

DEPARTMENT OF MECHANICAL ENGINEERING



ROBOTICS & MECHATRONICS RESEARCH CENTER – (FIST)

ROBOTICS & MECHATRONICS RESEARCH CENTER– FIST



ABOUT THE RESEARCH CENTER

The research center, equipped with advanced tools like Robotic Manipulator, Wire-EDM, Micro-ECM, CNC Turning, and 3D Printing, supports research for scholars, faculty, and industry. Funded by DST TIDE, DIST SERB, and KLEF SRG Projects, it has published over 50 papers in SCI/Scopus-indexed journals since its establishment.



VISION

To establish excellence in research, innovation, and education through the design, fabrication, and characterization of MEMS, aerospace components, and micro-electronic parts, driving technological advancement and Societal impact.



MISSION

To be a globally recognized research institution excelling in the design, fabrication, and characterization of MEMS, aerospace components, and micro-electronic parts, fostering innovation and advancing cutting-edge technologies.

OBJECTIVES

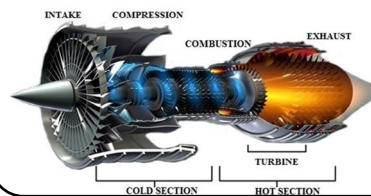
1. Fabrication of MEMS metallic components, such as Microgripper, MEMS Accelerometers, and other components.
2. Precision manufacture of Aerospace components using Wire-EDM trim- offset Approach.
3. Development of hybrid micro-machining facilities for Micro-electronics and MEMS packaging Applications.
4. National/International collaboration with other research center to address micromachining challenges in MEMS and aerospace industries.

KEY RESEARCH AREAS

Designing, fabrication and characterization of Aerospace Component

Quality check for turbine disk profile slot

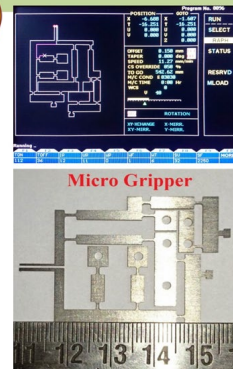
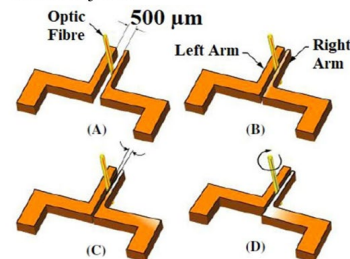
Minimum requirement of fir tree slot	Remark
• Surface roughness – $R_a \leq 0.8 \mu\text{m}$	✓
• Tolerance – $t = \pm 5 \mu\text{m}$	✓
• Residual stresses – $\sigma \leq 850 \text{ MPa}$	✓
• No white layer/recast layer	✓
• No micro cracks	✓
• No porosity	✓



Designing, fabrication, and characterization of MEMS Component

2

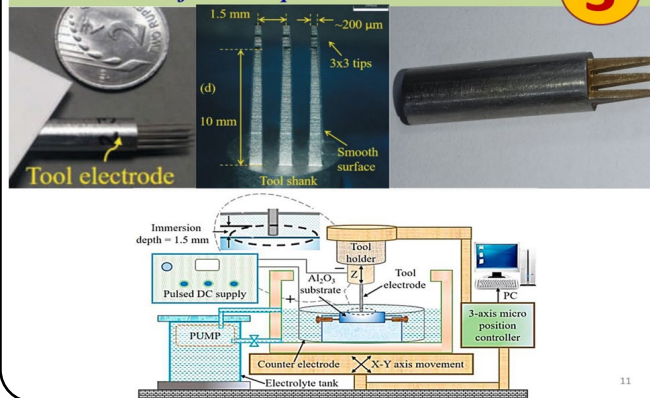
A novel 2 DOF micro gripper was designed, fabricated and tested for manipulation of micro-objects.



