



Dr. RANJAN KUMAR

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Weblink:

<https://www.youtube.com/watch?v=FS0shBEJ0Uc>

<https://sites.google.com/view/ranjankumar/?usp=sharing>

Dr. Ranjan Kumar is Currently Professor & Head in Dept. of Mechanical Engineering at Swami Vivekananda University, Kolkata, India. He is also serving as a visiting researcher at Gas turbine research establishment (DRDO Lab), Bangalore. He received his Bachelor's degree from VTU Belgaum, and Master's and Doctoral degrees from Indian Institute of Technology (ISM) Dhanbad, all in Mechanical Engineering. Before Joining to Swami Vivekananda University, Dr. Kumar has worked at Adamas University and RVSCET Jamshedpur. His research interest includes Carbon Credit generation, Design Thinking, Waste management, Solid Mechanics, failure analysis & Prognosis of mechanical components, finite element simulation and analysis of real engineering problems, vibration analysis of structures etc. He is having more than 11 years of teaching and 13 years of research experience. He has extensive research experience in the field of aero gas Turbine Engines for fighter jet and aeroengines applications. He has executed projects in association with Gas turbine research establishment, Bangalore. He has published 61 International research papers in peer-reviewed journal majorly indexed in SCI and Scopus. 35 patents are there on his account. He is a professional member of "The Institution of Engineers" India and Society of Automotive Engineers. He also serves as editor-in-chief of Journal of Mechanical Engineering Advancements.

Career Summary

12 th September 2026– till date

Professor & Head, SOE, Department of Mechanical Engineering, at Swami Vivekananda University, Kolkata, India.

1st February 2024– 11th September 2026

Associate Professor & Head, SOE, Department of Mechanical Engineering, at Swami Vivekananda University, Kolkata, India.

10th September 2021– 30th January 2024

Associate Professor & Head, SOE, Department of Mechanical Engineering, at Swami Vivekananda University, Kolkata, India.

30th July 2018 – 09th September 2021.

Assistant Professor, SOET, Department of Mechanical Engineering, at ADAMAS University, India.

6th July 2015 – 28th July 2018.

Assistant Professor, Department of Mechanical Engineering, at Kolhan University (RVSCET Jamshedpur), Jharkhand-831012.

4 January 2016 – till date

Visiting Professor at “The Institution of Engineers”, Jamshedpur Local Centre for AMIE Courses - Section ‘A’

(Subjects- Material Science and Engineering, Fundamentals of Design and Manufacturing)

Visiting researcher at Gas turbine research establishment, DRDO Bangalore

Professional & Scholastic Credentials

PhD - Indian Institute of Technology (IIT- ISM) Dhanbad, India.

M.Tech- Indian Institute of Technology (IIT- ISM) Dhanbad, India.

B.E- Visvesvaraya Technological University, Belgaum, India.

Certification Courses

1. Introduction to Thermodynamics: Transferring Energy from Here to There, Course floated by **University of Michigan, USA.**
2. Introduction to Advanced Vibrations, Course floated by **Korea Advanced Institute of Science and Technology (KAIST), South Korea.**
3. The 3D Printing Revolution, Course floated by **University of Illinois at Urbana-Champaign, USA.**

Project Guidance:

PhD: 02 (Completed), 04 (Ongoing)

MTech: 41 (Completed), 10 (Ongoing)

B.Tech: 15 (Completed)

Journal Publication: 56 (SCI/SCOPUS/Peer reviewed)

Patent: 21

Conference organized: 06

Conference Attended: 22

Book Published: 17

Book chapter Published: 08

Funded Project: 03

Project Executed

- ANRF Grant: 01
- Design and fabrication of indigenous Lithium-battery inverter (Funding Agency: Pointo;)- **Completed**
- Investigation of operating parameters on performance and emission characteristics of compression ignition engines operated by hydrogen and hydrogen-diesel mixtures in **collaboration with Aliah University, Kolkata. – Completed**
- Biocompatibility and mechanical behaviour of advanced materials for bone implantation. –**Completed**
- Effect of Centrifugal stiffening on rotating wind turbine blade for structural integrity.in collaboration with University of Pittsburg, USA-Ongoing
- Vibration analysis of mistuned rotor blades in a gas turbine engine (IIT Dhanbad)

