

## **Dr. SHARNAPPA JOLADARASHI**

Associate. Professor, Mechanical Engineering Department, National Institute of Technology,  
Surathkal -575025, Karnataka, India.

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### **Academic Profile**

- 2005- 2008                      Doctor of Philosophy, Machine Design (Mechanical engineering),  
**Indian Institute of Technology Madras. (I.I.T.M)**  
**Chennai - 600036, Tamil Nadu.**  
CGPA: **9.5/10.00**
- 2001- 2003                      Master of Technology, Advanced Manufacture Engineering  
(Mechanical engineering),  
**N.I.T.K Surathkal (Formerly KREC)**  
Percentage: **79.22**
- 1996-2000                      Bachelor of Engineering, Mechanical Engineering,  
**S.L.N.C.E Raichur, Gulbarga University, Karnataka.**  
Percentage: **68.42**

### **Professional Experience**

#### **1. Sept 2019 to Till date**

- a. Designation : Associate Professor
- b. Organization : National Institute of Technology Surathkal (NITK), Karnataka, India.

#### **2. March 2015 to Sept 2019**

- a. Designation : Asst. Professor
- b. Organization : National Institute of Technology Surathkal (NITK), Karnataka, India.

#### **3. August 2012 to March 2015**

- a. Designation : Lead Engineer
- b. Company : QuEST Global Engineering Pvt Ltd, Bangalore, India.

#### **4. August 2010 to August 2012**

- a. Designation : Senior Analyst
- b. Company : QuEST Global Engineering Pvt Ltd, Bristol, UK.

#### **5. August 2008 to August 2010**

- a. Designation : Analyst
- b. Company : QuEST Global Engineering Pvt Ltd, Bangalore, India.

#### **6. April 2003 to Dec 2004**

- Designation : Lecturer (Contract basis)
- Company : National Institute of Technology Surathkal, Karnataka, India.

### Core subjects:

1. Applied Finite Element (FEM)
2. Composite materials
3. Theory of vibrations
4. Theory of Shells
4. Machine Design

### Soft Skills

- |                        |  |
|------------------------|--|
| 1. CAE Software        | <b>PATRAN, NASTRAN, LS-Dyna, HYPERMESH. BRAVA READER</b> |
| 2. Programming         | <b>LAP, FORTRAN. STAT17- MIL HDBK.</b>                   |
| 3. Presentation Skills | <b>MS WORD, MS Power Point, MS Excel, MathCAD</b>        |
| 4. Operating Systems   | <b>MS Windows 98/2000/XP.</b>                            |

### Training

- **Six sigma project training (QuEST).**

### Sponsored Research Projects:

1. **Dr. Sharnappa Joladarashi, Principal Investigator** and Dr. Hemantha kumar, Co- Principal Investigator, *Experimental investigation of passive, semi-active and active vibration control of composite sandwich structure, Funding:Rs:50.5Lakhs*, DST Funded Project under ECR Scheme- [ECR/2016/001448] – Completed on 15<sup>th</sup> Feb 2021. (2017-2021)
2. Dr. Hemantha kumar, Principal Investigator and **Dr. Sharnappa Joladarashi, Co- Principal Investigator (along with other 6 Co-PIs)**, *Development of Cost Effective Magneto-Rheological (MR) Fluid Damper in Two wheelers and Four Wheelers Automobile to Improve Ride Comfort and Stability'*, *Funding:Rs:355 Lakhs*, Funding Agency: Ministry of Human Resource Development, Govt. of India and Ministry of Road Transport and Highways under IMPRINT Scheme- [IMPRINT/2016/7330] – Completed on 31<sup>st</sup> March 2022 (2017-2022)

