SRES', Sanjivani College of Engineering, Kopargaon

(An Autonomous Institute affiliated to SPPU, Pune)

Staff Profile

Personal Information

Name of Teaching Staff: (Dr.) Prasad M Patare

Designation: Associate Professor and HoD

Department: Mechanical Engineering

Date of joining: 23rd August, 2004



Contact No: (+91) 9423386703

Education Details

Qualification	Specialization with Class or Grade	University	Year		
UG	Mechanical Engineering	Pune University	2002		
PG	Design Engineering	Pune University	2004		
Ph.D.	Mechanical Engineering	SRTM University	2019		
Total experience in years:					
Teaching:	22 years				
Industry:	0.9				

Research and Publication

Research and Publication

International Journal/Conference:

- 1. "Intelligent Approach for Analyzing Semiconductor Band Gaps in Nanomaterial Systems", Journal of Nano- and Electronics Physics, 2025, https://doi.org/10.21272/jnep.17(4).04027
- 2. "Optimization of Defect Detection in Atomic Materials Using Graphene Layer", Journal of Nano- and Electronics Physics, 2025, https://doi.org/10.21272/jnep.17(4).04028
- 3. "Approach for Predicting Filtration Efficiency in Nanocomposite Membranes Using 2D Materials", Journal of Nano- and Electronics Physics, 2025, https://doi.org/10.21272/jnep.17(4).04029

- 4. "Optimization Technique for Parameter Estimation in Solar Photovoltaic Systems Using Nanomaterials", Journal of Nano- and Electronics Physics, 2025, https://doi.org/10.21272/jnep.17(4).04030
- "Effect Of Molybdenum Disulfide and Bronze on Tribological Behaviors Of Polytetrafluoroethylene Composites", Materials Today Proceedings, 2023, https://doi.org/10.1016/j.matpr.2023.10.118
- 6. "Convolutional Neural Network Based On-Line Defect Recognition in Additive Manufacturing Using Image Processing", IEEE Xplore, 4th International Conference on Computation, Automation and Knowledge Management (ICCAKM), Dubai, United Arab Emirates, 2023, pp. 1-6, <u>Http://10.1109/ICCAKM58659.2023.10449655</u>
- 7. "Size-Dependent Physical Properties of Metallic Films: Analysis of Thermal and Mechanical Characteristics in the Nanoscale Regime", Journal of Nano- and Electronics Physics, 2024, https://doi.org/10.21272/jnep.16(3).03014
- 8. "Enhancing Nanocomposite Filtration Membranes: Refined SVM Approach for Precise Estimation of Permeate Flux and Foulant Rejection", Journal of Nano- and Electronics Physics, 2024, https://doi.org/10.21272/jnep.16(3).03016
- 9. "Nano Granular Metallic Thin Films: Unravelling Non-Linear Electrical Conduction and Resistive Switching for Neuromorphic Applications", Journal of Nano- and Electronics Physics, 2024, https://doi.org/10.21272/jnep.16(3).03015
- 10. "Novel Approach Based Minimization of Geometric Action for Predicting Rare and Extreme Events in Non-Equilibrium Systems", Journal of Nano- and Electronic Physics, 2024, https://doi.org/10.21272/jnep.16(4).04008
- 11. "Clustering-Based Growth Analysis of 2D Transition Metal Thin Films on Graphene Substrates via Molecular Beam Epitaxy", Journal of Nano- and Electronic Physics, 2024, https://doi.org/10.21272/jnep.16(4).04005
- 12. "An Innovative Classification Approach for Predicting Physical Properties in Nanoparticles", Journal of Nano- and Electronics Physics, 2024, https://doi.org/10.21272/jnep.16(5).05011
- 13. "Optimizing Data Traffic: Effective Management of Physical Processes in Networked Information Systems", Journal of Nano- and Electronics Physics, 2024, https://doi.org/10.21272/jnep.16(5).05010
- 14. "Probabilistic fracture analysis of double edge cracked orthotropic laminated plates using the stochastic extended finite element method", Forces in Mechanics, 2024, https://doi.org/10.1016/j.finmec.2024.100257

