

Kazi Tahsin Mahmood

Graduate Teaching Assistant – Department of Mechanical Engineering
Wayne State University

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🌐 Website

in KaziTahsin

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ACADEMIC CREDENTIALS

Wayne State University

Ph.D. in Mechanical Engineering

Detroit, Michigan, USA

Jan 2022 - Present

Bangladesh University of Engineering & Technology

B.Sc. in Mechanical Engineering

Dhaka, Bangladesh

Feb 2016 - Feb 2021

Cumulative GPA: 3.30/4.00

Rank: 80th of 192 students

UNDERGRADUATE THESIS

Title: Electro-Thermo-Mechanical Response of a Thin Conductive Layer of Metal Matrix Composite Reinforced by Graphite Fibers

Supervisor: Dr. Shaikh Reaz Ahmed, Professor, Department of Mechanical Engineering, BUET

RESEARCH INTEREST

Numerical Analysis	System Analysis	Applied Mathematics	FGM
Mechanics of Materials	Computational Mechanics		

RESEARCH EXPERIENCE

- Successful first attempt to solve coupled Electro-Thermo-Mechanical Multi-Physics problem in terms of single Scalar field variables.
- Investigation of the thermal and mechanical response of thin conductive layer of metal matrix composite reinforced by graphite fibers by developing the necessary equations and solving the equations through numerical analysis.
- Investigation of the thermal and mechanical behavior for different fiber content and different thermal condition and determining the failure criterion of the metal matrix composites for both thermal and mechanical limit.
- Numerical equations development using the language MATLAB and solving the single scalar field variables to determine the components around the metal matrix composites.
- Various CAD design and simulation regarding multi-physics system analysis and implementation of various loading and boundary conditions.

TECHNICAL SKILLS

C/C++	Python	MATLAB	COMSOL Multiphysics	ANSYS
AutoCAD	SolidWorks	Microsoft Office	LaTex	

STANDARDIZED TEST SCORES

GRE - **311** [12-August, 2021]
Verbal Reasoning - 150/170 (44th percentile)
Quantitative Analysis - 161/170 (74th percentile)
AWA - 3.5/6.0 (37th percentile)

TOEFL iBT - **98** [4-September, 2021]
Reading - 28/30 Speaking - 23/30
Listening - 22/30 Writing - 25/30

LINGUISTIC PROFICIENCY

Bengali (Native Language)

English (Fluent Working Proficiency)

PROFESSIONAL EXPERIENCE

Wayne State University
Graduate Teaching Assistant

Detroit, Michigan, USA
Jan 2022 - Present

BSRM Steel Limited
Engineer Trainee

Foujderhat, Chittagong, Bangladesh
Jan 2020 - Feb 2020

PROJECTS

CAD Model of an Industrial Rescue Robot

January -2018

- A model of a rescue robot capable of operating in hazardous environment.
- The model included medical and food supplies for delivering at need.

Color Sorting Industrial Crane Model

June -2018

- Created a prototype of an industrial crane which uses color sensor to sort the objects.
- Used Arduino based micro-controller to control the motors and sensor for running a smooth sequence of the crane.

Thermo-Fluid System Design of Double Pipe and Shell & Tube System

January -2019

- Build working prototype of a double pipe heat exchanger and a shell & tube heat exchanger.
- Calculated the heat transfer rate and flow of the system to maximize the efficiency.
- A systematic CAD drawing developed for simulating the flow regulation and heat transfer area.

REFERENCES

Shaikh Reaz Ahmed, Ph.D
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Muhammed Mahbubur Razzaque, Ph.D
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Department of Mechanical Engineering, BUET
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