Medur Rodoshi Aungshu

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Personal Website: https://aungshu30.github.io/

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Research Interests

Renewable Energy Integration, Advanced Energy Materials, Energy Storage Solutions, Energy Efficiency Improvements, Battery and Fuel Cell Materials.

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

REFERENCES

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