

SRI SAI RAM ENGINEERING COLLEGE (AUTONOMOUS), CHENNAI.

DEPARTMENT OF MECHANICAL ENGINEERING

<p>Name: Dr. R. BHOOPATHI</p>	
<p>Designation:</p>	<p>Associate Professor</p>
<p>Qualification:</p>	<p>Ph.D</p>
<p>Area of Specialization:</p>	<p>Computer Aided Design & Composite Materials</p>
<p>Experience:</p>	<p>Teaching- 18 Years 3 Months</p> <p>Industry - Nil</p>
<p>Number of Workshops/ FDP/ Conferences Attended:</p>	<p>WORKSHOP - 10</p> <p>FDP - 21</p> <p>CONFERENCE - 07</p>
<p>Publication:</p>	<p>Journal:</p> <p>National : 02</p> <p>International : 17</p> <p>Conference:</p> <p>National : 02</p> <p>International : 07</p>
<p>Staff Achievement</p>	<ul style="list-style-type: none"> ❖ Successfully Completed a AICTE QIP PG Certification Programme in Artificial Intelligence and Data Science conducted during June 2025 to December 2025 in IIIT, Kottayam, Kerala. ❖ Every year publishing 2 Research Articles (SCI / WOS / SCOPUS / UGC) in International and Reputed Journals.

Educational Qualification:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
Ph.D	Ph.D	Composite Materials	2022	KIT- Kalaignar Karunanidhi Institute of Technology (Autonomous)	Anna University	--	I
PG	M.E.	Manufacturing	2010	Mahendra Engineering College (Autonomous)	Anna University	94	I/ Distinction
UG	B.E.	Mechanical	2006	Dr Mahalingam College of Engineering and Technology (Autonomous)	Anna University	73.46	I
Diploma	D.M.E	Mechanical	2000	Muthayammal Polytechnic College	DOTTE	91.66	I/ Distinction

Professional Experience:

Sl. No	College/Organization	Designation	Period From To	Total period	Nature of work
1.	Sri Sairam Engineering, Chennai.	Associate Professor	03.06.11 to Till date	14.3 Years	Research & Teaching
2.	Muthayammal Polytechnic College	Senior Lecturer	01.06.10 to 31.05.11	01 Year	Teaching
3.	Muthayammal Polytechnic College	Lecturer	12.12.03 to 16.08.08	4.4 Years	Teaching

Funded Project Details:

- ❖ Received a project grant of ₹7,500 from the Tamil Nadu State Council for Science and Technology (TNSCST), Department of Higher Education, Government of Tamil Nadu, for the project titled “Design and Fabrication of a Multipurpose Automated Footstep Mechanism for Physically Challenged Persons” (2022–2023).

List of publications in international journals:

1. Published a Paper Titled **“Optimizing mechanical properties of AA6061-B4C-Fe2O3 hybrid composites through Taguchi method analysis”** in the *Indian Journal of Science and Technology*, in the *AIP Conference Proceedings*. *AIP Conf. Proc.* 3270, 020200 (2025).
2. Published a Paper Titled **“A study on microstructures and physical properties of high-entropy alloys and materials.”** in the *Indian Journal of Science and Technology*, in the *Oxidation Communications* . 2025, Vol. 48 Issue 1, p162-171. 11p.
3. Published a Paper Titled **“Specifications of structural development and characteristics of al–si–cu exceptional highalloy formulations”** in the *Oxidation Communications* . 2025, Vol. 48 Issue 1, p172-182. 11p.
4. Published a Paper Titled **“Surface modification of natural fillers and their composites.”** In *Elsevier Series on Tribology and Surface Engineering, Surface Modification and Coating of Fibers, Polymers, and Composites*, Elsevier, 2025, Pages 207-218.
5. Published a Paper Titled **“Surface modification of natural fillers and their composites.”** In *Elsevier Series on Tribology and Surface Engineering, Surface Modification and Coating of Fibers, Polymers, and Composites*, Elsevier, 2025, Pages 207-218.
6. Published a Paper Titled **"Additive manufacturing (3D printing) technologies for fiber-reinforced polymer composite materials: A review on fabrication methods and process parameters."** in *e-Polymers*, vol. 24, no. 1, 2024, pp. 20230114. <https://doi.org/10.1515/epoly-2023-0114>.
7. Published a Paper Titled **“Comparative study on pentagonal pyramid (PPy) and tubular (Tub) solar stills with thermal energy storage (TES)”**, in *Materials Today: Proceedings*, 2023, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.08.336>.
8. Published a Paper Titled **“Influence of Haritaki (Terminalia chebula) nano-powder on thermo-mechanical, water absorption and morphological properties of Tindora**

