Faculty Profile

Dr. Benjamin Rohit holds a Ph.D. in Mechanical & Materials Science from VIT, with expertise in advanced material characterization, material testing, and computational modeling. He leads pioneering research in alloy development, vibration analysis, and high-temperature materials. His work integrates Molecular Dynamics, CALPHAD, and Physics-Informed Neural Networks to advance aerospace materials.

Personal Information

- **Name:** Benjamin Rohit, Ph.D
- **Designation:** [Assistant Professor (Senior Grade)]
- **Department:** [Aerospace Engineering]
- **Email:** [benjaminr@rvce.edu.in]
- **Phone:** [9986735896]

https://scholar.google.com/citations?user=MFWIg_gAAAAJ&hl=en&authuser=2

Domain of Expertise

Research Focus

- **Primary Area:** Aerospace Structures and Materials
- **Allied Areas:**
    - Computational Materials Science
    - [Autonomous Vehicles, Unmanned Aerial Vehicles and Autonomous Underwater Vehicles]

Academic Qualifications

- **Ph.D.**: [Mechanical], [Vellore Institute of Technology], [2024]
- **M.Sc.**: [Computational Mechanics], [University of Duisburg Essen, Germany], [2015]
- **B.E.:** [Aeronautical], [VTU], [2011]

Professional Experience

Experience

S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	PESIT BSC	Assistant Professor	2015-2016

Publications & Patents

Journal Publications

1. B. Rohit and N. R. Muktinutalapati, "Austenite reversion in 18% Ni maraging steel and its weldments," Mater. Sci. Technol., vol. 34, no. 3, pp. 253–260, 2018.
2. B. Rohit, "An analytical solution to estimate the critical buckling load of doubly-curved laminates under a combined load of uniaxial compression, in-plane shear and bending moment," Mech. Based Des. Struct. Mach., vol. 51, no. 12, pp. 6976–6997, 2023.
3. B. Rohit and N. R. Muktinutalapati, "Influence of reverted austenite on tensile deformation and fracture in 18Ni 250 maraging steel," J. Test. Eval., vol. 51, no. 2, pp. 766–783, 2023.
4. B. Rohit and N. R. Muktinutalapati, "Fatigue behavior of 18% Ni maraging steels: a review," J. Mater. Eng. Perform., vol. 30, no. 4, pp. 2341–2354, 2021.
5. B. Rohit, S. S. R. Reddy, S. Ghosh, and M. A. S. Shakil, "Computations of flow past the corrugated airfoil of Drosophila melanogaster at ultra low Reynolds number," J. Appl. Fluid Mech., vol. 14, no. 2, pp. 417–427, 2020.
6. B. Rohit and N. M. Rao, "Influence of reverted austenite on fatigue life of 18% nickel maraging steel," Mater. Werkst., vol. 54, no. 10, pp. 1283–1295, 2023.
7. B. Rohit and N. R. Muktinutalapati, "Modelling the overaging kinetics of 18Ni250 maraging steel," Mater. Perform. Charact., vol. 13, no. 1, pp. 60–71, 2024.

Conference Papers

1. R. S. Kulkarni, B. Rohit, V. Lokanatha, and C. Lokesh, "Understanding boundary layer suction and its effect on wings—A review," in IOP Conf. Ser.: Mater. Sci. Eng., vol. 376, no. 1, p. 012030, 2018.
2. B. Rohit, P. D. Gowda, N. B. Nagaraju, and S. Meghana, "Life and failure of aircraft wheels—A review," in IOP Conf. Ser.: Mater. Sci. Eng., vol. 520, no. 1, p. 012002, 2019.
3. S. Rao, S. Sathyanarayanan, C. M. Tejaswini, and B. Rohit, "Star sensor algorithm using the overlapping grid method for attitude determination first," in Proc. Int. Conf. Innov. Inf. Commun. Technol. (ICI2CT), 2020, pp. 111–121.
4. M. Sudarshan, P. D. Gowda, B. Rohit, and N. B. Nagaraju, "Effect of temperature on local stresses in magnetoelectric composites," in Proc. 2019 IEEE 10th Int. Conf. Mech. Aerosp. Eng. (ICMAE), 2019, pp. 550–554.
5. R. Benjamin and M. N. Rao, "Crack nucleation in β titanium alloys under high cycle fatigue conditions—a review," in J. Phys.: Conf. Ser., vol. 843, no. 1, p. 012048, 2017.

6. R. Vishwanath and B. Rohit, "A review on inspection and maintenance of FRP structures," in IOP Conf. Ser.: Mater. Sci. Eng., vol. 520, no. 1, p. 012003, 2019.

Books/Book Chapters

Patents [Filed / Published / Granted]

R & Grants & Consultancy Projects

Co-Principal Investigator for a INR 20 lakh (~22,000 Euros) grant (GRD No. 1025, KFIST-L2) from the Government of Karnataka, India, securing funding from 2022 onward to drive experimental studies on vibration and flutter phenomena

Ongoing & Completed Research Projects

Ongoing & Completed Consultancy Projects

Professional Memberships

Awards & Recognitions

Student Supervision

- **Undergraduate Research Mentees:** [18]

Professional Roles

Teaching

Core Courses: [Current semester]

- [AS244AI] [Aerospace Structures]
- [21AS7F1] [Fatigue and Fracture Mechanics]

Advanced/Lab Courses:

- [Aerospace Structures Lab]

Professional Roles

Responsibilities

- **Academic:** [CIE Coordinator, IDP Coordinator, Minor Project Coordinator, AICTE Activity Points Coordinator, BOS Member, BOE Member]
- **Administrative:** [Aerospace Structures Lab in-charge]

External Connect