

RESUME

			
Name :	Dr. VASUNDHARA M G		
Date of Birth :	04-05-1979		
Highest Qualifications :	MTech. (Machine Design), Ph. D. (Energy Harvesting)		
Address	Assistant Professor, Dept. of Mechanical Engineering Malnad College of Engineering, Hassan, Karnataka, PIN: 573202 #+919964070272 Email: vasundharamg@gmail.com mgv@mcehassan.ac.in		
Academic Performance:			
Qualifications	Board / IIT / University	Institute and place where studied	Year of passing
UG Degree	Kuvempu University, Shankaraghatta	University.B.D.T College Of Engineering, Davangere	2000
PG Degree	Visveswaraiah Technological University,Belgaum.	Basaveshwar Engineering college, Bagalkot	2004
Ph. D.	Anna University, Chennai	PSG College of Technology, Coimbatore.	2019
Field of Specialization: Analytical, Numerical and Experimental Study on Tuning of Piezoelectric Based Vibration Energy Harvester Using Shape Memory Alloy			

AREER PROFILE:

From Date	To Date	Years	Employer	Designation
14 th Aug 2001	15 th Aug 2002	1 Years	HMT Machine Tools Bangalore	Trainee Engineer
28 th Aug 2004	02 nd Feb 2009	4.42 Years	Bahubali College of Engineering Shravanabelagola	Lecturer
02 nd Feb 2009	01 th Feb 2010	1 Year	Bahubali College of Engineering Shravanabelagola	Senior Lecturer
02 th Feb 2010	16 th Jun 2011	1.33 Years	Bahubali College of Engineering Shravanabelagola	Assistant Professor
17 th Jun 2011	Till date		Malnad College of Engineering Hassan	Assistant Professor

Responsibilities held:

- Work Load officer, Malnad College of Engineering, Hassan
- Institute level NBA Coordinator, Malnad College of Engineering, Hassan
- Institute level Parent Relation Centre Coordinator, Manad College of Engineering, Hassan
- Enquiry Committee Member, Malnad College of Engineering, Hassan
- College Disciplinary Committee member, Malnad College of Engineering, Hassan
- Ant ragging committee member, Malnad College of Engineering,Hassan
- Department Academic Committee member, Department Mechanical Engineering, Malnad College of Engineering,Hassan.
- Coordinator UGC/AICTE Department Mechanical Engineering, Malnad College of Engineering,Hassan.

- Administrative Committee Member, Manad College of Engineering, Hassan
- Coordinator NAAC-AQAR Department Mechanical Engineering, Malnad College of Engineering, Hassan.
- Coordinator for NBA, Department Mechanical Engineering. Malnad College of Engineering, Hassan.
- Coordinator for Mechanical Engineering Association, Department Mechanical Engineering.
Malnad College of Engineering, Hassan.
- Coordinator for Design Laboratory, Department Mechanical Engineering.
Bahubali College of Engineering, Sharvanabelagola.
- Coordinator for College Fest, Bahubali College of Engineering, Sharvanabelagola.

Membership of Professional Societies:

Life Member, Indian Society for Technical Education, New Delhi, India

List of short-term courses/FDP/Attended:

- **The Workshop on “FACULTY DEVELOPMENT PROGRAMME” held at Bahubali College of Engineering, Shravanabelagola during 25th Aug to 27th Aug 2005.**
- **The QIP sponsored short-term course on “MICROMACHINING” held at I.I.T. Kanpur during Oct. 25th to 29th Oct 2005.**

