



Renganath Rengarajan

Aerospace Engineer

Phone: +91-7892848524
Address: 84, 3rd Main, 5th cross, VV Nagar 2nd Block, Vasanthapura Subramanyapura Post, Bangalore 560061
Website: <https://www.linkedin.com/in/renganath-rengarajan-27a7b4115/>
Email: renganathabhi@gmail.com

An adaptable aerospace engineer with 2+ years of research cum industry experience. Aiming to leverage a proven knowledge in experimental research, structures & materials and process improvement skills to fill up a suitable role at a progressive organization that offers career growth.

EXPERIENCE

Indian Institute of Science (IISC)

June 2022-Present

Project Associate

- Project Title: Vibration Isolation using Bandgap Metamaterials
- Project Supervisor: Prof. Rajesh Chaunsali

Belcan India Pvt Ltd

February 2022-May 2022

Design Engineer

- Part of the technical requirements specification team working on compliance of various aero-engines.
- Involved in reviewing of gas turbine engine parts & identification of hazardous materials.
- Created technical passports for aero-derivative engines based on data from engine manuals.

NewSpace Research & Technologies Pvt Ltd

April 2021- January 2022

Project Engineer

- Design of structural testing methods for drone airframe.
- Structural optimization of drone airframe components.
- Supervision of production & integration of hybrid drones. Involved in vendor management, quality inspection and production planning of composite drone airframes.

Arrowdynamic Laboratories Pte Ltd

October 2020-December 2020

Intern

- Worked on mechanical integration of autopilot system of solar glider, manufacturing of balloons for station-keeping purpose.
- Conducted workshops on basics of aero-modelling to undergrads and school students.

Singapore Institute of Manufacturing Technology (SIMTECH)- AS*TAR

January 2020-September 2020

Intern-Master Thesis

- Collaborated with a team and developed an accelerated fatigue testing method for high strength materials using vibration shaker system.
- Conducted a comprehensive experimental research to validate the testing process using a specific type of fixture and acquired insights on reliability of test setup.
- Researched & established a sequential process for high frequency axial-fatigue testing electrodynamic shaker. Identified the coupling between various test parameters & user controlled input parameters.
- Validated test process by examining structural integrity of test fixture. Acquired insights on reliability of test method, compatibility of test fixture. Explored scope for process modification, fixture re-design based on experimental results.

ERI@N-NTU

March 2019-October 2019

Research Intern

- Collaborated with a team working on cost effective manufacturing of composite tidal turbine.

- Fabricated GFRP & CFRP panels using vacuum assisted resin transfer molding (VARTM) process. Examined the possibilities of manufacturing a composite tidal turbine blade by applying VARTM methodology on a closed cement mold.
- Worked on fabrication & testing of composite materials, resin characterization (DSC & Rheometer).
- Identified issues prevailing in the manufacturing process & the scope for process optimization.

PROJECTS

Conceptual Design of Blended Wing Aircraft September 2018- November 2018

- Drag reduction is a hot topic in the field of aerodynamics and Blended Wing Body aircrafts are an innovative solution for it in the field of Aerospace.
- Our team designed a blended wing body aircraft by developing the idea from the blended wing body design of the Boeing X-48B.
- Our conceptual design was 15% more efficient than a medium haul commercial airliner through a better aerodynamic design.

Studies on characteristics of Small Wind turbine blade (Bachelors final year project) December 2017-May 2018

- Carried out reverse engineering of a composite small wind turbine blade.
- Conducted structural testing, made analytical estimation, CMM scanning to identify the scope for structural and aerodynamic optimization of the design.
- Suggested manufacturer (based on experimental results) to include spar and use better airfoils for improving structural integrity and aerodynamic efficiency of the blade.

Conceptual Design of Multipurpose Amphibian Aircraft- National Level competition (Finalist) December 2017-April 2018

- Brainstormed with the team and developed a initial conceptual design that possess the mission capabilities described in the RFP.
- Performed calculations pertinent to weight estimation & performance parameters.

Flight Lab (IIT Kanpur) February 2017

- Carried out flight mechanics experiments onboard Cessna 206H & Piper Saratoga Aircraft for flight stability analysis.

EDUCATION

TUM-Asia (TU Munich-NTU Singapore) July 2018-December 2020

M.Sc. Aerospace Engineering

- Primary focus Area: Structures & Materials
- Secondary Focus Area: Flight Mechanics & Controls
- Master Thesis: High Frequency Fatigue Testing of High Strength Materials.
- Subjects: Fracture mechanics and NDT, Carbon Fiber composites, Failure analysis-diagnostics & prevention, Lightweight aerospace structures, Structures & materials, Advanced flight controls, advanced flight mechanics, Spacecraft technology, Helicopters engineering.
- TUM CAP: 2.07
- NTU CGPA: 3.22/5

IJAEM-Jain University August 2014-June 2018

Bachelor of Technology Aerospace Engineering

- CGPA: 8.66/10

SKILLS

Technical skills: Problem solving, Critical thinking, Composite materials, Structural analysis, Aerospace design, VARTM, Composite manufacturing, 3D printing, Material & structural testing, Fatigue testing, Polymer characterization, Experimental research, R&D, Team player, Vendor management, Quality inspection, Negotiation, Interpersonal skills.

Software skills: Ansys workbench, Solidworks, XFLR, ElamX, X-Mind, NI-LabVIEW, Matlab

Languages: English (Professional, IELTS band 8), Tamil (Native or bilingual), Kannada (Native or bilingual)