- 15. "Tribological Failure Analysis of Journal Bearings used in Sugar Mill", Material Today Proceeding (Elsevier),2023, https://doi.org/10.1016/j.matpr.2023.07.319
- 16. "Based on Natural Frequencies, Crack Analysis of Fixed Support Fibre Glass Composite Beam", Selected as Book Chapter in CRC Press Taylor and Francis, 2021-22, https://doi.org/10.1201/9781003324539.
- 17. "Probabilistic Mixed Mode Stress Intensity Factors of Single Edge Cracked Laminated Composite Plates Using Stochastic Extended Finite Element Method", *Selected as Book Chapter in CRC Press Taylor and Francis*, 2021-22, https://doi.org/10.1201/9781003324539.
- 18. "Optimization of Bronze Filled PTFE Composites Using GRA and Artificial Neural Network", Lecture Notes in Mechanical Engineering, PRIME 2021.
- 19. "Optimization of Glass fiber and MoS2 Filled PTFE Composites Using Non Traditional Optimization Techniques" Material Today Proceeding (Elsevier), 2018, DOI: https://doi.org/10.1016/j.matpr.2017.11.400, Vol. 5, Issue 2 (2018).
- 20. "Analysis of PTFE composites as Bearing Material" in Bonfrings International Journal of Industrial Engineering and Management Science. Vol 3,No2, http://dx.doi.org/10.9756/BIJIEMS.4406
- 21. "Dry Sliding Wear Performance Optimization of MoS2 Filled PTFE Composites Using Taguchi Approach" at Springer International Publishing Jr of Springer Nature https://:10.1007/978-3-319-53556-2_91
- 22. "Tribological Performance Analysis of Polymer Composite Using Nontraditional Optimization Technique" National Tribology Conference "NTC-2016" at Indian Institute of Technology (Banaras Hindu University) Varanasi on 08 to 10 December 2016 organized by Tribology Society of India.
- 23. "Effect of Filler Glass Fibre on the Tribological Properties of the PTFE composites", International Journal of Innovation Research in Science, Engineering and Technology. Vol 3 November 2014, ISSN:2319-8753, DOI:10.15680/
- 24. "Wear Studies of Aluminum Zinc Alloy Metal Matrix Composites" in International Journal of Engineering Science and Technology (IJEST) ISSN :0975-5462
- 25. "Analysis of PTFE composites as Bearing Material" on 22-24 February 2013 at SNJB Chandwad (Maharashtra) ISBN:978-81-926080-0-6.
- 26. "Effect of Bronze on PTFE Composite", in NCSME 2014
- 27. "Tribological Performance Analysis of Polymer Composite Bearing Materials" at international Conference on Industrial Tribology (ICIT 2010) at Ranchi by Tribology Society of India on 2nd-4th December 2010.

- 28. "Design & Finite Element Analysis of a 24 Feet 2 Axle Flat Bed Semitrailor Chassis" on 15th
 17th December 2008 at SVNIT Surat (Gujrat)
- 29. "Analysis of Aircraft Structure Using Ideas" on 20th 21st December 2008 at International Conference on Mechanical Engineering at PREC Loni (Maharashtra)

National Conference:

- "Tribological Studies of Aluminium Zinc Alloy Composites using Design of Experiments (DOE)", Proceedings of National Conference on Recent Trends in Mechanical Engg.-2013 held at GHRCOE Wagholi, Pune
- "Wear Studies Of Aluminium Zinc Alloy Metal Matrix Composites" IJEST, ISSN: 0975-5462
 Vol. 5 No.05 May 2013.
- 3. "Tribological Performance of Composite Polytetrafluroethylene (PTFE) under Dry Condition" Sanjivani Vision 2012- National Conference on Emerging Trends in Engineering and Technology ISBN 978-93- 81583-30-2.(2011-12)
- 4. "Effect of Bronze on Polytetrafluroethylene and its Property Evaluation", on 22nd March 2014 at Technosanjivani 2014
- 5. "Performance analysis of MoS2 filled Polymer Composites", on 22nd March 2014 at Technosanjivani 2014
- 6. "Productivity Improvement in Welding Robot", on 23rd March 2013, at Recent Trends in Mechanical Engineering RTME 2013.
- 7. "Tribological Failure Analysis of Journal Bearings used in Sugar Mills", on 23rd March 2013, at Recent Trends in Mechanical Engineering RTME 2013.
- 8. "Dry Sliding Wear Performance, optimization of MoS2 filled PTFE composites using Taguchi Approach" on 23rd March 2013, at Recent Trends in Mechanical Engineering RTME 2013.
- 9. "Analysis of PTFE Composites as Bearing Materials" on 22nd February 2013 at International Conference of Recent Trends in Engineering and Technology.
- 10. "Analysis of PTFE Composites", on 21st -22nd March 2012 at Regional Research Conference on Innovations by University of Pune.
- 11. "Performance Evaluation of Hydrodynamic Bearing for Various Bearing Materials" on 24th & 25th November 2008 at SRES COE Kopargaon.
- 12. "Mathematical Model of Car Suspension System" on 29thMarch 2007 at J T Mahajan College of Engg Faizpur (Maharashtra)
- 13. "Performance Evaluation of Dual Fuel Engine Fueled with CNG-Diesel Combination" on 25th & 26th November 2006 at Jaipur Engineering College, Kukas Jaipur (Rajasthan)