<https://www.youtube.com/watch?v=vjoxqcDSpVk>

Designing, fabrication, and characterization of Microelectrode for ECM process

3



RESEARCH LAB EQUIPMENT

S.No	Name Of Equipment	Cost
		(In Lakh) INR
1	Cnc Wire Cut EDM (Model: Eco-Cut)	18.63
2	XI Turn (Model: M Tab)	13.00
3	Robotic Manipulator (Model: Irb-1600)	18.75
4	Coordinate Measuring Machine (Model: Grano 4-5-4 Dcc)	19.87
5	3d Printing (Model: U Print, Se Plus)	28.00
6	Micro-Electro-Chemical Machining	1.77
7	Muffle Furnace (Model: Kemi, 1100 °c)	0.62
8	Magnetic Stirrer With Hot Plate (Model: Remi, Capacity 5 Liters)	0.20

PHOTOS OF EQUIPMENT



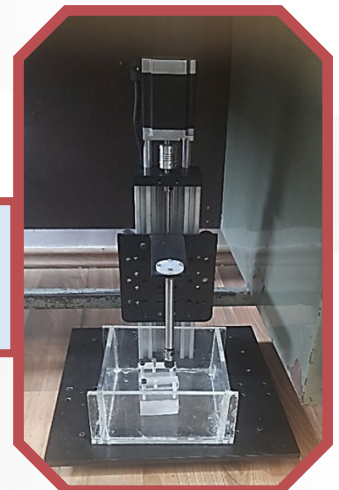
**Wire-EDM (Model:
Electronica Eco-Cut
@e-Pulse15)**

CNC XL Turn Lathe



**3D Printer (Model: Uprint
SE plus)**

**Micro Electro-chemical
Machining**



PHOTOS OF EQUIPMENT



**Robotic Manipulator
(Model: Irb-1600)**



**Coordinate Measuring
Machine (Model: Grano
4-5-4 Dcc)**



**Muffle Furnace
(Model: Kemi, 1100 °c)**



Magnetic Stirrer

OUR TEAM



Dr. Priyaranjan Sharma
Associate Professor
Citations: 814, H-Index: 14



Dr. A. Srinath
Professor, Dean Skilling &
Student Progression
Citations: 326, H-Index: 10



Dr. A. Jagadeesh
Professor, CCO &
Director FED
Citations: 1530, H-Index: 11



Dr. S. S. Rao
Professor, R&M Group Head
Citations: 311, H-Index: 08



Dr. T. Vijaya Kumar
Associate Professor, HoD
Citations: 556, H-Index: 13



Dr. K. V. D. Rajesh
Associate Professor
Citations: 147, H-Index: 07



Dr. G. Yedukondalu
Associate Professor
Citations: 155, H-Index: 06



Dr. A. Sri Harsha
Assistant Professor
Citations: 098, H-Index: 05

COLLABORATES

INTERNATIONAL RESEARCH COLLABORATORS



1. Dr. Filipe Fernandes, University of Coimbra, Portugal
2. Dr. Catalin Iulian Pruncu, University of Birmingham, UK
3. Dr. Theodoros Theodoridis, University of Salford, UK
4. Prof. Noor Azuan Bin Abu Osman, University of Malaya, Malaysia
5. Dr. Md Julker Nine, University of Adelaide, Australia



COLLABORATES

NATIONAL COLLABORATES



1. Dr. Pradeep Dixit, Associate Professor, Indian Institute of Technology, Bombay
2. Dr. D Chakradhar, Associate Professor, Indian Institute of Technology, Palakkad
3. Dr. Ashis Tripathy, Associate Professor, Vellore Institute of Technology, Chennai.
4. Dr. Gajanan Anne, Assistant Professor, Manipal Academy of Higher Education, Karnataka.
5. Dr. Sudhansu Ranjan Das, Associate Professor, Veer Surendra Sai University of Technology, Burla.

Industry Collaboration and Research Consultancy: Aton Solar Pvt. Ltd.



