

## Faculty Profile

<b>Name of Faculty</b>	Dr. D. Shivalingappa	
<b>Department</b>	Mechanical Engineering	
<b>Qualification</b>	B.Tech., M.E., Ph.D.	
<b>Designation</b>	Professor	
<b>Area of specialization</b>	Materials Engineering, Composite Materials, Tribology, Mechanical Vibrations	
<b>Date of Joining BNMIT</b>	05.06.2017	
<b>Nature of Association (Regular/Contractual/Adjunct)</b>	Regular	
<b>e-mail</b>	dsivadvg@gmail.com	
<b>No. of years of Experience</b>	Teaching:24.5 years Research:12.5years	

### Academic Qualifications

- **Ph.D.** (2008), Department of Metallurgical and Materials Engineering, Indian Institute Technology Roorkee, India.
- **M.E.** (1993), Machine Design, Bangalore University, Bangalore, Karnataka, India. (I Class).
- **B.Tech.** (1990), Sri Venkateswara University, Tirupathi, Andhra Pradesh (I Class).

### Working Experience Details

- Professor, Department of Mechanical Engineering, BNMIT, Bangalore, India, (2017 – Till date).
- Professor, Department of Mechanical Engineering, Adhiyamaan College of Engineering, Hosur, Tamil Nadu, India, (2010 – 2017).
- Assistant Professor, Department of Mechanical Engineering, BIET, Davangere, Indian (2007 – 2010).
- Senior Lecturer, Department of Mechanical Engineering, BIET, Davangere, Indian (2004 – 2007).
- Lecturer, Department of Mechanical Engineering, BIET, Davangere, Indian (1994 – 2004).
- JRF in Structures Division, NAL, Bangalore, (January 1994 – May 1994).
- Lecturer, Department of Mechanical Engineering, GPREC, Kurnool, Andhra Pradesh, Indian (1990 – 1991)

### Subject taught

**Under-graduate – B.E.:** Mechanical Vibrations, Dynamics of Machinery, Design of Machine Elements Composite Materials, Mechanics of Materials, Machine Drawing, Engineering Drawing.

**Post-graduate – M.Tech:** Mechanics Composite Materials, Experimental Stress Analysis, Advanced Vibrations, Theory of Elasticity, MEMS.

### Research Experience Details:

#### Ph.D:

In-situ Magnesium based composites have been developed by using two stage processing technique and characterization of developed material, Mechanical and wear properties has been carried out. Indian Patent has been granted for research work in the name of IIT Roorkee.

### Research Supervision

Sl.No.	Name of the student	Ph.D / M.Phil	University	Year of completion	Title of Research Topic
1	Varun M.	Ph.D.	VTU, Belgaum	Pursuing	Structural Dynamics of a Tool Tip of a Manufacturing Process
2	Vijaykumar H. B.	Ph.D.	VTU, Belgaum	Pursuing	A Study on Mechanical and Thermal Properties of Cenosphere Reinforced Polymer Hybrid Composites
3	Harish	Ph.D.	VTU, Belgaum	Pursuing	Studies on Foreign Object Damage and its Mitigation
4	Kiran J.O.	Ph.D.	VTU, Belgaum	2016	Numerical and Experimental Simulations for the Vibrating Systems with Three Degrees of Freedom

### Academic Positions and other Responsibilities (Institute Level):

1. **Chief Superintendent** at BNMIT, Bangalore from 41-06-2017 to 27-06-2017, for the conduction of June 2017 B.E. examinations of VTU, Belgavi.
2. Coordinator, ISTE Chapter, BIET, 2008-09.
3. **Member, Pandal Committee**, 5<sup>th</sup> and 6<sup>th</sup> Convocations of IIT Roorkee, September 2005 and November 2006.
4. Office Superintendent for Conducting BE - Engineering Examinations (Kuvempu University), 1997 and 1998.

### Experimental/ Computational/ Any other Skills:

#### A. Material Synthesis

- Synthesis of Polymer Composite.
- Synthesis of In-stu Metal Matrix Composites and alloys.

## **B. Characterization Techniques**

- X-ray Diffraction technique (XRD).
- Microstructural and Composition analysis.
- Mechanical Properties.
- Dry sliding Wear Properties.
- Density measurements by Archimedes principle.