- **The AICTE sponsored course on “STAFF INDUCTION TRAINING PROGRAMME IN PEDAGOGY” held at Acharya Institute of Technology Bangalore during 4th Jan to 20th Jan 2006.**
- **The QIP sponsored short-term course on “RECENT TRENDS ON CAD/CAM/CAE” held at Malnad College of Engineering, Hassan during. 22nd May to 27th May 2006.**
- **The QIP sponsored short-term course on “RECENT ADVANCES IN MATERIALS AND MANUFACTURING” held at Malnad College of Engineering, Hassan during. 21st Aug to 25th Aug 2006.**
- **The QIP sponsored short-term course on “ADVANCES IN NON DESTRUCTIVE TESTING” held at Malnad College of Engineering, Hassan during. 11th Dec to 15th Dec 2006.**
- **The QIP sponsored short-term course on “RECENT TRENDS IN ALTERNATIVE FUELS” held at Malnad College of Engineering, Hassan during. 08th Jan to 12th Jan 2007.**
- **The QIP sponsored short-term course on “COMPUTER AIDED MODELING AND ANALYSIS LABORATORY” held at Malnad College of Engineering, Hassan during. 04th Feb to 08th Feb 2009.**
- **The AICTE sponsored course on “Research Method and Tool for Mechanical Engineering Faculty” held Bannari Amman Institute of Technology,**

Sathyamangalam during 31st May to 11th June 2010.

- **The VTU-VGST sponsored three days course RENEWABLE ENERGY SOURCES & LATEST MANUFACTURING TECHNOLOGY on "" held at New Horizon College of Engineering, Bangalore during. 27th Jan to 29th Jan 2011.**
- **The ISTE sponsored course on "MISSION10X" held at Adichunchunagiri Institute of Technology, Chikmangalur during 12th Sept to 16th Sept 2011.**
- **The QIP sponsored short-term course on "CONTROL SYSTEMS" held at I.I.T.Bombay during 3rd Dec to 07th Dec 2012.**
- **The TEQIP sponsored short-term course on "TEACHING EFFECTIVENESS" held at during 29th March to 30th March 2013.**
- **The AICTE sponsored course on "STRATEGIES FOR ENVIRONMENTALLY CONSCIOUS PRODUCT DESIGN AND MANUFACTURING" held PSG college of Technology, Coimbatore during 02nd June to 15th June 2013.**
- **The DST sponsored course on "OPTIMIZATION OF MATHEMATICAL MODEL AND THEIR APPLICATIONS" held MS Ramaiah Institute of Technology, Bangalore during 1st July to 6th July 2013.**
- **The TEQIP sponsored short-term course on "RECENT ADVANCES IN THERMAL ENGINEERING AND ITS APPLICATIONS" held at Malnad College of Engineering, Hassan during. 20th May to 24th May 2013.**

- **The TEQIP sponsored short-term course on “INDUSTRIAL TRIBOLOGY” held at Siddaganga Institute of Technology, Tumkur during 20th Aug to 24th Aug 2013.**
- **The TEQIP sponsored short-term course on “DERIVING PROGRAM EDUCATIONAL OBJECTIVES/PROGRAM OUTCOMES/COURSE OUTCOMES/ASSESSMENTS FOR NBA SELF ASSESSMENT REPORT” held at Malnad College of Engineering, Hassan during. 11th July to 13th July 2013.**
- **The TEQIP sponsored short-term course on “THEORETICAL COMPUTATIONAL AND APPLIED MECHANICS” held at BMS College of Engineering, Bangalore during 16th June to 20th June 2014.**
- **The AICTE sponsored course on “TECHNOLOGY FOR DESIGN, MODELING AND PRODUCTION OF COMPOSITE STRUCTURES” held Government Engineering College, Hassan during 27th Jan to 08th Feb 2014.**
- **The VTU-VGST sponsored course METHODOLOGIES FOR 3D SCANNING OF CIVIL AND ARCHITECTURAL STRUCTURES on “” held at Government Engineering College, Hassan during. 24th Feb to 27th Feb 2014.**
- **The QIP sponsored short-term course on “ANALYTICAL AND NUMERICAL TECHNIQUES IN APPLIED MATHEMATICS AND ENGINEERING” held at Malnad College of Engineering, Hassan during. 28th July to 02nd Aug 2014.**

