

CV of Prof.(Dr.) Rangaswamy T.

Name: Dr. Rangaswamy T.

Designation: Professor & Head

Additional Charge: Special Officer, Govt. Engineering College,
Mosalehosalli, Hassan Tq.& Dt.

Teaching Experience 28 Years

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Educational Details:

- **Degree:** Ph.D.
Year: 2006
Institute: PSG College of Technology, Coimbatore
University: Anna University, Chennai
Specialization: Composite Materials and Design Optimization/Mechanical Engineering
- **Degree:** M.Sc.(Engg.) by Research
Year: 1997
Institute: Malnad College of Engineering, Hassan
University: University of Mysore, Mysore
Specialization: Thermal/Mechanical Engineering
- **Degree:** B.E.
Year: 1990
University: University of Mysore, Mysore
Discipline: Mechanical Engineering

Professional Experience:

- **Designation:** Professor and Head
Organization: Department of Mechanical Engineering,
Government Engineering College, Hassan
Period: 23.09.2010 to date
- **Designation:** Professor
Organization: Department of Mechanical Engineering,
Malnad College of Engineering, Hassan
Period: 05.10.2007 to 22.09.2010
- **Designation:** Assistant Professor
Organization: Department of Mechanical Engineering,
Malnad College of Engineering, Hassan
Period: 05.10.2001 to 04.10.2007
- **Designation:** Senior Lecturer
Organization: Department of Mechanical Engineering
Malnad College of Engineering, Hassan,
Period: 05.10.1996 to 04.10.2001
- **Designation:** Lecturer
Organization: Department of Mechanical Engineering
Malnad College of Engineering, Hassan,
Period: 05.10.1990 to 04.10.1996

Research Interests:

- Composite Materials, Smart Materials & MEMS
- Finite Element Analysis
- Design Optimization
- CAD/CAM/CAE
- Additive Manufacturing

Software Proficiency:

- C language
- Commercial software's: Modeling - Pro-E and Solid edge
Analysis - ANSYS and NX Nastran, MATLAB

International Experience:

- Attended and Presented a research article in the Intl. Conference, Jeonju, Korea, 2017
- Attended and Presented a research article in the Intl. Conference, Dubai, UAE, 2015
- Attended and Presented a research article in the Intl. Conference, Paris, France, 2009
- Attended and Presented a research article in the Intl. Conference, Beijing, China, 2007
- Attended and Presented a research article in the Intl. Conference, Tokyo, Japan, 2005
- Software Engineer, Science & Technology, Inc, NJ, USA, 1998-99

International Experience: *Visiting Professor*

Subject: Advanced Material Science for Design & Manufacturing(AT 73.17)

Department: School of Engineering and Technology

Institute: Asian Institute of Technology, Bangkok, Thailand

Duration: 4 Months(Sept 2012 to Jan 2013)

(Sponsored by Department of Higher Education, MHRD, New Delhi)

Awards:

- Received Prof. O.Prabhakar's best paper award from International Symposium for Research Students on Materials Science and Engineering,(ISRS-2004), **Indian Institute of Technology, Chennai, Dec.20-22, 2004**, PO-PMS-5.
- Commendation Certificate from International Symposium at **Visvesvaraya Technological University, Belgaum (VICAS 2013)** for high quality research and Innovation, **April 19-20, 2013**.

Research Publications

I. Papers published in International/National Journals

1. Chethan R C, **Rangaswamy T** and Manjunath K, "Fatigue Life Estimation of a Turbine Rotor Blisk by Finite Element Analysis", Int. Journal of Engineering Research and Application, 2, Vol. 8(3), pp.23-27, March 2018, ISSN : 2248-962.
2. Chethan R C, **Rangaswamy T** and Manjunath K, "Fatigue Life Estimation of Small Gas Turbine Blisk", International Research Journal of Engineering and Technology, Vol.5 (3), Mar-2018.
3. Abhijith Vaidya S and **Rangaswamy T**, A Review on E-Glass/ Epoxy Composite Combined with Various Filler Materials and Its Mechanical Behavior under Different Thermal Conditions, American Journal of Materials Science, Vol.7(4),pp. 83-90, Sep.2017,
4. Ajay P D and **Rangaswamy T**, "Near Net Pressing of WC based hard metal compacts in Cold Iso-static Pressing", Journal of International Journal for Scientific & Engineering Research, Vol. 8(1), pp.1471 – 1481, Jan 2017,
5. **Rangaswamy T** and Sudeep Deshpande, "A Comparative Study on Dry Sliding Wear Characteristics of Al₂O₃ and Bone Powder Filled Hybrid Composites", Journal of Minerals and Materials Characterization and Engineering, Vol. 4(2), pp. 164-180, March 2016.
6. **Rangaswamy T** and Sudeep Deshpande, "Sliding Wear Characteristics of Bone Powder Filled Hybrid Fiber Reinforced Epoxy Composites", International Organization of Scientific Research (IOSR) Journal of Mechanical and Civil Engineering, Vol. 13(1), Jan-Feb 2016.
7. **Rangaswamy T** and Sudeep Deshpande, "Surface Morphology and Taguchi's Analysis of Hybrid Fiber Reinforced Epoxy Composites", European Journal of Scientific Research (EJSR), Vol. 138(1), pp 76-90 March 2016.[IF;0.85]
8. **Rangaswamy T et al.**, "CFD Investigation of Internal Cooling of Gas Turbine Blades with and without Ribs", International Journal for Scientific Research & Development, Vol 3(5),July 2015,
9. **Rangaswamy T et al.**, "Performance Parameters Analysis of an XD3P Peugeot Engine Using Artificial Neural Networks (ANN) Concept in MATLAB", Journal of The Institution of Engineers (India): Series C, Mechanical, Production, Aerospace and Marine Engineering, Vol. 96(2), pp175–182, April–June 2015, Springer.