### Book Chapters Published:

1. Rakesh Patil, **Sharnappa Joladarashi** and Ravikiran Kadoli, "Finite element formulation for static and time dependent transverse deflection of functionally graded sandwich beams with viscoelastic core," 2nd International Congress on Advances in Mechanical and Systems Engineering (CAMSE), 2021, Dr B R Ambedkar National Institute of Technology Jalandhar, 17-19 July 2021. Proceedings CAMSE, Lecture Notes in Mechanical Engineering (LNME), Springer [https://doi.org/10.1007/978-981-19-2188-9\\_36](https://doi.org/10.1007/978-981-19-2188-9_36).
2. Praveennath G Koppad, MR Ramesh, **S Joladarashi**, ST Aruna, Nagaraja C Reddy, C Siddaraju, Gaseous Phase Processing Techniques for Functionally Graded Materials, book titled Functionally Graded Materials (FGMs): Fabrication, Properties, Applications, and Advancements, CRC Press- Taylor and Francis Group. Sep 2021, Page 49-76, ISBN 9781000439342.
3. Durga Prasad C, Mahantayya Matapathi, Ramesh M R, and **Sharnappa Joladarashi**, "Investigation of Microstructural and Tribological Behavior of Metco 41C+WC-12Co Composite Coating Sprayed by HVOF Process" book titled "Thermal Spray Coatings", CRC press- Taylor and Francis Group. ISBN 9781032081489, November 29, 2021, 392 Pages.

## **Publications:**

### **International Journals:**

1. Kartik S Kumbhare, Vishwas Mahesh, **Sharnappa Joladarashi**, and Satyabodh M Kulkarni, (2022) “Comparative Study on Low Velocity Impact Behavior of Natural Hybrid and Non Hybrid Flexible Thermoplastic Based Composites”, Journal of Thermoplastic Composite Materials, Dec.2022, pp.1-18, (I.F: 3.027, SCIE) DOI: <https://doi.org/10.1177/08927057221145530>.
2. Vishwas Mahesh, Vinyas Mahesh, Dineshkumar Harursampath, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2022) “Development of Sustainable Jute/Epoxy Composite and Assessing the Effect of Rubber Crumb on Low Velocity Impact Response”, Journal of Natural Fibers, Volume 19, Mar 2022, NO. 15, 12268–12279, (SCIE Indexed, IF:5.323 and Scopus Indexed). DOI: <https://doi.org/10.1080/15440478.2022.2054897>
3. Suryarao Nagiredla, **Sharnappa Joladarashi**, Hemantha Kumar, “Influence of Material and Geometrical Properties on Static and Dynamic Behavior of MR Fluid Sandwich Beam: Finite Element Approach”, Iranian Journal of Science and Technology (I.F: 1.530, SCIE, Revision Submitted).
