

# Suchinto Roy Dhrubo

## Prospective Graduate Student

[Portfolio](#) [Google Scholar](#) [ReaserchGate](#) [Linkedin](#)

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Dhaka, Bangladesh 

## Academic Credentials

### Bachelor of Science in Mechanical Engineering

Khulna University of Engineering & Technology (KUET), Khulna-9203  
February 2018 - April 2023

**CGPA: 3.36/4.00**

Position in Class: 41/140  
Equivalent Marks: 71.20%

## Research Experiences

### Additive Manufacturing and Comparison of Mechanical Behaviour

August 2023 - Present

Independent Research Group

- Investigated the impact of different process parameters and materials on mechanical properties of 3D-printed components using Fused Deposition Modelling (FDM) & Stereolithography (SLA).
- Examined the effect of process parameters and materials (PLA, ABS, PLA-CF, PETG, PAHT-CF) on 3D-printed components using tensile, compressive, and bending tests.

### Mars Rover

January 2019 - April 2023

KUET Mars Rover-Team Durbar

- Researched, designed, and developed a Mars rover using the rocker-bogie mechanism, including a manipulator arm capable of lifting over 5 kg.
- Led the team, coordinated with sub-teams, and participated in international rover challenges.

### Undergraduate Thesis

March 2022 - March 2023

A Numerical Study of Aerodynamic Performance of Corrugated Airfoil of a Dragonfly Wing Section

- Conducted a numerical study on the aerodynamic performance of dragonfly-inspired corrugated airfoils, using a wide range of flapping frequencies, to evaluate lift and drag.
- Results show superior lift-to-drag ratios compared to conventional airfoils, and higher lift-to-drag ratios in higher frequencies.

### Undergraduate Project

Construction & Performance Test of Electromagnetic Braking System February 2020 - March 2022

- Explored the potential of an Electromagnetic Braking System, using electromagnetism to stop vehicles, highlighting its advantages and current limitations.
- Emphasized the need for further research to overcome challenges and align with the shift toward electric-powered vehicles in the automobile industry.

## Selected Publications

### Journals

- Haque, M.M.M., **Dhrubo, S.R.**, Pranto A.Z., Ahmed A., Arefin M.M. and Islam, M.S., 2024. *Comparison of Different 3D Printed Materials in Various Process Parameters.* Under Review
- Dhrubo, S.R.**, Haque, M.M.M., Ahmed A., Arefin M.M., Pranto A.Z. and Islam, M.S., 2024. *Fatigue, Impact and Creep Profile Comparison of FDM and SLA Printed Materials.* In Preparation

### Conference Proceedings

- Shuvo, M.I.H., Mooaz, N.S., **Dhrubo, S.R.** and Islam, M.A., 2024. *A Comparative Analysis of Flap Position for Improved Aerodynamic Characteristics using NACA 4412.* Available at SSRN 4859496. ([View](#)) Published
- Mooaz, N.S., Arefin, M.M., **Dhrubo, S.R.** and Ahmed, A., 2023, December. *Transforming UAV Design: Coandă-Based Lift Generation for Enhanced Aerial Performance.* In 2023 6th International Conference on Electrical Information and Communication Technology (EICT) (pp. 1-6). IEEE. ([View](#)) Published

- Costa, J.J., Al Kadir, S.T., **Dhrubo, S.R.**, Wahid, M.F., Ratan, Z.A. and Roy, D., 2022, February. *A Wearable Hearing Protection Device for Vehicle Drivers to Mitigate the Impact of Sound Pollution for Noisy Places in Bangladesh*. In 2022 International Conference on Innovations in Science, Engineering and Technology (ICISET) (pp. 135-139). IEEE. ([View](#))

Published

## Professional Experiences

### Synovia Pharma PLC.

(Formerly known as Sanofi Bangladesh Limited)

### Designation - Executive

December 2023 - Present

- Supervised the Fire Hydrant Pipeline Installation Project and managed ETP and STP operations.
- Ensured compliance with GMP and +QDCI regulatory standards.
- Implemented HSE protocols per BNBC Fire and Electrical Codes, PPE Matrix, DoE Laws-Acts, and DPHE Guidelines.
- Created Site Plan, Zone Layout, Machine Layout, and Man-Material-Waste Flow diagrams using AutoCAD.

## Technical Skills

### CAD & Analyzing Software

SolidWorks, AutoCAD, KeyShot, ANSYS (Fluent), Abaqus CAE

### Programming Language

MATLAB, C/C++, Python, Arduino Programming

### Hardware Skills

Arduino, Basic Sensors

### Operating Skills

3D Printer, Lathe Machine, Milling Machine

### Others

MS Word, MS PowerPoint, MS Excel, Adobe Illustrator, Premiere Pro

## Leadership Experiences

### KUET Mars Rover (Team Durbar)

50+ Team Members, June 2021 - March 2023

### Designation - Project Team Lead

### Mechanical Engineering Association, KUET

500+ Members, March 2022 - February 2023

### Designation - Vice President

### CADers

Computer Aided Designing Club of KUET, February 2019 - January 2023

### Designation - IT Officer

### Bangladesh Scout

Volunteering Movement

### Designation - President's Scout

## Awards & Achievements

### International Planetary Aerial Systems Challenge

Organized by Mars Society South Asia, May 2021

Rank - 09/27

### Indian Rover Design Challenge

Organized by Mars Society South Asia, July 2021

Rank - 10/28

### CAD (Mechanical Design), Ignition 2019

Organized by the Department of Mechanical Engineering, KUET, March 2019

Rank - 1st Runner Up

### President's Scout Award

Awarded by Bangladesh Scouts, May 2015

Status - Awarded

### Shapla Cub Award

Awarded by Bangladesh Scouts, June 2009

Status - Awarded

## References

### Dr. Md. Ashraful Islam

Professor

Department of Mechanical Engineering, KUET

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### Dr. Md. Helal-An-Nahiyen

Professor

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