10. **Rangaswamy T** and Sudeep Deshpande, “Al₂O₃ and Granite Powder Filled E-Glass/Jute Fiber Reinforced Epoxy Composites” International Journal for Scientific Research & Development, Vol. 2(5), November 2014.
11. **Rangaswamy T** and Sudeep Deshpande., “Effect of Fillers on E-Glass/Jute Fiber Reinforced Epoxy Composites” Intl. Journal of Engineering Research and Applications, Vol 4 Issue No.8, pp : 118-123, August 2014.
12. **Rangaswamy T et al.**, “Structural Health Monitoring of Fiber Reinforced Polymer Composite Leaf Spring” International Journal of Recent Research in Civil and Mechanical Engineering, Vol 1(1), pp : 24- 30, April-June 2014.
13. **Rangaswamy T et al.**, “Passive Liquid Water Recovery from Fuel Cell Exhaust” International Journal of Recent Research in Civil and Mechanical Engineering, Vol 1(1), pp : 18- 23, April-June 2014.
14. **Rangaswamy T et al.**, “Vibration Analysis of Composite Leaf Spring for a Light Commercial Vehicle (TATA ACE)” International Journal of Scientific Engineering and Technology, Vol 3 Issue No.7, pp : 871-875, July 2014.
15. **Rangaswamy T**, Madhusudan S and Chennakeshava K. R., “Content-Based Image Retrieval System for Optical Fiber Sensor Information Processing”, International Journal of Engineering Research, Vol.3(6), pp : 398-401, June 2014.
16. **Rangaswamy T** and Manjunath K., “Ply Stacking Sequence Optimization of Composite Driveshaft using Particle swarm Optimization Algorithm”, International Journal for Simulation and Multidisciplinary Design Optimization (IJSMDO), Vol 5, A16, Feb 2014.
17. **Rangaswamy T** and Devendra K., “Strength Characterization of E-glass Fiber Reinforced Epoxy Composites with Filler Materials” Journal of Minerals and Materials Characterization and Engineering, 2013, Vol 1, pp. 353-357.
18. **Rangaswamy** and Devendra K “Thermal Conductivity and Thermal Expansion Coefficient of GFRP Composite laminates with Fillers”, International journal of Mechanica Confab, Aug-Sept 2013, Vol. 2(5), pp. 39 – 44.
19. **Rangaswamy T et al.**, “Thermophoresis Effects on Heat and Mass Transfer in a Non-Darcy Porous Medium”, International Journal of Mechanical and Production Engineering, 2013, Vol 1 Issue 1, pp 19-24.
20. **Rangaswamy T** and Devendra K., “Determination of Mechanical Properties of Al₂O₃, Mg (OH)₂ and SiC Filled E-Glass/Epoxy Composites”, International Journal of Engineering Research and Applications (IJERA), Oct 2012, Vol.2(5), pp. 2028-33.
21. **Rangaswamy T** and Devendra K., “Evaluation of Thermal Properties of E-Glass/ Epoxy Composites Filled By Different Filler Materials”, International Journal of Computational Engineering Research (ijceronline.com), Sep. 2012, Vol. 2 Issue.5, pp 1708-14.
22. **Rangaswamy T** and Devendra K., “Thermal and Fire Resistance Properties of E-Glass Fiber Reinforced Epoxy Composites” Intl. Journal of Emerging Technologies and Applications in Engineering, Technology and Sciences, Jan.2012, Vol.5 No. 1 pp.182-186.
23. **Rangaswamy T et al.**, “Studies on Rapid Prototyping of Micro Air Vehicles using Stereo lithography Based Composites,” Journal of the Institution of Engineers (India): Aerospace Engineering, Jan 2011, Vol. 3 No 1 pp.1-9, ISSN : 0975-5462.

