# ALI AHMAD

Graduate Research Student
New Delhi, India, 110025
+91-935-405-8008 aliahmad01309@gmail.com www.linkedin.com/in/ali-ahmad-4a55531ab/

## Education

**Faculty of Engineering and Technology, JMI** **August 2023 – July 2025**
*Master of Technology (Thermal Engineering)* *CGPA - 8.85/10*

**Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh** **August 2019 – July 2023**
*Bachelor of Technology (Mechanical Engineering)* *CGPA - 8.71/10*

**St. Mary's Inter College, Lucknow** **May 2018**
*Intermediate* *Percentage - 71.83/100*

**St. Mary's Inter College, Lucknow** **May 2016**
*High School* *Percentage - 75.33/100*

## Research Experience

**High Performance Computing Lab** **May 2023 – June 2024**
*Research Assistant – Supervisor: Professor Abdur Rahim* *JMI New Delhi, India*

- Compiling a Fortran code for 2D, compressible viscous flow to carry out DNS simulations for a NACA series airfoil.
- Studying the effect of flow separation and density variation in an airfoil for both steady and impulsively accelerated conditions, and further investigating the stall point.

## Projects

**Numerical Investigation of transient aerodynamic characteristics on a 2D compressible viscous flow around an impulsively accelerated NACA0012 airfoil** **Aug 2024 - June 2025**
*Master's Thesis— Supervisor Professor Abdur Rahim* *New Delhi, India*

- Performed Computational Fluid Dynamics (CFD) simulations of unsteady 2D compressible viscous flow using Navier–Stokes equations with Sutherland viscosity law.
- Investigated shock wave formation, migration, and shock–boundary layer interaction during early acceleration phases.
- Conducted grid independence studies to ensure numerical accuracy and stability of results.

**Design and fabrication of multipurpose electric wheelchair for patients** **August 2022 – May 2023**
*Bachelor's Thesis — Supervisor: Mr. Vivek Agnihotri* *Lucknow, India*

- Designed a motorized wheelchair with integrated multi-function capabilities including reclining, height adjustment, and detachable accessories for patient comfort.
- Incorporated ergonomic design principles for improved seating posture and long-term usability.
- Optimized design for ease of maintenance and cost-effectiveness for low-income healthcare facilities.

## Certifications and Events

- Campus Ambassador at E-Cell IIT Hyderabad
- Certified in AUTOCAD from CETPA infotech pvt. ltd. Lucknow, India
- Workshop on Entrepreneurship Development
- Volunteer at college fest (GANTAVYA)

## Skills

**Simulation Software**: Fortran, Ansys, MATLAB
**Post-Processing Software**: Tecplot, OriginPro
**CAD Software**: AutoCAD
**Operating Systems**: Windows, Ubuntu/Linux
**Desktop editing and productivity software**: MS-Office, Latex, Google docs
**Soft Skills**: Quick Learner, Problem-solving, Leadership
**Languages**: English, Urdu, Hindi
**Hobbies**: Reading, Anchoring

## Relevant Coursework

- Advance Thermodynamics
- Fluid Mechanics
- Advance Fluid Mechanics
- Advance Heat Transfer
- Gas Dynamics
- IC Engines
- Automobile Engineering
- Turbomachinery
- Non-Conventional Energy Sources

## References

**Prof. Abdur Rahim (M.Tech Supervisor)**
Departnment of Mechanical Engineering
Jamia Millia Islamia, New Delhi-110025, India.
**Email** : arahim@jmi.ac.in

**Prof. Nadeem Hasan**
Department of Mechanical Engineering
Aligarh Muslim University, Aligarh-202002, India
**Email** : n.hasan.me@amu.ac.in

**Prof. M. Jamil Ahmad**
Departnment of Mechanical Engineering
Aligarh Muslim University, Aligarh-202002, India.
**Email** : jamil.amu@gmail.com

**Mr. Vivek Agnihotri**
Department of Mechanical Engineering
SRMCEM, Lucknow-226028, India
**Email** : vivekagnihotri.me@srmcem.ac.in