SANCHITA GHOSH

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EDUCATION

Ph.D. in Mechanical Engineering   Aug 2022 - Present
Texas Tech University, Lubbock, Texas, USA.
B.Sc. in Mechanical Engineering   Feb 2013 - Sep 2017
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.

RESEARCH INTERESTS

Control Engineering, Fault Detection, Computational & Mathematical Modeling, Simulation.

RESEARCH EXPERIENCES

Academic

Fault Detection for Cyberattack on Switched System

- Mathematical Modelling of fault detector to detect cyberattacks on switched system.

- Computational simulation for the proposed model.

- Validate the proposed model with Physical System Data

Supervisor: **Dr. Tanushree Roy**, Assistant Professor, Dept of ME, TTU   Ongoing

Effect of Decreasing Inlet Air Temperature of Gas Turbine Compressor using Ammonia-Water Refrigeration

- Through numerical analysis, finding the effect of decreasing inlet air temperature of a simple-cycle gas turbine compressor using an ammonia-water absorption refrigeration system run by GT exhaust heat.

- Fabricating and simulating the system model in the Python platform with acquired thermodynamic properties from the CoolProp database.

- Studying the deviation in the refrigeration effect on account of installing regeneration process

- Proposing an optimum process solution with cost analysis.

Supervisor: **Dr. Md. Zahurul Haq**, Professor, Dept of ME, BUET   2016 - 2017

Design and Prototype Construction: Automated Wall Painter

- Designing the structure in SolidWorks & controlling operation through Arduino

- Constructing the prototype of the proposed automated wall painter with the best-suited available technology with cost consideration.

Supervisor: **Anup Saha**, Assistant Professor, Dept of ME, BUET   2014 - 2015

Industrial

Product Development and Operations   2019 - 2020

- Study, modify and validate the modifications by feasibility check for different aggregates of imported commercial vehicles, e.g.: chassis, filters, and so on to cope with non-identical environmental and structural attributes.

WORK EXPERIENCE

IFAD Autos Ltd., Bangladesh   Sept 2018 - Nov 2020

- Deputy Manager, Spare Parts Department   Oct 2019 - Nov 2020
    - Demand Planning, Inventory Management, Sales Forecasting, Product Design and Modification

TECHNICAL SKILLS

Programming Languages:	Python, C
Numerical Analysis:	MATLAB, ANSYS
Data Analysis | Visualization:	Orange, Tableau
Design Tool:	SolidWorks, AutoCAD
Documantation | Presentation:	Office Suite, LaTeX

SEMINAR PRESENTATIONS

"Guidelines for Cleaner Production: A case study of Plastic Recycling Industries in Bangladesh", 10th IWACP, Online Workshop   October 2021

SCHOLARSHIPS AND CERTIFICATIONS

- Graduate Teaching Assistantship   Fall'22- Present
- Data Science Bootcamp Certification by Upskill-BD   2021
- ISO 9001:2015 Audit Certification   June 2019
- Two times Champion and Three times 1st Runner Up in Regional Math Olympiad   2008 - 2012
- Exam Board Scholarship **12th Grade**, **10th Grade**, **8th Grade**, **5th Grade**

MEMBERSHIP AND ACTIVITIES

Member

- Mechanical Engineer Association(MEA), BUET   2013-2017
- Ramanujan Math Club, Natore   2008-2012

Extra-Curriculum Activities

- Organizing member of ME DAY:2017,BUET.
- Fund Raising and Distribution to ensure Education for Street-children.
- Teaching Assistant for System Dynamics and Vibration.   Fall'22- Present
- Mentoring A level, O level, Higher Secondary students.   2013-2018

REFERENCE

Dr. Md. Zahurul Haque	**Dr. Tanushree Roy**
Professor	Assistant Professor
Bangladesh University of Engineering and Technology	Texas Tech University
Email: zahurul@me.buet.ac.bd	Email: tanushree.roy@ttu.edu