Curriculum Vitae

Dr. Janakarajan Ramkumar

Institute Ambassador, IIC IIT Kanpur
Satish Chandra Agarwal Chair Professor
FNAE, FIE(I), FETE, Chartered Engineer (India)
Chairman, Kanpur local Centre, Institute of Engineers (India)
Professor (HAG), Department of Mechanical Engineering & Design
Co-ordinator for Imagineering Laboratory, MedTech & RuTAG IIT Kanpur
Indian Institute of Technology Kanpur, Kanpur – 208016, Uttar Pradesh, India

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Citation:

Dr. J Ramkumar, Professor (HAG) in the Department of Mechanical Engineering and Design Program at Indian Institute of Technology Kanpur, has over 20 years of experience in industry, research and academia. He joined as an Assistant Professor in the Department of Mechanical Engineering in Dec 2003. He has published over 350 articles in the peer-reviewed international journals and has delivered over 100 lectures in the international conferences. He has 5500+ citations for his publications & his h-index of 40, which endorses his high research productivity. Five of his patents are commercialized, total number of patents in his name being 98. He has procured a funding of over Rs. 24.7 Crores so far at IIT Kanpur. Currently, he's the Project Investigator of MedTech facility, Imagineering Laboratory and RuTAG facility at IIT Kanpur. He is reviewer of 27 technical journals from Elsevier, Blackwell Publishing Inc., Wiley, Springer, Hindawi, Highwire, MRS India/INSA, ACS Publications, Institution of Civil Engineers and American Society of Metals.

Date of Birth:

January 30, 1975

Area of Specialization:

Micro/Nano Manufacturing and New product/process development, Tribology, composite, Manufacturing Process modelling, Medical Device Development

Educational Qualifications (from bachelor's degree onwards):

S.No.	Degree	University	Year	Subjects	Percentage/GPA
1.	PhD	Indian Institute of Technology, Madras	2003	Mechanical Engineering	9.5/10
2.	MTech	Indian Institute of Technology, Madras	1999	Mechanical Engineering	10/10 Dr. S. Vaidyanathan Memorial Award for Best outgoing Master student
3.	BTech	National Institute of Technology, Trichy	1996	Production Engineering	89 % Best outgoing B.E. (Prod) student

Details of employment:

S.No.	Department	Position	Period
1.	Mechanical Engineering and Design program, Indian Institute of Technology Kanpur	HAG Professor	2022- till date

S.No.	Department	Position	Period
2.	Mechanical Engineering and Design program, Indian Institute of Technology Kanpur	Professor	2015 - 2022
3.	Mechanical Engineering and Design program, Indian Institute of Technology Kanpur	Associate Professor	2010 - 2015
4.	Mechanical Engineering, Indian Institute of Technology Kanpur	Assistant Professor	2003 - 2010

Details of professional training and research experience:

S.No.	Place of Training	Position	Period	Country
1.	Osaka University	Research Fellow	May-July, 2015	Japan
2.	Fraunhofer Institute	Research Fellow	May-July, 2012	Germany
3.	Tokyo Institute of Technology, Tokyo	Visiting Faculty	May-July, 2009	Japan
4.	University of Illinois, Urbana Champaign	Research Fellow	May-Dec, 2008	USA

Courses taught in the Institute:

S.No.	Courses	Designation & Institution	UG/PG
1	• TA 202 A: Manufacturing Processes II • ME 361 A: Manufacturing Science & Technology • ME 461 A: Manufacturing Systems • ME 661 A: Manufacturing Science I • ME 662 A: Manufacturing Science II • ME 761 A: Computer Aided Manufacturing • DES 602 A: Design Practice - I • DES 698 A: Project Courses in Design • ME 664 A: Fundamentals of Casting And Solidification • ME 670 A: Laser Assisted Additive Manufacturing	Professor, Indian Institute of Technology Kanpur 2015 – till date	UG-12 PG-9
2	• TA 202 A: Manufacturing Processes II • ME 361 A: Manufacturing Science & Technology • ME 461 A: Manufacturing Systems • ME 661 A: Manufacturing Science I • ME 662 A: Manufacturing Science II • ME 761 A: Computer Aided Manufacturing • DES 602 A: Design Practice - I • DES 698 A: Project Courses in Design • ME 664 A: Fundamentals of Casting And Solidification • ME 670 A: Laser Assisted Additive Manufacturing	Associate Professor, Indian Institute of Technology Kanpur 2010-2015	UG-8 PG-7
3	• TA 202 A: Manufacturing Processes II • ME 361 A: Manufacturing Science & Technology • ME 461 A: Manufacturing Systems • ME 661 A: Manufacturing Science I • ME 662 A: Manufacturing Science II • ME 761 A: Computer Aided Manufacturing • DES 602 A: Design Practice - I • DES 698 A: Project Courses in Design • ME 664 A: Fundamentals of Casting And Solidification • ME 670 A: Laser Assisted Additive Manufacturing	Assistant Professor, Indian Institute of Technology Kanpur 2003-2010	UG-13 PG- 9

Introduced new courses in the Department of Design:

- Applied Design Thinking DES-622A.
- Design for Sustainability DES-624A

Knowledge Dissemination via Book Chapters:

S.No.	Title	Authors	Publisher	Year of publn	ISBN 13
1.	Advances in Digital Manufacturing Systems: Technologies, Business Models, and Adoption, Digital Manufacturing	Amandeep Singh, J. Ramkumar	Springer	2023	978-9811970702
2.	Unconventional Machining Processes (Book)	J. Ramkumar, Amandeep Singh, Vyom Sharma, Mahavir Singh	CBS Publishers	2022	978-9354664663
3.	Wire Electrical Discharge Machining	Mahavir Singh, J. Ramkumar, V. K. Jain,	CRC Press	2022	978-148-2211-092
4.	Magnetic Field Assistance in the EDM Process	Mahavir Singh, Vyom Sharma, J. Ramkumar	CRC Press	2022	978-100-3202-301
5.	Electrochemical Spark Machining Process.	Vyom Sharma, Mahavir Singh, J. Ramkumar,	CRC Press	2022	978-100-3202-301
6.	Numerical Simulation of Micro-EDM Process by Incorporating a Novel Approach of Multi-sparks.	Mahavir Singh, Devesh Kumar Chaubey, J. Ramkumar,	Springer Nature Singapore Pte Ltd.	2019	978-981-32-9425-7
7.	Experimental Investigations into Wire Electrical Discharge Machining Process for the Machining of Ti-6Al-4V.	Mahavir Singh, V. K. Jain, J. Ramkumar,	Springer Nature Singapore Pte Ltd.,	2019	978-981-32-9425-7
8.	Micro-electrical Discharge Milling operation	Mahavir Singh, Vijay K. Jain, J. Ramkumar	Springer Nature	2018	978-981-13-3074-2
9.	Electrochemical Grinding	Divyansh S. Patel, Vijay K. Jain, J. Ramkumar	CRC Press Taylor & Francis Group	2017	978-1-4987-4594-9
10.	Abrasive flow finishing process and modelling	Sachin Singh, M. Ravi Shankar, Vijay K. Jain, J. Ramkumar	CRC Press Taylor & Francis Group	2017	978-1-4987-4594-9
11.	Fabrication of Micro Lens Array by Excimer Laser Micromachining	Akhtar, Syed Nadeem, Shashank Sharma, and J. Ramkumar	Springer India	2014	978-81-322-2352-8
12.	Ionic polymer metal composites	J. Ramkumar, Syed Nadeem Akhtar, Jayesh Cherusseri, and Kamal K. Kar	Research Publishing Services	2014	978-981-08-3713-6

Knowledge Dissemination via courses:

Developed courses (as instructor) on NPTEL (National Program on Technology Enhanced Learning) portal:

Name of the Course	Timeline	Link
Manufacturing of Composites *Over 5,20,000+ views online*	Jul-Dec 2019	Course
Social Innovation in Industry 4.0	Jul-Oct 2023	Course
	Feb-Mar 2018	Course
	Jan-Apr 2019	Course

Product Design & Manufacturing *Over 36,100+ views online*	Jan-Apr 2020	Course
	Jan-Apr 2021	Course
	Jan-Apr 2022	Course
Computer Integrated Manufacturing *Over 91,000+ views online*	Jan-Apr 2020	Course
	Jan-Apr 2021	Course
	Jan-Apr 2022	Course
Engineering Metrology *Over 91,330+ views online*	Jul-Oct 2018	Course
	Jul-Oct 2019	Course
	Sep-Dec 2020	Course
	Jul-Oct 2021	Course
	Jul-Dec 2022	Course
	Jul-Oct 2023	Course
Rapid Manufacturing *Over 26,000+ views online*	Jul - Oct 2018	Course
	Jan-Apr 2019	Course
	Sep-Dec 2020	Course
	Jul-Oct 2021	Course
	Jul-Dec 2022	Course
	Jul-Oct 2023	Course
Metal Additive Manufacturing	Jul-Dec 2022	Course
	Jul-Dec 2023	Course
Value Engineering Agricultural Plan *3300+ registrations globally*	Dec-Jan 2024	Course
Agricultural Statistics in Practice *5100+ registrations globally*	Jul-Aug 2023	Course
Statistical Techniques for Agriculturists *4000+ registrations globally*	May-Jul 2022	Course
Design Thinking for Agricultural Implements	Oct-Nov 2019	Course

a. agMOOCS on:
   i. Agricultural Statistics in Practice 2023; 5000+registrations globally
   ii. Statistical Techniques for Agriculturists 2022; 4000+ registrations globally
   iii. Design Thinking for Agricultural Implements 2019
b. GIAN Course on Laser Materials Processing Fundamentals & Applications, Feb 2018
c. GIAN Course on Fundamentals of Micromachining, Aug 2017
d. 2 Terms of Workshop on Statistical Analysis for Engineers since Jul 2012 - May 2015
e. 3 Terms of Workshop on Micro & Nano fabrication since Mar 2010 till Mar 2015

Details of positions in organisations inside institute:

- Chairman, Senate Post-Graduate Committee (SPGC), 2021 – 2023
- Chairman, Security Advisory & Executive Committee (SAEC)
- Head of Imagineering Lab, MedTech and Coordinator for RuTAG at Indian Institute of Technology Kanpur
- Coordinator for AICTE and IITK Sponsored Winter Internship Program for J&K students.
- Convener of “Ek Bharat Shreshtha Bharat – IIT Kanpur”
- Associate Dean, Student Affairs, 2015 – 19
- Chairman, Hall Allocation Administrative committee, 2014 – 15
- Chairman, Council of Warden, 2014 – 15
- Warden-in charge, Hall X, 2012 – 15
- Warden-in charge, Hall IX, 2009 – 2012

Details of positions in organisations outside institute:

- Vice-Chairman GATE, 2024
- President in the Selection Committee for various IITs and NITs
- Subject Expert for IITs and NITs

- Member of:
  - Selection Committee, UPSC
  - Transportation Engineering Division Council of Bureau of Indian Standards
  - Task force on AI for India's economic transformation – Ministry of Commerce and Industry, Govt. of India
  - ISRO Committee on "Space robotics experiment for Gaganyaan program
  - Production Engineering Division, Institute of Engineers (India)
  - Imprint Scheme
- Program Chair – International Conference "Advances in Robotics" 2021
- Secretary – Robotics Society of India
- Selection Committee for Professors in Mechanical Engg. at Indian Institute of Technology Guwahati
- Mechanical Engineering Research Advisor Board, UP Technical University
- Ex-Chairman for:
  - IEEE, UP Section
  - The Institution of Engineers India, Kanpur
- Treasurer, Institution of Electronics and Telecommunication Engineers (IETE)
- Member of the advisory board/committees in:
  - Council of Science and Technology, Uttar Pradesh
  - Research & Development Council, Harcourt Butler Technological University, Kanpur
  - Academic Council, Harcourt Butler Technological University, Kanpur
  - Academic Council, Pandit Deendayal Energy University, Gandhinagar
  - Technology Innovation and Incubation Center at Atal Bihari Vajpayee, IIITM, Gwalior
  - Board of Studies, XLI, UIET, CSJM University, Kanpur
  - Atal Bihari Vajpayee Research Centre, AITH Kanpur
  - National Design and Research Forum
  - AICTE Innovation Council
  - AICTE NEP Committee
  - AKTU Restructuring Committee
- Honorary Professor for Amity University
- Elected Expert, DRDO Materials and Manufacturing Panel
- Elected Fellow in Leadership for Academicians Program (LEAP) at Tata Institute of Social Sciences (TISS)
- Project Investigator of various projects under the umbrella of Medical Aids, and Agricultural Innovations

Professional awards and recognitions:

S.No.	Name	Year	Donor organization
1.	Late GK Dubey Memorial Lifetime Achievement Award	2023	IEEE UP Section
2.	Recognition for Exemplary Contributions in Society	2023	IETE Kanpur
3.	Award for Contributions to the society as a scientist	2023	RDSS & SSSDPC Kanpur
4.	Anna University National Award for the Outstanding Academic Teacher	2023	Anna University and Indian Society for Technical Education
5.	Excellence in Academic, Research, Innovation & Invention, DAA	2023	National Institute of Technology, Tiruchirappalli
6.	Eminent Endurance Achiever	2023	Indian Society for Technical Education & GCET
7.	Fellow of INAE	2022	Indian National Academy of Engineering
8.	Satish Chandra Agarwal Chair Professor	2022	Indian Institute of Technology Kanpur
9.	Eminent Production Engineer Award	2022	Indian Institute of Production Engineering

10.	IETE- Shri Devi Singh Memorial Award	2021	Institution of Electronics and Telecommunication Engineers, India
11.	IEI BLC-FCRIT Excellence Award Research Excellence (Faculty-National)	2021	The Institution of Engineers (India) Belapur Local Centre & F. C. Rodrigues Institute of Technology, Vashi
12.	SITARE GYTI Award (Students Innovations for Translation & Advancement of Research Explorations, Gandhian Young Technological Innovation Awards)	2020	Society for Research and Initiatives for Sustainable Technologies and Institutions
13.	Outstanding Volunteer Award	2019	Institute of Electrical and Electronics Engineers
14.	Eminent Engineer Award	2019	Indian Institute of Production Engineering
15.	Award of Excellence	2018	Indian Technology Congress
16.	Gandhian Young Technological innovation (GYTI) Award	2018	Society for Research and Initiatives for Sustainable Technologies and Institutions
17.	Outstanding Scientist for the contribution and achievement in the field of Mechanical Engineering.	2017	Venus International Foundation, India
18.	Bharat Vikas Award for the contribution in the field of developing new products for inclusive society	2017	Institute of Self Reliance, India
19.	Ram Tiwari chair Professor, I.I.T. Kanpur, 2017-2020	2017	Indian Institute of Technology, Kanpur
20.	Young Alumni Achiever Award	2017	National Institute of Technology, Tiruchirappalli
21.	Outstanding Achievement in Member Recruitment	2016	Institute of Electrical and Electronics Engineers
22.	Eminent Mechanical Engineer Award	2016	Indian Institute of Technology, Kanpur
23.	Gopal Das Bhandari Memorial Distinguished Teacher Award	2015	Indian Institute of Technology, Kanpur
24.	Eminent Mechanical Engineer Award	2015	Indian Institute of Production Engineering
25.	National Design Award in Mechanical Engineering	2015	The Institution of Engineers (India)
26.	“Prashamana: A smart hospital bed” Gandhian Young Technological Innovation (GYTI) appreciation certificate at the Rashtrapati Bhavan.	2015	Society for Research and Initiatives for Sustainable Technologies and Institutions
27.	Best paper award in Production Engineering Division prize	2015	The Institution of Engineers (India)
28.	Rajkumar Varshney Awards – System Society of India	2015	System Society of India
29.	JSPS short term research fellow 2014, 2013, 2012, 2009, 2005	-	Japan Society for the Promotion of Science
30.	Shield of Excellence in Mechanical Engineering	2012	KITS Warangal
31.	DAAD short term research fellow 2012, 2011, 2009	-	Deutscher Akademischer Austauschdienst (DAAD)
32.	Class of 1984 fellowship award, 2012-2015	2011	Indian Institute of Technology, Kanpur

33.	IEI Young Engineers Award 2011	2011	The Institution of Engineers (India)
34.	Young Scientist Award – Engineering Science Division	2009	Indian Science Congress Association
35.	Innovation Potential of Student Projects Awards	2009	Indian National Academy of Engineering (INAE)
36.	Young Scientist Award	2008	Dept. of Atomic Energy, India
37.	Boyscast Fellowship – Dpt. of Science & Technology, India	2008	Dpt. of Science & Technology, India
38.	Fast Track DST Young Scientist Award	2007	Dept. of Science & Technology
39.	National University of Singapore, Short-Term fellowship	2007	National University of Singapore
40.	Monbusho Japanese Fellow	2001	Ministry of Education Culture, Sports, Science and Technology
41.	Dr. S. Vaidyanathan Memorial Award for best outgoing Master student	2000	Indian Institute of Technology, Madras
42.	Gold medalist in M. Tech	1999	Indian Institute of Technology, Madras
43.	Best outgoing B.E. (Prod) student	1996	National Institute of Technology, Tiruchirappalli

List of sponsored research projects (funding total worth Rs. 24,71,35,533):

S.No.	Project Title	Year	Sanctioned Amount (Rs.)	Funding Agency
1.	Development of a new facility Maker's Space	2023 – 2025	2,50,00,000	DoRA, IIT Kanpur
2.	Development of Prototype Melt-Spinning Machine for manufacturing Tri-lobal Cross-section Bi-Component Fibers	2023 – 2026	99,31,680	Ministry of Textiles, GoI
3.	Imagineering Lab (C. Workshop, Tinkering, 4i, MedTech)	2023 – 2026	5,52,000	IIT Kanpur
4.	Low-cost Smart Dual Water Purification System for water supply from surface water or underground water sources	2023 – 2026	65,13,000	Ministry of Education, GoI
5.	Design and realization of an orthodontic robotic arm for dental surgery	2023 – 2025	49,61,304	Department of Science and Technology, GoI
6.	SIDBI Advisory Services	2023 – 2024	14,40,000	Small Industries Development Bank of India (SIDBI)
7.	Virtual Fluid Mechanics Lab Development	2023 – 2024	12,00,000	Ministry of Education, GoI
8.	Design and realization of an orthodontic robotic arm for dental treatment	2022 – 2024	50,00,000	Department of Science and Technology, GoI
9.	Smart India Hackathon 2022, Software Edition	2022 – 2023	6,72,000	Ministry of Education & AICTE
10.	Developing affordable and AI enabled hand-held X-ray device for TB diagnosis	2022 – 2023	4,60,34,643	Indian Council for Medical Research
11.	Design Development of Sabjikothi, a Preservative Setup for use for Vegetable/Fruit Vendors	2021 – 2023	33,16,800	Department of Science and Technology, GoI

12.	Establishment of a State of-the-Art Facility for Design and Fabrication of Medical Devices and Equipment with in House Quality Control System for Cultivating a Local Production Hub of Medical Grade	2019 – 2023	4,58,02,000	Biotechnology Industry Research Assistance Council
13.	Rural Technology Action Group (RUTAG)	2018 – 2023	1,41,03,840	Office of Principal Scientific Advisor, GoI
14.	Designing and Developing a Desktop Micro Wire ECM Machine	2018 – 2020	40,35,744	Department of Science and Technology, GoI
15.	Indigenization & Improvisation Of Puncher Gun For Manual Tissue Micro-Array Construction	2017 – 2022	3,56,08,515	Ministry of Education, GoI
16.	Indigenization & Improvisation Of Puncher Gun For Manual Tissue Micro-Array Construction	2017 – 2020	4,68,500	Ministry of Education, GoI
17.	Design And Development Of Dual Wavelength Led Based Phototherapy Unit	2017 – 2019	14,90,000	Ministry of Education, GoI
18.	Experimental And Theoretical Investigation In Nano-Finishing Of Freeform/Sculptured Surfaces	2017 – 2019	27,52,300	Aeronautics Research and Development Board, GoI
19.	Development Of Magnetic Abrasive Finishing (MAF) Technology For CNC Machined Diaphragms	2017 – 2019	9,84,000	Defence Research and Development Organization
20.	Surface Texturing On Biocompatible Titanium Alloy To Enhance Adhesion Interface Between Dissimilar Materials Using ECMM	2016 – 2018	36,32,000	Science and Technology Centres, GoI
21.	Modification Of Conventional Artillery Rocket To A Guided Rocket With Freely Spinning Tail	2016 – 2018	3,60,285	Science and Technology Centres, GoI
22.	RuTag: Development Of A Manually Operated Seed Drill	2016 – 2019	1,52,000	Office of Principal Scientific Advisor, GoI
23.	RuTAG Sub Project(Design And Development Of Amla Pricking Machine)	2015 – 2017	2,10,000	Office of Principal Scientific Advisor, GoI
24.	Dic -Pd Lab	2015 – 2018	77,00,000	Ministry of Education, GoI
25.	Surface Texturing On Biocompatible Titanium Alloy For Inducing Hydrophobicity Using ECMM	2015 – 2016	6,00,000	Science and Technology Centres, GoI
26.	An Independent Stair Climbing Wheel Chair (Manual) For Up/Down Climbing	2013 – 2015	49,23,312	Department of Science and Technology, GoI
27.	Fabrication Of Microchannel With Nano finish On Ss304	2012 – 2015	43,76,350	Bhabha Atomic Research Centre, GoI
28.	Utilization Of Wasted Groundnut Shell For The Development Of Natural Polymeric Composites And Their Mechanical Properties, Drilling And Tribological Studies	2012 – 2014	4,12,000	Department of Science and Technology, GoI
29.	Excimer Laser Micromachining For Mhmic	2012 – 2014	34,53,600	Science and Technology Centres, GoI
30.	Design And Fabrication Of Micro ECM Setup For Micro Channels	2011 – 2013	19,30,750	Aeronautics Research and Development Board, GoI

31.	3 -D Nanofabrication Using Electric Discharge Machining	2010 – 2013	34,90,000	Department of Science and Technology, GoI
32.	Fabrication Of U Channel On Aerospace Materials	2009 – 2011	25,42,500	Science and Technology Centres, GoI
33.	Boycast	2008 – 2009	7,57,000	Department of Science and Technology, GoI
34.	Nano Finishing Of Ultra High Speed Bearing	2008 – 2009	11,69,410	Bhabha Atomic Research Centre, GoI
35.	Development And Characterization Of Thin Sandwiched Structures Using Polymer Foam	2007 – 2010	7,86,000	Aeronautics Research and Development Board, GoI
36.	Online Monitoring Of Abrasive Flow Machining	2008 – 2005	7,74,000	Department of Science and Technology, GoI