## **Awards/ Achievements/Memberships:**

- **INDIAN PATENT** for part of Ph.D work Patent number - 261746, Date of Grant - 11/Jul/2014 under the ownership of IIT Roorkee (Application No.: 1384/DEL/2007).
- **QIP Scholarship** while pursuing Ph. D during July 2004 –July 2007.
- **Top Teacher Award** from the Management of Bapuji Institute of Engineering & Technology, Davangere, Karnataka, during 1995-96, 1996-97, 2001-02 and 2002-03.
- **MHRD Scholarship** for qualifying GATE – 91, while pursuing ME during 1991-93.
- **National Merit Scholarship** while studying Intermediate during 1983-84.

## **Professional Memberships:**

- Life Member, Indian Society for Technical Education (ISTE).
- Fellow, Institution of Engineers (India).

## **Research Publications:**

### **I. In National & International Journals**

#### **International Journals:**

1. **D. Shivalingappa**, B.S. Sundar Daniel and Subrata Ray, “Effect of reinforcing phase inherited from another composite on the mechanical properties of cast magnesium base composite”, *Material Science and Engineering A*, Vol. 541 (2012) pp 172-180.
2. A. Nagaraj, **Dr. D. Shivalingappa**, Halesh Koti and Channakaiah, “Modeling and predicting adhesive Wear behavior of Aluminum – Silicon alloy using neural networks”, *Int. Journal of Recent Scientific Research*, Vol. 3, Issue 5 (2012) pp 378 -381.
3. J.O. Kiran and **D. Shivalingappa**, “Study on the Effect of Position of the Dampers in Systems with 3 Degrees of Freedom”, *Int. Journal of Emerging Technology and Advanced Engineering*, Vol. 3 Issue 4, April 2013, Pp.155 - 163.
4. J. Jenix Rino, **D. Shivalingappa** and Halesh Koti, “Properties of Al6063 MMC Reinforced with Zircon Sand and Alumina”, *IOSR Journal of Mechanical and Civil Engineering*, Vol. 5, Issue 5, March 2013, Pp. 72-77.
5. V. Daniel Jebin, **D. Shivalingappa** and J. Jenix Rino , “Wear behavior of AL6063-Alumina Metal Matrix Composite”, *Int. Journal of Science and Research*, Vol. 2 Issue 3, March 2013, Pp. 446-449.