- Finite Element Analysis of Disc-Blade Assembly Region of an Aeroengine (IIT Dhanbad)
- Finite Element Analysis of Gas Turbine Disc (DRDO, GTRE Bangalore)
- Design of Regenerative braking system.
- Automatic wheel-chair for physically disabled person.
- Design and fabrication of low-cost briquette machine. (ADAMAS University)

Conferences Organized:

Sl. No.	Conference Name	Details	Convener/Organizing Chair
1.	1st International Conference on Sustainable Research and Development (ICSRD) 2024	25th & 26th September, 2024	Dr. Ranjan Kumar
2.	2nd International Conference on Integrative Science and Engineering	20th-21st June 2024	Dr. Ranjan Kumar
3.	2 nd International conference on Engineering Design and Computing (ICEDC) -2024,	22-24th February, 2024	Dr. Ranjan Kumar
4.	International Conference on Integrative Science and Engineering (ICISE) -2023	28-30th September, 2023	Dr. Ranjan Kumar
5.	IEEE, International conference on Engineering Design and Computing (ICEDC) -2023	28th-29th January, 2023	Dr. Ranjan Kumar
6.	one-week workshop on CAD & Solid modelling tools	07th to 12th March 2022	Dr. Ranjan Kumar
7.	one-day seminar on "Intellectual property rights	26th April 2022	Dr. Ranjan Kumar

Reviewer

- Journal of Natural Gas Science and Engineering, Elsevier (SCI Indexed).
- Journal of Aerospace Engineering, Sage (SCI Indexed).
- Recent Patents on Mechanical Engineering, (Scopus Indexed)
- Materials Today: Proceedings, Elsevier.
- The 9th Global Conference on Materials Science and Engineering (CMSE 2020) November 20-23, 2020.
- The 3rd International Conference on Material Strength and Applied Mechanics (MSAM 2020) December 6-9, 2020,
- Flame-2018, International conference on future learning aspects of mechanical engineering-2018, organized by Amity University, India.

Subjects of Interest: Strength of materials, Solid Mechanics, Finite element Method, Fracture mechanics, Gas turbine and jet propulsion

Research interest

- Aerospace Structures
- Energy
- Carbon Credit
- Design Thinking
- Solid Mechanics
- Finite Element Analysis

1. Publications in SCI/Scopus/WOS indexed Journals:								
Sl. No	Name of the Journal (mention SCI/Scopus)	Title of the paper	Month & Year of Publication	Author(s)	doi number	Issue No. & Volume No.	Page no.	ISSN of the journal
1.	ACS Omega (SCI, IF 4.4)	Influence of Piston Bowl Geometry and Hydrogen-Diesel Mixing Ratios on Dual Fuel Engine Combustion	2026	Ranjan Kumar et al.	https://doi.org/10.1021/acsomega.5c09077	Accepted	Accepted	2470-1343