SCHOLAR INFORMATION

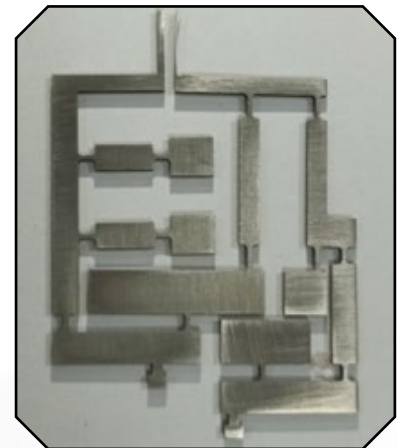
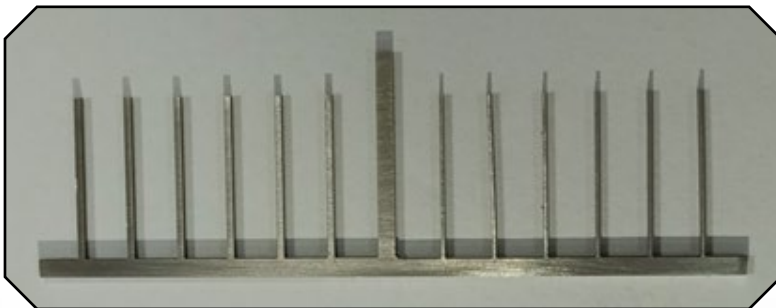
S.No	Name	Category	Registration No.	Status
1	Mr. Y. Kalyan Chakravarthy	Part Time	12307010	Completed
2	Mr. K. Kishore Kumar	Part Time	12307004	Completed
3	Gurram Narendra Santhosh kumar	Part Time	173070006	Completed
4	Khot Rahul Shivaji	Part Time	14307010	Completed
5	BANDHAVI	Part Time	14307022	Completed
6	M. Harish	Part Time	163070062	Completed
7	Danthala Swetha	Part Time	173070005	Completed
8	Kundurthi Bharadwaja	Part Time	163070056	Completed
9	L. Rangananth	Part Time	183070005	Completed
10	Sireesha Koneru	Part Time	183070010	Completed
11	PVCK Subhashini	Part Time	2002071006	Completed
12	GARI SURYA CHANDRA SWAMY	Part Time	173070038	Completed
13	Mr. Rajesh Kumar K	Part Time	163070051	Submitted
14	Mr. Ramatenki Chinna	Full Tim	2302070002	On-going
15	Mr. Vidyanand	Part Time	2302071001	On-going

HIGHLIGHTS OF RESEARCH CENTER WORK

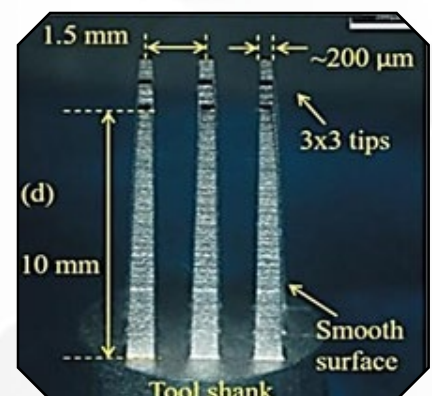
Aerospace Parts Manufacture using Wire-EDM Process



MEMS Parts Fabricated using Wire-EDM Process



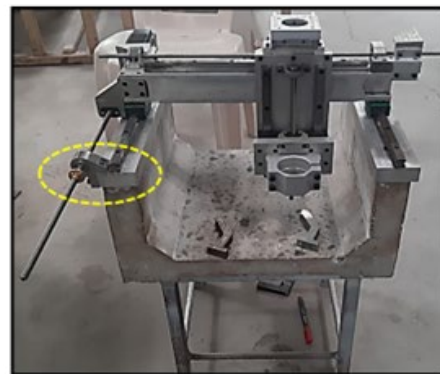
Multi-micro-tip electrode Fabricated using Wire-EDM Process



HIGHLIGHTS OF RESEARCH CENTER WORK

*Designing, fabrication, and characterization of Components
for PCB Building Machine*

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PCB Building Machine



PUBLICATION ANALYTICS – INCLUDING SDGs

Dr. Priyaranjan Sharma

(Assoc. Professor, Department of ME)
I-PDF – ECMF Lab, IIT Bombay (2019-2021)
PhD – NIT Karnataka (Awarded in JAN 2017)
Post-PhD Experience: 8 years
Publication: 30 SCI + 10 Scopus,
Cumulative IF: ~116.4,
Average IF: 4.0
Patent: 35 [03 (Utility) + 25 (Design)]