6. K.S. Sucitharan **D. Shivalingappa** and P. Senthil Kumar, "Wear Behaviour of Al6063-Zircon Sand Metal Matrix Composite", *IOSR Journal of Engineering*, Vol. 3, Issue 2, Feb. 2013, Pp. 24-28.
7. N Pugazhenth, D. Mohanraj, **D. Shivalingappa**, and K. Sivakumar "Mechanical And Thermal Behavior of Novolac Reinforced With Nano - Hydroxy Apatite", *Int. Journal of Scientific & Engineering Research*, Vol. 4, Issue 5, ISSN 2229-5518, May-2013, pp 1027-1031.
8. Chandrakala, A.B, **Shivalingappa, D.** and Halesh Koti, "Preliminary Design of an Aircraft Wing Spar" *Int. Journal of Recent Scientific Research*, Vol. 4, Issue, 6, ISSN: 0976-3031, June, 2013, Pp.922 – 924.
9. J.O. Kiran and **D. Shivalingappa**, "Investigation of behaviour of 3 degrees of freedom Systems for transient loads", *Int. Journal of Research in Engineering and Technology*, Vol. 2 Issue 10, October 2013, Pp. 204-215.
10. S. Devaraj, **D. Shivalingappa**, Channankaiah and Rajesh Jangaler, "Surface Quality Enrichment using Fine Particle Impact Damper in Boring Operations", *Int. Journal of Research in Engineering and Technology*, Vol. 3 Issue 02, Feb-2014, Pp. 531-535.
11. J.O. Kiran and **D. Shivalingappa** and D. Ramesh Rao, "Experimental Validation of Numerical Simulation of Vibrating Systems having Three Degrees of Freedom using Power Input Method", *Int. Journal of Engineering Research and Development*, Vol. 10, Issue 5, May 2014, Pp. 48-55.
12. T. Hariprasad, **D. Shivalingappa**, A. Nagaraj and Geetha Manivasagam, "The use of artificial neural network for the prediction of wear loss of aluminium-magnesium alloys", *Int. Journal of Computer Aided Engineering and Technology*, Vol. 7, No. 1, 2015, Pp. 48-55.
13. Dr. **D. Shivalingappa**, Binto Tomy, Dr. Channankaiah, "Modification Effect on Mg<sub>2</sub>Si Reinforced Magnesium Metal Matrix Composites-A Review", *Int. Journal of Applied Engineering Research*, Print ISSN: 0973-4562 Online ISSN: 1087-1090, Special Issue Vol. 10, No. 9 (2015), Pp. 7648-7650.
14. J.O. Kiran and **D. Shivalingappa**, "Application of Numerical and Experimental Simulations for the Vibrating Systems with Three Degrees of Freedom", *Int. Journal of Engineering Research and development*, ISSN: 9734562, Special Issue Vol. 11, No. 3 (2015), Pp. 51-56.
15. **Dr. D. Shivalingappa**, Dr. Channankaiah, Ajil Michael, "Investigation the Effect of Carbon Fibre on Mechanical Properties of Polypropylene Polymer Composite Material - Review", *Int. Journal of Applied Engineering Research*, ISSN:9734562, Special Issue Vol. 10, No. 9 (2015), Pp. 7972-7976.
16. A. Ramaniraj **Dr. D. Shivalingappa**, Halesh koti, Dr. Channankaiah, "Experimental investigation on noise pollution caused by agricultural tractors", *Int. Journal of Recent Scientific Research*, Print ISSN: 0976-3031, Special Issue Vol. 10, No. 9 (2015) Pp. 3342-3344.
17. A. Ramaniraj **Dr. D. Shivalingappa**, Dr. Channankaiah, "A real time study on Noise and Vibration in Mahindra 575 DI and Massey Ferguson 1035 DI Tractors" has been accepted for publication in *Int. Journal of Applied Engineering Research*, Print ISSN: 0973-4562 Online ISSN: 1087-1090, Special Issue Vol. 10, No. 9 (2015) Pp. 9340 – 9342.
18. **Dr. D. Shivalingappa**, M. Richard Wilson Martin, Channankaiah and Halesh Koti, "Effect of Temperature and Reinforcement Volume Fraction on Impact Energy of Hybrid Polypropylene Matrix Composites", *Int. Journal of ChemTech Research*, ISSN: 0974-4290, Vol. 8, No. 4 (2015), Pp. 1965-1971.
19. D.E. Umesh, **D. Shivalingappa**, R. Kishore Kumar, Binto Tomy, D. Ramesh Rao, "Influence of bismuth on the microstructure, hardness and dry sliding wear behavior of magnesium silicide

reinforced magnesium alloy composite” *NANOSYSTEMS: PHYSICS, CHEMISTRY, MATHEMATICS*, Vol. 7 (4), (2016) Pp. 618 – 620.

20. M. Sabari, **D. Shivalingappa**, Channankaiah, “CFD Simulation of Fin-and-Tube Heat Exchanger with Louvered Fin Configuration”, *Int. Journal of Vehicle Structures & Systems*, Vol. 8 (5), (2016) Pp. 219 – 223.
21. G. Majunath, **D. Shivalingappa**, R. Kishore Kumar, D.E. Umesha, “Effect of Mg<sub>2</sub>Si along with bismuth on the microstructure and mechanical properties of Mg-Al/ Mg<sub>2</sub>Si composite”, *Int. Journal of ChemTech Research*, ISSN: 0974-4290, Vol. 10, No. 14 (2017), Pp. 88-92.

