

SRI SAI RAM ENGINEERING COLLEGE
DEPARTMENT OF MECHANICAL ENGINEERING

Name: **K. Vetri Velmurugan**



Designation : Assistant Professor

Qualification : B.E., M.Tech., (Ph.D)

Area of Specialization : CAD/CAM

Experience : Teaching – 13.8 Years (As on 31.03.2026)
: Industry- 2 Year 4 Months

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Postal Address : Department of Mechanical Engineering
Sri Sai Ram Engineering College,
Sai Leo Nagar, West Tambaram
Chennai - 600044 Tamil Nadu.

Professional Experience:

S.No	College/Organization	Designation	Period	Total Period	Nature of work
1	Sri Sai Ram Engineering College	Assistant Professor	June 2012 to Till Date	13 Years 08 Months	Teaching
2	Genuine Technologies	Senior Design Engineer	Jan 2011 to Jun 2012	1 Years 5 Months	Design
3	Light Alloy Products Ltd	Design Engineer	Jun 2009 to Apr 2010	10 Months	Design

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
Doctorate	Ph.D	Material Characterization	Pursuing	Anna University	Anna University	NA	NA
PG	M.Tech.	CAD/CAM	2009	Vellore Institute of Technology	VIT University	79.3	I
UG	B.E.	Mechanical Engg.	2005	Pallavan College of Engineering	Anna University	72	I

Roles and Responsibilities(Institution Level):

1. Higher Education Cell - Executor

Roles and Responsibilities(Department Level):

1. Placement Facilitator
 2. Class Coordinator
 3. Project Coordinator
 4. Vidwan, Irins Portal - Coordinator
 5. NBA C4 Member, NAAC Criteria 5 - Coordinator
- hBaja/mBaja - Coordinator

Achievements

International Journal Publications

1. Optimization of sintering parameters in aluminium metal matrix composites via Taguchi method and ANOVA analysis DOI: <https://doi.org/10.1063/5.0270427>
2. Evaluating the fatigue performance of extruded A2024 in AM2 airfield matting systems under simulated aircraft loading conditions DOI: <https://doi.org/10.1063/5.0262740>
3. Experimental investigation and optimization of stir casting parameters for magnesium hybrid metal matrix composites reinforced with silicon carbide and rice husk ash DOI: <https://doi.org/10.1063/5.0262743>
4. Enhanced machining performance using a hybrid cryogenic CO₂ and TiO₂ nanofluid minimum quantity lubrication (Cryomql) system Published in Materials Research Express DOI: 10.1088/2053-1591/ADB7BB
5. Design and Fabrication of Solar Power Tiller Published in International Journal of Scientific Research in Engineering and Management DOI: 10.55041/IJSREM30844
6. Pneumatic Powered Drone Catcher Gun Published in International Journal of Scientific Research in Engineering and Management DOI: 10.55041/IJSREM30672
7. INVESTIGATING THE WEAR RESISTANCE OF ZN-CO-NI ALLOY COATINGS ON POLYMER SUBSTRATES Published in Journal of the Balkan Tribological Association
8. Influence of hBN nanofluid MQL on machining characteristics in turning of Inconel 625 Published in Materials Today: Proceedings DOI: 10.1016/J.MATPR.2023.08.247
9. Analysis of Structural, Optical, and Aquaphobic Properties of Zirconium Oxide Nanofilms by Varying Sputtering Gas Published in Advances in Materials Science and Engineering DOI: 10.1155/2022/9968485
10. Wear behavior analysis of vitallium metal matrix composite Published in Materials Today: Proceedings DOI: 10.1016/J.MATPR.2021.06.212
11. An overview on role of unconventional machining processes on different materials Published in Materials Today: Proceedings DOI: 10.1016/J.MATPR.2021.08.25
12. Liquid Crystal Display (LCD) and Organic Light Emitting Diode (OLED) Applications on Natural Fibre Reinforced Polymer Matrix Composites Published in Advances in Materials Science and Engineering DOI: 10.1155/2021/1934490
13. Experimental investigation and comparative assessment of PVD and CVD insert on dry machining of waspaloy Published in Materials Today: Proceedings DOI: 10.1016/J.MATPR.2020.12.1208
14. Fabrication and Machinability Study of Al2219 Metal Matrix Composites Reinforced with SiN/MoS₂ Nanoparticles Published in SAE Technical Papers DOI: 10.4271/2019-28-0170