4. Suryarao Nagiredla, **Sharnappa Joladarashi**, Hemantha Kumar, “Influence of Magneto-rheological Fluid Pocket Configuration on the Dynamic Response of the Composite Sandwich Beam”, Mechanics Based Design of Structures and Machines (I.F: 4.364, SCIE), <https://doi.org/10.1080/15397734.2022.2138914>
5. Suryarao Nagiredla, **Sharnappa Joladarashi**, Hemantha Kumar, “Characterization of an In-house Prepared MR Fluid and Vibrational Behaviour of Composite Sandwich Beam with MR Fluid Core”, Scientia Iranica (I.F: 1.416, SCIE, Accepted for publication). DOI: <https://doi.org/10.24200/sci.2022.58527.5777>
6. Suryarao Nagiredla, **Sharnappa Joladarashi**, Hemantha Kumar, “Combined Damping Effect of the Composite Material and Magneto-rheological Fluid on Static and Dynamic Behavior of the Sandwich Beam”, Journal of Vibration Engineering Technologies (I.F: 2.333, SCIE), <https://doi.org/10.1007/s42417-022-00716-4>
7. Suryarao Nagiredla, **Sharnappa Joladarashi**, Hemantha Kumar (2022). “Rheological Properties of the In-house Prepared Magneto-rheological Fluid in the Pre-yield Region”. International Journal of Engineering, (ESCI, Scopus), <https://doi.org/10.5829/ije.2022.35.11b.19>
8. T. S. Mohan Kumar, **Sharnappa Joladarashi**, S. M. Kulkarni and Saleemsab Doddamani. (2022). “Optimization of process parameters for ballistic impact response of hybrid sandwich composites”, International Journal on Interactive Design and Manufacturing (IJIDeM), (Impact Factor: 2.681), <https://doi.org/10.1007/s12008-022-01061-2>.
9. Aruna M N, M. R. Rahman, **Sharnappa Joladarashi**, Hemantha Kumar, Sher Singh Meena, Debashish Sarkar, C.K.Umesh, “A study on Magnetorheological and Sedimentation Properties of Soft Magnetic Fe<sub>58</sub>Ni<sub>42</sub> Particles” Journal of Magnetism and Magnetic Materials, Sept. 2022, 169934, (Impact Factor: 2.993), <https://doi.org/10.1016/j.jmmm.2022.169934>.
10. G.T.Mohanraj, **Sharnappa Joladarashi**, Harish Hanumanthappa, Bharath Kumar Shanmugam, Harsha Vardhan, Gajanan M.Naik, P. Devadas Bhat, M.R.Rahman “Numerical approach for optimization of magnetic roller and evaluating the performance of permanent magnet roller separator through design of experiment” Alexandria Engineering Journal, Volume 61, Issue 12, 2022, Pages 13011-13033. (Impact Factor: 6.626) DOI: <https://doi.org/10.1016/j.aej.2022.07.003>
11. Rakesh Patil, **Sharnappa Joladarashi** and Ravikiran Kadoli. (2022). “Bending and vibration studies of FG porous sandwich beam with viscoelastic boundary conditions: FE approach”,