2.	Emerging Materials Research (SCI, IF 1.2)	Effect of La_2O_3 on the physicomaterial properties of Calcium fluoroaluminosilicate glass	2025	Ranjan Kumar et al.	https://doi.org/10.1680/jemmr.24.00205	Vol. 14, Issue 4	325–331	2046-0155
3.	Multidiscipline Modeling in Materials and Structures (SCI, IF 3.6)	Simulation studies on combined effect of variable geometry, rotation and temperature gradient on critical speed of gas turbine disc	2023	Ranjan Kumar et al.	https://doi.org/10.1108/MMMS-07-2022-0139	Vol. 19 No. 2	277-291.	1573-6105
4.	Engineering Failure analysis (SCI, IF 5.7)	Finite Element Modelling and Analysis of the Burst Margin of a Gas Turbine Disc Using an Area Weighted Mean Hoop Stress Method	2018	Ranjan Kumar et al.	https://doi.org/10.1016/j.engfailanal.2017.12.014	Vol. 90	425-433	1350-6307
5.	Journal of vibration engineering & Technologies (SCI, IF 2.5)	Acoustic Response of Thin Plate with Discrete Patches with Variable Thickness in Water Medium	2020	Ranjan Kumar et al.	https://doi.org/10.1007/s42417-018-0046-z	Vol. 8	27-34	2523-3939
6.	Journal of Vibroengineering (SCI, IF 1.3)	Acoustic response of clamped isotropic plate with discrete patches and point masses having different thickness variation	2016	Ranjan Kumar et al.	https://doi.org/10.21595/jve.2016.16620	Vol. 18	2587-2600	2538-8460
7.	Recent patents in Mechanical	Experimental Optimization of Bead Geometry in WAAM	2026	Ranjan Kumar et al.	https://doi.org/10.2174/01221279765076322607	Accepted	In press	2212-797

	Engineering (SCOPUS)	for Single-layer Deposition			13080350			6
8.	Journal of Molecular and Engineering Materials (ESCI)	Parametric Investigation on Laser Beam Welding of Aluminum Alloy 5052-H32 using Finite Element Analysis	2025	Ranjan Kumar et al.	https://doi.org/10.1142/S2251237325500078	Volume 13	25500 07-1 to 25500 07-14	225 1- 237 3
9.	Journal of Polymer & Composites (ESCI)	Experimental Analysis of Cutting Forces Under Different Machining Parameters and Carbide Inserts During Turning of Hardened AISI 4340 Steel	2023	Ranjan Kumar et al.	https://journals.sagepub.com/doi/full/article/article=2023/view=95514/	Volume 10, Issue 1	S32- S43	232 1- 281 0
10.	Journal of Mines, Metals and Fuels (SCOPUS)	Effect of Gap Ratio on flow influenced actions of two circular in side-by-side arrangement	2022	Ranjan Kumar et al.	https://doi.org/10.18311/jmmf/2022/30662	70(3A)	15-20	002 2- 275 5
11.	Materials Today: Proceedings (SCOPUS)	Experimental study on FDM 3d printed object & position analysis using multicriteria decision- making process	2023	Ranjan Kumar et al.	https://doi.org/10.1016/j.matpr.2023.02.292	In Press	In Press	221 4- 785 3
12.	Journal of Mines, Metals and Fuels (SCOPUS)	A Review on Compression-Ignition Engine Performance and Emissions with Hydrogen-Diesel Mixtures: Effect of Operational Parameters	2023	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/36095	71(11)	2056- 2068	002 2- 275 5
13.	Journal of Mines, Metals and Fuels	Experimental Investigation of Welding Parameters on Mild Steel Using	2023	Ranjan Kumar et al.	https://doi.org/10.18311/jmmf/2023/36094	71(11)	2078- 2083	002 2- 275

	(SCOPUS)	Metal Active Gas Welding						5
14.	Journal of Mines, Metals and Fuels (SCOPUS)	Identification of Different Features of the Reported Alternative Fuels using Exploratory Data Analysis (EDA)	2023	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/35864	71(10)	1657-1662	0022-2755
15.	Journal of Mines, Metals and Fuels (SCOPUS)	Optimization of Process Parameters of Gas Metal Arc Welding using Taguchi Method	2024	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/43787	71(12A)	6-14	0022-2755
16.	Journal of Mines, Metals and Fuels (SCOPUS)	Damage Localization in a Beam by Lifting Wavelet Scheme and Photographic based Experimentation	2024	Ranjan Kumar et al.	https://doi.org/10.18311/jmmf/2023/43926	71(12A)	153-159	0022-2755
17.	Materials Today: Proceedings (SCOPUS)	Experimental investigation of cutting parameter during laser beam machining of aluminium alloy 7075	2024	Ranjan Kumar et al.	http://dx.doi.org/10.1016/j.matpr.2023.03.194	In Press	In Press	2214-7853
18.	Journal of Mines, Metals and Fuels (SCOPUS)	A Review on the Approach Towards Cyber Physical Manufacturing System Architecture for Mining and Production Industries	2023	Ranjan Kumar et al.	https://doi.org/10.18311/jmmf/2023/43064	71(12A)	21-29	0022-2755
19.	Journal of Mines, Metals and Fuels (SCOPUS)	Free Vibration Response of Functionally Graded Porous Metallic Plates Embedded with Piezoelectric Layers	2023	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/35867	71(10)	1645-1656	0022-2755