Research Interest: Advanced Manufacturing, Microfabrication and Characterization

Sharma, Priyaranjan

[K L Deemed to be University, Vaddeswaram, India](#) [56905098200](#) <https://orcid.org/0000-0002-0312-1612> [View more](#)

647

Citations by 539 documents

41

Documents

13

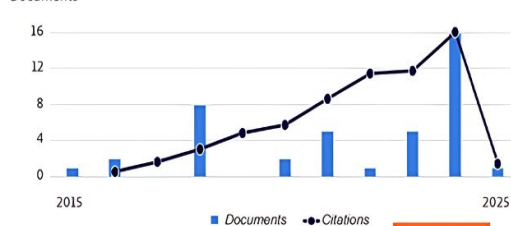
h-index [View *h*-graph](#)

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Document & citation trends

Documents



Citations

Most contributed Topics 2019–2023

Surface Roughness; Electric Discharge Machining; Taguchi Method

4 documents

Electric Discharge Machining; Micro Machining; Microelectromechanical System

3 documents

Energy Absorption; Sintering; Aluminum

1 document



Goal 9: Industry, innovation ... [18 documents](#)



Goal 12: Responsible consum... [2 documents](#)

PROJECTS

COMPLETED PROJECTS: 03, RESEARCH PROJECT APPLIED: 03

Recent Completed Projects:

Project Title 1: Development Of Cost-Effective Porous Titanium Implants using Ultrasonic-assisted Pulse -Electrodeposition and WEDM Process for Improved Osseointegration.

Principal Investigator: Dr. Priyaranjan Sharma (Associate Professor, ME)

Scheme: Seed Money Research Grant (SRG) 2023-2024

- **Amount:** INR 4.5 Lakhs
- **Duration:** 1 Years (December 2023- Nov 2024)
- **Sponsor:** KLEF (Deemed to be University)

Project Title 2: Functionally graded prosthetics and biomedical implants with optimal porosity for aged people

Principal Investigator: Dr. K L Narayana, (Professor, ME)

Scheme: Seed/TIDE/2018/33G

- **Amount:** INR 68.51 Lakhs
- **Duration:** 3 Years (2018- 2021)
- **Sponsor:** DST, SEEDD

Project Title 3: Functionally graded prosthetics and biomedical implants with optimal porosity for aged people

Principal Investigator: Dr. M Nageswara Rao, (Associate Professor, ME)

Scheme: SB/EMEQ-501/2014

- **Amount:** INR 5 Lakhs
- **Duration:** 1 Years (2018- 2019)
- **Sponsor:** DST, SERB