## II. National/International Conference Proceedings

### International

1. **D. Shivalingappa**, B.S. Sundar Daniel and Subrata Ray, “Effect of Processing Temperature on Microstructure and Mechanical Properties of In-situ Al<sub>3</sub>Ti & Al<sub>2</sub>O<sub>3</sub> Reinforced Magnesium Based Composite”, 53<sup>rd</sup> International Congress ISTAM held at University College of Engineering, Osmania University, Hyderabad, India, during 15 - 17, Nov 2009, Pp. 65-71.
2. H.S. Balasubramanya, **D. Shivalingappa** and M. Prasanna Kumar, “Development of Hybrid Aluminium Matrix Composites for Brake Disc”, International Conference on Advances in Mechanical Engineering held at S.V. National Inst. of Technology, Surat, India, during 03 – 05, Aug, 2009, Pp. 507-511.
3. **D. Shivalingappa**, Halesh Koti, G. Ranganath and S. Ray, “Intermetallic and Ceramic Reinforced Hybrid Light - Metal Matrix Composite”, International Conference on Smart Technologies for Materials, Communication, Controls, Computing and Energy, held at Vel Tech Dr. RR & Dr. SR Technical University, Chennai, during 5-7, Jan 2011, ISBN 978-1-4507-5567-2.
4. Nagaraj, A. **Shivalingappa**, D. Halesh Koti and Mohamed sajid, P, “Artificial neural network-based wear loss prediction for ZA-27 alloy”, 3rd International Conference on Science, Engineering and Technology, held at School of Mechanical and Building Sciences, VIT University, Vellore, TN, during 17-18, Nov 2011, Pp. 894-901.
5. Nagaraj, A. **Shivalingappa**, D. and Halesh Koti, “Prediction of wear behaviour of aluminium-silicon alloy using artificial neural network”, accepted for publication in International Conference INCACMA-2012, held at Kongu Engineering College, Erode, during 30-31 March 2012.
6. T. Hariprasad, **D. Shivalingappa** and A. Nagaraj, “The use of Artificial Neural Network for the Prediction of Wear loss of Aluminium- Magnesium Alloys”, April 11-12, 2013, at Cape Institute of Technology, Rajakrishnapuram – 627 114.
7. J. Jenix Rino, **D. Shivalingappa** and S. Balasivanandha Prabu, “Properties of Al6063 MMC Reinforced with Zircon Sand and Alumina”, during April 11-12, 2013, at Cape Institute of Technology, Rajakrishnapuram – 627 114, Pp. 1-8.
8. T. Hariprasad, **D. Shivalingappa** and A. Nagaraj, “Artificial Neural Network Based Wear Behaviour of Aluminium-Magnesium Alloy”, during March 2-3, 2013, held at Thiruvallur College of Engineering and Technology, Vandavasi – 604 505, Pp. 103-106.
9. B.S. Manoj Prabhakar and **D. Shivalingappa**, ‘Computational Fluid Dynamic Analysis of Turbulence in a Water Pump of SUV’s’ 2<sup>nd</sup> International Conference on Innovative Research in Engineering and Technology, during January 3-5, 2013, at Park College of Engineering and Technology, Pp. 1-9.