20.	Journal of Mines, Metals and Fuels (SCOPUS)	Comparative Study of Wear Behaviour of Heat Treated 304 Austenitic and 410 Martensitic Stainless Steel	2024	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/36038	71(11)	2110-2115	0022-2755
21.	Journal of Mines, Metals and Fuels (SCOPUS)	TEM Analysis and Insights into the Physicomechanical Characteristics of CeLa-Substituted Bio-Glass Ceramics	2023	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/45547	71(12B)	91-95	0022-2755
22.	Journal of Mines, Metals and Fuels (SCOPUS)	Examining the Performance Traits of a Rear-Supported V-Cone Flowmeter	2023	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/45541	71(12B)	139-142	0022-2755
23.	Journal of Mines, Metals and Fuels (SCOPUS)	Metallurgical Properties of CeLa Substituted Bio-Glass Ceramics	2023	Ranjan Kumar et al.	https://doi.org/10.18311/jmmf/2023/35871	71(10)	1639-1644	0022-2755
24.	Journal of Mines, Metals and Fuels (SCOPUS)	CoO Substituted Borate 1393B3 Glass Scaffold with Enhanced Metallurgical Performance	2023	Ranjan Kumar et al.	http://dx.doi.org/10.18311/jmmf/2023/43176	71(12A)	15-20	0022-2755
25.	Journal of Mines, Metals and Fuels (SCOPUS)	A Review of the Effects of Injection Strategy and Combustion Chamber Geometry Modification and a Single - Cylinder Diesel Engine	2023	Ranjan Kumar et al.	https://doi.org/10.18311/jmmf/2023/45540	71(12B)	131-138	0022-2755

Patent/IPR granted:							
Sl. No.	Name of the patent	Name of the applicant	Name of the inventor	Date of File	Date of Publication	Whether Granted (yes/no) ; If yes, Date of Grant	Application No.
1.	A Method and A System for Estimating Burst Margin of Rotating Disc (Granted)	Ranjan Kumar	Ranjan Kumar et al.	18/12/2018	19/06/2020	Yes, 20/12/2024	201831048014
2.	Hand Operated Oil Pump (Granted)	Ranjan Kumar, Sujit Kumar, Hemant Kumar	Ranjan Kumar et al.	08/03/2025	20/06/2025	Yes, 20/06/2025	450784-001
3.	Folding Mobile Stand With Charging Management (Granted)	Swami Vivekananda University	Ranjan Kumar et al.	17/01/2025	18/03/2025	Yes, 18/03/2025	444654-001