15. Experimental Study on Tool Wear and Cutting Temperature during Machining of Nimonic C-263 and Waspaloy Based on Taguchi Method and Response Surface Methodology Published in SAE Technical Papers DOI: 10.4271/2019-28-0144
16. Experimental Investigation on Turning Characteristics of TiC/MoS₂ Nanoparticles Reinforced Al7075 Using TiN Coated Cutting Tool Published in SAE Technical Papers DOI: 10.4271/2019-28-0165
17. Dry Machining of Nimonic 263 Alloy Using PVD and CVD Inserts Published in Lecture Notes in Mechanical Engineering DOI: 10.1007/978-981-13-2718-6_18
18. Investigation of Parameters for Machining a Difficult-to-Machine Superalloy: Inconel X-750 and Waspaloy Published in Lecture Notes in Mechanical Engineering DOI: 10.1007/978-981-13-2718-6_19
19. A Study on the Turning Characteristics and Optimization of MOS₂p and SiCp-Reinforced Al-Si10Mg Metal Matrix Composites Published in SAE Technical Papers DOI: 10.4271/2018-28-0043
20. A Comparative Study on Machinability Characteristics in Dry Machining of Inconel X-750 Alloy Using Coated Carbide Inserts Published in SAE Technical Papers DOI: 10.4271/2018-28-0031
21. Parametric Study, the Process Benefits, Optimization and Chip Morphology Study of Machining Parameter on Turning of Inconel 718 Using CVD Coated Tool and Nd: YAG Laser Published in SAE Technical Papers DOI: 10.4271/2018-28-0029
22. Empirical and Artificial Neural Network Modeling of Laser Assisted Hybrid Machining Parameters of Inconel 718 Alloy Published in SAE Technical Papers DOI: 10.4271/2018-28-0023
23. Design Optimization of an Epoxy Carbon Prepreg Drive Shaft and Design of a Hybrid Aluminium 6061-T6 Alloy/Epoxy Carbon Prepreg Drive Shaft Published in SAE Technical Papers DOI: 10.4271/2018-28-0014
24. Acceptance tests and their results for 1st Pre-Series Cryoline (PTCL) of ITER Published in IOP Conference Series: Materials Science and Engineering DOI: 10.1088/1757-899X/171/1/012054
25. An Investigation of the Parametric Effects of Cutting Parameters on Quality Characteristics during the Dry Turning of Inconel 718 Alloy Published in Indian Journal of Science and Technology DOI: 10.17485/IJST/2016/V9I44/103314
26. Experimental Investigation and Optimization of Machining Parameters using Grey-Relational Analysis Approach and Fuzzy Based Taguchi Loss Function Method Published in Indian Journal of Science and Technology DOI: 10.17485/IJST/2016/V9I44/103313
27. Comparative Analysis of AHP and ANP Model for Lean Production System Justification Published in Applied Mechanics and Materials DOI: 10.4028/WWW.SCIENTIFIC.NET/AMM.591.197

Programs Attended:

Workshop / FDP attended / Training Programme:

1. one-day workshop titled "Awareness on Additive Manufacturing" held on Precision Engineering and Technology Centre, Chennai held on 28.08.2024
2. Attended a workshop on "Recent trends in Optimization Techniques – RTOT 2017" at Velammal Engineering College, Chennai held on 21st April 2017.
3. Attended a workshop on "Value Engineering using ANSYS" in Sri Sai Ram Engineering College held on 19th August 2016.
4. Attended a workshop on "Advances in Design of Experiments (DOE) "in VIT University, Vellore held on 21st October 2016.
5. Attended a workshop on "Development, Manufacturing and Analysis of Advanced Composites" in SRM University held on 19th December 2015.
6. Attended a workshop on "Rapid Prototyping Technology and its applications to industries in engineering and healthcare" in VIT Chennai held on 22nd March 2014.
7. Attended one day Workshop on "Role of Lean Manufacturing on Organization Competitiveness ", Organized by Sri Sai Ram Engineering college Chennai on 28th August 2014.
8. Attended a workshop on "Finite Element Analysis Tools and its Applications" Organized by Sri Sai Ram Engineering college Chennai on 19th July 2012.
9. Attended Faculty Development Program on "International Virtual Faculty Development Program on Research Opportunities and Futures of Additive Manufacturing Engineering" from 30.01.2023 to 03.02.2023, Organized by Sri Manakula Vinayagar Engineering College.
10. Five Days Faculty Development Programme on "RECENT ADVANCEMENTS IN MATERIALS AND MANUFACTURING" from 22.04.2024 to 26.04.2024 Organized by Sri Sai Ram Engineering college Chennai
11. Six Days Faculty Development Programme on "Advanced materials for defence and aerospace applications from 27.01.2025 - 01.02.2025 Organized by Ballari Institute of Technology & Management, Ballari.
12. Attended Faculty Development Program on "Automobile Engineering", Organized by Sri Sai Ram Engineering College, Chennai from 29th November to 5th December 2017.
13. Attended Faculty Development Program on "Computer Aided Design and Usage of Software", Organized by Sri Sai Ram Engineering College, Chennai from 4th August to 6th August 2016.

14. Attended Faculty Development Program on “Processing and Characterization of Composite Materials including Natural Fiber Re-inforced Composites”, Organized by Sri Sai Ram Insitute of Technology, Chennai from 18th March to 31th March 2015.
15. Attended 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.
16. Attended State institute of Rural Development and Panchayat Raj certificate course on Panchayat Administration and Rural Development Schemes during the month of August 2025.
17. Attended Training Program on “Automotive Technology”, in Sri Sai Ram Engineering College, Chennai Conducted on 12th and 13th September 2017.
18. 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.
19. Attended Quality Management and Audit Training, Organized by Sri Sai Ram Engineering College, Chennai Conducted on 22nd and 23th Feburary 2013.

PATENT DETAILS:

S. No.	Application No./ Design No.	Title	Status	Type
1	201941048055	PORTABLE MILL WRIGHT FITTERS TABLE	Published	Utility
2	202041049409	Method And Apparatus For Controlling Vehicle To Avoid Accidents	Published	Utility
3	202041049407	Two-Stage Constant Ratio Powertrain	Published	Utility
4	202241060607	A Method for Design and Investigation of Compliant Mechanism in Robotic Gripper	Published	Utility
5	202241077104	CARBONATION-CALCINATION CYCLE INTEGRATED EXHAUST WITH ELECTROSTATIC PRECIPITATOR AND CATALYTIC CONVERTER	Published	Utility
6	202341059266	AN ECO-FRIENDLY NATURAL FIBER COMPOSITES FOR MARINE APPLICATIONS	Published	Utility
7	202441014311	DESIGN AND FABRICATION OF HYBRID POWER GENERATOR	Published	Utility
8	202441015533	VERTICAL AXIS WIND TURBINE (VAWT) INTEGRATED AIR PURIFICATION SYSTEM	Published	Utility

9	202441071048	ELECTROMECHANICAL AND PNEUMATIC MACHINE FOR WIRELESS COMMAND-BASED AGRICULTURAL CULTIVATION AND RESOURCE OPTIMIZATION	Published	Utility
10	202441071049	DESIGN AND FABRICATION OF AN ELECTRICALLY OPERATED MINI CORN SHELLING MACHINE FOR INDUSTRIAL AUTOMATION	Published	Utility
11	202441077575	DESIGN AND FABRICATION OF AUTOMATED DRAIN CLEANER WITH GUTTER SHAFT DRIVE MECHANISM	Published	Utility
12	202541118419	AUTOMATED LEAF PICK-UP AND HANDLING ASSISTANT SYSTEM	Published	Utility
13	425040-001	MINI CORN SHELLING MACHINE	Granted	Design
14	417740-001	WIRELESS AGRICULTURAL CULTIVATING MACHINE	Granted	Design