- 14. "Analysis of Aircraft Fuselage Structure" on 17th & 18th November 2006. At Sri Jaychamrajendra College of Engineering, Mysore (Karnataka)
- 15. "FEM Analysis of Spur Gear in Contact" on 17th & 18th November 2006. At Sri Jaychamrajendra College of Engineering, Mysore (Karnataka)

IPRs/Patents

SN	Title of Design Patent	Patent No	Date of Issue
1	Suspension Test Analyser	388063-001	15/11/2023
2	Tricycle Rickshaw	396355-001	29/09/2023
3	Automated Brick Making Machine	401678-001	16/01/2025
4	Cargo Bicycle with Suspension Mounted on Rear Shaft	398593-001	15/10/2024
5	Foldable Cargo Bicycle	398670-001	21/02/2024
6	Grilled Trolley Cargo Bicycle	396338-001	15/02/2024
7	Three Seater Cargo Bicycle	396335-001	02/05/2024
8	Adjustable Trailer Hitch	401680-001	12/02/2024
9	Agricultural Mecha Tool	402060-001	04/03/2024
10	Hitch Set for Agricultural Tractors	404509-001	15/10/2024
11	Hammer Guard	439877-001	27/02/2025
12	The Spray Pilot	404510-001	22/03/2024
13	Solar Powered Grass Cutter	398595-001	09/05/2024
14	Grain Storage Containers	404519-001	03/05/2024
15	Pneumatic Sheet Metal Cutting Machine	404518-001	05/03/2024
16	Water Jet Based Projectile Motion Apparatus	411510-001	16/05/2024
17	Agri lift Max	411510-001	16/05/2024
18	Folding and Unfolding Type Ceiling Fan Canopy	412020-001	16/05/2024
19	Air Compressor with Air Impact Wrench Moving Stand	412491-001	06/06/2024
20	Advance Mulching Machine	415231-001	28/06/2024
21	An Automatic Sowing Machine	416243-001	12/07/2024
22	Sweet-Harvest Planter	416242-001	26/06/2024

23	Versatile Load Modulation Weight System	429376-001	28/11/2024	
24	Smart Vault Grain Storage	429373-001	28/11/2024	
25	Precision Braille Printer with Threaded Motion Control	428121-001	01/10/2024	
26	Hitch Set for Agricultural Tractors	404509-001	15/10/2024	
	Cargo Bicycle with Suspension Mounted on Rear Shaft			
27	(EV/Non-EV)	398593-001	15/10/2024	
	Monitoring Battery Water Level Indicator for Inverter Using			
28	IoT Device	425833-001	01/10/2024	
29	90-Degree Holder	436345-001	03/01/2025	
30	Multifunctional E-Weeder	449025-001	05/06/2025	

