ABRAR TASNIM WASHI

Mail LinkedIn Website

RESEARCH INTERESTS

Computational Fluid Dynamics	Aerodynamics	Wind Engineering
Structural Analysis	Nanomaterial	Artificial Intelligence

EDUCATION

Bachelor of Science in Mechanical Engineering 2020 - Present
Khulna University of Engineering & Technology
CGPA: 3.51 (Till 7th semester out of 8 semesters)
Thesis Title: **Analyzing the Aerodynamic Impact of Tall Buildings through Numerical Analysis**
Supervisor: Dr. Mohammad Masud, Professor.

Higher Secondary Certificate (HSC) 2017 - 2019
Dhaka Residential Model College
GPA: 5.00/5.00

Secondary School Certificate (SSC) 2015 - 2017
BPATC School & College
GPA: 5.00/5.00

PUBLICATIONS

- **A. T. Washi**, K. K. Das, T. Nath, J. P. Das, K.M. T. Tahmid, F. Shahoriar, "Analyzing the Aerodynamic Impact of Tall Buildings through Numerical Analysis", The 3rd International Conference on Mechanical Engineering and Applied Sciences 2025 (ICMEAS 2025). [Accepted for publication. The camera-ready version is submitted.]
- T. H. Anto, F. Shahoriar, S. Mahmud, **A. T. Washi**, T. Nath, K.M. T. Tahmid, "Aerodynamic Analysis of a Modified NASA SC(2)-0414 Airfoil with a Trailing-Edge Enhancement Under Transonic Flow Conditions", The 3rd International Conference on Mechanical Engineering and Applied Sciences 2025 (ICMEAS 2025). [Accepted for publication. The camera-ready version is submitted.]
- T. Nath, **A. T. Washi**, K.M. T. Tahmid, K. K. Das, J. P. Das, T. H. Anto, " Investigating Hemodynamic Changes in a Stenosed Artery with Varying Eccentricity Using Nano-fluid Simulation", The 3rd International Conference on Mechanical Engineering and Applied Sciences 2025 (ICMEAS 2025). [Accepted for publication. The camera-ready version is submitted.]
- J. P. Das, K.M. T. Tahmid, T. Nath, **A. T. Washi**, " Optimizing Pin-Fin Heat Sinks Automatically Using MATLAB-Based Computational Fluid Dynamics and Genetic Algorithms", The 3rd International Conference on Mechanical Engineering and Applied Sciences 2025 (ICMEAS 2025). [Accepted for publication. The camera-ready version is submitted.]
- K.M. T. Tahmid, J. P. Das, T. Nath, K. K. Das, **A. T. Washi**, S. Mahmud, " Numerical Investigation of Heat Transfer Performance in a Shell and Tube Heat Exchanger Using Twisted Tube and Hybrid Nano-Fluid", The 3rd International Conference on Mechanical Engineering and Applied Sciences 2025 (ICMEAS 2025). [Accepted for publication. The camera-ready version is submitted.]
- K. K. Das, T. Nath, **A. T. Washi**, K.M. T. Tahmid" Comparative Study Between NACA 2412 and NACA 4412: A CFD Approach", The 3rd International Conference on Mechanical Engineering and Applied Sciences 2025 (ICMEAS 2025). [Accepted for publication. The camera-ready version is submitted.]

PROJECTS

Study on Screw Turbine
A detailed study on manufacturing and working mechanism of a screw turbine.

Design and fabrication of a Bevel gear
In this project, me and my team designed and fabricated a bevel gear as a part of our practical course.

TECHNICAL SKILLS

- **Simulation Softwares:** ANSYS (Fluent)
- **Design Softwares :** SOLIDWORKS AutoCAD

- **Programming Language :** C Python
- **Microsoft Packs :** MS Word MS Powerpoint MS Excel
- **Plotting Software :** Origin Pro
- **Technical Skills :** Mechanical Testing on UTM

SCHOLARSHIPS & AWARDS

Deans Award
For keeping academic excellence throughout a year.

Government Scholarships
This scholarship is given to the students for securing top positions in the country.

CERTIFICATES & ACHIEVEMENTS

Introduction to Autocad (from EDGE)
A project of the Bangladesh Computer Council (BCC) under the ICT Division where CSWA equivalent knowledge is given.

INDUSTRIAL EXPERIENCE

United Power Generation & Distribution Company Ltd.
Completed a 7 day industrial attachment gaining vast knowledge about power generation, engines, generators, transformers, HVAC systems.

HAMKO Battery
Completed an industrial attachment getting insights about battery production, from sourcing raw materials to delivering finished products to retailers.

TEST SCORES

IELTS (Academic): 7.5 (Overall score)

Listening: 9 Reading: 8 Writing: 6.5 Speaking: 6

EXTRA-CURRICULAR ACTIVITIES

Vice President
Ramians Association of KUET