List of consultancy research projects (funding total worth Rs. 1,67,38,986):

S.No.	Project Title	Year	Sanctioned Amount (Rs.)	Funding Agency
1.	Robofest-Gujarat 3.0	2023 – 2024	50,000	Council of Science & Technology, GoI
2.	Development of Substation Inspection Robot	2022 – 2023	1,07,89,920	Power Grid Corporation Of India Limited
3.	J.P. Constructions	2021 – 2021	2,00,000	JPC Infratech Pvt. Ltd.
4.	JPC Consultancy	2020 – 2020	2,00,000	JPC Infratech Pvt. Ltd.
5.	Finish Machining of Harsenes Laser Textured BN Tools	2018 – 2019	11,06,250	SECO Tools India Pvt. LTD.
6.	Design Feasibility Study And FEA Analysis Of Tether Aerostat Application Against Cars No.	2014 – 2015	9,97,195	Aerial Delivery Research and Development Establishment
7.	Design, Development And Primary Testing Of A Technology Demonstration Unit Of A Wheel Speed Transducer For Military Aircraft Applications Based On Hall Effect Sensor	2014 – 2017	9,97,195	Hindustan Aeronautics Limited
8.	The Development Of Prototype Of Magnetic Abrasive Finishing &Deburring Machine For Nano Finishing And Micro Deburring	2013 – 2017	5,00,000	Central Manufacturing Technology Institute
9.	Approval Of Pole & Tower Drawing	2013	82,932	J P Constructions
Others	Consultancy In 4i-Lab & SIDBI	2019 – 2022	18,15,494	SIDBI and IIT Kanpur

List of peer reviewed publications (authors, journal, reference):

S.No.	Title	Author(s)	Year	Complete Reference of Journal
1.	Thermal modeling and experimentation on discharge energy distribution and plasma flushing for a single discharge in EDM of D2 steel	Bibeka Nanda Padhi, Sounak Kumar Choudhury, and Ramkumar Janakarajan	2023	Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. 2023;0(0). doi:10.1177/09544089231194872

S.No.	Title	Author(s)	Year	Complete Reference of Journal
2.	Fabrication and Evaluation of Mechanical Properties of Biodegradable Groundnut Shell Composites	Bibeka Nanda Padhi, Sounak Kumar Choudhury, and Ramkumar Janakarajan	2023	Fabrication and Evaluation of Mechanical Properties of Biodegradable Groundnut Shell Composites, ISME Journal of Manufacturing and science, Vol 11 , No.1, 2022 , pp 01-07.
3.	Flexible Dielectric Spacer with Tunable Dielectric Properties for Metamaterial Absorber Application	Kajal Chaudhary,, Sudha Malik, Gaganpreet Singh, Sudeb Bhattacharya, J Ramkumar, S Anantha Ramakrishna and Kumar Vaibhav Srivastava	2023	J. Phys. D: Appl. Phys. 57 05510110.1088/1361-6463/ad030e
4.	A study of surface fatigue wear and influence of contaminated lubricant in journal bearing system using tribological and vibration analyses	Perumalla, Sateesh; Muniyappa, Amarnath; Kamarapu, Santhosh; V, Gunasegaran; Chelladurai, H; Vardhaman, BS AJay; Ramkumar, J	2023	Part E: Journal of Process Mechanical Engineering JPME-23-0015.R1
5.	An Investigation on Wettability Characteristics of Nanoparticle Enriched Cutting Fluid	Sarthak Singh, Vineet Dubey, Anuj Kumar Sharma, J. Ramkumar	2023	Materials Today Proceedings, doi.org/10.1016/j.matpr.2023.05.189
6.	Modeling and Prediction of Powered Parafoil Unmanned Aerial Vehicle Throttle and Servo Controls through Artificial Neural Networks	Kumar, Prashant; Choudhury, Bisheswar; Singh, Amandeep; Ramkumar, Janakarajan; Philip, Deepu; Ghosh, Ajoy	2023	The Journal Team, Drone Systems and Applications Canadian Science Publishing
7.	Fabrication of through-holes of different shapes using foil tool in EDM: Process development and analysis	Bibeka Nanda Padhi Sounak Kumar Choudhury, and Ramkumar Janakarajan	2023	Journal of Process Mechanical Engineering doi.org/10.1177/09544089231171467
8.	Numerical simulation and experimentation to investigate the performance of powder mixed dielectric in electrical discharge micromachining	Mahavir Singh, Vijay Kumar Jain, and Janakarajan Ramkumar	2023	Proceedings Of The Institution Of Mechanical Engineers Part B-Journal Of Engineering Manufacture
9.	An investigation into alumina nanoparticle sizes on tribology, wettability and cutting performance of stainless steel	Dubey, Vineet; Sharma, Anuj Kumar; Ramkumar, J	2023	Journal of Process Mechanical Engineering
10.	Characterization of surface topography during multi-pass WEDM of MWCNT alumina composites	Meinam Annebushan Singh, Deba Kumar Sarma, Ondrej Hanzel, Pavol Sajgalik, Janakarajan Ramkumar	2023	CIRP Journal of Manufacturing Science and Technology
11.	Numerical simulation and experimentation to investigate the performance of powder mixed dielectric in electrical discharge micromachining	Mahavir Singh, VK Jain, Janakarajan Ramkumar	2023	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture doi.org/10.1177/0954405422114770

S.No.	Title	Author(s)	Year	Complete Reference of Journal
12.	Design and development of IV fluid warming system using TRIZ methodology	Siddhant Shrivastav, Abhishek Verma, Janakarajan Ramkumar	2023	IOP Science Engineering Research Express
13.	Making Primary Healthcare delivery robust for low resource settings – Learning from Mohalla Clinics	Md Haseen Akhtar, J Ramkumar	2023	Discover Social Science and Health
14.	Condition assessment of in-service SAE 10W-30 lubricating oil using spectroscopic and rheological analyses	Sangharatna M Ramteke, H Chelladurai , M Amarnath, B S Ajay Vardhaman , J Ramkumar, Juned A Siddiqui	2023	Sadhana (2022) 47:218 https://doi.org/10.1007/s12046-022-01988-y Sadhana(0123456789-vol V)
15.	Singh Characterization of surface topography during multi-pass WEDM of MWCNT alumina composites	Meinam Annebushan, J Ramkumar	2023	CIRP Journal of Manufacturing Science and Technology
16.	A Review of Smart Condition Monitoring System for Gearbox	Manvir Singh Lamba, Amandeep Singh, J Ramkumar	2023	Advances in Forming, Machining and Automation, Springer, 417 – 433
17.	Dynamic Topology Optimization of a Stair Climbing Spline Wheel	Aditya Dhankhar, Abhishek Verma, Janakarajan Ramkumar	2023	Advances in Simulation, Product Design and Development, Springer, 27 – 38
18.	Healthcare on wheels – mobilizing healthcare to the doorstep of the remotest population – a lesson learned from the covid-19 pandemic	Md Haseen Akhtar, J Ramkumar	2023	Springer Link, Discover Health Systems
19.	Tribological Performance Enhancement of Bronze Alloy through Microwave Irradiation: Fundamental Tribo-Tests and Real-Time Journal Bearing Applications	Perumalla Sateesh Kumar, Muniyappa Amarnath, Sonnappa Devaraj, B. S. Ajay Vardhaman, J. Ramkumar	2022	Journal of Materials Engineering and Performance DOI: 10.1007/s11665-022-07734-z
20.	Condition assessment of in-service SAE 10W-30 lubricating oil using spectroscopic and rheological analyses	Sangharatna M Ramteke, H Chelladurai, M Amarnath, Ajay Vardhaman, J Ramkumar, Juned A Siddiqui	2022	Sadhana Vol. 47, Issue 4, 1-14
21.	Large Area Surface Texturing Through Electrical Discharge Micromachining Process for Inducing Hydrophobicity	Mahavir Singh, Pragya Tripathi, J Ramkumar	2022	Advances in Modern Machining Processes DOI: 10.1007/978-981-19-7150-1_36
22.	Enhancing the Hydrophobicity of Ti-6Al-4V through Multi-level Electrical Discharge Texturing	Mahavir Singh, Pragya Tripathi, J Ramkumar	2022	Surface Engineering, Taylor and Francis SUR7617R1 225502899
23.	Fabrication of micro-textured surfaces using Gravity-assisted EDM process with foil electrode to induce hydrophobicity on Cu surface	Bibeka Nanda Padhi, Sounak Kumar Choudhury, Janakarajan Ramkumar	2022	Material Today: Proceedings https://doi.org/10.1016/j.matpr.2022.10.095

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24.	Analysis of Protective Coating for Optically Transparent Microwave Metamaterial Absorber	Kajal Chaudhary, Abhinav Bhardwaj, Rahul Vishwakarma, Kumar Vaibhav Srivastava, Anantha Ramakrishna, J Ramkumar	2022	IEEE MAPCON 2022 Proceedings
25.	Energy Optimization in Laser Micro-Machining of Transparent Metamaterial Absorber	Sudeb Bhhatacharya, Rajkumar Rajkumar, Kajal Chaudhary, Kumar Vaibhav Srivastav, J Ramkumar	2022	IEEE MAPCON 2022 Proceedings
26.	Design of an Optically Transparent Wideband Absorber With 15 dB Absorption Bandwidth for C, X and Ku Band	Sudha Malik, Kumar Vaihav Srivastav, Gaganpreet Singh, Puneet K Mishra, J Ramkumar	2022	IEEE MAPCON 2022 Proceedings
27.	Enhancement of Oblique Incidence Performance of a Microwave Absorber Using Cylindrical Dielectric Resonator	Jyoti Yadav, Rahul Vishwakarma, Mondeep Saikia, Kumar Vaibhav Srivastav, J Ramkumar	2022	IEEE MAPCON 2022 Proceedings
28.	3-D fabrication using electrical discharge-milling: an overview	Mahavir Singh, J Ramkumar, V.K. Jain	2022	Materials & Manufacturing Processes
29.	Anti-bacterial and arsenic remediation insights in aqueous systems onto heterogeneous metal oxide (Cu0.52Al0.1Fe0.47O4)/Rgo hybrid: an approach towards airborne microbial degradation	Yaswanth K Penke, Prem Anand Murugan, Sarvana Matheshwaran, Janakarajan Ramkumar, Kamal K. Kar	2022	Environmental Science and Pollutions Research Doi:10.1007/s11356-022-22169-8
30.	Electrical discharge micro-texturing using compound tool electrodes for tribological and wettability applications	Mahavir Singh,Pragya Tripathi &Janakarajan Ramkumar	2022	Surface Engineering doi: 10.1080/02670844.2022.2089801
31.	Material Selection for Ultrashort Pulsed Laser Textured Self-Cleaning Surfaces	KS Srin, J Ramkumar, R Bathe	2022	Journal of The Institution of Engineers (India): Series C, 1-7
32.	Large area fabrication of single micron features using two-photon polymerization with sub-nanosecond laser.	Singh G, Mishra D, Ramkumar J, Anantha Ramakrishna S.	2022	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture. doi:10.1177/0954405422 1077781
33.	Analysis of circuit current in electrochemical micromachining process under the application of different waveforms of pulsed voltage	V Sharma, P Gupta, J Ramkumar	2022	Journal of Manufacturing Processes 75, 110-124
34.	A study on selective laser melting (SLM) of TiC and B4C reinforced IN718 metal matrix composites (MMCs)	V Mandal, P Tripathi, A Kumar, SS Singh, J Ramkumar	2022	Journal of Alloys and Compounds 901, 163527

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35.	Effect of Vibratory Tip Amplitude on the Erosion Rate of Various Microstructures of High Carbon Steel	A Rajput, J Ramkumar, K Mondal	2022	Journal of Materials Engineering and Performance, 1-15
36.	Water attenuation enhances tribological damage resistance in laser peened steel	S Gowthaman, P Tripathi, S Ariharan, J Ramkumar, K Balani	2022	Materials Letters 308, 131175
37.	Numerical study on thermal analysis of square micro pin fins under forced convection	RS Niranjan, O Singh, J Ramkumar	2022	Heat and Mass Transfer 58(2), 263-281
38.	Effect of addition of strong oxidizer and temperature on the cavitation erosion resistance of different microstructures made from a high carbon steel	A Rajput, J Ramkumar, K Mondal	2022	Wear, 204245
39.	A low-profile consolidated metastructure for multispectral signature management	NK Gupta, G Singh, H Wanare, SA Ramakrishna, KV Srivastava, Ramkumar J	2022	Journal of Optics. J. Opt. 24 035102
40.	Facile synthesis of Al substituted Cu-Ferrite infused Reduced Graphene Oxide (rGO) nanohybrid for improving microwave absorption at gigahertz frequencies	SK Singh, YK Penke, J Ramkumar, MJ Akhtar, KK Kar	2022	Journal of Alloys and Compounds, 163659
41.	Laser Surface Texturing in Powder Bed Fusion: Numerical Simulation and Experimental Characterization	V Mandal, S Sharma, SS Singh, J Ramkumar	2022	Metals and Materials International 28 (1), 181-196 1
42.	Cavitation Resistance of a Cr-Mn Stainless Steel, A Mild Steel, and A High-Carbon Steel Based on Rust Protectivity and Corrosion Behavior	A Rajput, J Ramkumar, K Mondal	2022	Journal of Materials Engineering and Performance 31 (1), 439-447
43.	Cavitation behavior of various microstructures made from a C–Mn eutectoid steel	A Rajput, J Ramkumar, K Mondal	2021	Wear 486, 204056 1
44.	Level-one house agent-based decentralized resilient energy management	KK Tomar, NV Srinath, J Ramkumar, SN Singh	2021	Electrical Engineering 103 (6), 3075-3083
45.	Design and developmental approach aimed at polar solvent chemical sensor for biomedical application	KS Srin, J Ramkumar, R Bathe	2021	Materials Today: Proceedings. https://doi.org/10.1016/j.matpr.2021.11.191
46.	Perforated lightweight microwave metamaterial broadband absorber with discontinuous ground plane	G Singh, A Bhardwaj, KV Srivastava, J Ramkumar, SA Ramakrishna	2021	Applied Physics A 127 (11), 1-9

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47.	Micro-texturing on flat and cylindrical surfaces using electric discharge micromachining	M Singh, VK Jain, J Ramkumar	2021	Journal of Micromanufacturing 4 (2), 127-137 2
48.	Polarization Insensitive Optically Transparent Microwave Metamaterial Absorber using Complementary Layer	A Bhardwaj, G Singh, KV Srivastava, J Ramkumar, SA Ramakrishna	2021	IEEE Antennas and Wireless Propagation Letters
49.	Micro-machining: An overview (Part II)	VK Jain, DS Patel, J Ramkumar, B Bhattacharyya, B Doloi, BR Sarkar	2021	Journal of Micromanufacturing, 25165984211045244
50.	Influence of laser surface texturing on the wettability and antibacterial properties of metallic, ceramic, and polymeric surfaces	I Singh, SM George, A Tiwari, J Ramkumar, K Balani	2021	Journal of Materials Research 36 (19), 3985-3999 1
51.	ORR performance evaluation of Al-substituted MnFe2O4/reduced graphene oxide nanocomposite	A Tyagi, YK Penke, P Sinha, I Malik, KK Kar, J Ramkumar, H Yokoi	2021	International Journal of Hydrogen Energy 46 (43), 22434-22445
52.	Impact of policy instruments on lead-acid battery recycling: A system dynamics approach	BV Joshi, B Vipin, J Ramkumar, RK Amit	2021	Resources, Conservation and Recycling 169, 105528
53.	Parametric Analysis of Laser Beam Percussion Drilling for Thin Titanium Alloy Sheet Using Yb: Yag Fiber Laser	M Singh, S Mishra, V Yadava, J Ramkumar	2021	Journal of Advanced Manufacturing Systems 20 (02), 317-340
54.	Level-one house agent-based decentralized resilient energy management	KKS Tomar, NV Srinath, J Ramkumar, SN Singh	2021	Electrical Engineering, 1-9
55.	Impact of nanoclay filler reinforcement on CFRP composite performance during abrasive water jet machining	RK Thakur, KK Singh, J Ramkumar	2021	Materials and Manufacturing Processes, 1-10
56.	Microscratching and fretting of electro-co-deposited Cr-based composite coatings with BN, graphene, and diamond reinforcements	P Tripathi, J Ramkumar, K Balani	2021	Journal of Materials Science 56 (10), 6148-6166
57.	Insights of arsenic (III/V) adsorption and electrosorption mechanism onto multi synergistic (redox-photoelectrochemical-ROS) aluminum substituted copper ferrite impregnated rGO	YK Penke, AK Yadav, I Malik, A Tyagi, J Ramkumar, KK Kar	2021	Chemosphere 267, 129246
58.	Effect of pearlitic morphology with varying fineness on the cavitation erosion behavior of eutectoid rail steel	A Rajput, J Ramkumar, K Mondal	2021	Ultrasonics Sonochemistry 71, 105399

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59.	Thermo-Hydraulic Performance of Square Micro Pin Fins under Forced Convection	S Onkar, J Ramkumar	2021	International Journal of Heat and Technology 39 (1), 170-178
60.	A comprehensive review of free-form surface milling–Advances over a decade	RA Mali, TVK Gupta, J Ramkumar	2021	Journal of Manufacturing Processes 62, 132-167
61.	Design Optimization of Lubrication System for a Four-Cylinder Diesel Engine	J Ramkumar, G Ranjit, V Sarath, V Vikraman, B Suresh, NP Babu, M Amit	2021	Advances in Automotive Technologies, 139-155
62.	Rheological characterization of newly developed fly-ash mixed polymeric media and its finishing performance through abrasive flow machining	GA Gupta, IA Ansari, J Ramkumar, KK Kar	2021	Cleaner Engineering and Technology 2, 100085
63.	Synergistic addition of yttria-stabilized zirconia and h-BN/graphene/diamond restricts multi-scale length wear of Cr-based hybrid coatings	P Tripathi, J Ramkumar, K Balani	2021	International Journal of Refractory Metals and Hard Materials, 99, p.105590.
64.	Sustainable Electrochemical Micromachining Using Atomized Electrolyte Flushing	DS Patel, V Sharma, VK Jain, J Ramkumar	2021	Journal of The Electrochemical Society 168 (4), 043504
65.	Investigations into machining accuracy and quality in wire electrochemical micromachining under sinusoidal and triangular voltage pulse condition	V Sharma, DS Patel, V Agrawal, VK Jain, J Ramkumar	2021	Journal of Manufacturing Processes 62, 348-367
66.	Experimental investigation of abrasive waterjet hole cutting on hybrid carbon/glass composite	R.K. Thakur, K.K. Singh, J.Ramkumar	2020	Materials Today: Proceedings, 21, pp.1551-1558.
67.	Delamination analysis and hole quality of hybrid FRP composite using abrasive water jet machining	R.K. Thakur, K.K. Singh, J.Ramkumar	2020	Materials Today: Proceedings, 33, pp.5653-5658.
68.	The effects of graphene nanoplatelets on the tribological performance of glass fiber-reinforced epoxy composites	Santosh Kumar, KK Singh, Janakarajan Ramkumar	2020	Institution of Mechnical Engineers 10.1177/1350650120965756
69.	Impact of nanoclay filler reinforcement on CFRP composite performance during abrasive water jet machining	R. K. Thakur, K. K. Singh & Janakarajan Ramkumar	2020	Materials and Manufacturing Processes https://doi.org/10.1080/10426914.2021.1906896
70.	Comparative study of the influence of graphene nanoplatelets filler on the mechanical and tribological behavior of glass fabric-reinforced epoxy composites	Santosh Kumar, Kalyan K Singh, Janakarajan Ramkumar	2020	Polymer Composites Wiley DOI:10.1002/pc.25804

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71.	Arsenic Remediation onto Redox and Photo-catalytic/electrocatalytic Mn-Al-Fe Impregnated rGO: Sustainable Aspects of Sludge as Supercapacitor	Yaswanth K. Penke, Amit Yadav, Prerna Sinha, Iram Malik, Janakarajan Ramkumar and Kamal K Kar	2020	Chemical Engineering Journal, doi.org/10.1016/j.cej.2019.124000
72.	Experimental Investigation on Surface Topography of the Natural Ceramics in Abrasive Water Jet Cutting and Its Optimization Validation by Formulated Model	V Mandal, A Singh, GS Yadav, J Ramkumar, S Agrawal	2020	Advances in Unconventional Machining and Composites, 347-360
73.	Experimental investigation of abrasive waterjet hole cutting on hybrid carbon/glass composite	RK Thakur, KK Singh, J Ramkumar	2020	Materials Today: Proceedings 21, 1551-1558
74.	Experimental Modeling of EDMed Aluminum Metal Metrix Composite: A Review	RN Yadav, RK Porwal, J Ramkumar	2020	Emerging Trends in Mechanical Engineering, 511-518
75.	Optically transparent protective coating for ITO-coated PET-based microwave metamaterial absorbers	K Chaudhary, G Singh, J Ramkumar, SA Ramakrishna, KV Srivastava,	2020	IEEE Transactions on Components, Packaging and Manufacturing Technology 10
76.	Correlation of Three-Dimensional Roughness Parameters With the Crater Dimensions in μED-Milling of Cryogenic- Treated Tool and Workpiece	JM Jafferson, P Hariharan, J Ramkumar	2020	Journal of Micro and Nano-Manufacturing, 8(1).
77.	Continuous and ordered surface microtexturing on Cu and Ni-based alloys by novel electrochemical dissolution	HS Maharana, SVSN Murty, J Ramkumar, K Mondal	2020	Journal of Alloys and Compounds 817, 153263
78.	Synergistic role of carbon nanotube and yttria stabilised zirconia reinforcement on wear and corrosion resistance of Cr-based nano-composite coatings	P Tripathi, PK Katiyar, J Ramkumar, K Balani	2020	Surface and Coatings Technology 385, 125381
79.	Reducing overcut in electrochemical micromachining process by altering the energy of voltage pulse using sinusoidal and triangular waveform	DS Patel, V Sharma, VK Jain, J Ramkumar	2020	International Journal of Machine Tools and Manufacture 151, 103526
80.	Optimization of process parameters in nano- finishing of Co-Cr-Mo alloy knee joint	L Nagdeve, VK Jain, J Ramkumar	2020	Materials and Manufacturing Processes, 1-8
81.	Delamination analysis and hole quality of hybrid FRP composite using abrasive water jet machining	RK Thakur, KK Singh, J Ramkumar	2020	Materials Today: Proceedings, 33, pp.5653-5658.