STTP Attended

- 1. "Smart Manufacturing Xperience: Navigating the future of Industry 4.0" by ATAL FDP from 27/01/2025 to 02/02/2025.
- 2. "Faculty Development Program on Mastering Cloud Computing: Applications and Deployment Strategies" ATAL FDP from 23/06/2025 to 28/06/2025.
- 3. "Advance Artificial Intelligence Technique and Matlab Integration National Faculty Development program" at Sanjivani College of Engineering, Kopargaon from 21-10-2024 to 26-10-2024 (6 Days)
- 4. "Solidworks 2024 and 3D Experience, by Dassult system/IFS Academy" at Sanjiavnii College of Engineering, Kopargaon from 9th and 11 Feb 2024 (3 Days)
- 5. "Libre office Suit Calc", by IIT Bombay (6 Days)
- 6. "Fundamental of Drone Technology in Precision Agriculture", at CAAST/CSAWM and MPKV Rahuri (6 Days).
- 7. "Design of experiments and Artificial neural network", ATAL FDP AICTE, 01/11/2022 to 06/11/2022.
- 8. "Research Areas in Mechanical Engineering", at Sanjivani CoE Kopargaon, 18/10/2022 to 23/10/2022.
- 9. "Alumni Leadership Program", VAAVE BAHA Network, 01/06/2022 to 01/08/2022 (Six Week)
- 10. "Multi Criteria Decision Making (MCDM) Methods", at MIT Pune,
- 11. "Industrial Tribology", at Amrutvahini COE Sangamner on 15th 19th January 2019.

- 12. "Design of Experiments and Optimization Technique", at SRES COE Kopargaon on 1st 5th June 2015.
- 13. "IPR Issue: Patent Drafting and Processing of Patent Applications", at MANIT Bhopal (MP) on 14th 18th March 2015.
- 14. "Advanced Engineering Optimization Through Intelligent Techniques" at SVNIT Surat (Gujarat) on $22^{\text{nd}} 26^{\text{th}}$ December 2008.
- 15. "FEA Training Event" at Finite to Infinite Pune on $21^{st} 22^{nd}$ August 2008 (Maharashtra).
- 16. "Autodesk Inventor 11" at SW Systems Pune on $23^{\rm rd} 30^{\rm th}$ March 07

Workshop Attended:

- 1. "Capacity Building workshop Strengthening Industry Academia Collaboration", by GIZ and TPS World (3 Days)
- 2. "Basics of Matlab and its Engineering Application", at PES Modern COE Pune (6 Days)
- 3. "Innovative Teaching Pedagogy in the Technical Education", at NDMVP Nashik (6 Days)
- 4. "Parametric Modeling using PTC Creo 7", at Sanjivani College of Engineering, Kopargaon, (6 Days)
- 5. "FFT Analyzer: A tool for the Measurement and Analysis of Vibration parameters", at PREC Loni on 30th 31st January 2015.
- 6. "Design of Machine Elements with standard practices used in design office" at SRES COE Kopargaon on 02nd -3rd January 2015.
- 7. "Application of Neural Network, Fuzzy Logic and Genetic Algorithm" at SRES COE on 08th -09th April 2014.
- 8. "Tribological Aspects in Design" at NDMVP COE Pune on 3rd -4th October 2013.
- 9. "Recent Trends in Industrial Tribology" at MEERS MIT Pune on 20th March 2013.
- 10. "One day Syllabus Review Workshop for the Finite Element Analysis (FEM)" on 23rd January 2012 at MKSSS Cummunis COE Pune.
- 11. "Finite Element Method" at PES Modern College of Engineering Pune on 13rd January 2012.
- 12. "One day Training on for Auditing of Quality Management System as per ISO 9001:2008" on 30th September 2011.
- 13. "A Syllabus Implementation in the subject of CADCAM and Automation (2008 Course)" at Dnyanganga COE Pune on 01st August 2011.
- 14. "Industrial Training to Academics" at HAL(Aircraft Div) Nasik on 18th Nov 9
- 15. "Revision of Syllabi: Design Engineering" at AIT Pune on 16th Nov 2009.
- 16. "Advances in New Engineering Composite Materials" at ACOE Sangamner (AICTE Sponsored) on $23^{rd} 24^{th}$ September 2009.

- 17. "High Impact Teaching Skills (MISSION 10X)" by DALE CARNEGIE TRAINING & WIPRO on 11th 15th May 2009.
- 18. "CAD/CAM/CAE Applications" at Indo German Tool Room Aurangabad on 24th February 2009.
- 19. "Machine drawing & Computer Graphics & Geometric Modeling" at PVG COE Pune on 17th January 2009.
- 20. "CAM & Robotics" at SRES COE Kopargaon on 16th 17th March 07
- 21. "Tribological Aspects in Engineering" at Sinhgad College of Engineering Pune on 10th 11th February 2006.

