

Samanvay Anand

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**Master of Technology (M. Tech.),
Mechanical Engineering with
specialization in Energy Systems**
Indian Institute of Technology (IIT)
Mandi – 175005, India.

ABOUT ME

- Career Objective – To achieve high career growth in the field of research in order to serve nature and mankind and keep myself dynamic, visionary and competitive with the changing scenario of the world.
- Effective and confident communicator, with ability to explain complex scientific concepts to audiences of all levels.

INTERESTS

Wave Propagation, Metamaterials, Magnetism, Solid Mechanics, Fracture Mechanics, Theories of Plates and Shells, Finite Element Methods, Structural Optimization (Topological Optimization).

EDUCATION

Doctor of Philosophy (PhD) **CGPA: 8.50/10**
Dept. of Aerospace Engineering,
Indian Institute of Science (IISc), Bangalore, India.
October 2020 – Present

Advisors: Dr. Rajesh Chaunsali & Dr. Vivekanand Dabade

Master of Technology (M. Tech.) **CGPA: 8.50/10**
Mechanical Engineering with specialization in Energy Systems
Indian Institute of Technology (IIT), Mandi, India.
Aug 2018 - July 2020

Master's project: 'Finite Element Modeling of In-Situ Composite Patch Repair of Cracked Aluminum Aircraft Structures'

Advisor: Dr. Himanshu Pathak

Bachelor of Engineering (B.E) in Mechanical Engineering **Aggregate %: 74.77**
Visvesvaraya Technological University, Belagavi, Karnataka, India.
Aug 2012 – July 2016

Bachelor's capstone project: 'Solar Mini Refrigerator'

Advisor: Lecturer Gururaja Sharma T

Higher Secondary School (12th) **Aggregate %: 72.83**
Patna Central School, Patna, CBSE
Passing year – 2011

Secondary School (10th) **Aggregate %: 85.16**
Gyan Niketan, Patna, CBSE
Passing Year – 2009

PUBLICATION

Anand, S. and Pathak, H., 2019. Finite Element Modeling of In-Situ Composite Patch Repair of Cracked Aluminium Aircraft Structures. Proceedings of the Indian Structural Steel Conference, IIT Hyderabad (ISSC 2020). (Accepted for publication in springer book series)

EXPERIENCE

Industrial Training

Studied the working and operation of “Tunnel Boring Machine” at **Tapovan Vishnugad Hydro Power Plant (TVHPP), NTPC Ltd.**, Joshimath, Uttarakhand from 17th June – 21st July, 2019.

National and International Workshops

- 1-day workshop on “**Scientific Writing**” organized by ISRO on 31st March 2021.
- 2-day India-UK SPARC webinar on “**Metal Additive Manufacturing and Friction Stir Processing: Present and Future**” from September 16 -17, 2020 at IIT Patna.
- 5-day workshop on “**Material Characterization Techniques**” from August 24 - 28, 2020 at NIT Jalandhar.
- 5-day workshop on “**Computational Methods in Mechanical Engineering**” from March 3 -7, 2020 at NIT Hamirpur.
- 3-day workshop on “**Water Filtration Technique Based on Solar Energy**” from February 11 – 13, 2019 at IIT Mandi.

Mentorship and Management Roles

Teaching Assistant – Central Library, IIT Mandi.	Aug 2018 – Nov 2018
Teaching Assistant – Design Practicum, IIT Mandi.	Feb 2019 – June 2019
Teaching Assistant – Mechanics of Rigid Bodies, IIT Mandi.	Aug 2019 – Nov 2019
Teaching Assistant – Product Realization Technology Lab, IIT Mandi.	Feb 2020 – July 2020
Student member – Mountain Biking Club, IIT Mandi.	2018 – 2020
Student member – ISHRAE (Indian Society of Heating Refrigeration and Air Conditioning Engineers).	2015 – 2016

AWARDS AND SCHOLARSHIPS

Ministry of Human Resource Development (MHRD) Fellowship Aug 2018 – June 2020
Awarded for pursuing Master’s degree at IIT Mandi after qualifying the Graduate Aptitude Test in Engineering (GATE) 2018, by the Ministry of Human Resource Development, Government of India.

TECHNICAL SKILLS

- **CAD and FEM Softwares:** - CATIA, ABAQUS, MSC Patran-Nastran, COMSOL
- **Programming and Scripting Languages:** - C++, MATLAB, LabVIEW
- **Documentation Software:** - Microsoft Office Suite, LaTeX
- **Operating System:** - Windows, Linux, Mac

COURSES

- **Academic Course Works:** -
Structural Optimization – Size, Shape and Topology, Fracture Mechanics, Flight Vehicle Structures, Mathematical Methods for Aerospace Engineers, Finite Element Methods, Analysis and Design of Composite Structures, Plates Shells and Geometric Elasticity
- **Short Term Courses:** -
“Certification of Composite Aero Structures” by Dr. Amar Garg, Boeing Aero Structures.
“Acoustics, Elastodynamics and Meta-materials” by Dr. Ankit Srivastava, Associate Professor at the Illinois Institute of Technology.

HOBBIES

Playing Flute, Cycling, Teaching, Taking care of Animals (Animal Lover)