24. **Rangaswamy T et al.**, “Integrated use of Rapid Prototyping and Metal plating Techniques for development of Micro air vehicles”, *International Journal of Engineering Science and Technology*, Jan.2011, Vol.3 No.1, pp.188-193.
25. **Rangaswamy T** and Devendra K., “ Effect of fillers on Mechanical and Thermal Properties of E-Glass Fiber Reinforced Epoxy Composites”, *Journal of Modern Manufacturing Technology*, January-June 2011, Vol. 3(1), pp. 183-193.
26. **Rangaswamy T et al.**, “Design Optimization and Stress Analysis of Composite Propeller shafts”, *Intl. Journal for Materials and Product Technology* Jan. 2008, Vol.9. No.2, pp. 163-182.
27. **Rangaswamy T** and Vijayarangan S. “Optimum Design of Composite Drive shafts using Genetic Algorithm”, *Intl. Journal for Manufacturing Tech. and Research*, Jan. 2006, Vol.2. No.1& 2, pp. 53-59.
28. **Rangaswamy T** and Vijayarangan S., “Optimal Sizing and Stacking Sequence of Composite Drive Shafts”, *Intl. Journal of Materials science*, June 2005, Vol.11, No.2, pp. 133-139.
29. **Rangaswamy, T** and Vijayarangan S., “Design Optimization of Composite Drive Shafts Using Genetic Algorithm”, *Intl. Acad Journal*, July 2005, Vol. 15.
30. **Rangaswamy T** and Vijayarangan S., “Optimal Design and Analysis of Composite Material Drive Shaft for Automotive Application” *Intl. Journal on Manufacturing Engineering*, March 2005, Vol. 4, No.1, pp. 31-36.
31. **Rangaswamy T** and Vijayarangan S., “A Genetic Algorithm Based Optimum Design and Stress Analysis of Laminated Drive shafts, Paritantra - A journal of Systems Science and Engineering, SSI, April 2005, Vol.11, No.1, pp.45-53.
32. **Rangaswamy T** and Vijayarangan S., “A Genetic Algorithm Based Design and Analysis of laminated Composite Drive shafts”, *National journal of Technology* Vol.1 No.1 Dec 2004/March 2005, pp.133-140.
33. **Rangaswamy T** and Vijayarangan S., “Optimal Sizing of Composite Power Transmission shafts”, *Technology – A Journal of the PSG College of Technology and Polytechnic College*, 2003, pp. 28-38.

II. Papers presented in International/National Conferences

1. **Rangaswamy T**, and R. Nagaraja , “Machining of Kevlar Aramid FRFP(K-1226) Using Solid Carbide Step Drill K44”, **IITM, TN**, Dec.,14-17, 2018, P No. 195
2. **Rangaswamy T**, and R. Nagaraja , “Design and development of solid carbide step drill K34 for machining of CFRP and GFRP composite laminates”, **NITK, KA**, Citation: AIP Conference Proceedings 1943, 020010 (2018); doi: 10.1063/1.5029586.
3. Nagaraja R and **T. Rangaswamy**, “ Drilling of CFRP and GFRP composite laminates using one shot solid carbide step drill K44”, **NITK,KA**, Citation: AIP Conference Proceedings 1943, 020025 (2018); doi:10.1063/1.5029601.
3. **Rangaswamy T** and Nagaraja R., “Design and Development of Solid Carbide Step Drill K 44 for Machining of CFRP Composites“, **International Conference on Processing and Fabrication of Advanced Materials- (PFAM-XXVI)**, **Chonbuk National University, Jeonju, Republic of KOREA**, 16-21, Oct.2017, PPMC-6.

4. Shwetha A, Manjunath K and **Rangaswamy T**, “Influence of Rolling Parameters on Hot Rolling of AZ31, AZ61 and AZ91 Mg Alloy”, ICAMS 2017, **Malnad College of Engineering, Hassan**, March 3 - 5, 2017, pp. 150-157.
5. **Rangaswamy T** and Ajay P.D.,” Near Net Pressing of WR based Hard Metal Compacts in Cold Iso-Static Pressing”, Intl. Conf. on Advances in Mechanical Sciences (ICAMS – 2017), **Malnad College of Engineering, Hassan**, KA, March 3 - 5, 2017.
6. **Rangaswamy T** and Ajay P.D., “Quality Control in Cold ISO Static Pressing”, NCETM-2016, **AIT, Chikmagaluru**, KA, April 29 – 30, 2016
7. **Rangaswamy T** and Yogesha S. A., “Manufacturing of Humidification Chamber Bottom Plate for Fuel Cell with HDPE Composite Injection Molding”, Proceeding of 2015 2nd Int’l Conference on Advances in Chemical, Biological & Environmental Engineering(ACBEE 2015), **Dubai, UAE**, Dec 25-26, 2015.
8. **Rangaswamy T.** et al., “Random Vibration Analysis of Kevlar49/Epoxy Composite Drive Shaft”, Regional Conference -2015 on Engineering Analysis, Modeling and Simulation, NAFEMS India, **Chennai**, February 6-8, 2015.
9. **Rangaswamy T.** et al., “Sliding Capabilities and Mechanical Property Evaluation of Fiber Reinforced Polymer (FRP) Composites”, Regional Conference -2015 on Engineering Analysis, Modeling and Simulation, NAFEMS India, **Chennai**, Feb., 6-8, 2015.
10. **Rangaswamy T.** et al., “Crash Analysis of Kevlar49/Epoxy Composite Drive shaft” – Regional Conference -2015 on Engineering Analysis, Modeling and Simulation, **NAFEMS India, Chennai**, February 6-8, 2015.
11. **Rangaswamy T.** et al., “CFD Simulation of Carburetor for Low Density Fuels” – Intl Conference on Advanced materials, Management and Thermal sciences(AMMMT-2013), Dept of Mech & IP Engg., **Siddaganga Institute of Technology, Tumkur**, May 3-4,2013,TS11.
12. **Rangaswamy T.** et al., “Sensing Capabilities of Fiber Reinforced Polymer Composite integrated with Electrical Inserts” – Intl Conference on Advanced materials, Management and Thermal sciences(AMMMT-2013), Dept of Mech & IP Engg., **Siddaganga Institute of Technology, Tumkur**, May 3-4,2013, AM 74.
13. **Rangaswamy T.** et al., “Static and Dynamic Analysis of Kevlar 49/Epoxy and HM Carbon Composite Drive shafts” – Intl Conference on Advanced materials, Management and Thermal sciences(AMMMT-2013), Dept of Mech & IP Engg., May 3-4,2013,AM 75.**Siddaganga Institute of Technology, Tumkur.**
14. **Rangaswamy T.** et al, “CFD Modelling and Simulation of Producer Gas Carburettor” – Intl Conference on Innovative Research and Solutions - ICIRS 2013, April 6, 2013, **Bharath Engineering College, Chennai**, JJT-IC-033-2013.
15. **Rangaswamy T.** et al.,“Sensing Capabilities of Fiber Reinforced Polymer Composite Integrated with Electrical Inserts” – Intl Conference on Innovative Research and Solutions - ICIRS 2013, April 6, 2013, **Bharath Engineering College, Chennai**, JJT-IC-038-2013.
16. **Rangaswamy T.** et al., “Property Evaluation of E-Glass/Epoxy Components Blended with Optical Fibers” – Intl Conference on Innovative Research and Solutions – ICIRS 2013, April 6, 2013, **Bharath Engineering College, Chennai**, JJT-IC-041-2013.