- (Coccinia grandis) tendrils fiber reinforced epoxy composites”**, in *Journal of Natural Fibers*, vol. 19, no. 13, 2022, pp. 6452- 6468.
9. Published a Paper Titled **“A Critical Review on Wood-Based Polymer Composites: Processing, Properties, and Prospects”**, in *Polymers*. 2022; 14(3):589. <https://doi.org/10.3390/polym14030589>.
 10. Published a Paper Titled **“Hemp fibers, their composites and applications”**, In *The Textile Institute Book Series, Plant Fibers, their Composites, and Applications, Woodhead Publishing*, 2022, Pages 233-252, ISBN 9780128245286, <https://doi.org/10.1016/B978-0-12-824528-6.00013-8>.
 11. Published a Paper Titled **“Carbon substrates: a review on fabrication, properties and applications”**, in *Carbon Lett.* 31, 557–580 (2021). <https://doi.org/10.1007/s42823-021-00264-z>.
 12. Published a Paper Titled **“Optimization of drilling output responses of eggshell fillers reinforced hemp/glass fibres hybrid composites”**, in *Materials Today: Proceedings*, Volume 46, Part 9, 2021, Pages 3245-3250, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.11.286>.
 13. Published a Paper Titled **“Influence of eggshell particles on mechanical and water absorption properties of hemp-glass fibres reinforced hybrid composites”**, in *IOP Conference Series: Materials Science and Engineering*, Volume 923, International Conference on Technological Advancements in Materials, Design, Manufacturing and Energy Sectors (ICTAMDMES’20) 20-21 February 2020, Chennai, India.
 14. Published a Paper Titled **“Influence of Eggshell Nanoparticles and Effect of Alkalization on Characterization of Industrial Hemp Fibre Reinforced Epoxy Composites”**, in *Journal of Polymers and the Environment*, 28, 2178–2190 (2020). <https://doi.org/10.1007/s10924-020-01756-1>.
 15. Published a Paper Titled **“Fabrication of Automated Scrap Collector Cum Scrubber for Production Industries”**, In *Advances in Manufacturing Technology. Lecture Notes*

in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-13-6374-0_18.

16. Published a Paper Titled “**Experimental investigation on morphological, physical and shear properties of hybrid composite laminates reinforced with flax and carbon fibers**”, in *Journal of the Chinese Advanced Materials Society, Taylor & Francis*, 2018, Vol. 6, no. 4, 640-654.
17. Published a Paper Titled “**Physical Properties of Glass-Hemp-Banana Hybrid Fiber Reinforced Polymer Composites**” in the *Indian Journal of Science and Technology*, Vol 10(7), February 2017, ISSN (Print) : 0974-6846 and ISSN (Online) : 0974-5645, DOI: 10.17485/ijst/2017/v10i7/103310.
18. Published a Paper Titled “**Experimental Investigation on Mechanical Properties of Hemp-Banana-Glass Fiber Reinforced Composites**” in the *Applied Mechanics and Materials (Trans Tech Publications)*, Vols 766-767 (2015) pp 167-172, ISSN: 1662-7482, doi:10.4028/www.scientific.net/AMM.766-767.167.
19. Published a Paper Titled “**Fabrication and Property Evaluation of Banana-Hemp-Glass Fiber Reinforced Composites**” in the *Procedia Engineering (Elsevier)*, 97 (2014) 2032 – 2041,ISSN: 1877-7058, doi: 10.1016/j.proeng.2014.12.446.