Event Organized

- 1. Organized Alumni Reunion Sanjivani Smaran 2024 at Dubai on 12 January 2024 (68 Alumni Present).
- 2. Organized Alumni Reunion Sanjivani Smaran 2023 at Kopargaon on 22nd and 23rd December 2023 (800 Alumni Present).
- 3. Organized Alumni Reunion Sanjivani Smaran 2023 at Singapore on 20th October 2023 (24 Alumni Present).
- 4. Organized Alumni Reunion Sanjivani Smaran 2023 at Helsinki, Finland on 22nd October 2023 (12 Alumni Present).
- 5. Organized Alumni Reunion Sanjivani Smaran 2022 at Delhi on 19th November 2022 (85 Alumni Present).
- 6. Organized Alumni Reunion Sanjivani Smaran 2022 at Sydney Australia on 13th November 2022 (22 Alumni Present).
- 7. Organized Alumni Meet at Bangalore on 02nd March 2019 (61 Alumni Present).
- 8. Worked as Co-convener for the Two days National level workshop on "Use of Excel in Engineering Applications" on 4th Match 2015.
- 9. Worked as Co-convener for the Two days National level workshop on "Design of Machine Elements with standard practices used in design office" on 2nd and 3rd January 2015.
- 10. Organized Alumni Meet at Nashik on 23rd August 2014 (52 Alumni Present).
- 11. Worked as Event Incharge for the Dance Competition "Discotheque" in Sanjivan-14 on 18th January 2014.
- 12. Organized the National Conference Sanjivani Vision 2014 0n 23rd March 2014.
- 13. Worked as Organizing Secretary for the National Conference RTME-2013 on 25th March 2013.
- 14. Worked Event in-charge for the AutoCAD competition in 2007.

- 15. Worked Event in-charge for the AutoLISP competition in 2008.
- 16. Worked Event in-charge for the CADIAN competition in 2009.
- 17. Organized Alumni Meet at Pune on 19th June 2010 (174 Alumni Present).
- 18. Organized Alumni Meet at Kopargaon 23rd December 2011. (122 Alumni Present).
- 19. Key role in organization of workshop on "CAM & Robotics" & National conference on "Advancement in Mechanical Engg".
- 20. Key role in organization of Regional University Level Conference "INNOVATION 2008" ON 24th-25th Nov 2008

Webinars Organized

- "Expectations of Companies from Candidates" by Mr Pawan Patil (Electronics and Telecommunication Engg) on 16/01/2021
- 2. "Opportunities in Growing SaaS Industries" byMr Prakash Nikam (Information and Technology) on 31//01/2021
- 3. "Cracking an Interview of a Top-Notch Company" by Ms Madhura Raul (Electronics and Telecommunication Engg) on 06/02/2021
- 4. "Get Ready to Sail...Be Prepared!!!" by Mr Rahul Dharankar (Mechanical Engg) On 13/02/2021
- 5. "What it takes to crack the GATE?" by Mr Gaurav Amrutkar (Mechanical Engg) on 20/02/2021
- 6. "General Finance for Students" by Mr Prasadrao Sabale (Electronics and Telecommunication Engg) on 10/04/2021
- 7. "How to Create Skill-Based Career Opportunities?" by Mr Dhananjay Kadam (Mechanical Engg) on 08/05/2021
- 8. "Try and Fail, But Don't Fail to Try" by Mr Shubham Zope (Mechanical Engg) on 09/05/2021
- 9. "Challenges After BE and Its Solutions" by Mr Shubham Darunte (Computer Engineering) on 15/05/2021
- 10. "Additive manufacturing or 3D printing" by Dr Yash Parikh (Mechanical Engg) on 28/05/2021
- 11. "Careers Opportunities in technical sales/ Business Development in International sales post Engineering Graduation" by Mr Shrikant.M. Gondhali (Electronics and Telecommunication Engg) on 18/09/2021
- 12. "Electronic product Development" by Mr Keshav Shinde (Electronics and Telecommunication Engg) on 25/09/2021