COLLABORATIVE PUBLICATIONS

1. **Priyaranjan Sharma**, Hargovind Soni, Sunita Sethy, Sudhansu Ranjan Das, Mohammed Y. Tharwan, Sharaf Al Sofyani, Abdel-Hamid I. Mourad*, Ammar Elsheikh (2023). Surface characterization of SS-304 after WED cutting: An experimental investigation and optimization. Journal of Materials Research and Technology, Elsevier, 23, 5723-5732, (**SCIE Indexed, CiteScore: 8.8, IF: 6.2, SJR-Q1, Google Scholar Citation: 2**), DOI: 10.1016/j.jmrt.2023.02.183, ISSN: 2214-0697. [First Author]
2. Ramatenki Chinna, **Priyaranjan Sharma**, Filipe Fernandes (2024). Machinability and surface integrity analysis of Ti-17 alloy using WEDC for advanced aeroengine application, Heliyon, Elsevier, (**SCIE Indexed, CiteScore: 4.5, IF: 3.4, SJR-Q1**), [Main Supervisor/Corresponding Author] [Status: Accepted for Publication]
3. Anurag Shanu; **Priyaranjan Sharma**; Pradeep Dixit* (2023). Micromachining of alumina ceramic for microsystems applications: a systematic review, challenges and future opportunities, Materials and Manufacturing Processes, Taylor & Francis, 39(7), 892–924, (**SCIE Indexed, CiteScore: 9, IF: 4.4, SJR-Q1, Google Scholar Citation: 5**), DOI: 10.1080/10426914.2023.2290244, ISSN: 1532-2475. [Second Author/Co-author]
4. Julfekar Arab, **Priyaranjan Sharma**, & Shih-Chi Chen (2024). Communication—Fabrication of Micro-Holes in PMMA Using Micro-ECDM Process: Geometric Characteristics and EC Discharge Behaviour, Journal of The Electrochemical Society, Electrochemical Society Inc., 171, 053506 (**SCIE Indexed, CiteScore: 7.2, IF: 3.1, SJR-Q1, Google Scholar Citation: 1**), DOI: 10.1149/1945-7111/ad4a0d, ISSN: 1945-7111. [Second Author/Co-author]
5. Ashis Tripathy*, **Priyaranjan Sharma**, Narayan Sahoo, Sumit Pramanik & Noor Azuan Abu Osman (2018). Moisture sensitive inimitable Armalcolite/PDMS flexible sensor: A new entry. Sensors and Actuators B: Chemical, Elsevier, 262, 211-220, (**SCIE Indexed, CiteScore: 14.6, IF: 8, SJR-Q1, Google Scholar Citation: 21**), DOI: 10.1016/j.snb.2018.01.207, ISSN: 1873-3077. [Second Author/Co-author]
6. Ashis Tripathy, **Priyaranjan Sharma***, Sumit Pramanik, Filipe Samuel Silva & Noor Azuan Abu Osman (2021). Armalcolite nanocomposite: A new paradigm for flexible capacitive humidity sensor, IEEE Sensors Journal, IEEE, 21(13), 14685-14692. (**SCIE Indexed, CiteScore: 6.1, IF: 4.325, SJR-Q1, Google Scholar Citation: 17**) DOI: 10.1109/JSEN.2021.3072162, ISSN: 1558-1748. [Corresponding Author]
7. Ashis Tripathy, **Priyaranjan Sharma*** & Noor Azuan Abu Osman (2024). Synthesis, fabrication and characterization of CaMgFexTiyO12-based electro-ceramics sensor. Journal of Materials Science: Materials in Electronics, Springer, 35, 492. (**SCIE Indexed, CiteScore: 4.6, IF: 2.8, SJR-Q2**), DOI: 10.1007/s10854-024-12100-x, ISSN: 1573-482X. [Corresponding Author]
8. Ashis Tripathy, Ashok Mondal, **Priyaranjan Sharma**, Kamrul Hassan, Fiacopi, Evgeniya (2024). Development of a Flexible Armalcolite/PDMS Sensing Device with Machine Learning for Physiological Temperature Monitoring. IEEE Transactions on Materials for Electron Devices, 1, 168-177, (**IEEE Transactions**) DOI: 10.1109/TMAT.2024.3489492, ISSN: 1557-9646. [Co-Author]