Mechanics of Advanced Materials and Structures, 1-20, DOI: (SCI, IF: 4.03). DOI:[10.1080/15376494.2022.2079030](https://doi.org/10.1080/15376494.2022.2079030)

12. Syam Narayana Addepalli, **Sharnappa Joladarashi**, M. R. Ramesh and S. B. Arya, " Effect of Mechanical Alloying on the Microstructure of CoCrNiTiMox High Entropy Alloy, Journal of Thermal Spray Technology (2022), (IF:2.757) 31, 1045-1055. DOI:[10.1007/s11666-021-01317-5](https://doi.org/10.1007/s11666-021-01317-5)
13. Dasari Rajkumar, Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2022) "A Novel Flexible Green Composite with Sisal and Natural Rubber: Investigation under Low-Velocity Impact", Journal of Natural Fibers, Feb 2022, (SCIE Indexed, IF:5.32 and Scopus Indexed). DOI: <https://doi.org/10.1080/15440478.2022.2036292>.
14. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2021) "Comparative study on ballistic impact response of neat fabric, compliant, hybrid compliant and stiff composite", Thin-Walled Structures, Volume 165, August 2021, 107986, (SCIE Indexed, IF:4.03 and Scopus Indexed). DOI: <https://doi.org/10.1016/j.tws.2021.107986>.
15. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2021) "Three Body Abrasive Wear Assessment of Novel Jute/Natural Rubber Flexible Green Composite", Journal of Thermoplastic Composite Materials, (SCIE Indexed, IF:1.59 and Scopus Indexed). DOI: 10.1177/08927057211017185. Vol 34(11), 1566-1576, 2021.
16. Vishwas Mahesh, Ashutosh Nilabh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2021). "Analysis of Impact Behaviour of Sisal-Epoxy Composites under Low Velocity Regime", Journal of Composite and Advanced Materials (Revue des Composites et des Matériaux Avancés), 2020, DOI: <https://doi.org/10.18280/rcma.310108>, Vol. 31, No. 1, February, 2021, pp. 57-63. (SCImago, IF: 0.132)
17. Mohanraj G. T, M. R. Rahman, **Sharnappa Joladarashi**, Harish Hanumanthappa, Bharath Kumar Shanmugam, Harsha Vardhan, Shahid Azam Rabbani, "Design and fabrication of optimized magnetic roller for permanent roll magnetic separator (PRMS): Finite element method magnetics (FEMM) approach" Advanced Powder Technology, Volume 32, Issue 2, February 2021, Pages 546-564. (Impact Factor: 4.217)
18. M. N. Aruna, M. R. Rahman, **Sharnappa Joladarashi**, Hemantha Kumar, Devadas Bhat P, "Influence of Different Fumed Silica as Thixotropic Additive on Carbonyl Particles Magnetorheological Fluids for Sedimentation Effects" Journal of Magnetism and Magnetic Materials, Volume 529, 1 July 2021, 167910, (Impact Factor: 2.993), <https://doi.org/10.1016/j.jmmm.2021.167910>.
19. Rangaraj M. Desai · Mohibb-e-Hussain Jamadar, · Hemantha Kumar · **Sharnappa Joladarashi**. "Performance evaluation of a single sensor control scheme using a twin-tube MR damper based semi-active suspension", Journal of Vibration Engineering & Technologies (IF 0.35), March 2021, <https://doi.org/10.1007/s42417-021-00290-1>
20. Timothy Harold Gonsalves , Mohan Kumar Garje Channabasappa , Ramesh Motagondanahalli Rangarasaiah & **Sharnappa Joladarashi**, " Dynamic characterization of hybrid composite material of rotor-bearing support system, Journal of Mechanics of Advanced Materials and Structures (2020), 6:124. <https://doi.org/10.1080/15376494.2020.1861667>.
21. Rakesh Patil, **Sharnappa Joladarashi** and Ravikiran Kadoli. (2020). "Studies on free and forced vibration of functionally graded back plate with brake insulator of a disc brake system", Archive of Applied Mechanics, **90**, pages2693–2714 (2020), DOI: <https://doi.org/10.1007/s00419-020-01743-x> (SCI, IF: 1.547).
22. C. Durga Prasad, **Sharnappa Joladarashi**, M. R. Ramesh and M. S. Srinath, " Microstructural and Tribological Resistance of Flame-Sprayed CoMoCrSi/WC-CrC-Ni and CoMoCrSi/WC-12Co Composite Coatings Remelted by Microwave Energy, Journal of Bio- and Tribo-Corrosion (2020), 6:124. <https://doi.org/10.1007/s40735-020-00421-3>

23. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2020). "Evaluation of Tensile Strength and Slurry Erosive Behaviour of Jute Reinforced Natural Rubber Based Flexible Composite", *Journal of Composite and Advanced Materials (Revue des Composites et des Matériaux Avancés)*, 2020, DOI: <https://doi.org/10.18280/rcma.300204>, Vol. 30, No. 2, April, 2020, pp. 77-82. (SCImago, IF: 0.132)
24. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2021). "Influence of Thickness and Projectile Shape on Penetration Resistance of the Compliant Composite", *Defence Technology*, **17**(1), 245-256, DOI: <https://doi.org/10.1016/j.dt.2020.03.006> (SCIE Indexed, IF: 2.637).
25. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2020). "Influence of laminate thickness and impactor shape on low velocity impact response of jute-epoxy composite: FE study", *Materials Today: Proceedings*, <https://doi.org/10.1016/j.matpr.2019.12.216>. (Scopus Indexed) **Volume 28, Part 2**, 2020, Pages 545-550.
26. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2021). "A Comprehensive Review on Material Selection for Polymer Matrix Composites Subjected to Impact Load", *Defence Technology*, **17**(1), 257-277, <https://doi.org/10.1016/j.dt.2020.04.002> (SCIE Indexed, IF: 2.637).
27. M. N. Aruna, M. R. Rahman, **Sharnappa Joladarashi**, Hemantha Kumar, "Investigation of sedimentation, rheological, and damping force characteristics of carbonyl iron magnetorheological fluid with/without additives" *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, **42** (2020), 228. (**Impact Factor: 1.98**)
28. Rangaraj Madhavrao Desai, Subash Acharya, Mohibb-e-Hussain Jamadar, Hemantha Kumar, **Sharnappa Joladarashi** and SC Raja Sekaran. "Synthesis of magnetorheological fluid and its application in a twin-tube valve mode automotive damper", *Journal of Materials: Design and Applications* (IF 1.568), 2020; 1-16, <https://doi.org/10.1177/1464420720925497>.
29. Mohibb-e-Hussain Jamadar, Rangaraj M. Desai · Radhe Shyam Tak Saini · Hemantha Kumar · **Sharnappa Joladarashi**. "Dynamic Analysis of a Quarter Car Model with a Semi-Active Seat Suspension Using a Novel Model for Magneto-Rheological (MR) Damper", *Journal of Vibration Engineering & Technologies* (IF 0.35), Vol.9, pp.161-176, 2021, <https://doi.org/10.1007/s42417-020-00218-1>.
30. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2021). "Damage Mechanics and Energy Absorption Capabilities of Natural Fiber Reinforced Elastomeric Based Bio Composite for Sacrificial Structural Applications", *Defence Technology*, **17**(1), 161-176, DOI: <https://doi.org/10.1016/j.dt.2020.02.013> (SCIE Indexed, IF: 2.637).
31. C. Durga Prasad, **Sharnappa Joladarashi**, M. R. Ramesh, M. S. Srinath, and B. H. Channabasappa. "Comparison of Microstructural and Sliding Wear Resistance of HVOF Coated and Microwave Treated CoMoCrSi-WC + CrC + Ni and CoMoCrSi-WC + 12Co Composite Coatings Deposited on Titanium Substrate, Silicon (2020). <https://doi.org/10.1007/s12633-020-00398-1>.
32. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2019) "An Experimental Study on Adhesion, Flexibility, Interlaminar Shear Strength and Damage Mechanism of Jute/Rubber Based Flexible 'Green' Composite", *Journal of Thermoplastic Composite Materials*, DOI: 10.1177/0892705719882074 (SCIE Indexed, IF:1.59 and Scopus Indexed). <https://doi.org/10.1177/0892705719882074>
33. Srikumar Biradar, **Sharnappa Joladarashi** and S M Kulkarni.(2020), "Investigation on Mechanical Behaviour of Filament Wound Glass/Epoxy Composites Subjected to Water Absorption and also Tribological Studies Using Taguchi Method", *Elsevier Materials Today Proceedings*. <https://doi.org/10.1016/j.matpr.2020.02.834>
34. Srikumar Biradar, **Sharnappa Joladarashi** and S M Kulkarni.(2019) "Tribo-mechanical and physical characterization of filament wound glass/epoxy composites". *Materials Research Express* (IF 1.44), (2019), DOI: 10.1088/2053-1591/ab3685.