- **The QIP sponsored short-term course on “ESSENTIAL SKILLS FOR MECHANICAL ENGINEERS” held at Malnad College of Engineering, Hassan during. 01st Sept to 05th Sept 2014.**
- **The TEQIP phase II sponsored short-term course on “VIBRATION MEASUREMENT, ANALYSIS AND CONTROL” held at PSG College of Technology,Coimbatore during 31st July to 06th Aug 2016.**
- **Work shop on “MATLAB R2017a” held at Vidyavardhaka College of Engineering, Mysuru during 28th July to 30th July 2017.**
- **The GIAN sponsored short-term course on “ANALYSIS AND DESIGN of PIEZOELECTRIC VIBRATION ENERGY HARVESTERS” held at IIT Madras, during 30th Oct to 03rd Nov 2017.**
- **The TEQIP phase III sponsored short-term course on “RECENT TRENDS IN AUTOMOTIVE TECHNOLOGY” held at Malnad College of Engineering, Hassan during 25th June to 29th June 2018.**
- **The TEQIP phase III sponsored short-term course on “ADVANCED MATHEMATICAL TOOLS IN ENGINEERING APPLICATIONS” held at Malnad College of Engineering, Hassan during 02nd July to 6th July 2018.**

- **The TEQIP phase III sponsored short-term course on “RESEARCH OPPORTUNITIES AND CHALLENGES IN ADVANCE MATERIALS AND MANUFACTURING” held at Malnad College of Engineering, Hassan during 17th Dec to 22nd Dec 2018.**
- **The TEQIP phase III sponsored short-term course on “ENGINEERING GRAPHICS AND DESIGN TEACHING METHODOLOGY AND EVALUTION PROCEDURE” held at Sri Jayachamarajendra College of Engineering, Mysuru during 08th July to 12th July 2019.**
- **The TEQIP phase III sponsored short-term course on “RECENT DEVELOPMENTS IN RENEWABLE ENERGY SOURCES AND CONVERSION SYSTEM FOR ON/OFF GRID APPLICATIONS” held at Malnad College of Engineering, Hassan during 09th Dec to 14th Dec 2019.**
- **The AICTE sponsored course on CREATING SMART AND GREEN SOCIETY THROUGH ADVANCE TECHNOLOGY OF GREEN ENERGY PHASE-1 held at Malnad College of Engineering, Hassan during 10-12-2020 To 15-12-2020.**
- **The AICTE sponsored course on CREATING SMART AND GREEN SOCIETY THROUGH ADVANCE TECHNOLOGY OF GREEN ENERGY PHASE-2 held at Malnad College of Engineering, Hassan during 17-12-2020 To 22-12-2020.**

- **The TEQIP phase III sponsored short-term course on RECENT ADVANCE IN COMPOSITE MATERIALS FOR ENGINEERING APPLICATION held at BMS College of Engineering, Bengaluru during 08-03-2021 To 12-03-2021**
- **The AICTE-ISTE sponsored course on DESIGN THINKING held at Vidyavardhaka College of Engineering, Mysuru during 07-03-2022 To 12-03-2022**
- **The ARDB sponsored course on SMART STRUCTURES & AEROELASTICITY held at Dayananda Sagar University School of Engineering, Bengaluru during 09-01-2023 To 13-01-2023**
- **The MSME sponsored course on Recent trends in automation technologies for MSME development held at The National Institute of Engineering, Mysuru 30-01-2023 To 03-02-2023**
- **State Level work shop on “Mechanical Vibration” held at Shiradi Sai College of Engineering, Bangalore.**

List of Publications:

International Journal:

- Chaithra CM, Kalavathi GK, **Vasundhara MG**, et al (2025) Thermal analysis of a wetted fin of wavy pattern under convective-radiative heat transfer using artificial neural network. Ain Shams Eng J 16:103621. <https://doi.org/10.1016/J.ASEJ.2025.103621>
- Chaithra CM, Kalavathi GK, **Vasundhara MG**, et al (2025) A Wavelet-Based Stochastic Interpretable Physics-Guided Neural Network to Study the Periodic Heat Transport in a Radiative Convex Fin. Heat Transf 54:4428–4443. <https://doi.org/10.1002/HTJ.70003>
- Manivannan GS, Deb S, **Vasundhara MG**, et al (2025) Performance Analysis of Artificial Gorilla Troop Optimization Algorithm Features based BAT Algorithm for Ground Vibrations Detection using Different Geophone Sensors. 2025 Int Conf Data Sci Agents Artif Intell ICDSAAI 2025. <https://doi.org/10.1109/ICDSAAI65575.2025.11011823>
- Manivannan GS, **Vasundhara MG**, R G C, et al (2025) Unified Approach to Detection of Induction Motor Faults from Vibration Signals using Hilbert Transform based Autoencoder Features and Hybrid Efficient Machine Learning Algorithms. 1–5. <https://doi.org/10.1109/ICICKE65317.2025.11136571>
- Muralidhara B, Babu SPK, **Vasundhara MG**, et al (2025) Enhanced mechanical, thermal, and wear performance of halloysite nanotube infused carbon fiber epoxy composites. Sci Reports 2025 151 15:30019-. <https://doi.org/10.1038/s41598-025-15142-1>
- Senthilkumar M, Satish VT, Bright RJ, **Vasundhara MG** et al (2025) Investigations on the high-temperature wear behaviour of LM25 aluminium alloy/silicon carbide foam interpenetrating phase composites synthesized using gas pressure infiltration. Surf Topogr Metrol Prop 13:15005. <https://doi.org/10.1088/2051-672X/ada6e2>
- Thapliyal S, Joshi A, Gairola S, **Vasundhara MG** et al (2025) A Study of Impact Toughness Behavior and High Cycle Fatigue Properties of Al-Li 8090 Alloy Processed by Cryorolling and Post-Deformation Annealing. Metallogr Microstruct Anal. <https://doi.org/10.1007/s13632-025-01184-4>

- **Vasundhara MG**, Kalavathi GK, Pradeesh EL, et al (2023) Simulation of Self Tuning Shape Memory Alloy Based PZT Energy Harvester. J Mines, Met Fuels 71:2669–2677. <https://doi.org/10.18311/jmmf/2023/41751>
- Pradeesh EL, Udhayakumar S, **Vasundhara MG**, Kalavathi GK (2023) Experimental and numerical analysis on different beam geometries for vibration based piezoelectric energy harvester. Ferroelectrics 606:219–238. <https://doi.org/10.1080/00150193.2023.2189838>
- Somashekhar M, Kalavathi GK, **Vasundhara MG**, Dinesh PA (2023) Intelligent Systems And Applications In Analysis of Viscous Shear Effect in the Boundary Layer Region of Porous Medium of Infinitely Long Journal Bearing. Int J INTELLIGENT INTELLIGENT Syst Appl Eng 11:663–676
- Kalavathi GK, Yuvaraja BK, Dinesh PA, **Vasundhara MG** (2021) Theoretical Study of influence of MHD in an infinitely long rough Porous Journal Bearing. IOP Conf Ser Mater Sci Eng 1189:012030. <https://doi.org/10.1088/1757-899X/1189/1/012030>
- Pradeesh, E. L., Udhayakumar, S., **Vasundhara, M. G.**, & Kalavathi, G. K. 2022. A review on piezoelectric energy harvesting. Microsystem Technologies, 28(8), 1797–1830. <https://doi.org/10.1007/S00542-022-05334-4/FIGURES/1>
- Pradeesh, E. L., Udhayakumar, S., **Vasundhara, M. G.**, & Nijandhan, K. 2021. Design and development of frequency tuneable vibration based piezoelectric energy harvester. <https://doi.org/10.1080/00150193.2021.1984779>
- Senthilkumar, M, **Vasundhara, MG** & Kalavathi, GK 2018, ‘Electromechanical analytical model of shape memory alloy based tunable cantilevered piezoelectric energy harvester’, International Journal of Mechanics and Materials in Design, vol. 15, no. 3, pp. 611–627. Updated List of Journals (ISSN: 1573-8841), <https://doi.org/10.1007/S10999-018-9413-X/TABLES/3>.
- **Vasundhara, MG**, Senthilkumar, M & Kalavathi, GK 2018, ‘A distributed parametric model of Brinson shape memory alloy based resonant frequency tunable cantilevered PZT energy harvester’, International Journal of Mechanics

and Materials in Design, vol. 15, no. 3, pp. 555–568. Updated List of Journals (ISSN: 1573-8841) <https://doi.org/10.1007/S10999-018-9429-2/FIGURES/11>.

