

Brief Resume

Dr. Manoharan R

Associate Professor

Department of Design and Automation

School of Mechanical Engineering

VIT University, Vellore – 632014

Tamil Nadu, India.

Email: rmanoharan@vit.ac.in

Mobile: +91 9500898090

Academics

Ph.D., Mechanical Engineering- VIT University, Vellore

- **Thesis Topic:** Vibration Analysis of a Fully and Partially Treated Laminated Composite Magnetorheological Fluid Sandwich Plate
- **Specialization:** Smart Materials, Computational Mechanics, Composite materials

M.E., Engineering Design - Anna University, Chennai

- **Specialization:** Engineering Design

B.E., Mechanical Engineering- National Institute of Technology, Trichy

- **Specialization:** Mechanical Engineering

Areas of Interest

- ❖ Dynamics and Control - active and semi-active vibration control
- ❖ Design, Simulation and Experimentation of Static and Dynamic Systems
- ❖ Computational Mechanics
- ❖ Development of smart structures using Smart Materials
- ❖ Composite Materials (Mechanics and Fabrication)
- ❖ 3D Printing & Nanocomposites
- ❖ Structural health monitoring

Research Experience

- ✓ More than 18 years of industry, research and teaching experience
- ✓ No. of Ph.D. scholars guided: 2
- ✓ No. of Ph.D. scholars guiding: 4
- ✓ No. of International Journals Publications with high impact factor: 26
- ✓ On-going R&D projects: 3
- ✓ Life time member of the Institution of Engineers (India) - Kolkata, India.

Selected Publications:

1. RajeshKumar S and **Manoharan Ramamoorthy** (2020), Experimental and finite element vibration analysis of CNT reinforced MR elastomer sandwich beam, *Mechanics Based Design of Structures and Machines, An International Journal*, 24 Jun 2020, DOI: [10.1080/15397734.2020.1778487](https://doi.org/10.1080/15397734.2020.1778487). **Impact Factor: 2.16**
2. RajeshKumar S and **Manoharan Ramamoorthy** (2020), Recent Developments in Semi-active Control of Magnetorheological Materials Based Sandwich Structures: A Review, *Journal of Thermoplastic Composite Materials*, 15 June 2020, DOI: [10.1177/0892705720930749](https://doi.org/10.1177/0892705720930749). **Impact Factor: 1.34**
3. Rajeshkumar S and **Manoharan Ramamoorthy** (2020), Dynamic analysis of laminated composite sandwich beam containing carbon nanotubes reinforced magnetorheological elastomer, *Journal of Sandwich Structures and Materials*, 12 February 2020, DOI: [10.1177/1099636220905253](https://doi.org/10.1177/1099636220905253). **Impact Factor: 5.616**
4. Mageshwaran Subramania , Rajeshkumar S and **Manoharan Ramamoorthy** (2020), Free vibration analysis of the MWCNT reinforced hybrid laminated composite sandwich beam, *Materials Today: Proceedings* 22 (2020) 3220–3225.
5. Sridharan Kannan and **Manoharan Ramamoorthy** (2020), Mechanical characterization and experimental modal analysis of 3D printed ABS, PC and PC-ABS materials, *Materials Research Express*, Volume 7, No.1, 27 January 2020. **Impact Factor: 1.41**
6. Mageshwaran Subramani and **Manoharan Ramamoorthy** (2020), Vibration analysis of the multi-walled carbon nanotube reinforced doubly curved laminated composite shallow shell panels: An experimental and numerical study, *Journal of Sandwich*

Structures and Materials, 16 January 2020, DOI: [10.1177/1099636219900484](https://doi.org/10.1177/1099636219900484). **Impact Factor: 5.616**

7. Mageshwaran Subramani and **Manoharan Ramamoorthy** (August 22, 2019), Vibration analysis of multiwalled carbon nanotube-reinforced composite shell: An experimental study, *Polymers and Polymer Composites*, [DOI.org/10.1177/0967391119870406](https://doi.org/10.1177/0967391119870406), pp. 1–10. **Impact Factor: 0.77**
8. Ananda Babu Arumugam, **Manoharan Ramamoorthy**, Vasudevan Rajamohan, Mageshwaran S and Rajesh Kumar S (2018), Dynamic characterization and parametric instability analysis of rotating magnetorheological fluid composite sandwich plate subjected to periodic in-plane loading, *Journal of Sandwich Structures & Materials*, 0(0) pp. 1–28. **Impact Factor: 5.616**
9. Mageshwaran S and **Manoharan R** (2018), A Numerical Investigation on Vibration Analysis of the Laminated Composite Sandwich Beam, *International Journal of Pure and Applied Mathematics*, Vol.118, No. 18 2018, 4139-4147. ISSN: 1311-8080 & 1314-3395
10. Kurhe Nikhil M., Shedbale Indrajeet B, Charapale Utkarsh D, **Manoharan R**, (2018) Modal Analysis of Hybrid Laminated Composite Sandwich Plate, *Materials Today: Proceedings* 5 (2018) 12453–12466.
11. Mageshwaran S, AnandBabu A, **Manoharan R** (2017), Vibration Analysis of Carbon Fiber Reinforced Laminated Composite Skin with Glass honeycomb Sandwich Beam using HSDT, *Periodica Polytechnica Mechanical Engineering*, Vol.61, No.3, 2017, pp.213-224, **Impact Factor: 1.15**
12. S Rajeshkumar and **R Manoharan**, (2017) Design and analysis of composite spur gears using finite element method, *IOP Conf. Series: Materials Science and Engineering* 263 (2017) 062048 doi:10.1088/1757-899X/263/6/062048.
13. **Manoharan R**, Vasudevan R and Edwin Sudhagar. G (2016), Semi-Active Vibration Control of Laminated Composite Sandwich Plate – An Experimental Study, *Archive of Mechanical Engineering*, Vol. LXIII, No.3, 2016, pp. 367-377. **Impact Factor: 1.06**
14. **Manoharan R**, Vasudevan R and Jeevanantham AK (2016) Vibration analysis of a partially treated laminated composite magnetorheological fluid sandwich plate, *Journal of Vibration and Control*, Vol.22 No.3, pp.869-895. **Impact Factor: 2.80**
15. **Manoharan R**, Vasudevan R and Jeevanantham AK (2015) Optimal layout of a partially treated laminated composite MR fluid sandwich plate, *Journal of Smart Structures and Systems*, Vol. 16, No. 6 (2015),pp. 1023-1047. **Impact Factor: 3.82**

16. **Manoharan R** (2015) , Experimental Investigation On Dynamic Characteristics Of Unidirectional And Woven Glass Fiber Laminated Composite Plates With And Without Cut-Outs, *International Journal of Applied Engineering Research*, ISSN, 0973-4562 Volume 10, Number 18 (2015) pp 38746-38752
17. **Manoharan R**, Shedbale Indrajeet B, Charapale Utkarsh D, Kurhe Nikhil M. (2015), Vibration analysis of laminated composite sandwich plate using finite element analysis, *International Journal of Applied Engineering Research*, ISSN 0973-4562, Vol. 10 No.91 (2015)
18. **Manoharan R**, Vasudevan R and Jeevanantham AK (2014) Dynamic characterization of a laminated composite magnetorheological fluid sandwich plate. *Journal of Smart Materials and Structures*, Vol. 23 (2014), 025022 (16pp). **Impact Factor: 3.710**