35. Srikumar Biradar, **Sharnappa J** and S M Kulkarni, "FE Analysis of FRP Pressure Vessel", *Key Engineering Materials* (2019), [doi:10.4028/www.scientific.net/KEM.801.77](https://doi.org/10.4028/www.scientific.net/KEM.801.77).
36. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2019). "Development and mechanical characterization of novel polymer-based flexible composite and optimization of stacking sequences using VIKOR and PSI techniques", *Journal of Thermoplastic Composite Materials*, <https://doi.org/10.1177/0892705719864619> (SCIE Indexed, IF:1.343 and Scopus Indexed).
37. Vishwas, M., **Sharnappa Joladarashi** and S M Kulkarni. "Comparative Study on Damage Behaviour of Synthetic and Natural Fiber Reinforced Brittle Composite and Natural Fiber Reinforced Flexible Composite Subjected to Low Velocity Impact", *ScientiaIranica, Transaction on Mechanical Engineering B* (IF: 0.71), (Accepted and in press), DOI: 10.24200/sci.2018.51294.2100.
38. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni.(2019). "An Experimental Investigation on Low-Velocity Impact Response of Novel Jute/ Rubber Flexible Bio-Composite", *Composite Structures*, **225**, 111190, 1-12 <https://doi.org/10.1016/j.compstruct.2019.111190> (SCI Indexed, IF: 5.138)
39. Vishwas Mahesh, **Sharnappa Joladarashi** and S M Kulkarni (2019). "Study on Stacking Sequence of Plies in Green Sandwiches for Low Velocity Impact Application", *Key Engineering Materials*, **801**, 59-64, [doi:10.4028/www.scientific.net/KEM.801.59](https://doi.org/10.4028/www.scientific.net/KEM.801.59) (Scopus Indexed)
40. Vishwas Mahesh, **Sharnappa Joladarashi** and Satyabodh M Kulkarni. (2019). "Experimental study on abrasive wear behaviour of flexible green composite intended to be used as protective cladding for structures", *International Journal of Modern Manufacturing Technologies (IJMMT)*, **11**(1), 69-76, DOI: 10.6084/m9.figshare.8287706.v1 (Scopus Indexed)
41. Prasad, C. Durga, **Sharnappa Joladarashi**, M. R. Ramesh, M. S. Srinath, and B. H. Channabasappa. " Effect of microwave heating on microstructure and elevated temperature adhesive wear behavior of HVOF deposited CoMoCrSi-Cr3C2 coating, *Surface & Coatings Technology*, 374 (2019) 291–304. <https://doi.org/10.1016/j.surfcoat.2019.05.056>.
42. M N Aruna, M R Rahman , **Sharnappa Joladarashi** and Hemantha Kumar. "Influence of additives on the synthesis of carbonyl iron suspension on rheological and sedimentation properties of magnetorheological (MR) fluids, *Materials Research Express* 6, (2019). <https://dx.doi.org/10.1088/2053-1591/ab1e03>. 086105 (**Impact Factor: 1.449**)
43. Vishwas Mahesh, **Sharnappa Joladarashi** and S M Kulkarni. "Physio-mechanical and wear properties of novel jute reinforced natural rubber based flexible composite, *Materials Research Express* 6, (2019). <https://doi.org/10.1088/2053-1591/ab0164>.
44. Rangaraj Madhavrao Desai, Mohibb E. HussainJamadar, Hemantha Kumar, **Sharnappa Joladarashi** and S. C. Raja Sekaran. "Design and experimental characterization of a twin-tube MR damper for a passenger van", *Brazilian Society of Mechanical Sciences and Engineering* (IF 1.74), 41, 332, pp1-21,2019. <https://doi.org/10.1007/s40430-019-1833-5>,
45. Rangaraj Madhavrao Desai, Mohibb E. HussainJamadar, Hemantha Kumar, **Sharnappa Joladarashi**, S. C. Raja Sekaran and Amarnath G. "Evaluation of a commercial MR damper for application in semi-active suspension", *SN Applied Sciences*,(2019), <https://doi.org/10.1007/s42452-019-1026-y>, *SN Appl. Sci.* **1**, 993 (2019).
46. Prasad, C. Durga, **Sharnappa Joladarashi**, M. R. Ramesh, M. S. Srinath, and B. H. Channabasappa. " Development and Sliding Wear Behavior of Co-Mo-Cr-Si Cladding through Microwave Heating, *Silicon* 11, 2975-2986 (2019). <https://doi.org/10.1007/s12633-019-0084-5>.
47. PradeepVBadiger , Vijay Desai, MR Ramesh , **Sharnappa Joladarashi** and Hemanth Gourkar, "Tribological behaviour of monolayer and multilayer Ti-based thin solid films deposited on alloy steel", *Mater. Res. Express*, Vol.6, Number 2 (2019) 026419, <https://doi.org/10.1088/2053-1591/aaef6d>
48. Prasad, C. Durga, **Sharnappa Joladarashi**, M. R. Ramesh, M. S. Srinath, and B. H. Channabasappa. " Microstructure and tribological behavior of flame sprayed and microwave fused CoMoCrSi/CoMoCrSi-Cr3C2 coatings" *Materials Research Express*, 6 (2019) 026512, <https://doi.org/10.1088/2053-1591/aaebd9>.
49. Vishwas, M., **Sharnappa Joladarashi** and S M Kulkarni. "Investigation on effect of using rubber as core material in sandwich composite plate subjected to low velocity normal and oblique

