

Faculty Profile

Name of Faculty	H S Kumaraswamy
Department	Mechanical Engineering
Qualification	M.Tech (PhD)
Designation	Assistant Professor
Area of specialization	Computer Integrated Manufacturing
Date of Joining BNMIT	21-07-2014
Nature of Association (Regular/Contractual/Adjunct)	Regular
e-mail	kumarhs89@gmail.com
No. of years of Experience	Teaching: 6 years



Academic Qualifications

- **Ph.D.** (July 2018), Completed comprehensive viva, Department of Mechanical Engineering, Global Academy of Technology, under VTU Belgaum
- **M.Tech.** (2013) Computer Integrated Manufacturing, Department of Mechanical Engineering, DSCE, VTU, Bangalore (**FCD**).
- **BE.** (2011), HKBKCE, VTU, Bangalore, India. (**I Class**).

Working Experience Details

- Assistant Professor, Department of Mechanical Engineering, BNMIT, Bangalore, India, (21-07-2014 – Till date).
- Assistant Professor, Department of Mechanical Engineering, Vemana Institute of Technology, Bangalore, India, (07-07-2013 – 10-07-2014).

Subjects taught

Topics Taught: Elements of Mechanical Engineering, Computer Aided Engineering Drawing, Manufacturing Process-1, Metal casting and welding, Computer Integrated manufacturing, Mechatronics and Microprocessor, Engineering economy, Operation research, Automation in Manufacturing, Automation and Robotics and operation management

Research Experience Details:

PhD:

Title: Development and characterization of Aluminium 2024-boron fiber-graphite hybrid metal matrix composite

Guide Name: Dr. T Krishna Rao.

- In the present work hybrid metal matrix composites are aimed to develop using stir casting technique to study the mechanical and tribological characteristics

M.Tech.

- In the present work the hybrid polymer matrix composites are developed using pultrusion process, and the developed composites are tested for physical and mechanical properties and also microstructure analysis were carried out using optical microscope and SEM analysis. In addition to this XRD analysis was carried out to observe the presence of reinforcement percentage and matrix percentage.

Academic Positions and other Responsibilities (Institute Level)

1. Guiding IEDC project Titled “Development and Fabrication of 3-D printed prosthetic arm”, 2017-18
2. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2017-18
(BNMIT is training one student under Pradhan Mantri Kaushal Vikas Yojana (PMKVY) In Automotive sector for lathe operator)
3. BNMIT-Toyota centre of excellence.

Experimental/ Computational/ Any other Skills:

A. Material development technique

- Development of new composites using Pultrusion process.
- Development of new composites using Stir casting process
- Development of new composites using powder metallurgy

B. Characterization Techniques

- Density measurements by Archimedes principle.
- X-ray Diffraction technique (XRD).
- Microstructure analysis using optical microscope and SEM.
- Pin on disc wear testing

Instruments Handled/Software's handled:

- Optimization of Mechanical and wear properties using Taguchi technique(Minitab)
- Optimization Of Mechanical And Wear Properties Using Ann(Matlab)
- Solid Edge V18/19
- Fanuc –SeeNC Turn-SeeNC Mill

Research Publications:

I. In National & International Journals

International Journals:

1. **Kumaraswamy H. S**, Bharat V, T. Krishna Rao “Effect of Stirring Parameters on Micro-structure of Aluminum Hybrid Metal Matrix Composites” *IOP Conf. Series: Materials Science and Engineering* 376 (2018) 012096 doi:10.1088/1757-899X/376/1/012096
2. **Kumaraswamy H. S**, Arun joshi, Anilkumar, “ A comparative study of mechanical properties of as cast and heat-treated Al-6063-MWCNT composite fabricated by stir casting process” *IOP Conf. Series: Materials Science and Engineering* 376 (2018) 012075 doi:10.1088/1757-899X/376/1/012075
3. **Kumaraswamy H. S**, Bharat V, T. Krishna Rao, “Influence of Mechanical & Tribological Behaviour of Al 2024 MMC fabricated by stir casting technique- A Review”, *Materials Today: Proceedings* 5 (2018), Volume/Issue 5/ pp. 11962-11970
4. **H S Kumaraswamy** ,Vishnu P, Manjunath A R, “ Finite Element Analysis and Cost Effective Design for Roll Over Protection Structure (ROPS) of Soil Compactor” *International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE)*, ISSN (Online) 2456-1290, Vol 2, Issue 4, April 2017
5. **Kumaraswamy H S**, Veeresh Bhusnur, “Importance of Simulation in Manufacturing” *International Journal of Innovative Science and Research Technology*, ISSN No: - 2456 - 2165, Volume 2, Issue 4, April– 2017
6. **Kumaraswamy H S**, Venkatesh M K, “Characterization of pultruded fiber reinforced high performance polymer matrix composite with carbon nano tubes”, *International Journal of Metallurgical & Material Science and Engineering*, ISSN(P): 2278-2516; ISSN(E): 2278-2524, Vol. 4, Issue 1, Feb 2014, 1-8(IF-2.6735)

