

# Medur Rodoshi Aungshu

🏠 Rajshahi, Bangladesh

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## Research Interests

Renewable Energy Integration, Energy Efficiency Improvements, Sensors and Smart Systems, Energy Storage Solutions, Smart Grid Technologies

## Education

**Khulna University of Engineering & Technology (KUET), Khulna, Bangladesh**  
(2019 - 2024)

- B.Sc. in Energy Science and Engineering
- CGPA: 3.17 (Out of 4.00)
- CGPA of last ~ 60 credits: 3.42/4.00
- **Notable Courses:** Energy Storage Systems | Solar Thermal Engineering | Bio and Wind Energy Engineering | Power Plant Engineering | Nuclear Power Engineering | Coal Power Generation | Energy Efficiency Assessment | Computer Programming | Power System Engineering | Solar Photovoltaic Systems | Energy Audit and Management | Energy in Built Environment | Safety and Environmental Aspects of Energy Projects | Solid Mechanics | Fluid Mechanics | Thermodynamics | Heat and Mass Transfer

## Research experiences

### **Numerical Investigation of Thermal Performance of Building Integrated with Phase Change Material in Roof.**

- Senior year thesis, Khulna University of Engineering and Technology.
- Numerical Investigation | Design Builder | Energy Plus
- Analyzing the thermal functionality of phase change materials (PCMs) integrated into the roof of a single-story building in different climatic conditions (two cities) in Bangladesh using Design Builder software.
- Investigating the effect of PCM integration on energy consumption.
- Evaluating the Percentage of energy consumption reduction.

### **Automated Single Axis Solar Tracking Based Battery Charging System.**

- Junior year project, Khulna University of Engineering and Technology.
- Solar tracker | Arduino | C++
- Evaluating the performance of static and mobile solar systems.
- Storage system

## Publications

- Conference (accepted)- **Medur Rodoshi Aungshu**, Dr. Mohammad Ariful Islam, “**Numerical Investigation on the Thermal Performance of a Building Integrated with Phase Change Material in the Roof**” International Conference on Mechanical, Industrial and Materials Engineering (ICMIME 2024), 11-13 December 2024, Rajshahi, Bangladesh, ID:403
- Journal (under review) – Haque AF, Hossain MJ, Hossain MM, Shovon MAH, **Aungshu MR**, Galib MR, Alam MM. “**Numerical Investigation on the Selection of Energy-Efficient Phase Change Material (PCM) for Building Envelopes in Different Climatic Conditions of Bangladesh.**” [Energy and Buildings]

## WORK ATTACHMENTS

- **Completed a one-week attachment program at “Khulna Power Company Ltd. (KPCL)” in August 2022.**
  - **Visited -**
    - Petromax Refinery Limited
    - Bangabandhu Water Treatment Plant. Khulna WASA, Pathorghata, Rupsha, Khulna-9240
    - HAMKO & Abdulla Battery Co.(pvt.) Limited (ABCO)
- **Attended “SOLIDWORKS WORKSHOP 2019” organized by CADers**

## HONORS & AWARDS

- Received Merit Scholarships for a total of three semesters in the Department of Energy Science and Engineering | Khulna University of Engineering & Technology, Khulna, Bangladesh
- Received a Merit Scholarship for Secondary School Certificate (S.S.C) from the Govt. Promothnath Girls’ High School, Rajshahi
- Received an award for Senior Member | KUET RESEARCH SOCIETY | Khulna University of Engineering & Technology, Khulna, Bangladesh
- Received an award for First Runner-up | INTER DEPARTMENT SPORTS | Khulna University of Engineering & Technology, Khulna, Bangladesh

## LEADERSHIP & ACHIEVEMENTS

- **KUET Research Society** | Member of Departmental Committee of ESE | Executive Committee 2023-2024
- **Volunteer at TRY** (A Social service club of KUET) | Hosted a total of **2** different workshops and seminars.

## TEST SCORES

- **IELTS Academic**

**Band Score:** 7 (L-8, R-8.5, W-6, S-6)

Test Report Form (TRF) Number: 24BD024370AUNM001A

## TECHNICAL SKILLS

- |                   |                                     |
|-------------------|-------------------------------------|
| • Microsoft Word  | • Microsoft PowerPoint              |
| • Design Builder  | • Microsoft Excel                   |
| • Solid Works     | • MATLAB                            |
| • Aspen HYSYS     | • PCTran                            |
| • OriginPro       | • Ansys                             |
| • Python          | • Engineering Equation Solver (EES) |
| • MATLAB Simulink |                                     |

## REFERENCES

Dr. Mohammad Ariful Islam  
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Department of Mechanical Engineering  
Khulna University of Engineering &  
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