impact loading”, ScientiaIranica, Transaction on Mechanical Engineering B (IF: 0.71), 2018, 10.24200/sci.2018.5538.1331

50. **Vishwas Mahesh.**, Sharnappa Joladarashi and Satyabodh M Kulkarni. (2018). “Experimental Investigation on Slurry Erosive Behaviour of Biodegradable Flexible Composite and Optimization of Parameters using Taguchi’s Approach”, *Journal of Composite and Advanced Materials (Revue des Composites et des Matériaux Avancés)*, **28** (3), 345-355, doi:10.3166/rcma.28.345-355 (SCOPUS and ESCI Indexed).
51. Prasad, C. Durga, **Sharnappa Joladarashi**, M. R. Ramesh, M. S. Srinath, and B. H. Channabasappa. "Influence of microwave hybrid heating on the sliding wear behaviour of HVOF sprayed CoMoCrSi coating." *Materials Research Express* Vol. 5, no. 8 (2018).
52. Vinyas, Subhas Chandra Kattimani and **Sharnappa Joladarashi**. “Hygrothermal coupling analysis of magneto-electroelastic beams using finite element methods.” *Journal of Thermal Stresses*.2018; Vol. 41: pp.1063-1079.
53. **Sharnappa**, N. Ganesan and Raju Sethuraman “Buckling and Free Vibrations of Sandwich General shells of Revolution with Composite facings and Viscoelastic core under Thermal Environment using Semi-analytical Method.” *Computer modeling in engineering and Science*.2007; Vol. 18(2): pp.121-144.
54. **Sharnappa**, N. Ganesan and Raju Sethuraman “Dynamic modeling of active constrained layer damping of composite beam under thermal environment.” *Journal of Sound and Vibration*.2007; Vol. 305:pp.728-749.
55. **Sharnappa**, N. Ganesan and Raju Sethuraman “Buckling, Free Vibration analysis of magnetic constrained layer damping (MCLD) beam”, *Finite Elements in Analysis and Design*, 2009; Vol. 45(3): pp.156-162.
56. **Sharnappa**, N. Ganesan and Raju Sethuraman “Thermally induced vibrations of piezo-thermo-viscoelastic composite beam with relaxation times and system response.” *Multidiscipline Modeling in Materials and Structures*,2010; Vol. 6 Iss: 1, pp.120 - 140.

#### National Journals:

1. Vinay M and **Sharnappa Joladarashi**. “Effect of stress concentration factor on threaded hole under different loading conditions using transfer functions." *Manipal J. Sci. Tech.*, 2017; vol.2(2), 32-39.

#### International Conferences:

1. Pradeep Kumar S., Rakesh Patil, **Sharnappa Joladarashi**, “Static Structural Analysis of Non-Pneumatic Bicycle Wheel using FEM”, 4<sup>th</sup> Innovative Product Design and Intelligent Manufacturing systems conference, NIT Rourkela, Odisha, India, November 25-26, 2022.
2. Gangu Sasi Sekharan Sadaram, Giridhar Ippili, Rachana Ellur, Pappu Mouli, Nagiredla Suryarao, Hemantha Kumar, **Sharnappa Joladarashi**, "Active Vibration Control of Viscoelastic Core Sandwich Using PID, LQR and LQG Controllers", 2nd Indian International Conference on Industrial Engineering and Operations Management - IEOM India Conference, NIT, Warangal, Warangal, India, August 16-18, 2022.
3. Giridhar Ippili, Gangu Sasi Sekharan Sadaram, Pappu Mouli, Rachana Ellur, Nagiredla Suryarao, Hemantha Kumar, **Sharnappa Joladarashi**, " Active Vibration Control of MR Fluid Core Sandwich Beam Using PID, LQR and LQG Controllers", 2nd Indian International Conference on Industrial Engineering and Operations Management - IEOM India Conference, NIT, Warangal, Warangal, India, August 16-18, 2022.
4. Kartik Kumbhare, Vishwas Mahesh, **Sharnappa Joladarashi** " Low-velocity impact response of jute/banana fiber in natural rubber-based hybrid composites: FE approach", 13th International Symposium on Plasticity and Impact Mechanics, (IMPLAST 2022), IIT Madras, Chennai, India, 21<sup>st</sup> -26<sup>th</sup> Aug 2022.
5. Kajal Chourasia, **Sharnappa Joladarashi**, Ajinkya S Chougule, "Structural and Random Vibration Analysis of Aftertreatment system Mounted on fixtures using ANSYS", International Conference on Sustainable Materials, Manufacturing and Industrial Engineering (ICSMMIE