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82.	An optically transparent and flexible microwave absorber for X and Ku bands application	Y Tayde, K Chaudhary, G Singh, A Dhumal, M Saikia, KV Srivastava, Ramkumar J	2020	Microwave and Optical Technology Letters 62 (5), 1850-1859
83.	Fabrication of Al-Si controlled expansion alloys by unique combination of pressureless sintering and hot forging	E Saraswat, HS Maharana, SVSN Murty, S Shekhar, KK Kar, J Ramkumar	2020	Advanced Powder Technology, 31(7), pp.2820-2832.
84.	Multi-spark numerical simulation of the micro- EDM process: an extension of a single-spark numerical study	M Singh, P Saxena, J Ramkumar, RV Rao	2020	The International Journal of Advanced Manufacturing Technology, 1-15
85.	Arsenic remediation onto redox and photo-catalytic/electrocatalytic Mn-Al-Fe impregnated rGO: Sustainable aspects of sludge as supercapacitor	YK Penke, AK Yadav, P Sinha, I Malik, J Ramkumar, KK Kar	2020	Chemical Engineering Journal 390, 124000
86.	Enhanced tribological performances of zinc Oxide/MWCNTs hybrid nanomaterials as the effective lubricant additive in engine oil	BSA Vardhaman, M Amarnath, J Ramkumar, K Mondal	2020	Materials Chemistry and Physics, 123447
87.	Micro-texturing on free- form surfaces using flexible-electrode through-mask electrochemical micromachining	DS Patel, V Agrawal, J Ramkumar, VK Jain, G Singh	2020	Journal of Materials Processing Technology, 282, 116644
88.	Numerical Simulation of Melt-Pool Hydrodynamics in µ-EDM Process.	Mahavir Singh, Shashank Sharma, J. Ramkumar,	2020	Procedia CIRP, 95, 226-231, https://doi.org/10.1016/j.procir.2020.02.289.
89.	Numerical Simulation of Heat Transfer and Fluid Flow in Co-axial Laser Cladding of Ti6Al4V Alloys	V Mandal, S Sharma, J Ramkumar	2020	Advances in Simulation, Product Design and Development, 241-254
90.	Investigations into Wire Electrochemical Machining of Stainless Steel 304	V Sharma, VK Jain, J Ramkumar	2020	Advances in Unconventional Machining and Composites, 41-52
91.	An Optically Transparent Broadband Microwave Absorber Using Interdigital Capacitance	Sheokand, H., Singh, G., Ghosh, S., J Ramkumar., Ramakrishna, S. A., & Srivastava, K. V.	2019	IEEE Antennas and Wireless Propagation Letters, 18(1), 113-117
92.	Excimer laser micromachining of indium tin oxide for fabrication of optically transparent metamaterial absorbers	Singh, G., Sheokand, H., Ghosh, S., Srivastava, K. V., J Ramkumar., & Ramakrishna, S. A.	2019	Applied Physics A, 125(1), 23
93.	Arsenic surface complexation behavior in aqueous systems onto Al substituted Ni, Co, Mn, and	Penke, Y. K., Tiwari, N., Jha, S., Bhattacharyya, D., J Ramkumar., & Kar,	2019	Journal of hazardous materials, 361, 383-393

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	Cu based ferrite nano adsorbents	K. K		
94.	Electrochemical micro texturing on flat and curved surfaces: simulation and experiments	D.S. Patel, V.K. Jain, A Shrivastava, J. Ramkumar	2019	The International Journal of Advanced Manufacturing Technology, 100, 1269-1286
95.	Numerical simulation of melt pool oscillations and protuberance in pulsed laser micro melting of SS304 for surface texturing applications	S. Sharma, V. Mandal, S.A. Ramakrishna, J. Ramkumar	2019	Journal of Manufacturing Processes, 39, 282-294
96.	Fabrication of non-wettable wearable textile based metamaterial microwave absorber	G. Singh, H. Sheokand, K. Chaudhary, K.V. Srivastava, J. Ramkumar,	2019	Journal of Physics D: Applied Physics, 52(38), p.385304.
97.	Modelling of Wire Electrochemical Micromachining (Wire-ECMM) process for anode shape prediction using finite element method	V. Sharma, I. Srivastava, V.K. Jain, J. Ramkumar	2019	Electrochimica Acta, 312, pp.329-341.
98.	Experimental investigation and multi-objective optimization of micro-wire electrical discharge machining of a titanium alloy using Jaya algorithm	Mahavir Singh, J. Ramkumar, R. V. Rao, J. Balic	2019	Advances in Production Engineering & Management, 14(2), https://doi.org/10.14743/apem201 9.2.326
99.	Thin-wall micromachining of Ti-6Al-4V using micro- wire electrical discharge machining process	Mahavir Singh, Amandeep Singh, J. Ramkumar	2019	Journal of the Brazilian Society of Mechanical Sciences and Engineering, 41:338, https://doi.org/10.1007/s40430- 019-1827-3
100.	Laser peening enhances tribological resistance of electrodeposited Cr coatings reinforced with yttria stabilized zirconia and carbon nano tubes	Pragya Tripathi, J. Ramkumar, Kantesh Balani	2019	Surface & Coatings Technology, Volume 378, 124919, https://doi.org/10.1016/j.surfcoat.2 019.124919
101.	Surface micro-texturing of dual phase steel and copper by combining laser machining and electrochemical dissolution	H.S. Maharana, Ravi Kumar, S.V.S. Narayana Murty, J. Ramkumar, K. Mondal	2019	Journal of Materials Processing Technology, 116260. doi:10.1016/j.jmatprotec.2019.116 260
102.	Condensation of water vapor underneath an inclined hydrophobic textured surface machined by laser and electric discharge	Ganesh B. Shirsatha, K. Muralidhara, Raj Ganesh S. Pal, J. Ramkumar	2019	Applied Surface Science. doi:10.1016/j.apsusc.2019.04.076
103.	Development of inverse replica fixture for Nano-finishing of knee joint using R-MRAFF process	Leeladhar Nagdev, V.K Jain and J. Ramkumar	2019	Journal of Micromanufacturing, 2(1), pp.35-41.

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105.	Enhancement of the surface reactivity of zigzag boron nitride nanoribbons by chlorine gas decoration: A computational study	Kiran Kumar Surthi , Bibekananda De, J. Ramkumar , Kamal K. Kar	2018	Journal of Physics and Chemistry of Solids, 120, 34-43
106.	Analysis of transient thermo-fluidic behavior of melt pool during spot laser welding of 304 stainless-steel	Ambuj Shah, Arvind Kumar , J. Ramkumar	2018	Journal of Materials Processing Technology, 256, 109-120
107.	Experimental investigations to enhance the machining performance of tungsten carbide tool insert using microwave treatment process	Durwesh Jhodkar, M. Amarnath, H. Chelladurai,J.Ramkumar	2018	Journal of the Brazilian Society of Mechanical Sciences and Engineering, 40(4), 200
108.	Rational Design Strategy for Optimization of Clamping Pressure to Minimize Contact Resistance between Electrode and Current Collector while Preserving Porosity of Electrodes in Water Electrolyzers	Koshal Kishor, Alhad Parashtekar, Sulay Saha, Sri Sivakumar, Janakarajan Ramkumar and Raj Ganesh S. Pala	2018	Canadian Journal of Chemical Engineering,96(4), 881-885
109.	Comparison of machining performance of microwave post-heated WC insert with dry, wet and MQL cutting in turning operation	Durwesh Jhodkar, H. Chelladurai, Akhilesh Kumar Choudhary & J. Ramkumar	2018	Journal of Microwave Power and Electromagnetic Energy, 52(2), 109-127
110.	A simulation based approach to realize green factory from unit green manufacturing processes	Amandeep Singh, Deepu Philip , J. Ramkumar , Mainak Das	2018	Journal of Cleaner Production, 182, 67-81
111.	Performance assessment of microwave treated WC insert while turning AISI 1040 steel	Durwesh Jhodkar, M. Amarnath, H. Chelladurai, and J. Ramkumar	2018	Journal of Mechanical Science and Technology, 32(6), 2551-2558
112.	Nanofinishing of freeform/sculptured surfaces: state-of-the-art	L. Nagdeve, V. K. Jain, J. Ramkumar	2018	Manufacturing Review,5, 6
113.	Wire Electrochemical Threading: A Technique for Fabricating Macro/Micro Thread Profiles	V Sharma, D.S. Patel, V.K. Jain, J. Ramkumar, A Tyagi	2018	Journal of The Electrochemical Society, 165(9), E397-E405
114.	Medium rheological characterization and performance study during rotational abrasive flow	M. R. Sankar, V. K. Jain, J. Ramkumar, S. K. Sareen, S. Singh	2018	The International Journal of Advanced Manufacturing Technology

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115.	Topographical effects of laser surface texturing on various time-dependent wetting regimes in Ti6Al4V	Divyansh Singh Patel, Abhilasha Singh, K. Balani, J. Ramkumar	2018	Surface and Coatings Technology, 2018
116.	Protective trivalent Cr-based electrochemical coatings for gun barrels	Pragya Shukla, Shikha Awasthi, Janakarajan Ramkumar, Kantesh Balani	2018	Journal of Alloys and Compounds, 768, 1039-1048
117.	Mechanical Analysis of Nickel Particle-Coated Carbon Fiber-Reinforced Epoxy Composites for Advanced Structural Applications	A. K. Yadav, S. Banerjee, R Kumar, K. K. Kar, J. Ramkumar, K. Dasgupta	2018	ACS Applied Nano Materials,1(8), 4332-4339
118.	Surface texture evaluation using 3D reconstruction from images by parametric anisotropic BRDF	Hitendra Kumar, J. Ramkumar, K.S. Venkatesh	2018	Measurement,125, 612-633
119.	Numerical simulation of melt hydrodynamics induced hole blockage in Quasi-CW fiber laser micro-drilling of TiAl6V4	S. Sharma, V. Mandal, S.A. Ramakrishna, J. Ramkumar	2018	Journal of Materials Processing Technology, 262, 131-148
120.	Redox Synergistic Mn-Al-Fe and Cu-Al-Fe Ternary Metal Oxide Nano Adsorbents for Arsenic Remediation with Environmentally Stable As(0) Formation	Yaswanth K. Penke, Ganapathi Anantharaman, Janakarajan Ramkumar, Kamal K. Kar	2018	Journal of Hazardous Materials,364, 519-530
121.	Experimental Investigations to Study the Effects of Microwave Treatment Strategy on Tool Performance in Turning Operation	Durwesh Jhodkar, M. Amarnath, H. Chelladurai, J. Ramkumar	2018	Journal of Materials Engineering and Performance,27(12), 6374-6388
122.	Theoretical and Experimental Investigations into Wire Electrochemical Turning (Wire-ECTrg) Process Using Finite Element Method	Sharma, V., Srivastava, I., Tyagi, A., Jain, V. K., & J Ramkumar.	2018	Journal of The Electrochemical Society, 165(14), E773-E783
123.	Differential finishing of freeform surfaces (Knee Joint) using R-MRAFF process and negative replica of workpiece as afixture	Leeladhar Nagdeve, V. K. Jain & J. Ramkumar	2018	Machining Science and Technology, 22(4), 671-695
124.	Aluminum Substituted Cobalt Ferrite (Co-Al-Fe) Nano Adsorbent for Arsenic Adsorption in Aqueous Systems and Detailed Redox Behavior Study with XPS	Yaswanth K. Penke, Ganapathi Anantharaman, Janakarajan Ramkumar, and Kamal K. Kar	2017	ACS Appl. Mater. Interfaces,9 (13), 11587-11598

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126.	Investigations into side gap in Wire Electrochemical Micromachining (Wire-ECMM)	Aakash Tyagi, Vyom Sharma, V. K. Jain & J. Ramkumar	2017	International Journal of Advanced Manufacturing Technology, 94(9-12), 4469-4478
127.	Experimental investigations into nano finishing of Ti6Al4V flat disc using Magnetorheological finishing process	G.V.L. Parameswari, V. K. Jain & J. Ramkumar,Leeladhar Nagdeve	2017	International Journal of Advanced Manufacturing Technology, 1-11,2017
128.	Experimental and theoretical investigations into internal Magnetic Abrasive Finishing of a Revolver Barrel	Sahil Kajal, Leeladhar Nagdeve, V. K. Jain & J. Ramkumar	2017	International Journal of Advanced Manufacturing Technology(2017):1- 18
129.	Transparent broadband metamaterial absorber based on resistive films	Harsh Sheokand, Saptarshi Ghosh, Gaganpreet Singh, Mondeep Saikia, Kumar Vaibhav Srivastava, J. Ramkumar, and S. Anantha Ramakrishna	2017	Journal of Applied Physics, 122(10), 105105
130.	Single step laser surface texturing for enhancing contact angle and tribological properties	Abhilasha Singh, Divyansh Singh Patel, J. Ramkumar & Kantesh Balani	2017	Int J Adv Manuf Technology, (2017):1-15
131.	Preliminary investigations into nano-finishing of freeform surface (femoral) using inverse replica fixture	Leeladhar Nagdeve, V. K. Jain and J. Ramkumar	2017	The International Journal of Advanced Manufacturing Technology, (2017): 1-12
132.	Investigations into insertion force of electrochemically micro-textured hypodermic needles	Divyansh Singh Patel, Abhilasha Singh, V. K. Jain, J. Ramkumar & A. Shrivastava	2017	The International Journal of Advanced Manufacturing Technology , (2017): 1-16
133.	Effect of carbonaceous reinforcements on the mechanical and tribological properties of friction stir processed Al6061 alloy	Rita Maurya, Binit Kumar, S. Ariharan, J. Ramkumar, Kantesh Balani	2016	Materials and Design 98 (2016) 155-166.
134.	Nano-finishing of cylindrical hard steel tubes using rotational abrasive flow finishing (R-AFF) process	M. Ravi Sankar, V. K. Jain, J. Ramkumar	2016	International Journal of Advanced Manufacturing Technology DOI 10.1007/s00170-015-8189-5
135.	Experimental Investigations into nano-finishing of freeform surfaces using negative replica of the knee joint	Leeladhar Nagdeve, V. K. Jain, J. Ramkumar	2016	Procedia CIRP 42 (2016) 793-798
136.	Microchannel-embedded metal-carbon-polymer nanocomposite as a novel support for chitosan for	Prateek Khare, Ashish Yadav, Janakranjan Ramkumar, Nishith Verma	2016	Chemical Engineering Journal 293 (2016) 44-54

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	efficient removal of hexavalent chromium from water under dynamic conditions			
137.	A Roadmap to Account for Potential Uncertainties in Non-Destructive Testing during Structural Health Monitoring of Composites.	F. Islam, B. Crawford, P. Pal, J. Ramkumar, A.S. Milani	2016	Proceedings of the American Society for Composites: Thirty-First Technical Conference.
138.	Green Index quantification of a unit manufacturing process through simulation experiments	Amandeep Singh, Deepu Philip , J. Ramkumar	2016	Procedia CIRP 41 1131-1136
139.	Effect of alternate corrosion and wear on the overall degradation of a dual phase and a mild steel	P Murkute, J Ramkumar, S Choudhary, K Mondal`	2016	Wear 368, 368-378
140.	Effect of Exposure Face Orientation and Tilt Angle on Immersion Corrosion Behavior of Dual-Phase and Mild Steels	P Murkute, S Choudhary, J Ramkumar, K Mondal	2016	Journal of Materials Engineering and Performance, 1-10
141.	Stress Corrosion Cracking Behavior of Interstitial Free Steel Via Slow Strain Rate Technique	P Murkute, J Ramkumar, K Mondal	2016	Journal of Materials Engineering and Performance 25 (7), 2878-2888
142.	Modelling of nano-finishing forces and surface roughness in abrasive flow finishing process using rheological properties	F. Islam, B. Crawford, P. Pal, J. Ramkumar, A.S. Milani	2016	International Journal of Precision Technology 6 (2), 123-141
143.	A new multi-objective Jaya algorithm for optimization of modern machining processes	Rao R.V., Rai D.P., Ramkumar J., Balic J.	2016	Advances in Production Engineering & Management, Volume 11,Number 4, pp 271-286
144.	Experimental Investigation on Electro-Discharge Deposition Process	B. Muralidharan, H. Chelladurai, J. Ramkumar	2015	International Mechanical Engineering Congress and Exposition .Volume 76, Issue 1-4, pp. 69-82.
145.	Tribological Performance of Laser Peened Ti-6Al-4V	Dharmesh Kumar; Syed N. Akhtar; Anup K. Patel; J. Ramkumar ; Dr. Kantesh Balani	2015	Journal of Wear, 322, 203-217
146.	Excimer laser micromachining of oblique microchannels on thin metal films using square laser spot	Syed Nadeem Akhtar, Shashank Sharma, S. Anantha Ramakrishna, and J. Ramkumar	2015	Sādhanā, 41(6), pp.633-641.
147.	Surface Texturing for Inducing Hydrophobicity	Divyansh Patel, V. K. Jain, J. Ramkumar	2015	Directions IIT Kanpur Publications, Vol. 15-1, pp. 46-53
148.	Micro texturing on metallic surfaces: State- of-the-art	Divyansh Patel, V. K. Jain, J. Ramkumar	2015	Proceedings of the Institution of Mechanical Engineers, Part B

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149.	Influence of coconut oil on tribological behavior of carbide cutting tool insert during turning operation	Ajay Vardhaman B. S, M. Amarnath, Durwesh Jhodkar, J. Ramkumar, H. Chelladurai, M. K. Roy	2015	Journal of the Brazilian Society of Mechanical Sciences and Engineering, 40(9), pp.1-23.
150.	Examining the Role of Cutting Fluids in Machining AISI 1040 Steel Using Tungsten Carbide Insert under Minimal Quantity Lubrication Condition	Ajay Vardhaman B. S, M. Amarnath, Durwesh Jhodkar, J. Ramkumar and H. Chelladurai	2015	3rd International Conference on Advances in Engineering Sciences & Applied Mathematics (ICAESAM 2015) (pp. 80-83).
151.	Quantifying green manufacturability of a unit production process using simulation	Amandeep Singha, Deepu Philip , J. Ramkumar	2015	Procedia CIRP 29 (2015) 257-262
152.	Performance evaluation of Microwave Treated Cemented Carbide insert on AISI 1040 steel during turning process	Durwesh Jhodkar, H. chelladurai, M. Amarnath and J. Ramkumar	2015	ASME 2015, Applied mechanics and materials conference. McMat2015-6318
153.	Control of Bacterial Growth in Water using Novel Laser-Ablated Metal-Carbon-Polymer Nanocomposite-based Microchannels	Nishith Verma, Prateek Khare, Janakaranjan Ramkumar,	2015	Chemical Engineering Journal 276 (2015) 65-74.
154.	Comparing the Adhesion and Survival of Adult Rod and Cone Photoreceptor Neurons on Poly-D-Lysine and Concanavalin-A Substrate	Bhargava, Neelima; Shanmugaia h, Vellasamy; Balakrishn an, Karuppiah; Ramkuma r, Ramkumar J; Das, Mainak	2015	Journal of Biomaterials and Tissue Engineering, Volume 5, Number 6, June 2015, pp. 431-438(8).
155.	A simplified damage prediction framework for milling of unidirectional carbon fiber-reinforced plastics	F. Islam, J. Ramkumar & A.S. Milani	2015	Polymer & Composites Science, 1: 4,175-184, DOI: 10.1080/20550340.2015.1117747.
156.	Application of Artificial Neural Networks in Abrasive Water Jet Milling	T. V. K. Gupta, J. Ramkumar , Puneet Tandon , N. S. Vyas	2015	Procedia CIRP 37 (2015) 225-229.
157.	Micro feature edge quality enhancement in excimer laser micromachining of metal films by coating with a sacrificial polymer layer	Akhtar, S. N., Sharma, S., Dayal, G., Ramakrishna, S. A., & J Ramkumar.	2015	Journal of Micromechanics and Microengineering, 25(6), 065001.
158.	Excimer laser micromachining of oblique micro channels on thin metal films using square laser spot	Akhtar, S. N., Sharma, S., Dayal, G., Ramakrishna, S. A., & J Ramkumar.	2015	SADH-D- 15-00069R3 Sadhana.
159.	Neural Network based Modeling and GRA coupled PCA Optimization of Hole Sinking Electro Discharge Micro machining	Rajesh Kumar Porwal, Vinod Yadava, J. Ramkumar	2014	International Journal of Manufacturing, Materials, and Mechanical Engineering. 4(1), pp. 1-21.