Papers presented in International/National Conferences

International

1. “Presented the paper entitled “A comparative study of mechanical properties of as cast and heat treated Al-6063-MWCNT composite fabricated by stir casting process” in the International Conference on “Advances in Manufacturing, Materials & Energy Engineering (Icon MMEE-

2018)” during 2nd & 3rd March 2018 organized by Department of Mechanical Engineering, MITE Moodabidre Jointly Patronized by BINGHAMTON UNIVERSITY , State University of New York.

2. Presented the paper entitled “*Effect of Stirring Parameters on Micro-structure of Aluminium Hybrid Metal Matrix Composites*” in the International Conference on “*Advances in Manufacturing, Materials & Energy Engineering (Icon MMEE-2018)*” during 2nd & 3rd March 2018 organized by Department of Mechanical Engineering, MITE Moodabidre Jointly Patronized by BINGHAMTON UNIVERSITY , State University of New York
3. Participated and presented a paper entitled “*Finite element analysis & cost effective design for roll over Protection structure (ROPS) of soil compactor*” in the international conference on Advance in Mechanical engineering Sciences (ICAMES-17) held during 21st – 22nd April 2017 at P.E.S College of engineering, Mandya .
4. Participated and presented a paper entitled “Influence of Mechanical & Tribological behavior of Aluminum Metal Matrix composite Fabricated by Stir casting Technique” in the international conference on materials, manufacturing and modeling held during March 9th – 11th, 2017 at VIT University, Vellore
5. Participated and presented a paper entitled “Characterization of Pultruded fiber Reinforced high performance polymer matrix with and without CNT” in ICCSEM on 26th September ,2013 at Bangalore which will be organized by Centre for post graduate studies Dayanada Sagar Institution

National Conference Proceedings

- ✓ Participated and presented a paper entitled “**Preparation of Resin /Nano Fillers mixture for Composites –A Case Study**” in “National Conference on Emerging Trends in Engineering & Technology-2012” held on 9th March 2012, Conducted at Jyothi Institute of Technology Bengaluru.

Participation in Training courses/Seminars/Workshops

1. Participated in Faculty Development Programme on “ **Patenting** ” organized by Entrepreneurship development cell in association with Visvesvaraya trade promotion centre sponsored by NSTEDB from 11th April 2018

2. Participated in Faculty Development Programme on “ **Research issues and challenges in Mechanical engineering science** ” organized by the Department of Mechanical Engineering, BNMIT, , Bengaluru from 16th July to 20th July 2018
3. Participated in Faculty Development Programme on “ **Recent development and challenges in Materials & Manufacturing Process** ” organized by the Department of Mechanical Engineering, Bangalore Institute of Technology, Bengaluru from 1st – 13th August 2018
4. Participated in Faculty Development Programme on “ **Emerging Research Areas and Trends in Mechanical Engineering**” organized by the Department of Mechanical Engineering, BNM Institute of Technology, Bengaluru from 31st – 5th August 2017
5. Participated in Faculty Development Programme on “ **Recent Advancements in Mechanical Engineering**” organized by the Department of Mechanical Engineering, BNM Institute of Technology, Bengaluru from 16th – 21st January 2017.
6. Participated in Faculty Development Programme on “ **Research Avenues in Thermal, Design and Manufacturing Engineering**” organized by the Department of Mechanical Engineering, BNM Institute of Technology, Bengaluru from 11th – 16th July 2016.
7. Participated in 10 day workshop on “**National Faculty Development Programme in Entrepreneurship**” organized by Entrepreneurship Development of India, and jointly organized by BNMIT Bengaluru, on 18th -30th January 2016.
8. Participated in Faculty Development Programme on “**Modern Technologies in Foundry Practice** ” organized by the Department of Mechanical Engineering, JSS Institute of Technology, Bengaluru from 4th – 8th January 2016”
9. Participated in Faculty Development Programme on Technological Advancements in Manufacturing and Application of Smart Materials, Structures and Systems at Vemana I T, 9th – 12th Dec 2013.

Personal Details:

- **Date of Birth:** 20 - 07 –1989; **Sex:** Male.
- **Family Details:** Wife with a Son

16th February 2019

H S. Kumaraswamy