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### **Administrative Responsibilities at Department Level**

<b>Sl No</b>	<b>Departmental activity</b>	<b>Year</b>
1	DRPC Secretary	2016-2017
2	Faculty Advisor for M-Tech (Design & Precision)	2017-18 and 2018-19
3	Faculty Advisor for B-Tech 2 <sup>nd</sup> Year	2018-19
4	Faculty Advisor for B-Tech 3 <sup>rd</sup> Year	2019-20
5	Faculty Advisor for B-Tech 4 <sup>th</sup> Year	2020-21
6	Member of DPGC, DRPC and DUGC	2015- Till date
7	Member, Selection committee for admission to Ph. D M. Tech. (Research).	2016-2017
8	Major Project Coordinator	2018-19, 2019-20
9	Co-ordinator for Temporary faculty recruitment	2018-19, 2020-21,

## Ph.D Guidance

Sl. No.	Year	Title of Project/Thesis	Name of students	Name of other supervisor
1	2018-19	Investigation on Elevated Temperature Adhesive Wear Behavior of Microwave Fused Thermal Spray Triballoy Composite Coatings	Durga Prasad, C.	Dr. M R Ramesh
2	2019-20	Performance Evaluation Of Flexible Composites For Impact Behaviour	Vishwas M	Dr. S M Kulkarni
3	2020-21	Design, Synthesis and Evaluation of Twin-Tube Valve Mode Magneto-Rheological (MR) Damper for Semi-Active Automotive Suspension System	Rangaraj Desai	Dr. Hemanth Kumar
4	2021-22	Investigation on Mechanical Properties of Filament wound Composites for Pressure Vessel	Srikumar Biradar	Dr. S M Kulkarni

### Ph.D. Dissertation:

**Title: Buckling and dynamic behavior of sandwich beam and shell structures under thermal and magnetic environments.**

**Description:** Research work deals with the vibration, damping and buckling analysis of sandwich structures (beam and axisymmetric shell) under magnetic and thermal environments using finite element method (FEM). FORTRAN code is developed and is validated with commercial finite element package ANSYS and available literature. The coupled piezo-thermo-elastic problem is solved for beam and axi-symmetric shell structures. The influence of fiber orientation, temperature and magnetic field on variation of frequency and loss factor is analyzed. In addition, the relative influence of a structural damping of composite material, passive damping of viscoelastic material and active damping are analyzed.

### **Research topics:**

- Dynamic behaviour of an Active Constrained Layer Damping (ACLD) composite beam under thermal environment.



- A thermally induced vibration of piezo-thermo-viscoelastic composite beam with relaxation times and system response is obtained.
- Study on dynamic analysis of sandwich structure with viscoelastic core for general shells of revolution under thermal environment.
- Buckling and vibration behavior of sandwich viscoelastic beam and shell under magnetic environment.

### **M. Tech Project:**

**Title: Characterization of cenosphere foam cored sandwich composites for mechanical Properties.**

**Description:** The project involves the preparation of particulate composites using cenosphere fly ash particles as filler in epoxy. The filler particle surface is treated chemically using a Silane-coupling agent to improve the compatibility with the matrix. The compressive properties of these are compared with untreated cenosphere fly ash particles and results are analyzed with scanning electronic microscope (SEM). The primary study involves the preparation of foam cores and testing them for specific strength in compression and bending tests. The secondary study involves the preparation of glass skin sandwiches with cenosphere foam cores and these are tested for specific strength in compression and bending and these properties are compared with cores.

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## **Declaration:**

I hereby declare that the above written particulars are true to the best of my knowledge and belief.

**(Sharnappa Joladarashi)**