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160.	Simulation and experiments on excimer laser micromachining of metal and polymer	Syed Nadeem Akhtar, Hirendra Choudhary, S. Anantha Ramakrishna and J. Ramkumar	2014	Journal of Micro / Nanolithography, MEMS, and MOEMS 13(1), 013008-013008
161.	Block EDG: issues and applicability in multiple pass micro ED-milling	G. Karthikeyan, J. Ramkumar, S. Dhamodaran	2014	Machining Science and Technology 18 (1), 120-136
162.	Comparative Assessment of the Laser Induced Plasma Micro machining and the Micro-EDM Processes	K. Pallav, P. Han, J. Ramkumar, K. F. Ehmann	2014	Journal of Manufacturing Science and Engineering 136 (1), 011001
163.	Modelling and multi-response optimization of hole sinking electrical discharge micro machining of titanium alloy thin sheet	R.K. Porwal, V. Yadava, J. Ramkumar	2014	Journal of Mechanical Science and Technology 28 (2), 653-661
164.	Experimental Investigations on the Effect of Vegetable Based Cutting Fluid in Turning AISI 1040 Steel	D. Jhodkar, M. Amaranth, H. Chelladurai, J. Ramkumar	2014	Applied Mechanics and Materials 541, 368-373
165.	Micro machining performance and surface quality comparison of using cryogenically treated copper-tungsten tool/AISI 304 work piece in micro EDM milling	Jefferson, Hari and J. Ramkumar	2014	Recent Patents on Mechanical Engineering. Reference#: BSP-MENG-2014-56 Machining Science and Technology,
166.	Optimization of process parameters in the hole drilling electrical discharge micro machining of titanium based super alloy thin sheet.	Rajesh Kumar Porwal, Vinod Yadava and J. Ramkumar	2013	Journal of Machining and Forming Technology, Vol. 5, pp. 175-188
167.	Modeling and Optimization of Hole Drilling Electrical Discharge Micromachining Process of Ti-6Al-4V Thin Sheet	Rajesh Kumar Porwal, Vinod Yadava and J. Ramkumar	2013	International Journal of Precision Technology, Vol. 3, No.2, pp. 183-205
168.	Optimization of laser machining process for the preparation of photo masks and its application to micro systems fabrication	Avinash Kumar, Ankur Gupta, Rishi Kant, Syed Nadeem Akhtar, Nachiketa Tiwari, J. Ramkumar, Shantau Bhattachary	2013	Journal of Machining and Forming Technology.Vo. 12. No.4 p041203 (9 pp)
169.	Comparative Assessment of the laser induced plasma Micro-Machining (LIP-MM) and the Micro- EDM processes	Kumar Pallav, Peidog Han, J. Ramkumar, NagHanumaiah, KornelEhman	2013	J. Manuf.Sci. Eng, DOI 10.1115/1.4025391.
170.	A study on the deviations of the jet with traverse speeds of different materials in pocket milling using Abrasive Water Jet Machining Processes	T. V. K. Gupta, J. Ramkumar, Puneet Tandon, N. S. Vyas	2013	Applied Mechanics & Materials, Vol.372,pp 402-405, Trans Tech Publications,

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171.	Excimer laser micromachining using binary mask protection for large are patterning with single micrometer feature	Govind Dayal, Syed Nadeem Akhtar, S. Anatha Ramkrishnan and J. Ramkumar	2013	J. Micro Nano-Manuf.1.031002 1(3) (7pages); DOI: 10.1115/1.4024880.
172.	Modeling and Multi-Response Optimization of hole sinking electrical discharge micromachining of titanium alloy thin sheet	Rajesh Kumar Porwal, Vinod Yadava, J. Ramkumar	2013	Journal of Mechanical science and Technology, Paper number: MEST-D-1300358R1, 3(2), pp 183-205
173.	Multi-Objective Optimization of Hole Drilling Electrical Discharge Micromachining Process using Grey Relational Analysis coupled with Principal Component Analysis	Rajesh Kumar Porwal, Vinod Yadava, J. Ramkumar	2013	Journal of The Institution of Engineers (India): Series C, Volume 94, (4), pp 317-325
174.	Role of process parameters on pocket milling with Abrasive Water Jet Machining technique	T. V. K. Gupta, J. Ramkumar, Puneet Tandon, N. S. Vyas	2013	International Journal of Mechanical Science and Engineering, 2013, Vol. 7, No. 10, pp. 627-632
175.	A study on deviations of the jet with traverse speeds on different materials in pocket milling using Abrasive Water Jet Machining Process,	Gupta T. V. K., Ramkumar J., Tandon P., and Vyas N.S.,	2013	International Journal of Applied Mechanics and Materials, 372, 402-405.
176.	Optimization of process parameters in the hole sinking electro discharge micromachining using GRA-PCA	Rajesh Kr. Porwal, Vinod Yadava, J. Ramkumar	2013	Journal of Manufacturing Engineering, Vol. 8, (2), pp. 96-104
177.	Analysis of Forces and Surface Roughness in Magnetic Abrasive Finishing with a ball end tool	Chandra Sekhar Sathua, V. K. Jain, J. Ramkumar, Ajay Sidpara	2013	Int.J. Precision Technology, Vol 3, No 2,pp 131-142
178.	Investigation of Single Pulse Discharge on Silicon: Crater and Plasma Characteristics	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran	2012	International Journal of Mechatronics and Manufacturing Systems, Vol 5, (5-6), pp 455-469
179.	A microscopic investigation of machining behavior in micro ED-milling Process	S. Karthikeyan, Anuj K. Garg, J. Ramkumar, S. Dhamodaran	2012	Journal of Manufacturing Processes, Vol 4, issue 3,pp 297-306
180.	CAD based modeling and prediction of tool wear in micro ED-milling	G. Karthikeyan, K. Sambhav, D. Santhosh and J. Ramkumar	2012	International journal of manufacturing technology research, vol 4, issue 1/2, pp 21-34
181.	Dependence of R-AFF process on rheological characteristics of soft styrene based organic polymer abrasive medium	M. R. Sankar, V. K. Jain, J. Ramkumar, and Y. M. Joshi	2012	International Journal of manufacturing technology research, vol 4, issue 1/2, pp 89-104

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182.	Abrasive Flow Finishing (AFF) for Micro manufacturing	M. Ravisankar, J. Ramkumar, V. K. Jain	2012	Micromanufacturing Processes, 183
183.	Effect of Abrasive Medium Ingredients on Finishing of Al Alloy and Al Alloy/SiC Metal Matrix Composites Using Rotational Abrasive Flow Finishing	M.R. Sankar, V.K. Jain, J. Ramkumar	2012	Applied Mechanics and Materials 110, 1328-1335
184.	A Study on Machinability of B-Modified Ti-6Al-4V Alloys by EDM	I. Sen, G. Karthikeyan, J. Ramkumar, R.Balasubramaniam	2012	Materials and Manufacturing Processes 27 (3), 348-354
185.	Micro-Electric Discharge Plasma: Characterization and Applications	S. Kanmani Subbu, J. Ramkumar, and S. Dhamodaran	2012	Journal of Materials and Manufacturing processes, Vol. 27, No. 11, pp. 1208-1212, 2012.
186.	A comparison between Raman scattering from GaNnano wires and polyhedrons	Satish Chander D., J. Ramkumar, Dhamodaran S.	2012	Nanoscience Methods, Vol 1, pp 129-136
187.	Artificial neural network modeling and multi objective optimization of hole drilling electro discharge micro machining of invar	Rajesh kumar porwal, Vinod Yadava, J. Ramkumar	2012	International Journal of Mechatronics and Manufacturing Systems, Vol. 5, No 5/6,pp 470-494
188.	Dynamic characterization and mechanical properties of FIB grown nano pillars	Banerjee, A., Mankad, T., Dhamodaran, S., Ramkumar J., Kulkarni	2012	International Journal of Nanotechnology 9 (10-12), pp. 972-981
189.	Performance analysis of micro ED-milling process using various statistical techniques	G. Karthikeyan, J. Ramkumar, S. Aravindan	2012	International Journal of Machining and Machinability of Materials VO. 11 (2) pp. 183-203
190.	Catalyst and its diameter dependent growth kinetics of CVD grown GaN nanowires	C. Samanta, D. S. Chander, J. Ramkumar, S. Dhamodaran	2012	Materials Research Bulletin 47 (4), 952-956
191.	Machining of metal matrix composites with minimum quantity cutting fluid and flood cooling	M. Ravi Sankar, J. Ramkumar, S. Aravindan	2011	Advanced Materials Research, Materials and manufacturing ,vol 299-300, pp. 1052-1055
192.	Experimental investigation of formability enhancement using hydraulic counter pressure assisted warm deep drawing	Sumedah Kulkarni, Syed Nadeem Akther, J. Ramkumar	2011	Advanced Materials Research, Materials and Manufacturing, vol 299-300,pp. 364-367,.
193.	Negative differential resistance in isolated GaN nano wires with focused electron beam deposited platinum contacts	A. Dhabal, D. S. Chander, J. Ramkumar, S. Dhamodaran	2011	Micro &Nano Letters 6 (4), 280-283
194.	Controlled 1-D to 3-D growth mode transition of GaN nano structures and their optical properties	D. Sathish Chander, J. Ramkumar, S. Dhamodaran	2011	Physica E: Low-dimensional Systems and Nanostructures 43 (9), 1683-1687

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195.	Plasma Temperature and Electron Density of Dry micro-EDM on Stainless Steel and Silicon: A Comparison	S. Kanmani Subbu, J. Ramkumar, and S. Dhamodaran	2011	International Journal of Automation Technology, Vol. 5, No. 1, pp. 45-51, 2011
196.	Anti-reflective and hydrophobic surface of self-organized GaNnano- flowers	S. Dhamodaran, D. S. Chander, J. Ramkumar	2011	Applied Surface Science 257 (22), 9612-9615
197.	Rheological characterization of Styrene-Butadiene based medium and its finishing performance using rotational abrasive flow finishing processes	M. Ravi Sankar, V. K. Jain, J. Ramkumar, and Y. M. Joshi	2011	International Journal of Machine tool and Manufacture, vol 51,(12), pp. 947-957
198.	Elemental identification of materials using optical emission spectra during electric discharge machining	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran	2011	Advanced Materials Research 299, 1330-1333
199.	Single Discharge of Dry micro-EDM on Silicon: Crater and Plasma Temperature Measurement	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran	2011	Advanced Materials Research 299, 1334-1337
200.	Plasma Characterization of Dry micro-EDM	S. Kanmani Subbu, G. Karthikeyan, J. Ramkumar, and S. Dhamodaran	2011	The International Journal of Advanced Manufacturing Technology, Vol. 56, pp. 187-195
201.	Magnetic Field Assisted micro EDM-Simulation of Field Distribution and Experimental Investigation	Omprakash Rawat, S. Kanmani Subbu, J. Ramkumar, and S. Dhamodaran	2011	International Journal of Applied Engineering Research, Vol. 6, No. 5, pp. 987-992, 2011.
202.	Development and Experimental Investigation of MAF Setup for Finishing of Ultra High Speed Shafts	Sandeep Nair, Trilok Singh, Ramkumar J., Sunil Jha	2011	International Journal of Abrasive Technology, Vol 4 (4), pp. 325-345
203.	GaN nanowires grown on silicon substrates engraved using stainless- steel micro-tip	S. Dhamodaran, D Sathish Chander, J. Ramkumar	2011	Materials Letters 65, 2398-2400
204.	Anti-reflective and hydrophobic surface of self-organized GaN nanoflowers	S. Dhamodaran, D. Sathish Chander, J. Ramkumar	2011	Applied Surface Science, 257, 9612
205.	Simulation and experimental realization of micro-channels using a micro ED-milling process ..	G. Karthikeyan, K. Sambhav, J. Ramkumar, S. Dhamodaran	2011	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, Vol.225, (12)pp.2206- 2219.
206.	Rheological characterization and performance evaluation of a new medium developed for abrasive flow finishing	M. Ravi Sankar, V. K. Jain, J. Ramkumar, Kamal K. Kar	2010	International Journal of Precision Technology, Vol. 1, No. 3-4, PP 302-313
207.	Micro ED-milling Process Performance: An Experimental Investigation	G. Karthikeyan, J. Ramkumar, S. Dhamodaran and S. Aravindan	2010	International Journal of Machine

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				tools and Manufacture, Vol. 50, PP 718-727
208.	The Effect of Process Parameters on Machining of Magnesium Nano Alumina Composite Through EDM	K. Ponappa, S. Aravindan, P. V. Rao, J. Ramkumar, M. Gupta	2010	The International Journal of Advanced Manufacturing Technology ,Vol 46 (9-12) , pp 1035-1042
209.	XNBR Toughened Epoxy-Glass Fabric Composites: An Evaluation of their Static and Dynamic Mechanical Properties	A. K. Singhal, Rashmi R. Devi, Vivek Kumar, J. Ramkumar, R. K. Singh	2010	International Journal of Polymer Materials, Vol.27, (2),pp. 97-112
210.	Experimental investigation of mechanical and tribological performance of XNBR rubber modified epoxy under dry sliding condition	A.K. Singhal, Vivek Kumar, J. Ramkumar, R. K. Singh and S. K. Malhotra	2010	International Journal of Plastic Technology, Volume 14, (1) ,pp 93-103.
211.	Mechanical and Tribological Properties of Jute Sandwich Structures	V. Kumar, J. Ramkumar, P Kumar, S. K. Malhotra	2010	Journal of Polymer Materials 27 (3), 267-281
212.	Rotational abrasive flow finishing (R-AFF) process and its effects on finished surface topography	M. Ravi Sankar, V. K. Jain, J. Ramkumar	2010	International Journal of Machine tools and Manufacture, Vol. 50, pp 637-650
213.	Controlling the nano-dot formation on GaAs surface during focused gallium ion beam processing	S. Dhamodaran, J. Ramkumar	2010	Radiation effectsand defects in solids, Volume 165, (12),pp.889- 893.
214.	Experimental investigation and mechanism of material removal in nano finishing of MMCs using abrasive flow finishing (AFF) process	Mamilla Ravi Sankar, J. Ramkumar and V. K. Jain,	2009	Wear, Vol. 266, (7-8), pp 688-698.
215.	Experimental investigations into rotating workpiece Abrasive flow finishing	Mamilla Ravi Sankar, V. K. Jain and J. Ramkumar	2009	Wear, Vol. 267 (1-4), pp. 43-51
216.	Preferential Media for Abrasive Flow Machining	Kamal K. Kar, N. L. Ravikumar, Piyushkumar B. Tailor, J. Ramkumar, D. Sathiyamoorthy	2009	J. Manuf. Sci. Eng. 131(1), p 011009 (pp 11)
217.	Performance Evaluation and Rheological Characterization of Newly Developed Butyl Rubber Based Media for Abrasive Flow Machining Process	Kamal K. Kar, N. L. Ravikumar, Piyushkumar B. Tailor, J. Ramkumar, D. Sathiyamoorthy,	2009	Journal of Materials Processing Technology, Vol. 209, (4)pp. 2212-2221
218.	Experimental Investigations and Modeling of Drill Bit Guided Abrasive Flow Finishing (DBG-AFF) Process	Mamilla Ravi Shankar, S. Mondal, J. Ramkumar, V. K. Jain	2009	International journal of Advanced Manufacturing Technology, Vol. 42, (7-8) pp. 678-688

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220.	Fabrication and Characterization of ABS Nano composite reinforced by Nano sized alumina particulates	Vivek Kumar, J. RamKumar , S. Aravindan , S. K. Malhotra, K. Vijai, Mukhul Shukla	2009	International Journal of Plastic Technology, Vol. 13, (2), pp. 133-149
221.	Characterization of plasma in micro-EDM discharge using optical spectroscopy	Ramkumar J., Nick Glumacc, Shiv G. Kapoorc and Richard E. DeVor	2009	Journal of Manufacturing Technology, Vol. 11, PP 82-87
222.	Defect controlled Water Jet Piercing of Continuous Fiber Reinforced Plastics	J. Ramkumar and T. Machida	2008	Journal of Advance Composite letters, Vol. 17(2), pp. 55-63.
223.	TEM studies on recovery and recrystallisation in equal channel angular extrusion processed Al-3%Mg Alloy	Giribaskar, S., Gouthama, Prasad, R., Ramkumar J	2008	Transactions of the Indian Institute of Metals 61 (2-3), pp. 171-176
224.	Laser based Surface Processing of Engineering Materials- State of the Art	I. A. Palani, S. Kanmani Subbu, N. J. Vasa, J. Ramkumar and M. Singaperumal	2008	International Journal on Design and Manufacturing Technologies, Vol. 2, No. 1, pp. 1-9, 2008
225.	Pressure Distribution Analysis of Fiber Reinforced Plastic Components made by Rubber Pressure Molding Technique	K. K. Kar, S.D. Sharma, P. Kumar, J. Ramkumar, R. K. Appaji and K. R. N. Reddy	2007	Journal of Applied Polymer Science, Vol. 105(6) ,pp. 3333 -3354
226.	Electro-discharge machining performance of TiCN-based cermets	B. V. Manoj Kumar, J. Ramkumar, B. Basu and S. Kang	2007	International Journal of Refractory Metals and Hard Materials, 25 392-399.
227.	Crater Wear Mechanism of TiCN-Ni-WC Cermets during Dry Machining	B.V. Manoj Kumar, J. Ramkumar and Bikramjit Basu,	2007	International Journal of Refractory Metals & Hard Materials 25 (2007) 293-299.
228.	Butt joining of similar &Dissimilar pipe material by cold joining process	J. Ramkumar, A. K. Singhal, Ritesh Kumar Singh and Prashant kumar	2007	Journal of Advanced Composite letters, Vol.16,(5), pp. 173-179.
229.	Experimental investigation on effect of alumina filler in butyl through mechanical properties	P. B. Tailor, J. Ramkumar and K. K. Kar	2007	Journal of Engineering and technology, Vol. 20, 35-39
230.	Erosion Wear behavior of TiCNNicermets containing secondary carbide (WC/NbC/TaC)	B.V. Manojkumar, Bikramjit Basu, S. Kang and J. Ramkumar	2006	Journal of American Ceramic Society, Vol. 89(12), pp. 3827-3831

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231.	Experimental Characterization of thin Sandwich Panel of Polymer Composite	Prasanth Kumar, Axay Kumar, Kamal. K. Kar and J. Ramkumar	2006	Journal of Advanced Composite letters, Vol. 15(3), pp. 89-98
232.	Analysis of Rubber Pressure Molding Technique to Fabricate Fiber Reinforced Plastic components	K. K. Kar, S.D. Sharma, P. Kumar, J. Ramkumar, R.K. Appaji and K. R. N. Reddy	2006	Polymer Composites, Vol. 28, (5) pp. 637-649
233.	A Mathematical Model for Determination of Limiting Blank Holding Force and Cavity Pressure in Hydromechanical Deep Drawing	Deep, K. S., Reddy, N. V., Agrawal, A., J. Ramkumar.	2006	Journal of Engineering Manufacture, Vol. 221 (2), pp. 155-162.
234.	Effect of microwave treatment of WC inserts for drilling of GFRP composites	J. Ramkumar, Malhotra S.K., and R. Krishnamurthy	2005	Machining Science and Technology 9(2): 263-269
235.	An enhancement of machining performance of GFRP by oscillatory assisted drilling	J. Ramkumar, Aravindan. S, S. K. Malhotra and R. Krishnamurthy	2004	International Journal of Advanced manufacturing technology, 23(3-4): 240-244
236.	Effect of workpiece vibration on drilling of GFRP laminates	J. Ramkumar, S. K. Malhotra and R. Krishnamurthy,	2004	Journal of Materials Processing Technology, 152(3), 329-332
237.	Enhancement of cutting performance of cemented carbide cuttings tools by microwave treatment	S. Aravindan, J. Ramkumar, S. K. Malhotra and R. Krishnamurthy	2003	Microwave and Radio Frequency Processing Ceramic Transactions, 199-206, 2003.
238.	Microstructure and dry sliding wear of Ti-50Al alloy and Ti-47Al-3W/Ti2AlCcomposites produced by reactive arc-melting	J. Ramkumar, S. KMalhotra, R. Krishnamurthy, Mabuchi. H, K. Demizu, K. Kakitsuji, H. Tsuda, T. Matsui and K. Morii	2003	Journal of Material Transactions, 44(9), 1861-1865
239.	Mechanical and erosion behavior of Ti-47Al-3W/Ti2AlC composites by reactive arc melting	J. Ramkumar, A. Kaakitsuji. S.K. Malhotra, R. Krishnamurthy, H. Mabuchi, H. Tsuda, T. Matsui, and K. Morii	2003	Journal of Advanced composites letters, 12(4), 141-148
240.	Studies on drilling of glass/epoxy laminates using coated high-speed steel drills	J. Ramkumar, S. K. Malhotra and R. Krishnamurthy	2002	Journal of Materials and Manufacturing Processes, 17(2), 313-322
241.	Enhancing the metallurgical properties of WC insert (K-20) cutting tool through microwave treatment	J. Ramkumar, S. Aravindan, S. K. Malhotra, and R. Krishnamurthy	2002	Journal of materials letters, 53(3), 200-204.
242.	Synthesis of TiAl(Cr)/Ti2AlC composites by reactive arc-melting	A. Kakitsuji, J. J Ramkumar. kinose, H. Mabuchi, H.Tsuda and K. Morii	2002	Journal of Materials Transactions, 43(10), 2589-2592
243.	Microstructure and mechanical properties of Ti-B-N cast alloys prepared by reactive arc- melting	Morikawa. D, J. Ramkumar, H. Mabuchi, H. Tsuda, T. Matsui, and K. Morii,	2002	Journal of Material Transactions, 43(8), 2193-2196

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244.	Influence of tool status on flexural strength of machined CFRP components	J. Ramkumar, R. Krishnamurthy and S.K. Mal	2001	Journal of Advanced composites letters, 10(4), 178-187
245.	Microwave Joining of Al2O3 and SiC with Glass Inter layer	S. Aravindan, J. Ramkumar and R. Krishnamurthy	2000	Microwave and Radio Frequency Processing Ceramic Transactions Vol 3, 287-294
246.	Online monitoring of oscillatory drilling of polymeric composites through acoustic emission	J. Ramkumar, SK Malhotra, R Krishnamurthy	2000	Indo-German Workshop on High Temperature Fibre Composite Materials, 231-242

List of peer reviewed conference publications:

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1.	Miniaturized Metamaterial Absorber Using Lossy Effective Dielectric-Medium and Resistive Metasurface	Jyoti Yadav, Mondeep Saikia, Kumar Vaibhav Srivastava, J. Ramkumar	2023	Metamaterials, Photonic Crystals & Plasmonics Conference, META 2023, PARIS - FRANCE
2.	Recent Advances in Mechanical Engineering	Sasmeeta Tripathy, Sikata Samantaray, J. Ramkumar, S. S. Mahapatra	2023	ICRAMERD: International Conference on Recent Advances in Mechanical Engineering Research and Development
3.	Covid-19 pandemic effect on education in developing and developed countries	Ranbir Kaur, Janakarajan Ramkumar, Amandeep Singh	2022	ARSSS - ICABS International conference on Agricultural and Biological Sciences(ICABS) 2022 Proceedings Toronto, Canada
4.	An Optically Transparent Microwave Broadband Absorber using Resistive Sheet	H. Sheokand, G. Singh, S. Ghosh, M. Saikia, K.V. Srivastava, J. Ramkumar, S. Anantha Ramakrishna	2018	National Conference on Communication
5.	Numerical Simulation of the Micro-EDM Process using Multi-Spark Approach	Mahavir Singh,Devesh Kumar Chaubey, J. Ramkumar	2018	Annual Technical Volume of Production Engg. Division Board: The Institute of Engineers (India), Vol.III 2018
6.	Micromachining of Silicon using Excimer laser for MEMS applications	Gaganpreet Singh,J. Ramkumar, S. Anantha Ramakrishnan	2017	Proceedings of 10th international conference on Precision,Meso,Micro and Nano Engineering (COPEN 10)
7.	Redox active Mn-Al-Fe ternary metal oxide Nano adsorbent for Arsenic Remediaion and Mitigation by Significant As (0) formation behavior	Y.K. Penke, G. Anantharaman, J. Ramkumar, K.K. Kar	2017	5th Nano Today Conference, December 6-10, 2017 (Hawaii, USA)
8.	Experimental investigation on the tribological behaviour of nano boric acid and FMWCNTs as oil additives on bronze alloy surface	B.S. Ajay Vardhaman, M. Amarnath, J. Ramkumar	2017	International Conference on Manufacturing Technology and Simulation (ICMTS), IIT Madras 2017