4.	Multipurpose Knife (Granted)	Dr. Ranjan Kumar Dr. Arnab Das Mr. Saurabh Adhikari	Ranjan Kumar et al.	24/01/2025	01/05/2025	Yes, 01/05/2025	445535-001
5.	Deep learning based portable aquaponics tunnel for fish fungal Infections (Granted)	Swami Vivekananda University Dr. Ranjan Kumar, Mr. Saurabh Adhikari	Ranjan Kumar et al.	18/02/2025	25/02/2025	Yes, 25/02/2025	642606
6.	Self-Balancing Two-Wheeler Vehicle	Dr. Ranjan Kumar, Dr. Bhupal Kumar, Dr. Sujit Kumar	Ranjan Kumar et al.	08/05/2025	16/05/2025	No	202531044595
7.	Hybrid Solar Powered Car	Swami Vivekananda University	Ranjan Kumar et al.	21/01/2025	31/01/2025	No	202531004915
8.	System for monitoring and classifying mosquito repellents	Swami Vivekananda University	Ranjan Kumar et al.	21/01/2025	31/01/2025	No	202531004916
9.	Automatic Food Serving Machine	Swami Vivekananda University	Ranjan Kumar et al.	21/01/2025	31/01/2025	No	202531004917
10.	Modular Biodegradable Solar-Powered Water Purification System	Swami Vivekananda University	Ranjan Kumar et al.	21/01/2025	31/01/2025	No	202531004918

11.	Bioglass Composition for Bone Replacement	Swami Vivekananda University	Ranjan Kumar et al.	25/02/2025	21/03/2025	No	202531016530
12.	Bioactive Glass Composition for Bone Healing	Swami Vivekananda University	Ranjan Kumar et al.	25/02/2025	21/03/2025	No	202531016529
13.	Piston bowl for a dual-fuel hydrogen-diesel engine	Swami Vivekananda University	Ranjan Kumar et al.	12/03/2025	28/03/2025	No	202531022103
14.	Solar-Powered Smart Cane with Obstacle Detection and AI-Based Assistive Features	Swami Vivekananda University	Ranjan Kumar et al.	25/04/2025	02/05/2025	No	202531040073
15.	A solar-powered go-kart	Swami Vivekananda University	Ranjan Kumar et al.	26/04/2025	02/05/2025	No	202531040467
16.	Smart Shredder for E-Waste Plastic Processing	Swami Vivekananda University	Ranjan Kumar et al.	28/04/2025	02/05/2025	No	202531040692

17.	Solar powered Automatic Tobacco / non tobacco products Vending Machine	Swami Vivekananda University	Ranjan Kumar et al.	26/03/2024	05/04/2024	NO	202431024111
18.	Intelligent autonomous wheel-driven sprayer system for precision Agriculture	Swami Vivekananda University	Ranjan Kumar et al.	28/03/2023	07/04/2023	NO	202431028477
19.	Transformation of dairy by-product into sustainable biodegradable material	Swami Vivekananda University	Ranjan Kumar et al.	07/04/2024	19/04/2024	NO	202431028476
20.	Solar Air Heater	Swami Vivekananda University	Ranjan Kumar et al.	07/04/2024	19/04/2024	NO	202431028487
21.	Pin-ring electrode based atmospheric pressure plasma jet Generating system. (Intellectual Property India)	Dr. G. Divya Deepak, Dr. Gajanan Anne, Dr. Atul, Dr. Ranjan Kumar	Ranjan Kumar et al.	20/01/2023	24/02/2023	NO	202341004118

22.	Fabrication and design of the 360-degree rotating vehicle (Intellectual Property India)	Swami Vivekananda University	Ranjan Kumar et al.	28/03/2023	07/04/2023	NO	202331022706
23.	Plastic-Based Composite for Concrete Production	Swami Vivekananda University	Ranjan Kumar et al.	17/08/2023	08/09/2023	NO	202331055315
24.	Fabrication and design of the Solar Air Cooler	Swami Vivekananda University	Ranjan Kumar et al.	25/08/2023	07/04/2023	NO	202331057258
25.	Automatic Electromagnetic Brake Using Ferromagnetic Material Scrap	Swami Vivekananda University	Ranjan Kumar et al.	26/08/2023	13/10/2023	NO	202331057359
26.	Mini Belt grinder	Swami Vivekananda University	Ranjan Kumar et al.	16/08/2023	08/09/2023	NO	202331054863
27.	Solar Powered water Pump	Swami Vivekananda University	Ranjan Kumar et al.	20/03/2023	31/03/2023	NO	202331018705