10. Dr. **D. Shivalingappa**, J.Jenix Rino, Dr. B.S.S. Daniel, “Wear behaviour of Al6063 MMC reinforced with zircon sand and alumina”, presented in the Technical paper session/Colloquium of 28<sup>th</sup> Indian Engineering Congress 2013, held during 20-21, December 2013 at The Institution of Engineers (India), Chennai, P. 160.
11. K. Karthik, **D. Shivalingappa**, “Vibration damping characteristics of Glass and carbon fiber with polyester matrix composites” in 3rd International Conference Competency building strategies in business and technology for sustainable development organized by Sri Ganesh School of Business Management, held on 25th Feb 2014.
12. M. Richard Wilson Martin, **D. Shivalingappa**, “Investigation of impact properties of polypropylene matrix composites” in International Conference on Futuristic Trends in Mechanical Engineering organized by Thiruvalluvar College of Engineering and Technology, held on 1st and 2nd March 2014.
13. S. Kesavamoorthy, **D. Shivalingappa**, “Wear behaviour on Ceramic particle filled carbon-epoxy composites” in International Conference on Futuristic Trends in Mechanical Engineering organized by Thiruvalluvar College of Engineering and Technology, held on 1st and 2nd March 2014.
14. S. Devaraj, **D. Shivalingappa**, “Experimental investigation on the fine particle impact damper in boring operations” in International Conference on Futuristic Trends in Mechanical Engineering organized by Thiruvalluvar College of Engineering and Technology, held on 1st and 2nd March 2014.
15. **Dr. D. Shivalingappa**, Dr. Channankaiah, M. Arun Kumar, “Design and Simulation of corner – skidding control system” in the International conference on Advances in Materials and Manufacturing held at Hindusthan College of Engineering and Technology, Coimbatore, during 03 - 04, March 2015.
16. **Dr. D. Shivalingappa**, Dr. Channankaiah, A. Ramaniraj, “Design and development of Engine hood for Tractor to optimize NVH characteristics” International conference on Innovative Research Techniques in Management, Aeronautical, Mechanical and Electrical Systems held at Kalaignar Karunanidhi Institute of Technology, Coimbatore, during 12 -13, Feb 2015.
17. **Dr. D. Shivalingappa**, Dr. Channankaiah, A. Ramaniraj, “Experimental Study on Noise and Vibration in Tractors – A Review” International conference on Advances in Materials and Manufacturing held at Hindusthan College of Engineering and Technology, Coimbatore, during 03 – 04 March 2015.
18. **Dr. D. Shivalingappa**, Dr. Channankaiah, A. Ramaniraj, “A real time study on Noise and Vibration in Mahindra 575 DI and Massey Ferguson 1035 DI Tractors” International conference on Engineering Technology and Science held at Muthayammal Engineering College, Namakkal, during 05 – 06 March 2015.
19. **Dr. D. Shivalingappa**, Binto Tomy, Dr.Channankaiah, “Modification Effect on Mg<sub>2</sub>Si Reinforced Magnesium Metal Matrix Composites -A Review” 2<sup>nd</sup> International Conference on Engineering Technology and Science, held at Muthayammal College of Engineering, Rasipuram, Tamil Nadu, during 05 – 06, March 2015.
20. **Dr. D. Shivalingappa**, Binto Tomy, Dr. Channankaiah, “Recent Studies in Mg<sub>2</sub>Si Reinforced Magnesium Metal Matrix Composites -A Review” 4<sup>th</sup> International Conference on Futuristic trends in Mechanical Engineering, held at Thiruvallur College of Engineering and Technology Campus, Vandavsi, Tamil Nadu, during 07 – 08, March 2015.

## **National**

1. **D. Shivalingappa**, K. Sadasivappa and Y. Vrushabhendrapa, “A Laser Based Non-Contact Vibration Measurement Technique” Second National Conference on Precision Engineering, held at P.S.G. College of Technology, Coimbatore during 11 – 12, Jan 2002, Pp. 137-141.
2. **D. Shivalingappa**, “Processing and Microstructure of Cast In-situ Al<sub>3</sub>Ti Intermetallic & Al<sub>2</sub>O<sub>3</sub>” National Conference on Advances in Materials and Manufacturing Processes, held at University BDT College of Engg., Davangere, during 05 – 06, Oct 2007, Pp. 17-22.
3. R. Raghunath Reddy, **D. Shivalingappa** and M. Shakthi Velu, “Dry Sliding Wear behaviour of Aluminum Silicon Alloys”, National Conference on Innovations in Engineering and Technology, held at Gnanamani College of Technology, Namakkal, India, February 3, 2012, P. 141.
4. R. Raghunath Reddy, **D. Shivalingappa** and M. Shakthi Velu, “Mechanical properties of Aluminum Silicon Alloys”, National Conference on Technological Advancements in Mechanical Engineering, held at Selvam College of Technology, Namakkal, India, February 9-10, 2012, P. 57.
5. A. Balachandrakala and **D. Shivalingappa**, “Optimization Techniques in Structural design of a Transport Air Craft”, National Conference on Technological Advancements in Mechanical Engineering, held at Selvam College of Technology, Namakkal, India on February 9-10, 2012, P. 85.

## **Personal Details:**

- **Date of Birth:** 01 - 07 –1966; **Sex:** Male.
- **Family Details:** Wife, one son, one daughter.

**16<sup>th</sup> February 2019**

**D. SHIVALINGAPPA**