List of Papers Presented in International Conferences:

1. Presented a Paper Titled “**Studies on mechanical strengths of hemp-glass fibre reinforced epoxy composites**” in the *2nd International Conference on Advances in Mechanical Engineering (ICAME 2018)*, conducted by SRM University, Chennai, Tamilnadu, India.
2. Presented a Paper Titled “**Mechanical properties evaluation of hemp fibre reinforced polymer composites**” in the *International Conference On Engineering Materials, Metallurgy and Manufacturing (ICEMMM 2018)*, conducted by SSN College of Engineering, Chennai, Tamilnadu, India.

3. Presented a Paper Titled **“Physical Properties of Glass-Hemp-Banana Hybrid Fiber Reinforced Polymer Composites”** in the *International Conference on Mechanical, Materials and Manufacturing Systems (ICMMMS 2016)*, conducted by Sri Sai Ram Engineering College, Chennai, Tamilnadu, India.
4. Presented a Paper Titled **“Experimental Investigation on Mechanical Properties of Hemp-Banana-Glass Fiber Reinforced Composites”** in the *International Conference on Advances in Materials and Manufacturing Engineering (ICAMME2014)*, conducted by Sri Sai Ram Institute of Technology, Chennai, Tamilnadu, India.
5. Presented a Paper Titled **“Fabrication and Property Evaluation of Banana-Hemp-Glass Fiber Reinforced Composites”** in the International Conference on *12th GLOBAL CONGRESS ON MANUFACTURING AND MANAGEMENT (GCMM 2014)*, conducted by VIT University Vellore, Tamilnadu, India.

List of Patent Published:

1. Published a patent Titled **“A Smart Natural Fiber Composite with Self-Healing Capabilities and Method Thereof”** Application No. 202541010807, Date:14/02/2025.
2. Published a patent Titled **“Magnetic Natural Fiber Composites for Energy Harvesting Applications”** Application No. 202341052750, Date:01/09/2023
3. Published a patent Titled **“A Method of Controlling Heat Generated Along the Welding Direction by Controlling Geometry of Friction Stir Welding Tools”** Application No. 202341013012, Date:17/03/2023.
4. Published a patent Titled **“Method and Apparatus for Controlling Vehicle to Avoid Accidents”** Application No. 202341013012, Date:17/03/2023.

List of NPTEL Course Completed:

1. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Manufacturing Processes - Casting and Joining”** conducted by IIT Kanpur, between July and August 2025.

2. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Welding Application Technology”** conducted by IIT Madras, between July and September 2025.
3. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Mechatronics”** conducted by IIT Madras, between Feb. and Apr.2025.
4. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Product Design and Manufacturing”** conducted by IIT Madras, between Jan. and Apr.2025.
5. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Manufacturing Guidelines For Product Design”** conducted by IIT Madras, between Jan. and Mar.2025.
6. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Introduction to Abrasive Machining and Finishing Processes”** conducted by IIT Madras, between Jan. and Mar.2025.
7. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Product Design and Development”** conducted by IIT Madras, between July. and Aug.2024.
8. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Inspection and Quality Control in Manufacturing”** conducted by IIT Madras, between Jan. and Feb. 2024.
9. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Design Practice”** conducted by IIT Madras, between Jan. and March 2024.
10. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Accreditation and Outcome Based Learning”** conducted by IIT Madras, between Aug. and Oct. 2023.

11. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Introduction to Composites”** conducted by IIT Madras, between Jan. and April 2019.
12. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Processing Polymers and Polymer Composites”** conducted by IIT Madras, between Aug. and Sep. 2018.
13. Successfully completed an intensive 8-week NPTEL-AICTE certification course on **“Fluid Mechanics”** conducted by IIT Madras, between Feb. and March 2018.

