduate Thesis
Topic: Analysis of Effective Heat and Sound Insulation Properties of Locally Available Jute Stick Board
Supervisor: Dr. Anup Saha, Assistant Professor, Dept. of Mechanical Engineering, BUET
Software utilized: Ansys FLUENT, Tecplot 360, MS Office Suite

Journal Paper
Title: Molecular Dynamics Simulation of Alloying Characteristics of Al-Mg Nanoparticles: Effect of thermal process parameter
[DOI: <https://doi.org/10.1080/08927022.2024.2381583>]
Authors: Partho Kundu, **Puja Rani Paul**, Apurba Sarker, Mohammad Nasim Hasan
Software utilized: LAMMPS, MATLAB, Tecplot, Ovito, AtomsK

Journal Paper **under preparation
Title: Thermal Management of Outer Shell of Coaxial Cylinder Containing a Constant Flux Heat Source Using P, PI and PID Controllers
Supervisor: Dr. Sumon Saha, Professor, Dept. of Mechanical Engineering (BUET)
Software utilized: COMSOL

PROJECTS

Spiral Plate Cross Flow Heat Exchanger - a prototype for automobile radiator

Mar 2023

- Design and manufacturing of a spiral plate heat exchanger
- Numerical simulation of the design using Ansys

Med_Pro : A Medicine Delivery Drone

Oct 2022

- Design and manufacturing of a complete drone with real-time video and GPS transmission system

TECHNICAL SKILLS

- | | | |
|--------------|----------------|---------------------|
| • LAMMPS | • OVITO | • MATLAB |
| • SOLIDWORKS | • AutoCAD | • Python |
| • COMSOL | • Ansys FLUENT | • Adobe Illustrator |

AWARDS & ACHIEVEMENTS

- The “RISE Student Research Grant 2023, BUET” worth of BDT 55,830
- “Dean’s Award” throughout 4 levels in the department of Mechanical Engineering
- 3rd position in the “Best Term Paper Award” under the course of ME 461: Control Engineering
- Accomplished competitor in “University Physics Competition 2022”
- 2nd Position in the “BAS Divisional Science Olympiad”
- General scholarship in Higher Secondary School Certificate (HSC)
- Talent Pool scholarship in Secondary School Certificate (SSC)

AFFILIATIONS

- | | |
|--------------------------------------------------------------------------------------|--------------------|
| • Technical Executive , ImechE BUET (2021- 2024) | 2021 - 2024 |
| • Logistics Executive , BUET Automobile Club (2020 – 2023) | 2020 - 2023 |
| • Association Representative , Mechanical Engineering Association (MEA), BUET | 2019 - 2024 |
| • Core Organizer , Mechanical Festival 2024, BUET | 2024 |
| • Executive Member , BUET Brain Teaser Club | 2022 - 2024 |
| • Active Member , BUET Drama Society | 2019 - 2024 |

REFERENCES

Dr. Mohammad Nasim Hasan

Professor, Department of Mechanical Engineering, BUET

Email: nasim@me.buet.ac.bd

Dr. Anup saha

Assistant Professor, Department of Mechanical Engineering, BUET

Email: anup106@me.buet.ac.bd