COLLABORATIVE PUBLICATIONS

9. Raj Kumar Pittala, **Priyaranjan Sharma***, Gajanan Anne, Sachinkumar Patil, Vinay Varghese, Sudhansu Ranjan Das, Ch Sateesh Kumar* and Filipe Fernandes (2023). Development and Mechanical Characterization of Ni-Cr Alloy Foam Using Ultrasonic-Assisted Electroplating Coating Technique. Coating, MDPI, 13(6), 1002 (**SCIE Indexed, CiteScore: 5.0, IF: 3.1, SJR-Q2**), DOI: 10.3390/coatings13061002, ISSN: 2079-6412. [Corresponding Author]
10. Raj Kumar Pittala, **Priyaranjan Sharma***, Gajanan Anne, Julfekar Arab, Deepak Rajendra Unune, Ch Sateesh Kumar, and Filipe Fernandes (2024). Synthesis and characterization of open cell Ni-Cr foam developed using Pulse electro deposition technique for filtration applications, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, SAGE Publications Inc, 1, 1-12, (**SCIE Indexed, CiteScore: 3.447, IF: 2.6, SJR-Q2**), DOI: 10.1177/095440542412389, ISSN: 2041-2975. [Corresponding Author]
11. Gajanan M. Naik, **Priyaranjan Sharma***, Gajanan Anne, Raj Kumar Pittala, Rahul Kumar, Gnane Swarnadh Satapathi, Ch Sateesh Kumar and Filipe Fernandes (2023). Improvement in Corrosion Performance of ECAPed AZ80/91Mg Alloys Using SS316 HVOF Coating. Materials, MDPI, 16(20), 6651, (**SCIE Indexed, CiteScore: 5.8, IF: 3.1, SJR-Q2, Google Scholar Citation: 3**), DOI: doi.org/10.3390/ma16206651, ISSN: 1996-1944. [Corresponding Author]
12. Rahul Biradar, Sachinkumar Patil*, **Priyaranjan Sharma***, and Filipe Fernandes (2024). Comparative investigation of friction stir welds reinforced with graphene nanoplatelets and copper in AA6082-T6 alloy Alloy. Materials Research Express, IOP Publishing Ltd., 11(10), 106519, (**SCIE Indexed, Cite Score: 2.2, IF: 2.27, SJR-Q2**), DOI: 10.1088/2053-1591/ad832b, ISSN: 2053-1591. [Corresponding Author]
13. Gajanan M Naik, **Priyaranjan Sharma***, Ramesh S, Mukesh Tak, Priyaranjan Samal, Nidhin Raj A, Gajanan Anne (2024). Effect of die parameters and coefficient of friction on equivalent plastic strain during ECAE: Modeling and Optimization. Cogent Engineering, Taylor & Francis, 11(1) (**SCOPUS & ESCI Indexed, Cite Score: 3.7, IF: 2.1, SJR-Q2**), DOI: 10.1080/23311916.2024.2399735, ISSN: 2331-1916. [Corresponding Author]
14. Royson Donate Dsouza*, Karanth P. Navin, Theo Theodoridis & **Priyaranjan Sharma** (2018). Design, fabrication and testing of a 2 DOF compliant flexural microgripper, Microsystem Technologies, Springer, 24(9), 3867-3883, (**SCIE Indexed, CiteScore: 5.2, IF: 2.10, SJR-Q3, Google Scholar Citation: 48**), DOI: 10.1007/s00542-018-3861-y, ISSN: 1432-1858. [Co-author]
15. Smita Padhan, Naresh Kumar Wagri, Lalatendu Dash, Anshuman Das, Sudhansu Ranjan Das, Mohammad Rafighi, and **Priyaranjan Sharma** (2023). Investigation on surface integrity in hard turning of AISI 4140 steel using recently developed SPPP-AlTiSiN coated carbide insert under nanofluid-minimum quantity lubrication, Lubricants, MDPI, 11(2), 49, (**SCIE Indexed, CiteScore: 4.7, IF-3.1, SJR-Q2, Google Scholar Citation: 19**), DOI: 10.3390/lubricants11020049, ISSN: 2075-4442. [Co-author]