S.No.	Title	Author(s)	Year	Name and Place of Conference
9.	Micro-wire electric discharge machining of Mg alloy used in biodegradable orthopaedic implants	T. U. Siddiqui, J. Ramkumar	2017	ICEMS 2017
10.	A review on work environment quality in shop floor: Impact of aerosols	Singh, A., Philip, D., J Ramkumar.	2017	IEEE Region 10 Humanitarian Technology Conference, R10-HTC 2017: Proceedings
11.	A review on NIOSH lifting equation applicability	Singh, A., Singh, S., Philip, D., J Ramkumar.	2017	IEEE Region 10 Humanitarian Technology Conference, R10-HTC 2017: Proceedings
12.	Experimental Investigations into nano-finishing of	Leeladhar Nagdeve, V. K. Jain and J. Ramkumar	2016	joint18th CIRP International conference on Electro Physical and Chemical Machining (ISEM XVIII) (Accepted)
13.	Preliminary study of effect of surface texturing on hypodermic needles	Divyansh Patel, V. K. Jain, J. Ramkumar, Ankit Shrivastava	2016	International conference on nanotechnology for better living (Accepted)
14.	Micro/Nano Surface texture evaluation by reconstruction from images using approximated BRDF model	Hitendra Kumar, J. Ramkumar, K. S. Venkatesh	2016	International conference on nanotechnology for better living (Accepted)
15.	Experimental investigation into international abrasive finishing of a helical grooves of a revolver barrel	Sahil Kajal , V.K Jain, J.Ramkumar, Leeladhar Nagdeve	2016	6th international & 27th all india manufacturing technology, design and Research (AIMTDR 2016)
16.	Micro-channels fabrication through pulsed Nd:YAG laser on Ti6Al4V	Abhilasha Singh, Divyansh Patel, J. Ramkumar, K. Balani	2016	International conference on nanotechnology for better living (Accepted)
17.	Optimization Study of Electric Discharge Trepanning Process on CP70	Vishal Kumar, J. Ramkumar, R. K. Gupta	2016	International conference on nanotechnology for better living (Accepted)
18.	Finite element analysis for shape prediction of micro-dimples produced through ECMM	Prashnath K, Divyansh Patel, V. K. Jain, J. Ramkumar	2016	International conference on nanotechnology for better living (Accepted)
19.	Magneto rheological finishing of Ti-4Al-6V disc	G. Parameswari Guides: Dr.V. K . Jain, Dr. J Ramkumar	2016	International conference on nanotechnology for better living (Accepted)
20.	A roadmap to account for potential uncertainties in non-destructive testing during structural health monitoring of composites	A.S. Milani, D. Frey, R. Seethaler, J. Ramkumar, B. Crawford, H. Teimouri, F. Islam, P. Pal	2016	(2016) 31st ASC Technical Conference and ASTM D30 Meeting, September 19-22, Williamsburg, USA
21.	Development of nano finishing technique for flat and curved plates	G.Parameswari, V.K.Jain, J. Ramkumar	2016	Proc. of the Intl. Conf. on Nanotechnology for Better Living, 2016.
22.	Experimental investigations into nano finishing technique for flat ti-6al-4v disc	G. Parameswari, V.K.Jain, J. Ramkumar	2016	Conference AIMTDR 2016
23.	A study on hydrodynamics of melt expulsion in Nd:YAG laser drilling of titanium	Sharma, S., Akhtar, S. N., Pachaury, Y., & J Ramkumar. (2015)	2016	Proceedings of COMSOL CONFERENCE 2015, Pune India

S.No.	Title	Author(s)	Year	Name and Place of Conference
24.	Experimental investigation into nano-finshing of freedom surfaces using negative replica of the knee joint	Leeladhar Nagdeve, V. K. Jain, J. Ramkumar	2016	International conference on electro physical and chemical machining (ISEM XVIII)
25.	Experimental investigation into Nano finishing of micro-channels	Leeladhar Nagdeve, V. K. Jain, J. Ramkumar	2016	3rd international conference on Nanotechnology for better living
26.	Feasibility study of micromachining of silicon wafer with excimer Laser using COMSOL multiphysics	Gaganpreet Singh, Shashank Sharma, Kartar Singh and J. Ramkumar	2016	Proc. Of the Intl. Conf. on Nanotechnology for Better Living, 2016
27.	Viscosity Affecting Wettability of Laser Textured Surfaces	Abhilasha Singh, Divyansh Patel, J. Ramkumar, Kantesh Balani	2016	AIMTDR 2016,College of Engineering Pune
28.	Experimental Investigations into Turbulated Holes using Shaped Tube Electrochemical Machining	Mahavir Singh, V.K. Jain and J. Ramkumar	2016	AIMTDR 2016,College of Engineering Pune
29.	Nano-finishing of freeform surfaces a review	Leeladhar Nagdeve, V. K. Jain, J. Ramkumar	2016	Journal of institute of engineer,India (IEI), production Div 2016
30.	Preliminary investigation into Nano-finishing of freeform surface (femoral component) using novel finishing fixture	Leeladhar Nagdeve, V. K. Jain, J. Ramkumar	2016	6th international & 24th all India Manufaturing technology, design and research (AIMTDR 2016)
31.	Experimental Analysis of Wire Electrochemical Machining Process	Vyom Sharma, V.K. Jain and J. Ramkumar	2016	AIMTDR 2016,College of Engineering Pune
32.	Large area texturing of metal surfaces	J. Ramkumar, Syed Nadeem Akhtar and S. A. Ramakrishna	2015	3rd International Conference on Laser and Plasma Applications in Materials Science, Jan 2015, Kolkata.
33.	Nano-finishing of freeform/Sculptured surfaces: A review	Leeladhar Nagdeve, V. K. Jain and J. Ramkumar	2015	International conference on Precision, Meso, Micro and Nano Engineering (COPEN9)
34.	Experimental Investigations on Micro-hole EDM Drilling in γ-TiAl	Vishal Kumar, J. Ramkumar, R. K. Gupta	2015	International Conference on Precision, Meso, Micro and Nano Engineering (COPEN-9)
35.	Prediction and quantification of damage during milling of unidirectional carbon fiber reinforced plastics (CFRPs)	F. Islam, J. Ramkumar, A.S. Milani	2015	International conf. on manufacturing of advanced composites (ICMAC 2015), June 24-25, Bristol, UK
36.	A study on millisecond underwater laser ablation of thin titanium sheets	Sharma, S., Akhtar, S. N., & J Ramkumar.	2015	proceedings of COPEN15 IIT Bombay.
37.	Nano-finishing of freeform/sculptured surfaces	Leeladhar Nagdeve, V. K. Jain and J. Ramkumar	2015	International conference on precision , meso , micro and Nano Engineering (COPEN9 2015)

S.No.	Title	Author(s)	Year	Name and Place of Conference
38.	Examining the Role of Cutting Fluids in Machining AISI 1040 Steel Using Tungsten Carbide Insert under Minimal Quantity Lubrication Condition	Ajay Vardhaman B.S, DurweshJhodkar, J. Ramkumar, M. Amarnath, H. Chelladura	2015	Institute of Engineers (IIE Conferences), London (UK),2015.
39.	Modeling of Finishing Forces and Surface Roughness in Abrasive Flow Finishing (AFF) Process Using Rheological Properties	Sachin Singh, M. Ravi Sankar,V. K. Jain and J. Ramkumar	2014	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, Dec 2014
40.	Application of Grey Relational Analysis for Geometrical Characteristics in Abrasive Water Jet Milled Channels	T. V. K. Gupta, J. Ramkumar, Puneet Tandon and N. S. Vyas	2014	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, Dec 2014
41.	Effect of Layer Thickness in Micro Electric Discharge Milling: An Experimental Investigation	J.M. Jafferson, P. Hariharan and J. Ram Kumar	2014	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, Dec 2014
42.	Fabrication of micro lens array by excimer laser micromachining	Syed Nadeem Akhtar, Shashank Sharma and J. Ramkumar	2014	5th International and 26th All India Manufacturing Technology, Design and Research Conference, IIT Guwahati, Dec 2014
43.	“State of the art on Abrasive Water Jet milling: Challenges ahead”	Gupta, T.V.K., Ramkumar J., Puneet Tandon and Vyas, N.S.	2014	ICMMM 2014 International Colloquium on Materials, Manufacturing and Metrology, August 8-9, 2014, IIT Madras. Ref No. ICM2586
44.	Tool wear assessment in turning AISI 1040 steel using cutting force signature analysis	Ajay Vardhaman B.S, DurweshJhodkar, J. Ramkumar, M. Amarnath, H. Chelladurai	2014	International Colloquium on Materials, Manufacturing and Metrology (ICMMM-14), IIT Madras. 2014
45.	Optimization of process parameters in the hole sinking electro discharge micromachining using GRA-PCA	Rajesh Kr. Porwal, Vinod Yadava and J. Ramkumar	2013	Proceedings of the International conference on Recent Advances in Material Processing Technology, (RAMPT-13).
46.	Role of process parameters on pocket milling with Abrasive Water Jet Machining technique	T V K Gupta, J. Ramkumar, Puneet Tandon, N S Vyas	2013	International Conference on Aerospace, Mechanical, Automotive and Materials Engineering, ICAMAME 2013, Dubai, UAE. Published in Word Academy of Science, Engineering and Technology, Issue 82, October, 2013, pp.1374-1379.

S.No.	Title	Author(s)	Year	Name and Place of Conference
47.	Influence of process parameters on the dimensions of the channels prepared using abrasive water jet machining	Gupta, T.V.K., Puneet Tandon, Ramkumar J. and N.S Vyas	2013	2013 ASME International Mechanical Engineering Congress and Exposition (IMECHE), November 15-21, 2013, San Diego, CA, USA, Ref No. IMECE-64063
48.	Fabrication of complex Micro-channels by micro EDM Milling	Vaibhav shukla, S. Nadeem, S. Kanmani Subbu and J. Ramkumar	2013	2013 ASME International Mechanical Engineering Congress and Exposition (IMECHE), November 15-21, 2013, San Diego, CA, USA, Ref No. IMECE-64031
49.	Microfeature edge quality optimization in excimer laser ablation of metallic film	Syed Nadeem Aktar, J. Ramkumar and S. Antharama krishnan	2013	2013 ASME International Mechanical Engineering Congress and Exposition (IMECHE), November 15-21, 2013, San Diego, CA, USA, Ref No. IMECE-64149
50.	Effect of magnetic field in single discharge dry micro EDM on Si and Stainless steel	Kanmani Subbu, J. Ramkumar & S. Damodharan	2013	2013 ASME International Mechanical Engineering Congress and Exposition (IMECHE), November 15-21, 2013, San Diego, CA, USA, Ref No. IMECE-67138
51.	EDM and µ-EDM Plasma Parameters Measurement: Overview	S. Kanmani Subbu, S. Dhamodaran, and J.Ramkumar	2013	A National Conference on Manufacturing: Vision for Future (MVF-2013), IIT Guwahati
52.	Multi Objective Optimization of EDM Parameters on Machining Carbon-Carbon Composites using RSM-GRA Approach	Ravi Kumar Dungroth J. Ramkumar, and S. Kanmani Subbu	2013	An International Conference on Precision, Meso, Micro and Nano Engineering (COPEN-8)
53.	A Preliminary Investigation on the forces generated with process parameters during Abrasive Water Jet Milling on SS304	T. V. K. Gupta, J. Ramkumar, S. Nalinaksh, Vyas and Puneet Tandon	2012	International Conference on Innovations in Design and Manufacturing (InnDeM 2012), PDPM IIITDM J,Dec.05-07, 2012 (paper No. 2032).
54.	Material removal rate prediction for blind pocket milling of SS304 using Abrasive Water Jet Machining Process	T. V. K. Gupta, J. Ramkumar, S. Nalinaksh Vyas and Puneet Tandon	2012	Hong Kong International Conference on Engineering and Applied Science (HKICEAS) Hong Kong, (Paper No. 411)
55.	Investigating of Single Discharge Dry Micro EDM on Different Planes of Silicon	S. Kanmani Subbu, S. Dhamodaran, and J. Ramkumar	2012	4th International & 25th (AIMTDR-2012), Jadhavpur university, Kolkata, India
56.	Micro-electric Discharge Plasma: Characterization and Applications	S. Kanmani Subbu, S. Dhamodaran, and J. Ramkumar	2012	International conference on Microactuators and Micromechanisms (MAMM-2012), CSIR-CMERI, Durgapur, India

S.No.	Title	Author(s)	Year	Name and Place of Conference
57.	Multi-Objective Optimization of Hole Drilling Electro Discharge Micromachining Process	Rajesh Kr. Porwal, Vinod Yadava, J. Ramkumar	2011	Proceedings of the International conference on precision, Meso, Micro and Nano engineering (COPEN-2011)
58.	Crater Diameter of Single Discharge Micro EDM: Modeling and Experimental Comparison	Omprakash Rawat , S. Kanmani Subbu, J. Ramkumar, and S.Aravindan	2011	International conference on Advanced Materials and Processing (ICAMP-2011), R M K Engineering College, Chennai, India
59.	Magnetic Field Assisted micro EDM–Simulation of Field Distribution and Experimental Investigation	Omprakash Rawat, S. Kanmani Subbu. J. Ramkumar, and S. Dhamodaran	2011	National Conference on Design and Manufacturing (NaConDM-2011), IIITD&M (Kancheepuram) 27-28, May 2011, pp. 997-992
60.	Micro EDM on Silicon	S. Kanmani Subbu, J. Ramkumar, and S. Dhamodaran	2011	26th National Convention of Production Engineers and National Seminar on New Vistas Production Technologies, Jaipur, Rajasthan, India , pp.79
61.	Fe-Cu Alloy Nano-particles Generation by Electric Discharge Machining	S. Kanmani Subbu, Jitendra Kumar Kateiyar, A. Chalvane, J. Ramkumar, and S. Dhamodaran	2011	6th International Conference on Micro Manufacturing (ICOMM-2011), Tokyo Denki University, Japan, March 7-10, 2011, pp. 213-218
62.	Plasma characteristics of dry EDM	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran	2010	RAMTM-2010, National conference on Recent Advances in Manufacturing Technology and Management, Jadavpur University, Kolkata,19-20 Feb 10.
63.	Plasma and Crater characteristics of dry EDM	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran	2010	RDMT-2010, National convension on Recent Developments in Manufacturing Technology and Management, NIT, Agartala,8-9 May 10.
64.	Effect of Humidity on Impact Behavior of Glass Fiber/Epoxy Sandwich Structures	Vivek Kumar and J. Ramkumar	2010	RDMT-2010, National convension on Recent Developments in Manufacturing Technology and Management, NIT, Agartala,8-9 May 10.
65.	High Speed Hard Turning With Minimum Quantity Lubrication	M. Ravi Sankar, and J. Ramkumar	2010	RDMT-2010, National convension on Recent Developments in Manufacturing Technology and Management, NIT, Agartala,8-9 May 10
66.	A Study on Tool Wear in Micro Electric Discharge Milling (Micro ED-milling) Process	G. Karthikeyan, J. Ramkumar and S. Aravindan	2010	RDMT-2010, National convension on Recent Developments in Manufacturing Technology

S.No.	Title	Author(s)	Year	Name and Place of Conference
				and Management, NIT, Agartala,8-9 May 10.
67.	Micro -manufacturing processes: A Brief Overview	Kumar pallav and J. Ramkumar	2010	RDMT-2010, National convension on Recent Developments in Manufacturing Technology and Management, NIT, Agartala,8-9 May 10.
68.	Invesigation of dry micro-EDM: single pulse discharge on silicon	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran	2010	International Forum on Micro Manufacturing (IFMM) 2010, Gifu, Japan, 20-23 October ’10
69.	Dry Micro-Electric Discharge Deposition of Copper on Die steel: Effect of Pulse on-time	S. Kanmani Subbu, Jitendra Kumar Kateiyar, J. Ramkumar,	2010	International Workshop on Micro Factories (IWFM) 2010, 7th International Workshop on Microfactories, Daejeon Convention Centre, Korea, 24-27 October ’10
70.	Investigating Non Conventional Machining of Silicon	S. Kanmani Subbu, J. Ramkumar, S. Dhamodaran, and Sujith Sagar	2010	3rd International & 24 th AIMTDR-2010, Andra Pradesh, India,13-15 December ’10
71.	Numerical Simulation of the Laser Induced Plsma Micro-machining Process (LIP-MM)	Kumar Pallv, J. Ramkumar, Nagahanumaiah, and Kornel F. Ehmann	2010	(IWFM) 2010, 7th International Workshop on Microfactories, Daejeon Convention Centre, Korea, 24-27 October ’10
72.	Comparative Assessment of the Laser Induced Plasma Micro-machining (LIP-MM) and the Micro-EDM Process	Kumar Pallv, J. Ramkumar, Nagahanumaiah, and Kornel F. Ehmann	2010	International Forum on Micro Manufacturing (IFMM) 2010, Gifu, Japan, 20-23 October ’10
73.	Dependence of AFF process on Rheological Characteristics of Soft styrene based organic polymer abrasive medium	M. Ravi Sankar, V. K. Jain and J. Ramkumar	2010	3rd International and 24th All India Manufacturing Technology Design and Research Conference, Andhra University, Visakhapatnam, December13-15, 2010.
74.	CAD Based Modeling and Prediction of Tool Wear in µED-milling	G. Karthikeyan, K. Sambhav, D. Santhosh and J. Ramkumar	2010	3rd International and 24th All India Manufacturing Technology Design and Research Conference, Andhra University, Visakhapatnam, December13-15, 2010.
75.	Investigation on Laser Shot Peening (LSP) of Ti alloys	S. Kanmani Subbu, J. Ramkumar, N. J. Vasa	2009	International Conference on Emerging Research and Advances in Mechanical Engineering, Chennai, India
76.	Micro Fabrication through micro EDM	G. Karthikeyan, J. Ramkumar	2009	International Conference on Advanced Manufacturing And Automation Incama WHERE?

S.No.	Title	Author(s)	Year	Name and Place of Conference
77.	Parametric investigation on Laser shock processing (LSP) parameters using Dimensional Analysis, Design and Manufacturing Issues Relevant to Automotive and Allied Industries	S. Kanmani Subbu, J. Ramkumar, N. J. Vasa	2009	IPRoMM-2009, Chennai, India
78.	Estimation of diameter during machining of Tungsten electrode by micro Block EDG process, Design and Manufacturing Issues Relevant to Automotive and Allied Industries	G. Karthikeyan, J. Ramkumar, Shalabh	2009	IPRoMM-2009, Chennai, India
79.	Dynamic Characterization of Nano Composite Pillars	Tarun Mankad, Amit Banerjee, S. Dhamodaran, J. Ramkumar and V. N. Kulkarni	2009.	ME Department Poster Presentation, IIT Kanpur,
80.	Experimental investigations into rotating workpiece abrasive flow finishing	Mamilla Ravi Sankar, V. K. Jain and J. Ramkumar	2009	International conference on Wear of Materials (WOM-09), Las Vegas, 2009.
81.	Exploring vibration aptitude and atto-gram mass sensing ability of FIB fabricated nano-pillars	Amit Banerjee, Trun Mankad, S. Dhamodaran, J. Ramkumar, V. N. Kulkarni	2009	International coference cum workshop on nanosciece and nanotechnology, Ansal institute of technolgy, Gurgaon
82.	Focused ion beam fabricated nano structures: Mass sensor to opto-electronics	S. Dhamodaran, J. Ramkumar, V. N. Kulkarni	2009	Theme meeting on quantum structures, BARC, Mumbai,
83.	Dimensional Analysis of Tool Wear Rate in u-EDM Milling Process	G. Karthikeyan, J. Ramkumar and S. Aravindan	2009	COPEN 6, International Conference on Precision, Meso, Micro and Nano Engineering, Coimbatore
84.	Nano-finishing of metal matrix composites using polymer rheological abrasive medium	Mamilla Ravi Sankar, J. Ramkumar and V. K. Jain	2009	Processing and fabrication of advanced materials (PFAM18), Tohoku University, Sendai, Japan
85.	Mechanical and Tribological behavior of Glass-Epoxy Composites Modified using XNBR Elastomer	Vivek Kumar , A. K. Singhal, J. RamKumar , S. Aravindan, S. K. Malhotra	2009	TRIBO-INDIA Conference on Tribology of Automotive Systems, IIT Delhi
86.	A study on the effect of process parameters in blind pocket milling using Abrasive Water Jet Machining	T. V. K. Gupta, J. Ramkumar, N. S. Vyas	2009	6th International Conference on Precision, Meso, Micro and Nano Manufacturing (COPEN6), 11-12 Dec. 2009, PSG College of Engineering, Coimbatore, pp. B28-32
87.	State of the art Magnetic Abrasive Finishing	Sandeep Nair and J. Ramkumar	2008	14th International Conference on Frontiers in Design and Manufacturing Engineering (ICDM), India.