17. **Rangaswamy T** and Thimmaiah A.G., “Numerical Study of Automotive Composite Drive Shaft subjected to Low Velocity Impact, Intl Conf on Emerging Trends in Manufacturing Technology, INC@mtTRENDS’12, Sep 5 & 6, 2012, **Toc H Institute of Science & Technology, Ernakulam.**
18. **Rangaswamy T** and Eshwariah, “Analysis and Optimization of Gas Turbine Disc and Blade”, National Conference on Emerging Trends in mechanical Engineering (ETIME – 2008), 28-29, August 2008, Department of Mechanical Engineering, **BMS College of Engineering, Bangalore.**
19. **Rangaswamy T** and Vijayarangan S., “Optimal Stacking Sequence and Analysis of Adhesively Bonded Joint for Composite Drive shaft”, National Conference on Advances in Materials and manufacturing Processes, Oct. 5-6, 2007, **UBDTE, Davanagere**, pp.251-254.
20. **Rangaswamy T.**, “Design Optimization and Stress analysis of Composite Propeller Shafts”, National Conference on Development of Advanced Comp Components in Aerospace and Automobile Applications (DAC2K7), **BIET, Davanagere** 09-10, Feb.2007. pp. 163-170.
21. **Rangaswamy T.** and Vijayarangan S. et al., “Fabrication and Torsion/Fatigue life Evaluation on Wet Filament Wound Composite Drive shafts”, National Conference on Manufacturing Technology and Management for Global Marketing (CMTM 2005), **Crescent engineering college, Chennai, TN**, Jan. 7–8, 2005. pp. 195-200.
22. **Rangaswamy T.** and Vijayarangan S. et al., “Stacking Sequence Optimization and Stress analysis of Fiber Reinforced Plastic Drive shaft”, National Conference on Recent Trends in Design and Manufacturing Technologies (RTDMT), **Kumaraguru College of Technology, Coimbatore, TN**, March 17-18, 2005.
23. **Rangaswamy T.** and Vijayarangan S. et al., “Analysis of Adhesively Bonded Tubular Lap Joint for Composite Drive Shaft”, National Conference on Recent Trends in Design and Manufacturing Technologies (RTDMT), **Kumaraguru College of Technology, Coimbatore, TN**, March 17-18, 2005.
24. **Rangaswamy T.** and Sivasubramaniam N. et al., “Analysis of Tubular Metal-Composite end joints for Automotive Power Transmission”, National Conference on Emerging Trends in Mechanical Engineering (ERTMECON 2K5), **Jayam College of Engineering and Technology, TN**, 11th April, 2005. pp. 163-170.
25. **Rangaswamy T.** and Vijayarangan S., “Stacking Sequence Optimization of Composite Drive Shafts Using Genetic Algorithms” - **International** Congress on Computational Mechanics and Simulation (ICCMS–04), Dept. of Aerospace Engg., **Indian Institute of Technology, Kanpur**, Dec. 9-12 , 2004, pp.663-670.
26. **Rangaswamy T.** and Vijayarangan S., “Stacking Sequence Optimization of Composite Drive Shaft” - **International** Conference on Recent Advances in Composite Materials” (ICRACM – 2004), Dept. of Mechanical Engineering, Institute of Technology, **Banaras Hindu University (BHU), Varanasi**, Dec.17-19, 2004, pp.512-516, ISBN: 81-7764-709-1, Allied publishers.
27. **Rangaswamy T.** and Vijayarangan S., “Optimal Stacking Sequence of HS-Carbon/Epoxy drive shaft using Genetic Algorithms” - **International** Conference on Emerging Technologies In Intelligent System and Control (EISCO–2005), **Kumaraguru College of Technology, Coimbatore**, Jan. 5 –7, 2005, pp.147-152. ISBN: 81-7764-728-8, Allied publishers.
28. **Rangaswamy T.** and Vijayarangan S., “A Genetic Algorithm Based Optimum Design of Laminated Composite Drive Shafts” – **International** Symposium of Research Students on Materials Science and Engg., (ISRS-2004), **Indian Institute of Technology, Chennai**, Dec. 20-22, 2004, PO-PMS-1.