COLLABORATIVE PUBLICATIONS

16. Sunita Sethy, Jaydev Rana, **Priyaranjan Sharma**, and Sudhansu Ranjan Das* (2024). Comparative performance investigation and sustainability assessment in electrical discharge machining of SS316 using different dielectrics. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, SAGE Publications Inc, 238(7), 2718-2733, (**SCIE Indexed, CiteScore: 2.393, IF: 2.0, SJR-Q2, Google Scholar Citation: 1**), DOI: 10.1177/09544062231195, ISSN: 2041-2983. [Co-author]
17. Aditya Kudva, Gajanan Anne, S Ramesh; **Priyaranjan Sharma**, Jagadeesh C, Lingaraj Ritti, Gajanan Naik, and G Divya Deepak (2024). Enhancing surface characteristics of Mg-Zn-Sr alloy through cryo-ball burnishing; modeling and experimentation, Journal of Mechanical Science and Technology, Springer, 38(3), 1175-1185, (**SCIE Indexed, CiteScore: 2.9, IF: 1.5, SJR-Q2**), DOI: 10.1007/s12206-024-0214-x, ISSN: 1976-3824. [Co-author]
18. Soumikh Roy, Anshuman Das, Ramanuj Kumar, Sudhansu Ranjan Das, Mohammad Rafighi, and **Priyaranjan Sharma** (2024). Exploring the viability of alternative cooling-lubrication strategies in machining processes: A comprehensive review on the performance and sustainability assessment, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, SAGE Publications Inc, 1, 1-43 (**SCIE Indexed, CiteScore: 3.447, IF: 2.6, SJR-Q2, Google Scholar Citation: 3**), DOI: 10.1177/09544054241229472, ISSN: 2041-2975. [Co-author]
19. Maruthi Prashanth B H, Ramesh S, P.S. Shivakumar Gouda, Gajanan M Naik, **Priyaranjan Sharma**, C Jagadeesh, Mahantesh M Math, Gajanan Anne (2024). Impact of ply stacking sequence on the mechanical response of Hybrid Jute-Banana fiber phenoplast composites. Materials Research Express, IOP Publishing Ltd., 11, 055301, (**SCIE Indexed, CiteScore: 2.2, IF: 2.27, SJR-Q2, Google Scholar Citation: 2**), DOI: 10.1088/2053-1591/ad425c, ISSN: 2053-1591. [Co-author]
20. Priyaranjan Samal, Himanshu Raj, Arabinda Meher, B. Surekha, Pandu Ranga Vundavilli, **Priyaranjan Sharma** (2024). Synergistic Effect of B4C and Multi-walled CNT on Enhancing the Tribological Performance of Aluminum A383 Hybrid Composites. Lubricants, MDPI, 12(6), 213 (**SCIE Indexed, CiteScore: 4.7, IF-3.1, SJR-Q2**), DOI: 10.3390/lubricants12060213, ISSN: 2075-4442. [Co-author]
21. Gajanan Anne, Ramesh S, **Priyaranjan Sharma**, Maruthi Prashanth B H, Aditya Kudva S, K Prakash, Sandeep Sahu, Nagaraj Bhat (2024). Enhancing wear resistance of AZ61 alloy through friction stir processing: Experimental study and prediction model. Materials Research Express, IOP Publishing Ltd., 11, 056524 (**SCIE Indexed, CiteScore: 2.2, IF: 2.27, SJR-Q2**), DOI: 10.1088/2053-1591/ad4e0a, ISSN: 2053-1591. [Co-author]

COLLABORATIVE PUBLICATIONS

22. Gajanan Anne, Vishwanatha H.M., **Priyaranjan Sharma**, Aditya Kudva S, Uzwalkiran Rokkala, Jagadeesh C, Nagaraj Bhat (2024). Effect of addition of Ce and accumulative roll bonding on structure-property of the Mg-Ce-Al hybrid composite and its prediction and comparison using artificial neural network (ANN) approach. Materials Research Express, IOP Publishing Ltd., (**SCIE Indexed, Cite Score: 2.2, IF: 2.27, SJR-Q2**), DOI: 10.1088/2053-1591/ad7449, ISSN: 2053-1591. [Co-author]
23. Gajanan Anne; Ananda Hegde; **Priyaranjan Sharma**; Aditya Kudva S; Prakash K; Mahanthayya Matapati; Ramesh S; Sathyashankara Sharma (2024). Combined effect of multidirectional forging and heat treatment on erosion and corrosion behaviour of the Mg-Zn-Mn alloys, Journal of Mechanical Science and Technology, Springer, 38(10), 5429-5437, (**SCIE Indexed, CiteScore: 2.9, IF: 1.5, SJR-Q2**), DOI: 10.1007/s12206-024-0916-0, ISSN: 1976-3824. [Co-author]
24. Maruthi Prashanth B H, Sandeepkumar Gowda, Ramesh S, Zaheerabbas B Kandagal, Prashanth Pai M, Divijesh Puninchathaya P, **Priyaranjan Sharma**, Gajanan Anne (2024). Effect of Teak Wood Dust as Filler Material on Mechanical Properties of Abaca-Pineapple-Epoxy Hybrid Composite, Journal of Natural Fibers, Taylor & Francis, 21(1), 2434603, (**SCIE Indexed, Cite Score: 6.2, IF: 2.8, SJR: Q2**), DOI: 10.1080/15440478.2024.2434603, ISSN: 1544046X. [Co-author]
25. Vinay Varghese, **Priyaranjan Sharma**, M.R. Ramesh, D. Chakradhar, Sunilkumar Dhasan (2024). Experimental Investigation on Surface Integrity in Cryogenic Machining of Maraging Steel, Journal of Materials Engineering and Performance, (**SCIE Indexed, CiteScore: 3.9, IF: 2.2, SJR-Q2**). [Co-author] [Status: Accepted for Publication]
26. Vishal Lalwani, **Priyaranjan Sharma**, Catalin Iulian Pruncu*, Deepak Rajendra Unune* (2020). Response Surface Methodology and Artificial Neural Network-Based Models for Predicting Performance of Wire Electrical Discharge Machining of Inconel 718 Alloy. Journal of Manufacturing and Materials Processing, MDPI, 4(2), 1-22, (**SCOPUS & ESCI Indexed, Cite Score: 5.1, IF: 3.3, SJR-Q1, Google Scholar Citation: 61**), DOI: 10.3390/jmmp4020044, ISSN: 2504-4494. [Co-author]
27. Atul Bhattad, Nidhin Raj A, Lokesh Paradeshi, **Priyaranjan Sharma***, Shashikumar C M. (2024). Numerical Analysis for Energy Assessment of Double Tube Heat Exchanger Using Hybrid Nanofluid as Coolant. Cogent Engineering, Taylor & Francis, (**WOS+SCOPUS Indexed, Cite Score: 3.7, IF: 2.1, SJR-Q2**), ISSN: 2331-1916. [Status: Accepted for Publication] [Corresponding Author]
28. K. Rajesh Kumar, **Priyaranjan Sharma***, Vaddi Venkata Satyanarayana, Nidhin Raj A, Gajanan Anne (2024). Predictive Modeling of Tensile Strength in AZ91D Mg Alloy FSW Joints Using Machine Learning Techniques. Cogent Engineering, Taylor & Francis, 38(10), 5429-5437, (**WOS+SCOPUS Indexed, Cite Score: 3.7, IF: 2.1, SJR-Q2**), ISSN: 2331-1916. [Status: Review Comments Submitted] [Main Supervisor/Corresponding Author]