S.No.	Title	Author(s)	Year	Name and Place of Conference
88.	Tribological Performance of Nano Alumina Composites	S. Aravindan and J. Ramkumar	2008	International Conference on Sintering 2008, California, USA.
89.	Rubber Composite: a Deformable Nano Finishing Tool for Viscoelastic Flow Finishing Process	Piyushkumar B Tailor, J. Ramkumar, Kamal K. Kar	2008	ICCE, KUNMING CHINA.
90.	Characterization of plasma in Micro-EDM discharge using Optical Spectroscopy	Nagahanumaiah, J. Ramkumar, Nick Glumac, S. G. Kapoor, R. E. De vor	2008	ICOMM – 08, September 2008 Carnegie Mellon, US
91.	Understanding Gap Phenomena in Micro EDM process using underwater acoustics	Anuj Kumar Garg, Nagahanumaiah, J. Ramkumar, Nick Glumac, S. G. Kapoor, R.E. De vor	2008	IWMF, Chicago, US
92.	Rheological characterization and performance evaluation of a new medium developed for abrasive flow finishing	M. Ravi Sankar, V. K. Jain, J. Ramkumar, Kamal K. Kar	2008	2nd International and 23rd All India Manufacturing Technology, Design and Research conference, IIT Madras (India)
93.	Development of MAF setup for finishing of ultra high speed shafts	R. Sandeep Nair, G. Karthikeyan, J. Ramkumar, Sunil Jha, Anil Varghese	2008	2nd International and 23rd All India Manufacturing Technology, Design and Research Conference WHERE?
94.	High Strength joints using GRPF: An experimental Study	Prasanth Kumar, Rajeev Kumar and J. Ramkumar	2007	Engineering Design IN-2007, Bangalore, India.
95.	“Rheological Characterization of Uncured Alumina Filled Butyl Composite	Piyushkumar B. Tailor, J. Ramkumar and Kamal K. Kar	2007	ICADM, Madurai, India.
96.	Composite: A Deformable Nano finishing tool	Piyushkumar B. Tailor, J. ramkumar and Kamal. K. Kar	2007	International and INCCOM-6 conference on future trends in composite materials and processing, India.
97.	Effect of electrode shape and rotation on EDM performance of Inconel 718	R. S. Pawade, S.S. Joshi, P.K. Bramankar and J. Ramkumar	2007	International and INCCOM-6 conference on future trends in composite materials and processing, India.
98.	TEM Studies on Recovery and Recrystallisation in SPD Processed Al-3%Mg Alloy	S. Giribaskar, Gouthama, J. Ramkumar and R. Prasad	2007.	International Conference on Metals And Alloys: Past, Present And Future (METALLO-2007), Indian Institute of Technology, Kanpur,
99.	Role of SiCP on the Microstructural Evolution of ECAE Processed Al-10%SiCP	S. Giribaskar, Gouthama and J. Ramkumar	2007	MMC International and INCCOM-6 Conference on Future Trends in Composite Materials and Processing (IINCCOM- 6), Indian Institute of Technology, Kanpur
100.	Influence of process parameters of electroless Ni-P coating on carbon fibers	Prabhat Agnihotri, Ariful Rahaman, Niranjan patra, J. Ramkumar, S. Basu and Kamal. K. Kar	2006	APMC, Chennai, India

S.No.	Title	Author(s)	Year	Name and Place of Conference
101.	Fabrication of ABS-Alumina Nanocomposites", Indo-Japan Workshop on Nanotechnology composites	S. Srivastava, J. Ramkumar and Kamal. K. Kar	2006	IIT Kanpur.
102.	Abrasive Flow Machining of Carbon-Carbon Composites using Styrene Butadiene Rubber	Piyush B Tailor, Ahankari S. Sureshrao, Ramkumar J. and Kamal K. Kar	2006	Nano Finishing, IRIkerala 2006, India
103.	Ultra-fine grained Metallic Materials by Severe Plastic Deformation	Sivaswamy Giribaskar, Gouthama, J. Ramkumar and Rajesh Prasad	2006	International Conference on Recent Advances in Materials and Processing), PSG College of Technology, Coimbatore
104.	Role of microwave in manufacturing	S. Aravindan, J. Ramkumar and A. K. Sharma	2004	CAMMT, India
105.	Damage Tolerancing of Drilling of GFRP composites	J. Ramkumar, S. K. Malhotra and R. Krishnamurty	2004	CAMMT, India
106.	Modelling of Left over strength in Drilling of Composites Laminates	S. K. Malhotra, R. Krishnamurthy and J. Ramkumar	2004	COMPTEST, Bristol.
107.	Indo-Japan Workshop on Nanotechnology	J. Ramkumar, "Microwave towards Nanomanufacturing	2004	Tokyo, Japan.
108.	Effect of workpiece vibration on drilling of GFRP laminates	J. Ramkumar, S. K. Malhotra and R. Krishnamurthy	2003	ISAMPE, India.
109.	Effect of Lay-up on drilling of GFRP composites	J. Ramkumar, S. K. Malhotra and R. Krishnamurthy	2003	ICCST- 2003, South Africa.
110.	Ultrasonic drilling of polymeric composites	J. Ramkumar, R. Krishnamurthy and S. K. Malhotra	2001	CANCOM 2001, Canada.
111.	On-line monitoring of material response of GFRP composites during ultrasonic machining through Acoustic Emission	J. Ramkumar, R. Krishnamurthy and S. K. Malhotra	2001	CAR & FOF 2001, South Africa.
112.	Response of High Frequency, low amplitude impact and Low frequency, High amplitude impact test on joining of SiC by microwave hybrid heating techniques	J. Ramkumar, S. Aravindan and R. Krishnamurhty	2000	International Seminar on Manufacturing technology beyond 2000, India.
113.	Online monitoring of oscillatory drilling of polymeric composites through acoustic emission	J. Ramkumar, S. Arul, S. K. Malhotra and R. Krishnamurthy	2000	High temperature Fiber composite materials-2000, India.
114.	Drilling of Fiber reinforced composites using microwave treated cutting WC inserts	J. Ramkumar, S. Aravindhan, S.K. Malhotra and R. Krishnamurthy	2000	RAMP-2001, 358-365, India
115.	Defect Evaluation through online monitoring on Drilling of Carbon reinforced composites using brazed WC Inserted Drill	J. Ramkumar, R. Krishnamurthy and S. K. Malhotra	2000	Manufacturing Engineering in twenty first century-2001, 25-28, India.

Details and status of patents filed/accepted and commercialized (International, National):

S.No.	Details of Patent	Patent File No.
1.	Stair Climbing Wheel Chair Design	238758
2.	Multicolor Interchangable Flaps and Convertible Form of Bag	201611023368
3.	Hand Pump Design	249921
4.	A Novel Tube-well Hand Pump	2727/Del/2012
5.	A Self Propelled Stair Climbing Wheel Chair	2097/DEL/2011
6.	Protective Layer for Microwave Metamaterial Absorbers and Method Thereof	201911050380
7.	A Wearable Device for Maintaining Body Temperature	201611031350
8.	A Millimetre Level Measuring Ruler for Measuring by Touch	650/DEL/2013
9.	Chair with Toilet Seat	376422-001
10.	Multifunctional Chair	376421-001
11.	Chair Walker	376423-001
12.	Glass Ampoule Breaker Design	380841-001
13.	A Thermally Stable and Reinforced Polypropylene-SiC Nanocomposite, A Method and Application Thereof	202011056116
14.	Multipurpose Proctoscope: Hinge Type Design	325093-001
15.	Multipurpose Proctoscope: Nested Type Design	325057-001
16.	Indoor Box Cricket Game Design	379880-001
17.	Algorithm for the working of Home Based Oxygen Concentrator	10142/2023-CO/SW
18.	Orthopedic Device for Alleviating Pain of A Body Part and Method Thereof	202311036298
19.	Jaw Opening device for Diagnostic Inspection	202011057432
20.	An Automatic Safety Gate System for Staircase	202011056117
21.	SITOLIA-The Table Game Design	340094-001
22.	Jaw Rehabilitation Device And Controlling Method Thereof	202311038942
23.	Device For Breaking Ampules And Method Thereof	202311047382
24.	Learn by Shapes Copyright	5346/2022-CO/L
25.	Jaw Opening Device Design	355721-001
26.	Gear Based Jaw Opening Device Design	355728-001
27.	Spring Based Jaw Opening Device Design	355749-001
28.	Matrix Based Electric Heating & Cooling Pad Design	356960-001
29.	Smart, Multilinguistic Talking Bot for Learning & Educating Children for Child Abuse Copyright	9484/2022-CO/L
30.	Multipurpose Heating System for Heating One or More Objects and A Method Thereof	202211059691
31.	Multipurpose Extension Key to reduce human contacts in public Places Design	329190-001
32.	Smart Biogas Plant Design	355718-001
33.	A Medium for Nano-finishing of Complex Component's Internal/external Surfaces and a Method for Preparation Thereof	712/DEL/2013
34.	Automatic Mechanical Pricking Machine	2898/DEL/2015
35.	A Phototherapy Unit for Treatment of Hyperbilirubinemea or Neo-natal Jaundice of Multiple Babies	873/DEL/2014
36.	A Sample Extraction Device and Operator Thereof	201811009657
37.	A Plunger to Remove Wax from Ear Design	368728-001
38.	Portable Medical Suction Device	202311028936
39.	Samaritan (Phototherapy Unit) Design	287986
40.	Interactive Board Game Design	249922
41.	Weight Training Device for Cramps, Medical Injury & Exercise in Leg Design	327146-001
42.	Lotus Shaped Holding Device Design	355860-001
43.	Seed Oil Extractor Design	355861-001
44.	Tool for Measuring and Drawing Quadrilateral Design	258028
45.	Angular Clock for Measuring Time and Angle Design	258030
46.	Tool for Measuring and Drawing Triangles Design	258029
47.	Kurzo, A Chair for Staircase Design	373048-001

48.	Respiratory Muscle Trainer Design	372698-001
49.	Systems and Methods for Dry Processing Fabrication of Binary Masks with Arbitrary Shapes for Ultra-violet Laser Micromachining	US- 14/408,721
50.	A Green Process for Fabrication of Binary Masks with Isolated Features for Micromachining and Photolithography	US - 14/760, 394
51.	An Auxiliary System for Filtering Aerosol Particles Released from An Electrical Discharge Machining (EDM) Tool	202211076615
52.	An Adjustable Air Filter Testing Device for Testing Performance of Air Filters	202211076672
53.	Metal Cutting Device With Waste-Collection Mechanism	202311055721
54.	A Metamaterial Based Wearable and A Method Thereof	201811038763
55.	Controlled Micro-texturing of Transparent Conducting Oxide Thin Films for Uniform Transparency	201811038031
56.	Apparatus for Performing an Electrochemical Micro-machining Process	202011012055
57.	Large Area Micro-Texturing on Free-Form Surfaces by Flexible-Electrode Through-Mask Electrochemical Machining	201911022950
58.	Shoe Insole Heating System	202211041677
59.	Light Weight Breathing Device for Virus and Pollution Protection Design	372611-001
60.	Apparatus for Finishing of Ball using Abrasive Flow Finishing	201811016131
61.	A Hanger to Hang a Plurality of Garments for Drying, Organizing and Exhibition/showcasing	3552/DEL/2013
62.	Fountain Tower for Wastewater Treatment Design	355879-001
63.	A Walking Device for Enhancing Capabilities of a Visually Impaired Person	202011026370
64.	A Softening and Dilation Device for Cervix of Animals	202211077148
65.	A Process for Making A House from Recycled Waste Materials	202111061685
66.	Method and Apparatus for Manufacturing Furniture from Waste Material	202111061712
67.	A Device for Magnetic Abrasive Finishing of Multiple Workpieces and Magnetic Abrasive Finishing Process	2309/DEL/2008
68.	Microfluidic Devices and Methods for Their Preparation Use	2232/DEL/2014
69.	Butt Joint using Reinforced Adhesives	679/DEL/2007
70.	Polymeric Nanocomposite Films with Embedded Channels and Methods of Their Preparation and Use	US - 15/115, 263
71.	Mn-Al-Fe Impregnated RGO Hybrid Composite for Arsenic Adsorption and its Sludge as Super-capacitor	201911002684
72.	A Process for Synthesis of Nano Particles of LiNi0.5C0.5PO4 (LNCP) and Use Thereof	201911049732
73.	Surface Finishing Composition For AFM Process and AFM Process Using the Same	201911029291
74.	A Hydrogen/methanol Based Low Working Temperature Polymer Electrolyte Membrane Fuel Cell	1586/DEL/2015
75.	A Novel Viscoelastic Media Used for a Nano-finishing of Materials Through Abrasive Flow Machining Process and a Method of Manufacture Thereof	591/DEL/2007
76.	Parametric Anisotropic BRDF for 3D Surface Reconstruction and Micro Texture Evaluation	201711001182
77.	A Machining Device for Turning and Boring of an Electrically Conducting Workpiece Using Electrochemical Machining	202211076892
78.	Irilla (Lamp) Design	292052
79.	Peltify Wearable Device for Thermoregulation Design	277649
80.	Business Purpose Utility Vehicle-vegetable Cart Design	277648
81.	Business Purpose Utility Vehicle-ironing Cart Design	277651
82.	Business Purpose Utility Vehicle-saloon Design	277652
83.	Bicycle for Carrying Food Articles Design	289821
84.	Milkman Bicycle Design	289822
85.	Bicycle for Vegetable Transport Design	289823

86.	Rotatory Abrasive Flow Finishing Process for Finishing and Texturing of Internal and External Surfaces of Hard and Composite Materials and an Apparatus Therefore	811/DEL/2009
87.	Magnetic Float Levitative Finishing	883/DEL/2007
88.	Grater Design	325203-001
89.	Automated Subglottic Aspiration Device	201811016906
90.	A Multipurpose Transporter with Modular Configuration Design	232708
91.	A Multipurpose Transporter with Modular Configuration	3157/DEL/2010
92.	The Drift-battery Operated Campus Vehicle Design	234987
93.	Fabrication of Jute Fiber Sandwich Composites	1688/DEL/2008
94.	Packaging System for Large Caliber Ammunition Design	280638
95.	A Packing Case for One or More Large-caliber Ammunition Shells	201711043201
96.	A Broncho training Device	920/DEL/2014
97.	System, Method and Device for Responsive Advancement of Mandible	201811009344

121 Graduated Students in M. Tech, M. Des, MS and Ph. D:
- There are 16 students currently pursuing their Ph. D

S.No.	Title	Name (Author, Supervisor)		Degree	Year
1.	Experimental Investigation and Modeling of tool heath monitoring system using multiple sensor data-fusion approaches in turning of hardened steel	Kane, Amarjit Prakashrao	Choudhury, Sounak; Ramkumar, J	Ph.D	2022
2.	Flexible Dielectric and Composite Materials for Microwave Metamaterial Applications	Chaudhary, Kajal	Ramkumar, J; Ramakrishna, S Anantha	Ph.D	2022
3.	Shape dependent electrochemical performance of Co-doped olivine phosphate (nano-sheet-, sphere-, plate and micro-brick-, leaf-, and cauliflower-like particles) for secondary, thin, and flexible Li-ion battery applications	S Kiran Kumar	J Ramkumar	Ph.D	2022
4.	Experimental investigation and modeling of tool health monitoring system using multiple sensor data-fusion approaches in turning of hardened steel	Kene, Amarjit Prakashrao	Choudhury, Sounak Kumar; Ramkumar, J	Ph.D	2022
5.	Effect of composition and microstructures on the cavitation behaviour of steels	Arun Rajput	J Ramkumar	Ph.D	2022
6.	Effect of composition and microstructures on the cavitation behavior of steels	Rajput, Arun	J Ramkumar; Mondal, Kallol	Ph.D	2021

S.No.	Title	Name (Author, Supervisor)		Degree	Year
7.	Fundamental Insights into the Electrical Discharge Micromachining Process for Performance Enhancement	Singh, Mahavir	J Ramkumar	Ph.D	2021
8.	A Study on the Process Fundamentals and Improvements in Wire Electrochemical Micromachining & its Application in Large Surface Area Texturing	Sharma, Vyom	J Ramkumar	Ph.D	2021
9.	Decentralized active power management and control of a microgrid using multi-agent based approach	Tomar, Krishna Kumar Singh	Singh, Sri Niwas; J Ramkumar	Ph.D	2021
10.	Tribological Performance and Characterization of Individual and Hybrid Nanomaterials as Lubricant Additives in SAE Automotive and Biodegradable Lubricants	Vardhaman, Ajay B S	J Ramkumar; Amarnath, M	Ph.D	2021
11.	Development of machining techniques for fabrication of large area metamaterial absorbers	Singh, Gaganpreet	J Ramkumar	Ph.D	2020
12.	Role of Ceramic and Carbonaceous Reinforcements on Mechanical, Tribological and Anticorrosive Properties of Electrodeposited Cr-based Coatings	Tripathi, Pragya	J Ramkumar; Balani, Kantesh	Ph.D	2020
13.	Large area micro-texturing for flat, curved and free-form metal surfaces using electrochemical micromachining	Patel, Divyansh	Jain, Vijay Kumar; J Ramkumar	Ph.D	2020
14.	Estimation of throttle and platform servo controls using artificial neural network for a powered parafoil unmanned aerial vehicle	Choudhury, Bisheswar	J Ramkumar; Philip, Deepu; Shyam, Radhey	Ph.D	2019
15.	Differential Finishing of Freeform/Sculptured Surfaces using Inverse Replica in Rotational-Magnetorheological Abrasive Flow Finishing (R-MRAFF) Process	Nagdeve, Leeladhar	J Ramkumar; Jain, Vijay Kumar	Ph.D	2018
16.	Arsenic Remediation, Mitigation and Surface Complexation Study onto Ni, Co, Cu, and Mn Based Ternary Metal Oxide Adsorbents (M-Al-Fe)	Penke, Yaswanth Kumar	J Ramkumar; Kar, Kamal Krishna	Ph.D	2018
17.	Micromachining of thin films and surfaces of metals and polymers using excimer laser	Akhtar, Syed Nadeem	J Ramkumar; Ramakrishna, S Anantha	Ph.D	2015
18.	Optical spectroscopy and Microscopic Investigations of Dry Micro EDM: Fundamentals and Applications	S, Kanmani Subbu	J Ramkumar	Ph.D	2014

S.No.	Title	Name (Author, Supervisor)		Degree	Year
19.	In-Process Monitoring of Abrasive Water Jet Milling	GUPTA, T V K	J Ramkumar; Vyas, Nalinaksh S; Puneet, Tandon	Ph.D	2014
20.	Nano-finishing of Metal Matrix Composites using Rotational Abrasive Flow Finishing (R-AFF) Process	Mamilla, Ravi Sankar	Jain, Vijay Kumar; J Ramkumar	Ph.D	2012
21.	Micro Electric Discharge Milling (µed-Milling) Process For Fabrication Of Complex Micro-Features	Karthikeyan, G	J Ramkumar	Ph.D	2011
22.	Design and Development of a Fused Deposition Modeling Process through Application of Value Engineering Techniques	Chhetri, Tara	Ramkumar, J; Singh, Amandeep	M.Tech	2024
23.	Designing of Additively Built Acoustic Metamaterial to improve Acoustic Behaviour and Performance	Zeeshan, Mohd	Ramkumar, J	M.Tech	2023
24.	Improving Efficiency of Pneumonia Detection in Chest X-Rays Using Convolutional Neural Networks Based Deep Learning Model	Khan, Mohammad Shahid	Ramkumar, J	M.Tech	2023
25.	Permeation of air through a graphene sheet: a molecular dynamics study	Luwaria, Parth	Kar, Kamal Krishna; Basu, Sumit; Ramkumar, J	M.Tech	2023
26.	Generation of a textured surface using Wire Electrochemical Micromachining and analysis of the wetting behaviour	Yadav, Krishnakant	J Ramkumar	M.Tech	2022
27.	Influence of Zirconia (ZrO2.8Y2O3) Coating on the Copper Tool in EDM Machining	Sahu, Rohit Kumar	Choudhury, Sounak Kumar; J Ramkumar	M.Tech	2021
28.	Analytical Modelling of Elliptical Vibration Cutting (EVC) to Predict Cutting Forces	Shivaji Shirale, Arvind	J Ramkumar	M.Tech	2019
29.	Automation of the Excimer Laser Micromachining and Two Photon Polymerization process for large area fabrication	Mishra, Deepak	J Ramkumar	M.Tech	2019
30.	Waste fly ash mixed polymeric media for surface finishing of industrial parts through abrasive flow machining process	Gupta, Gopal Ashok	Kar, Kamal Krishna; J Ramkumar	M.Tech	2019
31.	Investigations into Electrochemical Milling for the generation of complex 3D Microstructures	Dayal, Prabhu	J Ramkumar	M.Tech	2019
32.	End-of-Life Analysis of Automobile Lead-Acid Batteries: A System Dynamics Approach	Joshi, Brahmesh	J Ramkumar; B, Vipin	M.Tech	2019
33.	Theoretical and Experimental Analysis of Wire Electrochemical Micromachining (Wire-EMM) Process	Sharma, Vyom	J Ramkumar	M.Tech	2018
34.	Fabrication of flexible absorber using Screen Printing Tecnology	Singh, Gaganpreet	J Ramkumar	M.Tech	2018

S.No.	Title	Name (Author, Supervisor)		Degree	Year
35.	Thin Wall Micromachining of Ti-6Al-4V using Wire Electrical Discharge Machining Process	Singh, Mahavir	J Ramkumar	M.Tech	2018
36.	Numerical modelling of micro electric discharge machining using multi-spark approach	Chaubey, Devesh Kumar	J Ramkumar	M.Tech	2018
37.	Performance Enhancement Of Ti-6Al-4v Alloy In Minimal Quantity Lubrication Grinding Using Nanofluids	Kumar, Tarun	J Ramkumar	M.Tech	2017
38.	Study of thermally produced cuprous oxide as a low cost photovoltaic material with fabrication and characterization of Cu/Cu2O Schottky junction and p-Cu2O/n-ZnO heterojunction solar cell	Danayak, Somnath	Kar, Kamal Krishna	M.Tech	2017
39.	Finishing of Ball Using Abrasive Flow Finishing	Dubey, Dhananjay	J Ramkumar	M.Tech	2017
40.	Surface micro-channeling of metals via Electro-chemical dissolution	Kumar Ravi	J Ramkumar; Mondal, Kallol	M.Tech	2017
41.	Parametric optimization and experimental study of cryogenic treated and modified tool geometry in CFRP drilling	Pandey, Dibyanshu	J Ramkumar	M.Tech	2017
42.	Process Parameters Optimization in Wire Feed Metal and Polymer Additive Manufacturing	Raj, Ravi	J Ramkumar	M.Tech	2017
43.	Effect of Attenuating Medium on the Tribology of Laser Peened Armoured steel	S, Gowthaman	J Ramkumar; Balani, Kantesh	M.Tech	2017
44.	Design and development of mrf process for nanofinishing of ti6al4v discs	Gundavarapu, Parameshwari	Jain, Vijay Kumar; J Ramkumar	M.Tech	2017
45.	Modelling and Validation of micro feature generated on metal surface using Electro Chemical Micro Machining (ECMM)	Karupothula, Prashanth	J Ramkumar	M.Tech	2016
46.	Finishing of helical gears using abrasive flow finishing	Sharma, Dipti	Kar, Kamal Krishna; J Ramkumar	M.Tech	2016
47.	Development of experimental methodology to Determine the optimum Mechanical operating Pressure for an electrolyser	Parashtekar, Alhad	J Ramkumar	M.Tech	2016
48.	Experimental investigations on electric discharge trepanning of difficult-to-cut aerospace materials	Kumar, Vishal	J Ramkumar; Gupta, R K	M.Tech	2016
49.	Parametric Anisotropic BRDF for 3D Reconstruction and Micro-Texture Evaluation	Kumar, Hitendra	J Ramkumar; Venkatesh, K S	M.Tech	2016
50.	Design and Development of a Mobile Gamma CT Scanner	Srivastav, Abhishek	Munshi, Prabhat; J Ramkumar	M.Tech	2016
51.	Analysis of Mobile Gamma Ray CT Scanner	Dwivedi, Parul	Munshi, Prabhat; J Ramkumar	M.Tech	2016