28.	Solar-powered beard trimmer	Swami Vivekananda University	Ranjan Kumar et al.	20/03/2023	31/03/2023	NO	202331018706
29.	Sensor-based desalinization and hydroponic technologies to improve agricultural productivity of resource-scarce coastal saline areas	Swami Vivekananda University	Ranjan Kumar et al.	28/03/2023	07/04/2023	NO	202331022652
30.	Smart solar grass cutter	Swami Vivekananda University	Ranjan Kumar et al.	07/07/2022	29/07/2022	NO	202331038992
31.	Hydraulic ram pump system for water lifting in hilly region	Swami Vivekananda University	Ranjan Kumar et al.	21/06/2022	29/07/2022	NO	202231035645
32.	Atmospheric pressure plasma jet generating system (Intellectual Property India)	Dr. G. Divya Deepak, Dr. Atul, Dr. Ranjan Kumar	Ranjan Kumar et al.	01/01/2022	14/01/2022	NO	202241000018

33.	Human motion based energy harvesting device (Intellectual Property India)	Dr. Atul, Dr. G. Divya Deepak, Dr. Ranjan Kumar	Ranjan Kumar et al.	25/02/2022	04/03/2022	NO	202241010368
34.	Plasma filter for automobile exhaust (Intellectual Property India)	Dr. G. Divya Deepak, Dr. Atul, Dr. Ranjan Kumar	Ranjan Kumar et al.	28/03/2022	08/04/2022	NO	202241018002
35.	A smart material fabrication method for handling deflection suppression of plates (Intellectual Property India)	Dr. Atul, Dr. G. Divya Deepak, Dr. Ranjan Kumar	Ranjan Kumar et al.	29/12/2021	04/02/2022	NO	20214106164

Text/Reference book published from reputed national/international publishers:						
Sl. No.	Title of the Text/Reference book	Publishers	Author(s) Name (Highlight the corresponding and 1 st author in every article)	Year	ISBN No.	doi no. (if applicable)
1.	Recent Advancements in Computational Intelligence and Design Engineering (SCOPUS)	CRC Press, Taylor & Francis	Ranjan Kumar et al.	2025	9781003596745	https://doi.org/10.1201/9781003596745

2.	Mechanical Engineering in Biomedical Applications: Bio-3D Printing, Biofluid Mechanics, Implant Design, Biomaterials, Computational Biomechanics, Tissue Mechanics (SCOPUS)	Wiley Publication	Ranjan Kumar et al.	2024	9781394174522	https://doi.org/10.1002/9781394175109
3.	Innovations Across Disciplines: Advancements in Engineering, Technology, and Sustainability	Inspira, Jaipur	Ranjan Kumar et al.	2025	9788197442759	https://doi.org/10.62823/Inspira/2025/9788197442759
4.	Progress in Materials Manufacturing, and Energy Systems	Inspira, Jaipur	Ranjan Kumar et al.	2025	9788197442711	https://doi.org/10.62823/Inspira/2025/9788197442711
5.	Multidisciplinary Perspectives in Mechanical and Applied Sciences	S sharda global research publications	Ranjan Kumar et al.	2025	9788197503719	https://doi.org/10.62823/SSGRP/2025/9788197503719
6.	Innovations Across Disciplines: A Collection of Contemporary Research	S sharda global research publications	Ranjan Kumar et al.	2025	9788197503726	https://doi.org/10.62823/SSGRP/2025/9788197503726
7.	Advanced Paradigms in Transdisciplinary Research	MGM publishing house	Ranjan Kumar et al.	2025	9789349468955	https://doi.org/10.62823/MGM/2025/9789349468955
8.	Engineering For Sustainability Research, Innovation, and Impact	Reyansh global research foundation	Ranjan Kumar et al.	2025	9788197496295	https://doi.org/10.62823/RGRF/9788197496295
9.	Dynamic Approaches to Multidimensional Challenges	MGM publishing house	Ranjan Kumar et al.	2025	9788198191380	https://doi.org/10.62823/MGM/2025/9788198191380
10.	Advances in Sustainable Technologies: Emerging Trends	Reyansh global research	Ranjan Kumar et al.	2025	9788197496226	https://doi.org/10.62823/RGRF/2025/9788197496226