29. **Rangaswamy T.** and Vijayarangan S., “Optimal Design and Analysis of Automotive Composite Drive shafts”- **International** Symposium of Research Students on Materials Science and Engg. (ISRS-2004), **Indian Institute of Technology, Chennai**, Dec.20-22, 2004, PO-PMS-5. (*Received Prof. O.Prabhakar best paper award*).
30. **Rangaswamy T.** and Vijayarangan S., “A Genetic Algorithm based optimal Design and Stress Analysis of Composite Drive shafts”- **International** Conference on Materials Processing and Properties Characterization (MP3-2005), **Tsukuba Science City, Ibaraki, Tokyo, Japan**, Nov.30 – Dec. 02, 2005, PP.192-193 Vol. 4, ISBN No. 981-05-4193-07.
31. **Rangaswamy T.** and Vijayarangan S., “ Optimal Design and Stress Analysis of Composite Drive shafts”- I **International** and 22nd AIMTDR Conference , Dec. 21-23, 2006, **Indian Institute of Technology, Roorkee**.
32. **Rangaswamy T.** and Vijayarangan S., “Optimal Stacking Sequence and Analysis of Composite Power Transmission Shafts” – 6th **International** Conference on Materials Processing for Properties and Performance (MP³ – 2007), 13 – 16, Sept. 2007, **Beijing International Convention Centre, Beijing, China**.
33. **Rangaswamy T. et al .**, “Virtual Prototyping of a Jointed arm Robot for Conceptual Design” - **International** Conference on Materials and Mechanical Engineering (ICMME2008), **Dr.Mahalingam College of Engineering and Technology, Pollachi,TN**, 18 – 20 December 2008,pp.207-212.
34. **Rangaswamy T. et al.**, “Modeling and Simulation of Quick Return Motion Mechanism” - **International** Conference on Materials and Mechanical Engineering (ICMME2008), **Dr.Mahalingam College of Engineering and Technology, Pollachi,TN**, Dec. 18-20, 2008, pp.213- 217.
35. **Rangaswamy T. et al**, “Design and Analysis of gas Turbine Disc and Blades” - **International** Conference on Materials and Mechanical Engineering (ICMME2008), **Dr.Mahalingam College of Engineering and Technology, Pollachi,TN**, Dec.18 – 20 2008, pp. 218- 225.
36. **Rangaswamy T. et al**, “Optimal Design and Analysis of Adhesively Bonded Composite Propeller Shafts” - SAMPE EUROPE **International** Conference (SEICO-09), **Paris, France**, March 23 – 25, 2009, pp.25-32, ISBN : 978-3-9522677-9-0.
37. **Rangaswamy T, et al.**, “Dynamic Stress Analysis for Weight Optimization in a Connecting rod ”, **World** Academy of science, Engineering and Technology (WCSET 2009), **Hong Kong, China** March 23 -25, 2009, Vol. 39, pp. 426 – 431, ISSN : 2070 - 3740.
38. **Rangaswamy T.** and Arun Prakash T. M. et al., “Vibration Suppression Using Fiber Enhanced Viscoelastic Damping Polymers” National Conference on Advanced manufacturing and Robotics (AMR-2004), **Central Mechanical Research Institute, Durgapur**, Jan.10-11, 2004,M2C9.
39. **Rangaswamy T.** and Vijayarangan S. et al., “Design of Carbon/Epoxy Composite Drive shafts”, National conference on Design, Simulation and Modeling of Mechanical Systems, **JNTU, Kakinada, AP**, May 7- 8, 2004, pp.207-211.
40. **Rangaswamy T.** and Vijayarangan S. et al., “Design of Glass/Epoxy Composite Drive shafts”, National conference on Challenges in achieving Global quality,(CAGQ–2004), **Thiagarajar College of Engineering, Madurai, TN**, May 24 - 25, 2004, pp. 645-650.

41. **Rangaswamy T.** and Vijayarangan S. “Evaluation of the effects of Torque Transmission, Torsional Buckling Strength and Critical speed Capabilities on the Design of Composite Hollow Drive Shafts”, National Conference on Emerging Trends in Mech. Engg. (NC 2004), **Padre Conceicao College of Engg., Verna, GOA**, In Association with Institution of Engineers, India, Sept. 11- 12, 2004, pp. 210-216.