PATENTS

1. Republic of South Africa Utility Patent on **“AI-IoT Based Cylinder Trolley System and Thereof”** with Application Number: 2023/07522, Filed on 28/07/2023, Accepted on 31/01/2024, Granted on 24/04/2024. (Status: Published Online, **Granted**)
2. Indian Utility Patent on **“Processing Barriers: Empirical Modelling for Predictive Excellence In Magnesium Alloy Friction Stir Welding”** with Application Number: 202441000621, Publication Number: 05/2024, Publication Date: 02/02/2024 (Status: **Published Online**, Not granted)
3. Indian Utility Patent on **“AI-IoT Based Cylinder Trolley System and Thereof”** with Application Number: 202331011690. Publication Number: 10/2023, Publication Date: 10/03/2023 (Status: **Published Online**, Not granted)
4. Indian Utility Patent on **“An AI-enhanced vitamin deficiency detection device for analyzing and monitoring vitamin levels”** with Application Number: 202441053775, (Status: **Filed**, Not Published, Not granted)
5. US Utility Patent on **“AI-IOT Based Cylinder Trolley System and Thereof”** with Application Number: US202331011690, Publication Date: N/A, Granted Date: N/A, (Status: **Filed**, Not Published, Not granted)
6. Indian Design Patent on **“Trisukh – A Multi Operational Farming Machine”** with Application Number: 383050-001, Cbr Number: 204262, Journal No – 27/2023, Journal Date – 07/07/2023 (Status: Design Accepted and **Published**).
7. Indian Design Patent on **“Medical Injector Pen”** with Application Number: 396155-001, Journal Number: 45/2023, Cbr Number: 212112, Journal No – 45/2023, Journal Date – 10/11/2023 (Status: Design Accepted and **Published**).
8. Indian Design Patent on **“Threading Tap Set with internal holes for Lubrication”** with Application Number: 401929-001, Cbr Number: 215711, Journal No – 18/2024, Journal Date – 03/05/2024 (Status: Design Accepted and **Published**).
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10. Indian Design Patent on **“Smart Broom Stick”** with Application Number: 408398-001, Cbr Number: 202963, Journal No – 19/2024, Journal Date – 10/05/2024 (Status: Design Accepted and **Published**).

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FOR MORE INFORMATION

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