- **Vasundhara, MG**, Senthilkumar, M & Kalavathi, GK 2019, 'A Distributed Parametric Model of Shape Memory Alloy based Resonant Frequency Tunable Cantilevered PZT Energy Harvester with tip mass', International ISSS Journal of Micro and Smart Systems, vol. 8, no. 1, pp. 13–24. (ISSN: 2509-7989) <https://doi.org/10.1007/S41683-019-00034-0>
- GK, Kalavathi, FA Najar, and **Vasundhara MG**. 2019. "Performance Characteristics of Journal Bearings (Porous Type): A Coupled Solution Using Hartmann Number and Roughness Parameter." Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, November, 135065011988670. <https://doi.org/10.1177/1350650119886709>.
- Senthilkumar, M, **Vasundhara, MG** & F, Rohit Adaikala Raj, (2019) 'A Study on Tunable Vibration Based Energy Harvester Using Shape Memory Effect. National Journal of Technology, vol 14, no. 6, pp. 29-32 (ISSN - 0973 – 1334)
- Swathi S P, **M G Vasundhara**, Dr B Yogesh " PLC based automatic liquid Racking System" International Journal of Engineering Research & Technology, vol 2 Issue 8 Aug 2013
- Roop R, **M G Vasundhara**, Dr K R Prakash "A low cost PLC based automatic liquid filling and sorting system" International Journal of Scientific and Engineering Research 2012
- Sanjay M R, Arpitha G R, **Vasubdhara M G**, B Yogesha, "Study on Mechanical Characteristics of Unidirectional Sisal/Glass Fiber Reinforced Polyester Hybrid Composites ",International Journal of Science and Research (IJSR),Volume 3 Issue 8, August 2014, ISSN: 585-588.

- Kalavathi G.K., M. Somashekhar, **Vasundhara M.G.**,Yogesha K.K Analytical Study of Roughness on Tilted Pad Thrust Slider Bearing Improved by the Boundary Slippage. Applied Mechanics and Materials Vol. 895, pp 70-75.

International Conference:

- **Vasundhara M G**, Chetan S, Satish S Nadig, Sudheer Kulkarni, “Comparative study of abrasive behavior of silicon carbide Graphite filled unsaturated polyester glass fiber composite” Proc. International Conference Recent Trends in Materials and Characterization NITK Surthakal Feb 14th & 15th 2010.
- Chetan S, Satish S Nadig, Sudheer Kulkarni, **Vasundhara M G** “Comparative study of Abrasive wear resistance of silicon carbide Graphite and mixture of silicon carbide graphite filled glass fiber reinforced vinyl ester” Proc. International Conference Recent Trends in Materials and Characterization NITK Surthakal Feb 14th & 15th 2010.
- Satish S Nadig, Sudheer Kulkarni, Chetan S, **Vasundhara M G** “Comparative study of tensile behavior of silicon carbide Graphite and mixture of silicon carbide graphite filled glass fiber reinforced vinyl ester” Proc. International Conference Recent Trends in Materials and Characterization NITK Surthakal Feb 14th & 15th 2010.
- Sudheer Kulkarni, **Vasundhara M G**, Chetan S, Satish S Nadig “Comparative study of flexural behavior of silicon carbide Graphite and mixture of silicon carbide graphite filled glass fiber reinforced vinyl ester” Proc. International Conference Recent Trends in Materials and Characterization NITK Surthakal Feb 14th & 15th 2010.
- Roop R, **M G Vasundhara**, Dr K R Prakash “A low cost PLC based automatic liquid filling and sorting system” Proc. Punjab university Oct 5th & 6th 2012

National Conference:

- **Vasundhara M G**, Chetan S “Abrasive Wear Behaviors of Graphite Filled Unsaturated Polyester Glass Fiber Composite” Proc.Advance in Mechanical

Engineering Don Bosco Institute of Technology Bangalore Mar 30th & Mar 31st 2009.

- **Vasundhara M G**, Chetan S “Comparative Study of Abrasive Wear Resistance of Mixture of Silicon carbide-Graphite Filled Glass Fiber Reinforced Polyester Composite” Proc. Recent Trend in Mechanical Engineering Vemana Institute of Technology Bangalore Nov 23th & 24th 2009.

VASUNDHARA M G