S.No.	Title	Name (Author, Supervisor)		Degree	Year
52.	Stress corrosion and alternate wear-corrosion effects on the degradation of low carbon steels	Murkute, Pratik	J Ramkumar; Mondal, Kallol	M.Tech	2016
53.	Surface Grinding of Duralumin using Minimum Quantity Lubrication	Mathur, Sudhanshu	J Ramkumar	M.Tech	2016
54.	Investigations into Internal Magnetic Abrasive Finishing of a Revolver Barrel	Kajal, Sahil	Jain, Vijay Kumar; J Ramkumar	M.Tech	2015
55.	Prediction and quantification of defect during machining of carbon fiber reinforced polymer (CFRP) composites	Islam, Faisal	J Ramkumar	M.Tech	2015
56.	Effect of carbon morphologies on friction stir deformation of Al 6061 alloy	Kumar, Binit	J Ramkumar; Balani, Kantesh	M.Tech	2015
57.	Laser Surface Texturing of Ti-6Al-4V under Confined Environment	Kumar, Ashwani	J Ramkumar	M.Tech	2015
58.	Precision machining of high aspect ratio holes in Ti-6Al-4V alloys using magneto-EDM process	Singh, Vijay Kumar	J Ramkumar	M.Tech	2014
59.	Multi-objective optimization of EDM parameters on machining carbon-carbon composites	Dungroth, Ravi Kumar	J Ramkumar	M.Tech	2014
60.	Nano finishing of micro channels for micro reactor	Singh, Neha	J Ramkumar	M.Tech	2014
61.	An Experimental Investigation on Surface Grinding of Ti6Al4V using MQL technique	Singh, Chandra Bhan	J Ramkumar	M.Tech	2014
62.	Vibration assisted Plasma Arc Machining of Mild Steel	Nandan, Devaki	J Ramkumar	M.Tech	2014
63.	Fabrication and Evaluation of Mechanical Properties, Tribology and Piercing Behaviour of Groundnut Shell-PVA/PP Composites	Shah, Randhir Kumar	J Ramkumar	M.Tech	2014
64.	Fretting Wear Behavior of Laser Peened Ti-6Al-4V	Kumar, Dharmesh	J Ramkumar	M.Tech	2014
65.	Edible Pulse Characterization Using IITK X-Ray Mini CT Scanner	Sharma, Rashmi	Munshi, Prabhat; J Ramkumar	M.Tech	2014
66.	Fabrication of Complex Circuit Using Electrochemical Micro Machining on Printed Circuit Board (PCB)	Singh, Jitendra	Jain, Vijay Kumar; J Ramkumar	M.Tech	2014
67.	Fault detection and classification in drilling using vibration analysis	Kumar, Adarsh	J Ramkumar	M.Tech	2013
68.	Design of Math products to impart spatial understanding in children	M, Jeyakumar	J Ramkumar	M.Tech	2013
69.	Fabrication and Flow Analysis of Micro- Channels for Bipolar Plate of Polymer Electrolyte Membrane Fuel Cell	Kumar, Charchit	Kar, Kamal Krishna; J Ramkumar	M.Tech	2013

S.No.	Title	Name (Author, Supervisor)		Degree	Year
70.	Data Error Analysis of In House Built Multi-Detector Gamma Ray CT scanner using first kanpur theorem	Shaikh, Rehan Ahmed	Munshi, Prabhat; J Ramkumar	M.Tech	2013
71.	Fabrication and Characterization of Complex Micro Channels by Micro Electric Discharge Milling (µ-ED Milling)	Shukla, Vaibhav	J Ramkumar	M.Tech	2012
72.	Numerical simulation and experiments of nano pulsed U.V. laser on metal and polymer	Choudhary, Hirendra	J Ramkumar	M.Tech	2012
73.	Design of multidetector system for gamma ray imaging and nuclear safety	Kanwal, Virendra Singh	Munshi, Prabhat; J Ramkumar	M.Tech	2011
74.	Magnetic abrasive finishing with a ball-end tool and force analysis	Sathua, Chandra Sekhar	Jain, Vijay Kumar; J Ramkumar	M.Tech	2011
75.	Modeling and Simulation of Magnetic Field Assisted Single Discharge Micro-EDM	Rawat, Omprakash	J Ramkumar	M.Tech	2011
76.	Novel Synthesis of Micro- and Nano- Granular Fe-Cu alloy by Electric Discharge Machining	Katiyar, Jitendra Kumar	J Ramkumar; Dhamodaran, S	M.Tech	2010
77.	Investigation of optimizing parameters for Blind Pocket milling using Abrasive water jet machining	Cholla, S Chandra Bose	J Ramkumar; Kalra, Manjeet S	M.Tech	2009
78.	Theoretical Modeling on Magnetic Abrasive Finishing Process	Dutt Roy, Soumyajyoti	J Ramkumar	M.Tech	2009
79.	Exploring vibrational aptitude and atto-gram mass sensing ability of composite nano-pillars	Mankad, Tarun	J Ramkumar; Kulkarni, V N	M.Tech	2009
80.	Fabrication and performance evaluation of thin sandwich composites	Hemanth Kumar, P	Venkitanarayanan, P; J Ramkumar	M.Tech	2008
81.	Finishing of shafts for ultra high speed gas bearings	Nair R, Sandeep	J Ramkumar	M.Tech	2008
82.	Investigations into rotary assisted abrasive flow machining (ra-afm) process	Varghese, Anil	J Ramkumar	M.Tech	2008
83.	Experimental Investigation on Modified AFM Process	Mondal, Subrata	J Ramkumar	M.Tech	2007
84.	Experimental and numerical analysis of grrp sandwich composite wall panels	Srinivas, Putta	Kumar, Prashant; J Ramkumar; Kishore, N N	M.Tech	2007
85.	Numerical simulation of the Degradation Behavior of Carbon-Carbon composites during Carbonization Process	Pandya, Chinmay	Kar, Kamal Krishna; J Ramkumar	M.Tech	2007
86.	Characterization of frp-joints	Singh, Jitendra Kumar	Kumar, Prashant; J Ramkumar	M.Tech	2007
87.	Fabrication and modeling of ionic polymer metal composites for use as actuators	Akhtar, Syed Nadeem	Kar, Kamal Krishna; J Ramkumar	M.Tech	2007
88.	Experimental study of a gfrp sandwich panel for earthquake-resistant buildings	Singh, Devesh	Kumar, Prashant; J Ramkumar	M.Tech	2006

S.No.	Title	Name (Author, Supervisor)		Degree	Year
89.	Microstructural Characterization of Deep Drawn Low Carbon Steel	Kumar, Rajesh	J Ramkumar; Gouthama	M.Tech	2006
90.	Performance Evaluation of Abrasive Flow Machining	Tailor, Piyushkumar B	J Ramkumar; Kar, Kamal Krishna	M.Tech	2006
91.	Experimental Investigation of Formability Enhancement Using Warm Deep Drawing	Kulkarni, Sumedh Suresh	J Ramkumar; Gouthama	M.Tech	2006
92.	Devlopment and characterisation of jute sandwiched structure	Naveen, Gopal Voruganti	J Ramkumar; Kumar, Prashant	M.Tech	2005
93.	Determination of limiting blank holding force and cavity pressure in hydromechanical deep drawing	Deep, K S	J Ramkumar; Reddy, N Venkata	M.Tech	2005
94.	Design and Development of Innovative Air Mattress to Reduce Pressure Ulcers	Tiwari, Arush	Ramkumar, J	M.Des.	2023
95.	Open-Interact-Birth: An interactive box for mothers in their prenatal journey	Oraon, Aditi	Ramkumar, J	M.Des.	2023
96.	Design for Pride : Empowering ASHA workers through a personalized bag	Usama, Ali	Ramkumar, J	M.Des.	2023
97.	Flip: Play : Release – Designing to reduce stress for Millennials through Game theory	Kakkar, Rohit	Ramkumar, J	M.Des.	2023
98.	Making Brainstorming Method Robust for Everyone	Sunil, Shreyansh	Ramkumar, J	M.Des.	2023
99.	Treat. Record. Share: Making Patient health record easy to manage by nurses through design thinking	Upadhyay, Shruti	Ramkumar, J	M.Des.	2023
100.	Designing Interactive Souvenir for IIT Kanpur	Sreshth, Anushka	Ramkumar, J	M.Des.	2023
101.	Designing animal stretcher system through prototyping from the early design stage - A design exploration	Perepu Kameswara, Sriram	Ramkumar, J	M.Des.	2023
102.	Medical Emergency Support Application Design for Outstation Travelers	Rai, Madhavi Lata	Roy, Satyaki; Ramkumar, J	M.Des.	2023
103.	Indigenous Design and Development of a Low Cost Manual Tissue Micro-Aarrayer Device	Dey, Pushpal	J Ramkumar	M.Des	2017
104.	Design of a subglottic secretion drainage device and artificial inseminator for cattle	Sudheendran Kumar, Amal	J Ramkumar	M.Des	2017
105.	Design and development of a multi utility assistive device for people with mobility impairment	C, Vimal	J Ramkumar	M.Des	2017
106.	Design For Elderly: Passive Health Monitoring & Object Tracking	Lakhani, Kirit	J Ramkumar	M.Des	2016
107.	RogMitra : An economical, efficient and portable blood testing device for haemoglobin	Kothari, Rahul	J Ramkumar	M.Des	2016

S.No.	Title	Name (Author, Supervisor)		Degree	Year
108.	Ergonomical interior design for truck cabin	Kurade, Sushil Suresh	J Ramkumar	M.Des	2016
109.	Design and manufacturing of a medium altitude long endurance unmanned aerial vehicle	Kushwaha, Pankaj	J Ramkumar	M.Des	2015
110.	Products for Physically Challenged	Bhagath, Pagadala Paparao	J Ramkumar	M.Des	2015
111.	Peltify–wearable device for thermoregulation	Kumar M, Shiva	J Ramkumar; Racherla, Uday Shanker	M.Des	2015
112.	To Design the Exterior of a High-end Luxury Inter-state Bus	Mitra, Akash	J Ramkumar	M.Des	2013
113.	Interactive systems for visually challenged	Ayyavu, Madhavan	J Ramkumar	M.Des	2012
114.	Exploring Vehicular Movements and Behavior at T intersections	Ghongade, Abhitosh	J Ramkumar; Bhushan, Braj	M.Des	2011
115.	Design and Development of an Interactive Board Game, Taking Inspiration from Ideas of Indian Logics	Jagatani, Sairam	J Ramkumar; Guha, Nirmalya	M.Des	2011
116.	"DRIFT…" – three-wheeler for a green ride	Sekar, Sathish	J Ramkumar; Roy, Satyaki	M.Des	2011
117.	A novel method for selective boring of thin-walled tubes using electrochemical micromachining	Kumar, Naveen	Ramkumar, J; Singh, Amandeep	MS	2023
118.	Micro patterning of large surface area using multiple electrodes in micro-electrochemical machining process	Thalkar, Mahesh	J Ramkumar	MS	2018
119.	Numerical Study of Transient Thermo-Fluidic Behaviour of the Melt Pool during Laser Welding	Shah, Ambuj	Kumar, Arvind; J Ramkumar	MS	2017
120.	Theoretical and Experimental Study of Wire Electrochemical Turning Process	Tyagi, Aakash	J Ramkumar; Jain, Vijay Kumar	MS	2017

Research innovation achieved, work completed or being perused:

(i) Development in Defense Technology (protective textiles).

Currently, RF sensors are available in market that can detect movement of vehicles, human beings, animals, birds etc. Aircraft based RADAR, unattended ground sensors and short range battlefield surveillance RADAR are deployed in warfare areas, or National borders to monitor the movement of soldiers, vehicles / tanks etc. Here, the objective was to design and develop novel textile based metamaterial absorbers, which can be worn by soldiers (integrated into bullet-proof jackets, helmets) or can be wrapped around army vehicles/tanks, for RADAR Stealth. These textiles based metamaterials that are developed and integrated into present-day optical camouflage uniforms and skirting, to absorb most of the microwave energy and reflect negligible energy. This significantly reduces the range and efficacy of RADAR and enemy RF based surveillance systems. Specifically, the outcomes are:

1. Development of textile based metamaterial absorbers for C (4 - 8 GHz) and X (8 -12 GHz) bands that are thin and light weight.
2. Field trials were conducted to evaluate performance of the absorbers. The metamaterial based absorber clothes were worn by personnel wrapped around the vehicles and real time testing was performed using commercially available RADAR / RF security systems.
3. Ruggedization of the textile metamaterials for water resistance, wearable/breathable jackets, development of metamaterials for use in clothing in warm or cold conditions is carried out.

The technology is tested and proven by "National Security Advisor (NSA)" office. The field tests were conducted at Jaisalmer and Jodhpur, Rajasthan in March 2020 using radar camera.

(ii) Design and development in Aerospace and Missile streams: a novel micro Wire-ECM process

Surface texturing is a technique of imparting roughness of any shape and orientation on the surface for the purpose of inducing desired tribological, thermodynamic, and wettability properties. The science of surface texturing is inspired and abstracted from nature. One such example is the existence of micro pillars on lotus flower leaves which makes the surface hydrophobic. In the work reported herein, principles of **Electrochemical Micromachining (EMM)** are used for generating micro textures on flat and cylindrical surfaces of different engineering materials. Multiple electrodes are used for simultaneous machining so as to reduce the processing time and make the process economically exploitable.

1. Experiments were designed and conducted to test the applicability of the designed machining setup for machining micro textures on flat surface of different workpiece materials. Different types of micro textures namely, micro-pillars, micro-dimples, micro-channels, and sharklet patterns were successfully machined.
2. An empirical model based on the experimental results is developed to evaluate the influence of different process parameters on machining efficiency and accuracy.
3. To demonstrate the capabilities of the developed setup for machining on cylindrical surfaces as well, different types of micro patterns such as micro-grooves, and micro-threads were machined on three different workpiece materials. Characterization of these features was done using techniques such as SEM imaging, EDS, 3D profilometry.

Finally, using the same machining setup and optimum process parameters, texturing was done on different real life components, and for making aerospace and missile parts such as the components and shells used in Man Portable Anti-Tank Guided Missile (MPATGM), for which no other process could do the precision machining of low thickness parts.

(iii) Development of the biomedical implants nano-finishing: establishing Magnetic Abrasive Finishing technology

Among all the free-flowing abrasive finishing processes, Magnetic Abrasive Finishing (MAF) process has emerged as a viable alternative. Magnetic abrasive finishing process has been successful in replacing the conventional finishing processes because it is able to finish parts of different geometries, be it flat, curve, freeform surfaces, and other complex geometries with a high level of surface finish. A detailed research to develop the technology from the theoretical models and simulation to the physical machine setup was carried out:

1. Machine setup for nano-finishing of internal hemispherical cup surface using MAF Process was designed and fabricated.
2. Several combinations of flexible magnetic abrasive brush containing different compositions of Boron Carbide (B4C) abrasive and iron particles were made. Brush containing more than 50% volume of the iron magnetic particles had magnetic field strength of more than 150 Gauss within a distance of 2 mm from the surface of the brush and hence, were selected for the experimentation.
3. The highest surface finish of 79 nm was obtained at a radial distance of 40 mm from the center of the cup with an overall average of 110 nm.
4. Although the developed setup finishes a particular geometry with high accuracy and surface finish, a newly developed reverse engineering technique discussed in this report for finishing of any type of surface geometry including curved and free-formed surfaces is the ideal methodology to approach the high-level finishing of metallic surfaces.

As the Magnetic Abrasive Finishing process involves the interaction of millions of abrasive cutting particles with the workpiece surface at any given time, tracking each particle and theoretical prediction through predictive analytical model is out of scope. Therefore, predictive numerical modelling inspired from collective research works was consolidated and was developed to predict the final surface roughness and material removal rate. The outcome of simulation results and its comparison indicated a strong validity of the developed model and is recommended for industry users to work on the predictive numerical model while dealing with machining or finishing processes involving large number of cutting edges.

The efficacy of the process is validated by using the concept on the biomedical products such as knee implants, shoulder prosthetics and bone fixation plates.

(iv) Development in Medical Devices stream:

a) DeeScope, A Novel Integrated System for Gynaecological Examination.

The developed device is an invasive endoscope for vaginal and cervical examination. It helps in making a visual diagnosis of various discharges and lesions as well as allows collecting cytology sample for cervical cancer screening in the most optimal way. The below are the product features.
1. Device is useful for routine evaluation of lower genital tract.
2. Device with a light source and a camera attached to an external monitor screen.
3. Device also have a separate channel for inserting sampling cytobrush. This brush is used to collect cytology sample for cervical cancer screening under direct magnified vision.
4. Inflatable balloon to separate the vaginal walls circumstantially for better view.
5. Direct air into the lower vaginal tract to inflate the cavity, this air is released by itself when probe is removed from the tract.

The device is novel and is being used in the multiple hospitals and by many surgeons. The novel features being, a) this is a single device to provide both visibility and sample collection, b) it can be used for routine gynae check and cancer screening simultaneously, c) it assists in CaCx detection and more.

b) Assistive Technology Intervention for people with locomotion Disability for overcoming architectural barriers:

The focus of assistive technology development is on increasing propulsion efficiency while climbing through steps.
1. A detailed kinematic and dynamic study on device structure and mechanism is conducted for making it more comfortable for user while movement on ground as well as on steps.
2. Dedicated kinematic models for this wheelchair are developed as current step climbing technologies are different from this Y-wheel based technology.
3. Improvisation in design is based on a thorough understanding of the wheelchair-user-interface. Therefore, careful assessment of the wheelchair-user interface, as well as complete and standardized reports on the methods and results were strongly encouraged.
4. Modelling different structures for wheel chairs and simulating them under constraints of stability, structural integrity, vibrations and jerks on simulation software such as ANSYSTM contributed in generating data for best possible engineering design of wheel.
5. One of the most needed biomechanical study in this project is the force application strategy of the stair climbing wheelchair users in Indian context.
6. Improving propulsion efficiency, while at the same time minimizing the incidence of repetitive strain injuries, has been a logical consequence of understanding force application strategies under different external conditions.

Electromyography study and postural evaluation is conducted to verify the human comfort during wheel chair drive along straight and staircase paths.

Incubation of a technology company/ Creation of Start-up and any Technology demonstration (outline individual contribution):

(i) Development of Sabjikothi, a preservative setup for use for vegetable/fruit vendors

It is observed that a big chunk of the produce could not make it to the market at all and ends up getting wasted due to the extremely short shelf life of horticultural & floricultural produce and the underdeveloped storage, transportation, and cold chain facilities. This is not the challenge for just one village or state, but the whole nation.

This situation motivated the applicants to develop an optimum cost-effective and energy efficient portable solution for all storage and transportation needs of post-harvest produce, which motivated the applicants to come up with the idea of 'Sabjikothi/Preservator' along with a startup named Saptkrishi Scientific pvt. Ltd., Bhagalpur.

1. The team developed wheel-mountable, microclimate-based storage 'Sabjikothi', which is cost-effective, portable, and extends the shelf-life while preserving the freshness of fruits and vegetables anywhere between 5 to 30 days.
2. With the affordable technology, the farmers do not need to sell their produce at meager amounts to the traders in town. They can themselves store and carry their produce to the market without worrying about its perishability.
3. The users can earn 40-50% more than what they were earning from selling to traders in town.

This setup is established under the Ministry of MSME, DST (SERB) and is tested in the socially backward areas. We will be creating jobs for families in rural households by engaging them in various activities from manufacturing to delivery.

(ii) Electrolysis based Portable Oxygen Generator

The candidate for the position of mentor collaborated with Siddlabls Pvt. Ltd., Kanpur, on the fundamental framework of the procedure while researching similar items utilising a reverse engineering strategy. The observed product used hydrogen peroxide as an ionising agent to make the water conductive and electrolysis to produce oxygen from de-ionized water. The acquired oxygen was kept in a surge tank and then pumped to an outlet tube by a built-in nebulizer. Using an oxygen analyzer, the exit air's purity was determined to be 85% at 6 litres per minute. As some purity and flowrate were noticed, the product seemed to have great potential. To be useful, the product requires numerous upgrades. First of all, the goods was badly made and lacked suitable branding and certification.

It was emitting a strong smell that was presumably hydrogen peroxide in the oxygen exit and urgently needed deodorising. Compared to a PSA oxygen concentrator, the device's noise level was minimal, and its technology was straightforward.

Following a careful examination of the product, it was determined that several improvements might be made.

1. The development of an electrolysis process for producing oxygen.
2. Electrocatalyst parameters for water splitting, including increased temperature, electrode distance, and type.
3. A batch of electrolysis-based oxygen generator beta prototypes.

(iii) Development of Test-rig for Oxygen Concentrator and separator setups

The startup Pinaka Technologies Pvt. Ltd., Kanpur worked with Professor Ramkumar and developed minimum viable product that needs to be replicated such that Oxygen Concentrators can be tested for the reliability of itss performance. The minimum viable products are sent to other testing facilities such as International Center for Automotive Technology & other certifying bodies for third party certification against safety, electromagnetic compatibility, particulates, bio compatibility etc. for confirmation on suitability of obtained concentrated oxygen for medical use.

A separate test rig is developed with trained personnel for various testing of Concentrators for Specification confirmation tests, electrical surge tests, component cyclic performance test, purity tests, noise level tests, gas analyzing, ergonomics tests etc.

The use of zeolite is limited to its supply and India is are more dependent on its import. An alternative molecular material to replace the commonly used zeolite is also at focus of this work. Following are the deliverables:

1. Test rig for Oxygen Concentrator parameters characterization
2. Transferable monograph, influence of environment on performance
3. Alternative molecular material test results and usage process
4. Oxygen separator setup for use in health centers

For hospitals already having medical compressed air supplies team developed a unique modular oxygen separator unit that is much portable for bedside application. This was also tested at nearby hospital and results are much promising.

(iv) Recycling the tubes & tires: DeDzines

Prof. Ramkumar is the advisor to the organization. A visionary sustainable sui generis company which transfigures scrap tires into beautiful, exquisite furniture. As manufacturing in a sustainable manner is the need of the hour it's essential for us to look out how we utilize the existing waste materials or products. Thus using rubber for making products like tiles, chairs, swings & planters, we could create a bridge between utility & waste products & then amplify the products by opening them for use in the public.