Conference Coordinated

National Conference on New advances in Thermal, Design, Materials and Manufacturing Engineering (NATDME 09), March 05-07, 2009, Department of Mechanical Engineering, Malnad College of Engineering, Hassan.

VTU E-learning Program(Edusat program)

Live lecture under VTU E-learning program:

Subject: Fluid Mechanics, Fourth semester, Mechanical Engineering, 2010, VTU-Edusat Centre, Bangalore.

Administrative Experience

- Chairman, BOE, Mechanical Engineering(Composite) Board, VTU, Belagavi, 2017-18
- Member, BOE(PG), Mechanical Engineering, MCE, Hassan, 2017-18
- Member, BOS, Gogte Institute of Technology, Belagavi. 2017-2019
- Member, Expert visiting Committee(EVC), AICTE, New Delhi, 2011 till date
- Member, Local Inspection Committee(LIC), VTU, Belagavi, 2013 to till date
- Member, Ph. D Registration Expert Committee, VTU, Belagavi, 2017-18
- In charge principal, Government Engineering College, Hassan
- Member, Faculty Selection Committee, BLDESCET, Bijapur, 28.06.2013
- Member, Faculty Selection Committee, AIT, Chikkamagaluru, 12.07.2012
- CAD/CAM Lab Coordinator, Dept of Mech. Engg, Malnad College of Engg, Hassan, 2006-2008
- Sports Coordinator, Malnad College of Engineering, Hassan, 2006-2008.

Invited Talk/Conference session Chaired:

- **International** Conference on Design, Materials & Manufacture (IcDeM 2018), Jan. 29-31, 2018 **NITK, KA**
- **International** Conference on Processing and Fabrication of Advanced Materials- (PFAM-XXVI), **Chonbuk National University, Jeonju, Republic of KOREA**, 16-21 Oct.2017, PPMC-6.
- VII National Conference on Novel **Polymeric Materials (Synthesis, Processing & Characterization (Polycon 2017))**, 15 - 16 September 2019, SJCE, Mysuru .
- International NAFEMS Conference on **3D Engineering Modeling, Analysis, Simulations & 3D Printing, Bangalore**, 29 -31 August, 2016.

- International Conference on **Advanced Materials and Technology (ICMAT-16)**, SJCE, Mysore, 26 - 28 May, 2016.
- National Conference on “**Emerging Trends in Mechanical Engineering**”(NCETM-2016) , AIT, **Chikmagaluru**, KA, 29th April 2016
- Three Day National Workshop on “ **Advances in Composite materials & DOE**, Dept of I & P Engineering, **Gogte Institute of Technology, Belagavi**, KA, 29th July 2015.
- AICTE-FDP on Computational mechanics and Industry Applications, Dept of Mechanical Engineering, **Government Engineering College, Ramanagara**, KA, 27th Jan 2015.
- CCTEK, **Govt Polytechnic for Women, Hassan**, 29th Jan 2015.
- International Conference on Current Trends in Engineering and Management (ICCTEM -2014), 17-19 July, 2014, **VVCE, Mysore**.
- International Conference on Advances in Manufacturing and Materials Engineering (ICAMME 2014), Dept of Mechanical Engg, 27-29, March, 2014, **NITK, Surathkal**.
- AICTE-VTU sponsored **National symposium MECH MASTIC 2K13**, Dept of Mech Engg, **Kalpataru Institute of Technology, Tiptur**, 27th Sept, 2013.
- AICTE- FDP on **Smart Materials, Structures and Systems**, Dept of Mech. Engg, **Government Engineering College, Kushalnagar**, KA, 18th ,Sept, 2013.
- Two day workshop on **Recent Advances in composites**, Dept of Mech. Engg, **National Institute of Engineering, Mysore**, 16th , August 2013.
- **Recent Advances in Mechanical Engineering and its Applications (RAMA-2013)**, Dept of E & C Engg, **Malnad College of Engineering, Hassan**, 31st May, 2013.
- Intl Conference on Advanced materials, Management and Thermal sciences(AMMMT-2013), Dept of Mech & IP Engineering, **Siddaganga Institute of Technology, Tumkur**, 4th May, 2013,
- National Conference on Engineering of Materials through Energetic particles (NCEMEP), **BCE, Shravanabelagola**, KA, 8-10, April, 2010.
- 4th International NAFEMS Conference at J. N. Tata Auditorium, **IISc, Bangalore**, 22 - 24 Sept., 2008.
- National Conference on Development of Advanced Composite Components in Aerospace and Automobile Applications (DAC2K7), **BIET, Davanagere**, 9-10 February , 2007, KA
- National Conference on Advances in Materials and manufacturing Processes, **UBDTE, Davanagere**, 5-6 October, 2007.