- 13. "Tolerance Stack up Method and its Significance in Manufacturing Industry" by Ms. Harshvardhini Gurav (Mechanical Engg) on 09/10/2021
- 14. "How to Crack Dream Jobs and Internship" by Mr. Amol Rokade (Information and Technology) on 12/10/2021
- 15. "Product Management Career and Entrepreneurship" by Ms. Priti Bakale (Electronics and Telecommunication Engg) on 12/10/2021
- 16. "Business & Product Management Along with Solution Designing" by Mr. Swapneel Choudhari (Electronics and Telecommunication Engg) on 16/10/2021
- 17. "Post Pandemic Career Opportunities" by Dr. A. G. Thakur (Mechanical Engg) on 15/12/2021
- 18. "Cyber Security Do's and Dont's" by Dr. Madhuri Jawale (Computer Engineering) on 02/12/2021
- 19. "Opportunities in Software Testing" by Mr. Rohit Thakur (Computer Engineering) on 24/02/2022
- 20. "Basics of Patents" by Mr. Vivek Doulatani (Mechanical Engg) on 15/03/2022
- 21. "Wings and Wisdom" by Mr. Vatsal Vakharia (Mechanical Engg) on 23/04/2022

Research Funding

- 1. Sanctioned Research Funding of Rs 90 Lakh under AICTE IDEA Lab in AY 2024-2025
- 2. Received funding of Rs. 1,25,000/- towards project consultancy from MASSIA (Marathwada Association of Small Scale Industries and Agriculture).
- 3. Received Rs. 1,50,000/- from Savitribai Phule Pune University under QIP scheme for Equipment Purchase Proposal id EQP191624001
- 4. Applied for the proposal of Center of Excellence of Rs. 1.75Cr from MSME Department of Government of India in Association with TATA Motors.
- 5. Applied for the MODROBS proposal of Rs. 20,000,00/- for the year 2019 to 2021.
- 6. Received funding of Rs. 5,70,000/- towards project consultancy from MASSIA and GIZ.
- 7. Received funding of Rs. 1,90,000/- towards project consultancy from MASSIA and GIZ.
- 8. Received funding of Rs. 45,000/- towards project consultancy from TATA Technology.
- 9. Received a BCUD Research fund of Rs. 1,50,000/- from University of Pune with letter BCUD/OSD/390 dated 27/01/2010.

Software Training:

1. Math works Training on MATLAB Onramp

- 2. Math works Training on MATLAB Fundamentals
- 3. Math works Training on MATLAB for Data Processing and Visualization
- 4. Math works Training on MATLAB Programming Techniques
- 5. Math works Training on Simulink Onramp
- 6. Math works Training on Machine Learning Onramp

Coursera and NPTEL Courses:

- 1. COVID 19 Contact Tracing by Coursera John Hopkins University (8 Week)
- 2. Python Data Structure by Coursera University of Machigan (4 Week)
- 3. Introduction to Data Science in Python by University of Michigan-Cousera (4 Weeks)
- 4. Exploratory Data Analysis for Machine Learning by IBM-Cousrera (6 Days)
- 5. Supervised Machine Learning: Regression by IBM-Cousrera (6 Days)
- 6. Google Analytics for Power users
- 7. Getting started with Google Analytics 360

Professional Memberships:	 Life member of Tribology Society of India 			
Research Profile URL				
Google Scholar	https://scholar.google.com/citations?user=9Yj6UMQAAAAJ&hl=en&oi=ao			
Scopus	Scopus Author ID: 57201735769 https://www.scopus.com/authid/detail.uri?authorId=57201735769			
Orcid	https://orcid.org/0000-0002-0002-0971			
Other Research Details				
Ph D Guide	PhD Guide: No			
Give field &	Field: Mechanical Engineering			
University:				
OTHER Professional URLs				
Personal	https://sites.google.com/sanjivani.org.in/nmo			
Website	https://pmpatare.wordpress.com/			
Linked In Profile	https://www.linkedin.com/in/dr-prasad-patare-6b042114			
GitHub URL	-			
YouTube Channel	www.youtube.com/@drprasadpatare8873			
Other	Researchgate Profile			