DeDzines recently inaugurated a green park, in Kanpur which is open for the public & is having products made through this technique.

(v) A bio composter: Bhoomi

In a significant development towards efficient waste management, and IIT Kanpur's resolve to mitigate Climate Change, Agnys Waste Management Pvt. Ltd., a SIIC IIT Kanpur-incubated company, has developed an automatic composting machine known as BHOOMI, in collaboration with Imagineering Lab, IIT Kanpur. BHOOMI stands for Bio-composting of Horticulture & Organic waste into Manure Indigenously. The Research & Development for the device has been supported by Engineer's India Limited. The device is equipped with

advanced features like carbon filters, shredders, air pumps, solar panels, which systematically convert waste into manure in just 10-20 days. The process is more convenient and rapid than the conventional technologies.

With surmounting concerns for Climate Change, the need for proper waste management is of paramount importance. To achieve this, it is also necessary to bring effective innovations at the grass root level. In India, around 60% of the total waste is organic waste and hence a rapid waste composter was the need of the hour. BHOOMI is a significant development in this regard as it follows the basic science of composting and converts the organic waste into manure in just 10-20 days making it one of the fastest composting solutions.

(vi) LCB Fertilizers

Prof. Ramkumar has nurtured LCB Fertilizers, which is a combined effort of more than 50+ people who belong to farmer families. The team includes chemical engineers, microbiologists, mechanical engineers, MBA holders, and many more skilled and unskilled workers who work with the motto "from the farmers, by the farmers, and for the farmers." Incubated at SIIC IIT Kanpur and collaborated with institutes IIM Kozhikode, MMMUT Gorakhpur, and REC Ambedkarnagar. We hold grants like NIDHI PRAYAS by DST-INDIA, Startup India Seed Fund Scheme, Start In Up, Capri foundation, CITI India, and many more. They are currently working with more than 6000 farmers from 35+ districts of UP, 10+ of Bihar, some from Jharkhand, Haryana, Maharashtra, Karnataka, etc.

1. Soil Structure

Due to the organic matter in organic fertilizer, soil structure is improved, resulting in the soil's ability to hold onto water and nutrients increases.

2. Reduce Fertilizers and Pesticide

Although organic fertilizer is expensive than synthetic, it can reduce the need for pesticides and the overall nitrogen, phosphorus, and potassium requirements. Because of the reductions, organic fertilizer can be cost neutral and sometimes a cost savings.

3. Plant Damage Threat Avoided

Some synthetic fertilizers can cause plant damage to leaves and roots. This is less likely with organic fertilizers.

Farming is Essential livelihood in India, LCB Fertilizers is connecting framers of villages and helping them by providing the right supplies and help. Team LCB Helps farmers to maximize their yield. With the belief in Sustainability. The upcoming generation is counting on them, to help the future. They promote the startup culture in Uttar Pradesh and India.

Leadership and Innovation in technology development activity:

(i) LEAP-TISS, Mumbai

Prof. Ramkumar is selected in the first batch of Leadership for Academicians Programme (LEAP) at Tata Institute of Social Sciences (TISS) for a fully-funded three weeks' leadership development training programme funded by Ministry of Human Resource Development, Government of India. The programme is conducted in collaboration with Graduate School of Education, University of Pennsylvania for second level academic functionaries in public funded higher education institutions who are likely to assume leadership roles in the future. LEAP comprises of two weeks of domestic and one week of foreign training. Highly eminent resource persons from India and abroad will be on-board as speakers and mentors at the programme.

(ii) Developed products to mitigate COVID-19 spread.

He has established multiple products to slowdown the spread of COVID-19 and support the people locked down. His most reached out products are SWASA N-95 masks, even worn by the Prime Minister of India during Ram Mandir Foundation Stone ceremony. His portable smartphone holder device, Mobile Masterjee, for the use of teachers to deliver their lectures from home using smartphones, is appreciated by **"PMO's Mann Ki Baat".** Technologically, UV corona box and UV tower are the examples of the products developed that help to disinfect the objects and rooms without the use of liquid sanitizer. To minimize the use of sanitizer, an electrostatic spray nozzle is also developed. Recently, he has developed Oxygen Concentrator and Oxygen Generator to cover up the need of medical oxygen supply in the country.

(iii) Chairman, IEEE (UP Section): 2 years

He successfully increased the IEEE, Kanpur membership, by 40%. In his leadership, the IEEE Student branches at IIT Kanpur has been increased from 10 to 30. He organized more than 185 activities during my

turn. Women in Engineering (WIE) chapter was started and several events were organized, by this endeavour bringing in the frontline the participation and association with many women engineers and the girl students in the technical education.

(iv) Chairman, Institutions of Engineers (India) Kanpur: 3 years (till date)
As the chairman, he was instrumental in constructing an auditorium for IEI Kanpur. This committee also controls all the internal financial processes always for being transparent to our members. He also helped to increase the number of institutional membership during his time, and added fellows to the Kanpur local centre. He got conducted several workshops, hands-on trainings, conferences and expert talks

(v) Treasurer, Institution of Electronics and Telecommunication Engineers (IETE) – till date
He helped the IETE office in consolidation of financial accounts and brought a new initiative of adding revenue head in the accounts. Multiple novel models are being proposed to better streamline the accounts flow

(vi) Mentor, HAL – indigenization of parts/products
He has been associated with HAL for a long time now. As a faculty coordinator of Imagineering lab, his team and he got the opportunity to work on a joint project with HAL. He has also mentoring them to improve process capabilities. He developed cockpit display boards for the aircrafts in HAL Kanpur. He also worked on the composite door fabrication using VARTM process, this process was used for other secondary structural parts for aircraft industry. He was also a part of the IIT Kanpur team that signed an agreement with HAL. He was involved in upgrading the engineers at HAL in latest cutting edge technologies, like Reverse Engineering and Additive Manufacturing.

(vii) Convenor of "Ek Bharat Shreshtha Bharat – IIT Kanpur"
This was an initiative by our honourable Prime Minister. As the convenor, he tried to develop long term engagement between different regional institutes and also focused on joint development program.

(viii) MHRD event Convenor, Smart India Hackathon – Hardware and Software: 3 years
It's a platform for innovators or entrepreneurs focused on smart futuristic, collaborative creative design or production, which empowers modern India. As the convener, he mentored the students on how they can improve and channelize their idea. He also helped them to design their product and connect them with the investors. We also focused on how we can improve the digitalization process in India. Fortunately, he was able to motivate students to bring their ideas to the real market and multiple start-ups were brought up.

(ix) Six MOOCs courses under NPTEL and agMOOCs platforms
He has delivered six courses under MOOCs platforms of Government of India such as NPTEL and agMOOCs. His courses have attracted around 30,000 audiences across the nation till date. Under NPTEL, five courses namely Computer Integrated Manufacturing, Rapid Manufacturing, Product Design and Manufacturing, Engineering Metrology, and Manufacturing of Composites. One course covering the implements and equipment design, Design Thinking for Agricultural Implements, is taught under amok platform that has a reach out to plethora of farmers, entrepreneurs and manufacturers.

(x) Faculty Convenor, MedTech facility, IIT Kanpur
Under MedTech facility system, his team developed a new startup lab at IIT Kanpur. The primary objective of this lab is to provide the prototype design for the low cost medical equipment. This is done with an aim to set up a local hub for design and manufacturing of cost effective, viable products and solutions under quality controlled environment. Focus is on fabrication of medical devices to aid researchers for cultivating in-house bio entrepreneurs. Along with in-campus solutions in fabrication, the facility also serves and support local businesses those who are lacking in access to a state of the art manufacturing facility.

(xi) Design and developed Imagineering Lab, IIT Kanpur
The lab is a central facility for concept design and product realization. As a faculty convenor his role is to investigate and provide feedback to all the projects. The processes of design, simulation and manufacturing are integrated into a digital environment.

(xii) Coordinator for RuTAG, IIT Kanpur:
Effective technology for rural development requires grassroots level work focusing on cost effective interventions in location specific problems covering a wide spectrum of problems. The Indian Institute of Technology Kanpur, by virtue of its geographical location coupled with its extensive technological

infrastructure, is ideally positioned for location specific and need based technological interventions for rural development.

(xiii) Chairman, Senate Post Graduate Committee
The Senate Post-Graduate Committee (SPGC) consists of one of representative from each of the academic departments and interdisciplinary programmes who, must be the Convenor of the respective post-graduate academic programme committees and six additional members of whom one is the retiring Chairperson (if not otherwise a member), and four are students, two each from Ph.D. and M.Tech./M.Des./MBA/M.Sc.-Ph.D. dual degree programmes and nominated for the purpose by the Students' Senate.

(xiv) Chairman, Security Advisory & Executive Committee
IIT Kanpur is maintaining a safe and secure campus for all students, faculty, staff, visitors and institute's property and physical assets. The institute is under professional security cover 24x7. A variety of personnel sufficiently trained and qualified with majority retired from Paramilitary Forces and Armed Forces are being utilized. The department is effectively guided and administered by the SAEC, Security Officer, Deputy Security Officer and Assistant Security Officers through the Security Supervisors.

Technology adopted or transferred

(i) Oxygen Concentrator (6 LPM): developed at MedTech IIT Kanpur, technology transferred to Fintek Engineers, Aurangabad, Maharashtra.
The current invention relates to the development of oxygen concentrators with oxygen purity of 92% ± 3 at 6LPM and 82% + purity at 8 LPM for both medical as well as personal uses.
Following are the observations during the prototype demonstration:
1. The developed prototype required the power supply of 220 V AC/ 50 Hz for its functioning.
2. The pressure range was 1-2 bar
3. The ambient temperature ranges from 10°C-45°C producing noise < 60 db.
4. It has (an adjustable) flow rate of oxygen at 6 LPM.
It is supported by the Prime Minister of India's **'Mission Bharat O2 Grant to Start-ups'**.

(ii) Oxygen Concentrator (10-14 LPM): developed at Imagineering Lab IIT Kanpur, technology transferred to Abbot Industries, Bhayandar East, Maharashtra.

The technology is developed by Prof. Ramkumar and a sub-committee including at IIT Kanpur have quoted following consideration to the licensee, Albot Industries Pvt. Ltd.
1. An upfront licensing fees.
2. Revenue sharing to IITK by the licensee, on Gross sales price/unit of the product.
3. A percentage of the Sublicensing income earned shall be paid to IIT Kanpur, from the gross income earned by the licensee.
4. The licensing shall be on a Non-Exclusive basis for a period of 10 years.

Albot is given the right to sublicense the technology to any other party on Non-Exclusive basis.

Major events/workshops/courses organized/participated/expert speaker at:

S. No.	Events/Workshops/Courses	Date
1.	Keynote Speaker @ International Conference on Application of Recent Technologies in Science Engineering and Management for Societal and Industrial Development (ICASEM)	Jan 11 – 13, 2024
2.	Frugal Innovation, FITIRI Workshop @ MANIT Bhopal by SERB	Dec 09, 2023
3.	Disruptive technologies for social inclusion: A product design approach @ La Trobe University Research Academy	Nov 28, 2023
4.	Chronology of Theories of Women Empowerment: Technology as an Engine @ IEEE WIE	Nov 24 – 25, 2023
5.	JEE, GATE & JAM: Opportunities @ King Makers IAS Academy	Nov 11, 2023
6.	Nurturing Bioentrepreneurs: Ideation to Commercialization @ MFCEM IIT Kanpur	Nov 08, 2023
7.	Frugal Innovation: Secret of Success @ PSIT Kanpur	Oct 21, 2023
8.	Impacts of Ingenious Innovations & GATE-JAM Session @ IIIT Gwalior	Oct 03, 2023
9.	From Roots to Remedies & GATE-JAM @ MANIT Bhopal	Sep 26, 2023

10.	IEEE GATE-JAM Awareness @ Uttaranchal University	Sep 23, 2023
11.	GATE & JAM @ UIET Kanpur	Sep 22, 2023
12.	Innovation: Need of the hour @ IEEE with WIE, IEEE	Sep 19, 2023
13.	Talk on Design Thinking & Innovations @ Lloyd Institute	Sep 16, 2023
14.	Talk on innovation @ Amity University	Sep 16, 2023
15.	Radiance of the Sun: Clean Energy that Pays for Itself for Royal Charter Day @ UPTTI	Sep 11, 2023
16.	Talk on Facets of Innovation under Mission LiFE @ Aligarh Muslim University	Aug 26, 2023
17.	Panel Discussion on MSME Conclave “Sangam” by HAL	Aug 25, 2023
18.	Talk on Roots to Remedies Design Thinking & Innovation @ Shiv Nadar University	Aug 24, 2023
19.	Talk on Social Innovation @ Sharda University	Aug 24, 2023
20.	Talk on Design Thinking powering Innovation @ IIITDM Jabalpur	Aug 16, 2023
21.	Talk on Social Innovation @ IITDM Jabalpur	Aug 15, 2023
22.	Nanofibers technology Workshop Espin Nanotechnology	June 10, 2023
23.	World Telecommunication and Information Society Day, HBTU	May 30, 2023
24.	Gyanotsav 2023, NEP 2020	Apr 07, 2023
25.	Advanced Management Development Programme, NIT Jamshedpur	Mar 22 – 26, 2023
26.	Manufacturing and Skills Development: The Indian Story, Embassy of Italy, New Delhi	Mar 04, 2023
27.	National Student Research Convention – Workshop on Design Thinking and MedTech	Mar 03 – 05, 2023
28.	ICRT Conference	Feb 03 – 04, 2023
29.	International FDP on Additive Manufacturing: Research Opportunities and the Future of Manufacturing	Jan 30 – Feb 03, 2023
30.	NTS Nurturance Camp	Jan 04 – 08, 2023
31.	ONLINE STTP on Additive Manufacturing of Metallic and Non-metallic Components	Dec 21 – Dec 27, 2022
32.	COPEN 12	Dec 08 – 10, 2022
33.	Karyashala, DST – SERB	Dec 05 – 15, 2022
34.	International Course on Climate Change, AARDO and IIT Kanpur	Nov 16 – 24, 2022
35.	FDP on Bioprinting of Multi-materials, IIT Tirupati	Nov 15, 2022
36.	Networking and Collaboration, BHEL	Nov 15, 2022
37.	Frugal Engineering: A solution for Embryonic Mastermind	Nov 12, 2022
38.	Frugal Innovations, Expert Lecture, UCER, Prayagraj	Nov 03, 2022
39.	Celebration of 69th IETE Foundation Day, HBTU Kanpur	Nov 02, 2022
40.	Panel Discussion on Frugal Innovation, INAE	Oct 27, 2022
41.	Opportunities in Medical Devices & Support by IIT Kanpur	Oct 15, 2022
42.	Design Thinking: A Tool for Engineering, Lucknow	Sept 19, 2022
43.	Indian Culture: An Ancient Modern World, IIT Guwahati	Aug 28, 2022
44.	FLAME Talk IEEE, Amity University	Aug 08, 2022
45.	Let’s Talk IEEE	Jul 31, 2022
46.	Commencement of Internship Programme for J&K Students	Jul 28, 2022
47.	MedTalk on Additive Manufacturing	Jun 25, 2022
48.	MedTalk on Design Thinking in Product Development	May 28, 2022
49.	6-week course on Statistics for Agriculturists on agMOOCs	May 31, 2022
50.	Product Development Series at IIT Kanpur, SIDBI	June 01, 2022
51.	Design Thinking Workshop at Graphic Era University	May 28, 2022
52.	Expert Lecture on “Challenges for Engineering Teachers” & “How to become Efficient Researcher”, NIT Delhi	May 09, 2022
53.	ATAL FDP on Smart Cities for Sustainable Development	Mar 07 – 11, 2022
54.	Workshop on How write Research Papers	Mar 06, 2022
55.	SIB-Shine Innovation Showcase and Curtain Raiser	Mar 05, 2022
56.	Frontier Lecture Series by MA@IITK on Multi-Material Printing	Feb 26, 2022
57.	Frugal Innovations PSIT Student Branch	Feb 17, 2022
58.	AICTE Internship Programme for J&K Students	Feb 12, 2022

59.	SMART Manufacturing Basics Online Course	Feb 28 – Mar 2, 2022
60.	Workshop on Design Thinking, Critical Thinking and Innovation Design	Jan 28, 2022
61.	International Conference Confluence on Cloud Computing, Data Science and Engineering	Jan 27 – 28, 2022
62.	FDP on Advanced Manufacturing of Biomedical Devices for Precision Health Technologies, AICTE Training and Learning (ATAL)	Jan 24 – 29, 2022
63.	Webinar on Project and Internship Opportunities for the UG and PG Students	Jan 21, 2022
64.	Innovative India – Machines and Processes by CMTI	Jan 10, 2022
65.	Artificial Intelligence, Machine Learning and Robotics online training by National Productivity Council	Dec 28 – 30, 2021
66.	Technology Based Entrepreneurship Development Program by, TMU, IEEE, NSTEDB, DST	Dec 20, 2021 – Feb 1, 2022
67.	Indigenous Technology in Uttar Pradesh for Atmanirbhar Bharat	Dec 22, 2021
68.	Digital Innovation in Higher Education – Post Pandemic by IEEE, EBSCO	Dec 17, 2021
69.	Conference on Transformational Changes in Manufacturing	Dec 09 – 11, 2021
70.	Rapid Manufacturing: Need of the Hour, CSIR-CSIO	Dec 02, 2021
71.	Lecture Cum Certification series on Innovation and Entrepreneurship Development, IEEE, NITI Aayog	Oct 22 – Dec 11, 2021
72.	National Conference on Emerging Technologies for Sustainable Manufacturing	Oct 30 – 31, 2021
73.	Talk on World Habitat Day at AITH, Kanpur	Oct 4, 2021
74.	National Conference on Documenting Innovation and Creativity in Engineering, PSIT Kanpur	Sep 25 – 26, 2021
75.	NDRF Online internship Program	Jul 15, 2021
76.	Vaishwik Bhartiya Vaigyanik Summit, IIT Kanpur	Oct 20, 2020
77.	Design Thinking Online Lecture Series	Apr 28, 2020
78.	Hands on Training Program on Medical Devices Prototyping	Jan 13 – Jan 17, 2020
79.	CCE course on Manufacturing Process Pedagogy	Aug 21 – Aug 25, 2019
80.	IE seminar on Reverse Manufacturing	Aug 24 – Aug 25, 2019
81.	Welding Technology training with Fronius International	Aug 10 – Aug 11, 2019
82.	Smart India Hackathon (SIH 2019; hardware)	Jul 8 – Jul 13, 2019
83.	Smart India Hackathon (SIH 2019; software)	Mar 2 – Mar 3, 2019
84.	Smart India Hackathon (SIH 2018; hardware)	Jun 18 – Jun 19, 2018
85.	MOOCs (NPTEL) course on Rapid Manufacturing	Jan 28 – Apr 28, 2019
86.	MOOCs (NPTEL) course on Product Design and Manufacturing	Jan 28 – Apr 28, 2019
87.	MOOCs (NPTEL) course on Engineering Metrology	Jul 22 – Oct 28, 2019
88.	MOOCs (NPTEL) course on Manufacturing of Composites	Aug 19 – Oct 28, 2019
89.	Workshop on Design Thinking	Feb 25– Feb 27, 2019
90.	GIAN Course-Laser Materials Processing: Fundamentals and Applications	Feb 19– Feb 23, 2018
91.	GIAN Course: Fundamentals of Micromachining	Aug 14– Aug 21, 2017
92.	Short term QIP course on micromanufacturing	Jun 29 – Jul 03, 2015
93.	Workshop on Statistical Analysis for Engineers	May 04 - May 08, 2015
94.	Short term QIP course on CNC Machining	Apr 29 – May 03, 2015
95.	Interactive Session for " Chairmen & Honorary Secretaries state & Local Centres, IEI	Mar 16 - Mar 20, 2015
96.	Workshop on Micro & Nano fabrication	Mar 16 – Mar 20, 2015
97.	Short term QIP course on Power Generation Technologies: Present Status & Future Directions	Dec 01 – Dec 05, 2014
98.	Short term QIP course on CNC Machining	Nov 12 - Nov 14, 2014
99.	Short term QIP course on CNC Machining	Jul 19 - Jul 21, 2014
100.	Advances in composite material, University college of Engineering JNTU, Kakinada	Mar 2014
101.	National conference on emerging frontiers in Mechanical Engineering, HBTI Kanpur, Topic: Large area microtexturing	Feb 2014

102.	Sensitization workshop on additive manufacturing, NIT Warangal, Topic: Additive manufacturing	Feb 2014
103.	Workshop on Advance composites materials, DMRDE, Topic: Soft composites for Nanofinishing	Feb 2014
104.	Short term QIP course on CNC Machining	Oct 05 - Oct 09, 2013
105.	Workshop on Statistical Analysis for Engineers	Jul 02 - Jul 06, 2012
106.	Workshop on Micro & Nano fabrication	Feb 27 – Mar 02, 2012
107.	Design and Development of Palm Top Micro EDM machine, NIT Warangal	Apr 2012
108.	Frugal Innovation in India, IEI Jaipur chapter	Mar 2012
109.	Micro ED Milling, BITS Goa	Dec 2011
110.	Focused Ion Beam potential in mass production, NIT Trichy	Jan 2011
111.	Excimer laser large area texturing, NIT Allahabad	Jan 2011
112.	Workshop on Micro & Nano fabrication	Mar 22 - Mar 26, 2010
113.	Nanofinish is do-able, IIT Guwahati	Jan 2010
114.	Abrasive flow finishing (AFF) process and its recent developments at IIT Kanpur Presented at 3rd SERC School on Micromachining at IIT Kanpur	Dec 2009
115.	Recent Trends in Manufacturing Technology in the Present Global level Competitions, Roever Engineering College, Tamil Nadu	Sep 2009
116.	Nano finishing of advanced materials using Visco-Elastic abrasive fluid, Fourth National symposium on Frontiers of Engineering (NaFOE 4)), Indira Gandhi Centre for Atomic Research, Kalpakkam	Aug 2009
117.	"Abrasive finishing processes", Central Mechanical Engineering Research Institute, Durgapur	Jun 2009
118.	"Abrasive flow machining (AFM): An Overview", INDO - US WORKSHOP on Smart Machine Tools, Intelligent Machining Systems and Multi-scale Manufacturing	Dec 2008
119.	Workshop on Recent Trends in Advanced Nanocomposites	Nov 06 - Nov 10, 2006
120.	Workshop on Recent Trends in Advanced Composites	Jul 18 - Jul 22, 2005
121.	Workshop on Advanced Machining Processes	Jun 18 - Jun 23, 2004