	And Applications	foundation				788197496226

Conferences/Workshop/Seminar/FDP/Short term course

1. Presented paper at The 8th International Conference on Fracture Fatigue and Wear (FFW 2020), organized by Ghent University, Belgium.
2. Attended AICTE-QIP sponsored, short term course on ‘Analysis and design of FRP composite structures, 2nd September-8th september, 2019, at Indian Institute of Technology Kharagpur.
3. Attended DST sponsored Faculty development Program “Entrepreneurship Development” 25th November to 7th December 2019, at S R Engineering college Warangal.
4. TEQIP-III sponsored one-week short term course on Machines and Mechanisms, June 17-22, 2019, Organized by Department of Mechanical Engineering, National Institute of Technology, Jamshedpur, Jharkhand.
5. Presented paper at International Conference on Mechanical & Materials Science Engineering: Innovation & Research, 5-6 July, 2018(ICMMSE:IR-2018) Organized by Sandip University, Nasik, Maharashtra.
6. Presented paper at 5th Nirma University International Conference on Engineering, 26-28 November, 2015(NUiCONE-2015) Organized by Institute of Technology, Nirma University, Ahmedabad.
7. Presented paper at International symposium on aspects of mechanical engineering & technology for industry, NERIST, Itanagar, Arunachal Pradesh.
8. Participated in International workshop on computational methods in vibration & acoustics, 16-21 March, 2015 at Indian school of mines Dhanbad.
9. Participated in seminar on Basics of Industrial Hydraulics, 22 Feb, 2017 organized by “The Institution of Engineers”, Jamshedpur Local Centre.

Professional Activities and Awards & Recognition

1. Editor-in-chief of Journal of Mechanical Engineering Advancements.
2. 50 Eminent Researchers of 2021, Published by International institute of organized research, MSME (Govt. of India) Registered organization.
3. Young Researcher Award-2021, International institute of organized research, MSME (Govt. of India) Registered organization.
4. Research Excellence Award-2021, Global Innovation & excellence, Institute of engineering & management.
5. Editorial member, Journal of Mechanical Engineering Research & Developments (Scopus)
6. Member of Editorial Board, American Journal of Mechanical and Industrial Engineering, U.S.A.
7. Member of Editorial Board, Engineering and Applied Sciences, New York, U.S.A.
8. Organized a technical exhibition cum competition namely Techjagran’2019 at Adamas University, 29 November 2019.
9. Organized “National conference on Non- Conventional Energy for Sustainable Growth” 29-30, July 2016; Organized by Dept. of Mechanical Engineering, RVSCET Jamshedpur.

10. Associate Member, The Institution of Engineers India.
11. Recipient of Best faculty Award-2019 at Adamas University.
12. Associate Member, Institution of Engineers India (Membership No.AM165888 - 6).
13. Member, Society of Automotive Engineers.
14. Life time Member International Association of Engineers (IAENG).