List of Workshop/Conferences/FDP’s/STTP attended:

1. Attended a NPTEL-AICTE **Faculty Development Program** on **“Welding Application Technology”** conducted by IIT Madras, between July and September 2025.
2. Attended a NPTEL-AICTE **Faculty Development Program** on **“Mechatronics”** conducted by IIT Madras, between Feb. and Apr.2025.
3. Attended a NPTEL-AICTE **Faculty Development Program** on **“Product Design and Manufacturing”** conducted by IIT Madras, between Jan. and Apr.2025.
4. Attended a NPTEL-AICTE **Faculty Development Program** on **“Manufacturing Guidelines For Product Design”** conducted by IIT Madras, between Jan. and Mar.2025.
5. Attended a NPTEL-AICTE **Faculty Development Program** on **“Introduction to Abrasive Machining and Finishing Processes”** conducted by IIT Madras, between Jan. and Mar.2025.
6. Attended a NPTEL-AICTE **Faculty Development Program** on **“Product Design and Development”** conducted by IIT Madras, between July. and Aug.2024.
7. Attended a NPTEL-AICTE **Faculty Development Program** on **“Inspection and Quality Control in Manufacturing”** conducted by IIT Madras, between Jan. and March 2024.

8. Attended a NPTEL-AICTE **Faculty Development Program** on “**Design Practice**” conducted by IIT Madras, between Jan. and March 2024.
9. Attended a NPTEL-AICTE **Faculty Development Program** on “**Accreditation and Outcome Based Learning**” conducted by IIT Madras, between Aug. and Oct. 2023.
10. Attended a NPTEL-AICTE **Faculty Development Program** on “**Introduction to Composites**” conducted by IIT Madras, between Jan. and April 2019.
11. Attended a NPTEL-AICTE **Faculty Development Program** on “**Introduction to Composites**” conducted by IIT Madras, between Jan. and April 2019.
12. Attended a One week **Faculty Development Program** on “*ME6401 Kinematics of Machinery*”, Organized by Sri Sai Ram Engineering College, Chennai from 27th November to 05th December 2017.
13. Attended a Two weeks **Faculty Development Program** on “*Bio De-Gradable, Green and Nano Composites for Industrial Applications: Manufacturing Methodologies and Properties*”, Organized by Sri Sai Ram Institute of Technology, Chennai from 20th October to 02nd November 2017.
14. Attended a Two days **DRDO & ARMERB sponsored National level Workshop** on “*Fabrication and Characterization of Advanced Composites*”, Organized by Selvam College of Technology, Namakkal from 22nd September to 23rd September 2017.
15. Attended a one day **Workshop** on “*Role of Lean Manufacturing on Organization Competitiveness*”, Organized by Sri Sai Ram Engineering college Chennai on 28th August 2014.
16. Attended a one day **Workshop** on “*Green Composites*”, Organized by Sri Sai Ram Institute of Technology, Chennai on 27th August 2014.
17. Attended a two day **Workshop** on “*Industry-Institution Interaction Event on Environment Management in Industrial Sectors-Status and Needs*”, Organized by Sri Sai Ram Engineering College, Chennai on 24th & 25th July 2014.

18. Attended a **International Conference on “Emerging trends in Energy and Environment (ICETEE 2014)”**, Organized by Sri Sai Ram Engineering College, Chennai.
19. Attended a **Faculty Development Program on “Advancement in Materials, manufacturing Processes and Management Systems”**, Organized by Sri Sai Ram Engineering College, Chennai from 4th November to 16th November 2013.
20. Attended a **workshop on “Renewable Energy”** in Sri Sai Ram Engineering College held on 19th JULY 2012.
21. Attended a one day **Workshop on “Renewable Energy”**, Organized by Sri Sai Ram Engineering College, Chennai on 24th Feb 2012.
22. Attended a one day **Workshop on “Art of Journal and Thesis writing”**, Organized by Sri Sai Ram Engineering College, Chennai on 19th January 2012.
23. Attended a **“Basic fire safety and emergency preparedness workshop”** program organized by Usha fire safety equipments (P) Ltd, held at SSEC, Chennai.
24. Attended a **“Basic fire safety and emergency preparedness workshop”** program organized by Thilak Safety Associates, held at SSEC, Chennai.
25. Attended a **ISO 9001: 2008 “Quality Management system and Audit”** training during 11th & 12th of October 2011 conducted by Creative Management Consultants, Chennai.

Professional Membership:

- ❖ Life member in **“The Indian Society for Technical Education (ISTE)”**.
- ❖ Life member in **“The Institution of Engineers (IEI)”**.
- ❖ Member in **“Institute of Electrical and Electronics Engineers (IEEE)”**.
- ❖ 10 Years Member in **“Society of Automotive Engineers (SAE)”**.