



MURTHAZA IRFAN A V

AEROSPACE ENGINEER

Research Fellow | Indian Institute of Science (IISc) | Department of Aerospace Engineering

An enthusiastic engineer who is ambitious to build a career and secure challenging position where I can use my extensive skills to help my organization to achieve its goal of excellence. As well as expand my knowledge, learnings and skills to improvise myself and growth of organization.

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PROFESSIONAL EXPERIENCE

[Research Experience]

- **Indian Institute of Science (IISc, Bangalore), India** (2022 - Present)
Department of Aerospace Engineering
Research Associate
 Advisor – Prof. Dr. Rajesh Chaunsali
 - Laboratory of Engineered Materials & Structures (LEMS) under Prof. Dr. Rajesh Chaunsali
Research work is broadly interested in
 - Solid Mechanics
 - Mechanics of advanced materials such as Metamaterials
 - Wave physics, vibration control, and instabilities
 - Turbulent Shear Flow Physics and Engineering Laboratory (TSFPEL) under Prof. Dr. Duvvuri Subrahmanyam
Research work is broadly interested in
 - Aero/Fluid Dynamics
 - Turbulent shear flows in both incompressible (subsonic) and compressible (supersonic, hypersonic) regimes.
 - Fluid-Structure Interaction (FSI)

[Industrial Experience]

- **Expleo Group Pvt Ltd, Bangalore, India** (2022)
Aero-Structures Department
Design Engineer – Trainee - Intern
 - Part of ESI (Electrical Systems Integration) AIRBUS - France team
 - Designing and (EHI) Electrical Harness Installation in Catia V5 as per AIRBUS standards
 - Check activity of the 2D drafts & 3D electrical harness.
- **Royal Nag Aviation, Bangalore, India** (2021)
Manufacturers of Aircraft scaled models
Project - Intern
 - Concept of Designing and Fabrication process of Aircraft Structures
 - Part of fabricating a full-scale functional model of Cessna 172 Aircraft



EDUCATION

- **B.E in Aeronautical Engineering** **8.9 CGPA** (on scale of 10) (2018-2022)
 Visvesvaraya Technological University (VTU), Bangalore, India
- **12th / II PUC** **87 %** (2018)
 (Department of Pre-University, Bangalore, India)
- **10th / SSLC** **92%** (2016)
 (Karnataka Secondary Education Board, Bangalore, India)

TECHNICAL SKILLS

- Catia V5
- 3D Printing
- Ansys
- Machine Design
- Structural Analysis
- SolidWorks
- UG NX
- COMSOL
- Adobe Illustrator
- Vibration Analysis

KEY STRENGTH

- Good Communication Skill
- Time Management
- Good Leadership
- Attentive Listener
- Passionate & Innovative Thinker

PROJECTS

- **ISRO – STC (Space Technology Cell) Project** (2022 - Present)
Vibration Isolation using Bandgap Metamaterials (Advisor: Prof. Dr. Rajesh Chaunsali)
 - ISRO's Communication on the Move (COTM) and Satcom on the Move (SOTM) activities require precise pointing of electronic hardware. Therefore, to isolate vibration from broadband, this work will investigate possibility of making vibration isolators using bandgap metamaterials.
 - Prototype of vibration isolation for mounted systems without using dampers.
- **Meta-Structure with Inertial Amplification** (2022 - Present)
(Advisor: Prof. Dr. Rajesh Chaunsali)
 - Fabrication of low frequency isolation system using inerters (metamaterials)
 - Vibration characterization
 - Additive manufacturing
- **Fabrication of Isospectral 1-D Discrete Systems** (2022 - Present)
(Advisor: Prof. Dr. Rajesh Chaunsali)
 - Computer Aided Designing (CAD) and 3D Printing
 - Experimental Data Collection using Laser Doppler Vibrometer (LDV)
- **Fluid-Structure Interaction (FSI) in Unsteady Pulsating Flow** (2023 - Present)
(Advisor: Prof. Dr. Rajesh Chaunsali, Prof. Dr. Duvvuri Subrahmanyam)
 - Unsteady pulsating flow in Hypersonic regime.
 - Study on FSI with Cone-cylinder model
- **SBRL – Stratospheric Balloon Rocket Launcher** (2020 – 2022)
(Advisor: Prof. Dr. Nishanth P)
 - Solution for the high economic expenses in rocket launches
 - Eliminate space debris as compared to other conventional methods of rocket launching methods.

ACHIEVEMENTS

- Won *Bronze medal* in Inter-Department Cricket Championship at IISc (2023)
- Selected for the *National Scholarship and State Scholarship* of Engineering, rewarded for 4 years. (2018-2022)
- Secured *1st place* in *Poster Illustration* organised by Ewasthava, EWCE (2021)
- Won *2nd place* in *Aircraft Sketching Event – The DaVinci 4.0*, organized by Aerotrotaire club at EWCE (2020)
- Awarded *2nd place* in *Internet of Things (IOT) Quiz at ATRIA* Institute of Technology, organized by XCELERATOR Innovation Challenge (2018)
- *Best Performer of the year* at H K E S, SVP PU College for securing *1st place* in all extra-curricular events (2017)
- Advance level-3 in *All India General Knowledge Examination*, as well as secured *Distinction* from 2010 to 2016 conducted by CHRD.
- *State level 2nd place, District level 1st place and Taluk level 1st place* in *Essay competition* organized by SYS (2015)
- *District Rank Holder* in *Science Talent Search Examination* organized by CADO (2011)

EXTRA CURRICULARS / WORKSHOPS

- *Coordinator* for the event *AERES (Aerospace Research Symposium)* 2023 at Department of Aerospace, IISc
- *Captain*, Aerospace B team (Cricket Tournament) at IISc, 2023
- 5 days International online program organized by *All Russian Science Festival and Valles Marineris International Space Agency* on the topic '*Introduction to Rocket & Satellite Engineering*' (April 12-17, 2020)
- Participated in *Balsa Glider Workshop* held at EWCE-Yelahanka on August 30-31, 2019 organized by HLI Model Sport including Flying session of glider (2 days workshop)
- Completed *Introductory Program for Aerospace Structural Engineer Analysis* conducted by BridgeNow Academy
- Completed *Basic HTML and Web Designing* by securing Distinction grade.