Short term/Faculty Development Programs/Courses/Workshops conducted:

- Three Day Workshop on **Quality Initiatives in Technical & Higher Educational Institutions through Accreditation and Assessment** (Preparation for Accreditation by NBA), 5.11.2015 to 7.11.2015, **Government Engineering College, Hassan**.
- TEQIP sponsored Short-term training programme on **CAD/CAM laboratory training for Technical teaching Staff**, 19.02.2007 to 24.02.2007. Department of Mechanical Engineering, **Malnad College of Engineering, Hassan**.
- TEQIP sponsored Short-term training programme on **Mathematical Modeling of Engineering problems** for Engineering College Teachers, 08-10.09.2006 Department of Mechanical Engineering and Mathematics, **Malnad College of Engineering, Hassan**.
- TEQIP sponsored Short-term training programme on **Advanced CAD/CAM Tools in Design and Manufacturing** for Engineering College Teachers,” 25-29.10.2006, Department of Mechanical Engineering, **Malnad College of Engineering, Hassan**.

- TEQIP sponsored **One day Seminar on FEA and its Applications** jointly with UBDTE, Davanagere and MCE, Hassan under networking Institutions on 17th October 2006.
- TEQIP sponsored Short-term training programme on **Awareness on Microsoft Office Tools** for ITI students under **unorganized sector scheme**, 25.10.2006 to 29.10.2006 Department of Mechanical Engineering, Malnad College of Engineering, Hassan.
- TEQIP sponsored Short-Term Training Programme on **Computational Methods in Mechanical Engineering** for Engineering College Teachers, 19-24.12.2005, Department of Mechanical Engineering, Malnad College of Engineering, Hassan.

Ph. D Thesis Evaluated

- Analysis of the Critical Success Factors Governing Inventory Control for ERP in the Process Manufacturing Environment, 2018, **Anna University, TN**
- Experimental Investigation on the Nano particles and Exhaust Gas Recirculation on Diesel Engine Fuelled with Pongamia Methyl Ester Blends with Diesel, 2018, **Anna University, TN**
- Investigation on Mechanical Properties And Wear Behavior Of Agave Angustifolia Marginata Fiber Reinforced Polymer Matrix Composites, 2018, **Anna University, TN.**
- Experimental Studies on the Effects of Process Parameters in Friction Stir Welded AA7075-T6 and A384.0-T6 Aluminum Alloys, 2018, **Karpagam University, Coimbatore, TN.**
- Identification of Hazard and Assessment of Risk using the Assessment Techniques of Occupational Health and Safety Analysis in Manufacturing Industries, 2018, **Anna University, TN.**
- Investigation of Manufacturing Micro Components Using Wire Electric Discharge Grinding [Wedg] Process In Hard Metals, 2018, **Anna University, TN.**
- Experimental Studies on Mechanical behavior of Al 6063 Composites Reinforced with Nano and Micro sized Sic, 2017, **Anna University, TN.**
- Performance Analysis of Active Suspension System for Armoured Fighting Vehicle, 2017, **Anna University,**
- Facing of A22E BI Metal Bearing - An Experimental Investigation, 2017, **Karunya University. Coimbatore. TN**
- Evaluation of Wear Behavior of Rare Earth Based Aluminum Matrix Composites, **Anna University, TN**
- Investigations on Air-cooled low Temperature Flash Evaporation Desalination System intended to use Solar Heat for Small-scale Applications, 2016, **Anna University, TN.**
- Studies on Tribological Properties of Metal Matrix Composites, 2016, **Anna University, TN.**
- Analysis and Optimization of coated and Non coated Cutting Tool, 2016, **Anna University, TN.**
- Investigations of Electrical Discharge machining of Al 6061-TiB₂ Metal Matrix Composite, 2015. **Anna University, TN.**
- Optimization of Machining Conditions on Composite materials using Classical Optimization Techniques, 2015, **Anna University, TN.**
- A study on Implementing Feasibility of Environmental Health and Safety management System (EHSMS) for Micro, Small and Medium scale Industries, 2015, **Anna University, TN.**
- Studies on Characterization of NANO-ZrO₂ Reinforced Cryogenically Solidified Aluminium Alloy(LM-13) Metal Matrix Composites, 2015, **Kuvempu University, KA**
- Investigations on Thermo mechanical behavior of high speed spindle, 2015, **Anna University, TN.**
- Investigations on Air-cooled low Temperature Flash Evaporation Desalination System intended to use Solar Heat for Small-scale Applications, 2015, **Anna University, TN.**