PhD/PG Guidance				
Sl. No	Name	Registration No	Year	Thesis Name
1.	Mr. Sudipta Nath (PhD)	SVU/PhD/ENGG/ME/002/2021	2026	Investigation of operating parameters on performance and emission characteristics of compression-ignition engines operated by hydrogen and hydrogen-diesel mixture
2.	Mr. Priyam Mondal (PhD)	SVU/PhD/ENGG/ME/001/2021	2026	Biocompatibility and mechanical behavior of advanced materials for bone implantation
3.	Mr. Joy Das (M.Tech)	007-101-2020-012	2022	Experimental Analysis of variation in welding strength of welded titanium grade V alloy bar at room temperature and elevated temperature with application of post weld heat treatment
4.	Mr. Jayanta Chakraborty (M.Tech)	007-101-2020-003	2022	Experimental investigation of tribological behaviour of heat-treated stainless steel
5.	Mr. Joydip Naskar (M.Tech)	007-101-2020-009	2022	Experimental investigation of cutting parameters during laser beam machining of aluminum alloy 7075
6.	Mr. Manoj Majhi (M.Tech)	007-101-2020-004	2022	Experimental analysis of water pressure, quenching rate, on TMT bar and physical properties
7.	Mr. Biswajit Chakraborty (M.Tech)	007-101-2020-011	2022	Experimental investigation into laser marking on Aluminum 7075 alloy
8.	Ms. Sumana Biswas (M.Tech)	007-101-2020-017	2022	Experimental investigation of welding parameters on metal active gas welding of mild steel
9.	Mr. Mriganka Maity (M.Tech)	007-101-2020-007	2022	Experimental investigation for enhancement of surface quality using Non-Planar

				Layer 3D printing process
10.	Ms. Deblina Biswas (M.Tech)	007-101-2020-019	2022	Optimization and measurement of KERF width and heat affected zone during laser beam machining of Hydroxyapatite
11.	Mr. Joydip Kumar Mondal (M.Tech)	007-101-2020-008	2022	Experimental study on FDM 3D printed object & position analysis using multicriteria decision-making process
12.	Mr. Arindam Roy Sarkar (M.Tech)	007-101-2020-013	2022	Estimation and management of non-revenue water losses at Kolkata municipal corporation water distribution system
13.	Mr. Kuntal Das (M.Tech)	007-101-2021-001	2023	Failure analysis for swelling in stator elastomer of progressive cavity pump and its effect on Volumetric Efficiency
14.	Md. Istiak Ali (M.Tech)	007-101-2021-012	2023	Numerical Analysis of gears for transient temperature and heat flux measurement
15.	Md Minhaz Ul Maruf (M.Tech)	007-101-2021-006	2023	Laser hardfacing of Titanium substrate using Boron Carbide embedded Titanium Matrix for enhanced Mechanical properties
16.	Md. Istiak Ali (M.Tech)	007-101-2021-012	2023	Numerical analysis gears for transient temperature and heat flux measurement
17.	Mr. Dipak Sarkar (M.Tech)	007-101-2022-001	2024	Evaluation of surface roughness of fused deposition modeling parts and Method of improvement
18.	Mr. Arup Ratan Paul (M.Tech)	007-101-2022-010	2024	Design analysis of self-balancing Bike
19.	Mr. Samir Roy (M.Tech)	007-101-2022-009	2024	Enhancement of construction efficiency of concrete pump
20.	Mr. Zeeshan Ahmed (M.Tech)	007-101-2022-006	2024	Life cycle assessment of 3D printing in the field of construction industry
21.	Mr. Prasun Chakraborty (M.Tech)	007-101-2024-018	2026	Parametric optimization using meta-heuristics algorithm (GA) in AISI 316L for WAAM

				application
22.	Mr. Biswajit Banik (M.Tech)	007-101-2024-001	2026	Experimental performance of a chilled water-based air conditioning system under variable operating conditions
23.	Mr. Akhtar Alam (M.Tech)	007-101-2024-007	2026	Experimental investigation of robotic TIG-WAAM deposition of Inconel 706 Alloy
24.	Mr. Subrata Sarkar (M.Tech)	007-101-2024-015	2026	Experimental study on the tensile response of E350 structural steel under variable strain rates
25.	Mr. Sujay Sarkar (M.Tech)	007-101-2024-014	2026	Characterization of R260 Rail Steel using SEMEDX and Machine Learning techniques
26.	Ms. Ombica Ojha (M.Tech)	007-101-2024-008	2026	Experimental investigation of strain rate effect on the tensile behaviour of R260 Rail Steel