- Experimental Analysis and Modeling of 6061 Aluminium Alloys with tic Reinforcements through Powder Metallurgical Technique, 2014, **Bharathiar University, TN.**
- Experimental Investigations on Particle Damping Technique on Boring Bar and Beam, 2014, **Anna University, TN**
- Studies on Energy and Environmental issues of small and Medium scale brick making units, 2013, **Bharathiar University, TN**
- Studies on the Effect of Zirconate Coating on Combustion Chamber Components of a Diesel Engine, 2013, **Bangalore University, KA**
- A Study on Thermal Related Constraints and Their Effects on Micro Tubular Coil Heaters, 2013, **Anna University, TN**
- Studies on Energy and Environmental Issues of Small and Medium Brick making Units, 2013, **Bharathiar University, TN**
- Investigations on Mechanical and Wear Characteristics of Aluminum(A380)/Fly Ash Composites, 2012, **Anna University, TN**
- Investigations on Plug-In Hybrid Electric Two Wheeler, 2012, **Anna University, TN**
- Investigations on Process parameters Optimization in Machining of Metal Matrix composites, 2011, **Anna University, TN.**
- Synthesis and Characterization of Surface Modified Montmorillonite Clay Filled Epoxy Nano Composite Reinforced with Short Woven Glass Fiber Reel, 2010, **JNTU, AP**
- Study of Martensitic, Ferritic and Ferritic (Mod.) Steels for Hard surfacing of Valve Seat Rings Using Shielded Metal Arc Welding Process, 2010, **Bharathiar University, TN**
- Experimental Investigations on Board Level Electronic Packaging Subjected to Dynamic Loads, 2009, **Anna University, TN.**
- Block - Based Multiple Ant Colony Algorithm for Optimal order Retrieval in a Warehouse -2009, **Bharathiar University, TN.**
- Study of Martensitic, Ferritic and Ferritic (Mod.) Steels for hard surfacing of Valve Seat Rings Using Shielded Metal Arc Welding Process, 2009, **Bharathiar University, TN.**
- Studies on Performance of Electronically Injected Diesel and DEE Ethanol Blend Dual Fuel in a Four Stroke Compression Ignition Engine, 2008, **Bharathiar University, TN.**

Details of M.Tech.

Subjects handled/handling :

- Advanced Materials Technology
- Optimization Techniques
- Rapid Prototyping
- MEMS
- CIM and Automation

Projects Guided/Guiding: More than - 40

Project Thesis Evaluated: More than - 50

Sponsored Research Projects:

- **Title:** Additive Manufacturing System based on Micro Mechanical Inhibition for 3D Printing of Metals and Plastics

Duration: 2016-19

Sponsored: DST, New Delhi

Project cost: 50.09 Lakhs

Status: On going

- **Title:** Development of Portable Solar Charger for Electronic Appliances

Duration: 2016- 17

Sponsored: R&D Grant in Aid, IIE, Kolkata

Project cost: 0.50 Lakh

Status: Completed

- **Title:** Development of Autonomous VTOL Ornithopter with Monoplane and Biplane Configuration with Hovering Ability

Duration: 2012-15

Sponsored: DRDO, New Delhi

Project cost: 36.85 Lakhs

Status: Completed

- **Title:** Design and Development of a Small Satellite

Duration: 2013-14

Sponsored: VGST - TRIP Grant, Bangalore

Project cost: 0.50 Lakh

Status: completed

- **Title:** Development of Fully Autonomous V-Tail - Micro Air Vehicle

Duration: 2013-14

Sponsored: R&D Grant in Aid, IIE, Kolkata

Project cost: 0.50 Lakh

Status: completed

- **Title :** Studies on Development of light weight Gear unit and Flapping Mechanism for Ornithopter with biplane configuration

Duration: 2011-2013

Sponsored: Aeronautics R&D Board, New Delhi

Project cost: 16.236 Lakhs

Status: Completed

- **Title:** Development of RC Mini Air Vehicle for Video Surveillance and Atmospheric Modeling

Duration: 2011-12

Sponsored: R&D Grant in Aid, IIE, Kolkata

Project cost: 0.65 Lakh

Status: Completed

- **Title:** Design Considerations of Metallic Brush Seals for Industrial Turbo Machines.

Duration: 2011-12

Sponsored: R&D Grant in Aid, IIE, Kolkata

Project cost: 0.50 Lakh

Status: Completed

- **Title:** Designing and Development of Automatic Height Adjustment Dribble Stand for Hospital and Clinics.

Duration: 2011-12

Sponsored: Matching Grant, VTU Belgaum, KA

Project cost: 0.50 Lakhs

Status: Completed

- **Title :** Studies on composite Leaf spring & Shaft in Automotive Applications

Duration: 2003-2006

Sponsored: DRDO, New Delhi

Project cost: 19.13 Lakhs

Co-investigators: Dr. S. Vijayarangan and M.Senthilkumar

Status: Completed

AICTE Grants

- **Title :** AICTE Faculty Development Programme on Technology for Design, Modelling and Production of Composite Structures

Duration: Two weeks

Sponsor: AICTE, New Delhi

Date: Jan 27th to Feb 8th 2014

Amount sanctioned: 7 Lakhs

- **Title :** AICTE Seminar Grant on Modelling and Numerical Analysis of Composite Structures

Duration: 3 Days

Sponsor: AICTE, New Delhi

Date : 3rd to 5th March 2014

Amount sanctioned: 2 Lakhs

Visvesaraya Technological University(VTU), Belagavi, KA Grants

Title : VTU Mission Empower 10k on Engineering Design and Analysis

Duration: Two weeks

Sponsor: VTU, Belgaum

Date : 23rd June to 11th July 2014

Amount sanctioned: 2 Lakhs

Ph .D./M.Sc.(Engg.): Awarded/guiding:

Ph.D: Registered- 5

Awarded - 3

M.Sc.(Engg) by Research: Awarded -2

Membership in professional societies/bodies :

- Indian Society for Technical Education (ISTE), Life member: LM 24108.
- The Institution of Engineers India, (IEI), Life Member: M-132262-6.
- System Society of India (SSI), Life Member: LM 26009



(Rangaswamy T)

