

Projects Sanctioned during Year 2024

Sr. No	Name of Faculty	Name of Department	Role of Faculty (PI/ Co-PI)	Title of Sponsored Project	Funding Agency	Sanctioned Project No with Date	Sanctioned Amount and Duration	Status (Completed with Date /Ongoing)
1	Prof. Bazil Raj Prof. K.P Ray	Electronics Engg.	PI Co-PI	Development of Foliage Penetration Radar	*** Classified	01/01/2024	Rs. 890.00 Lakhs	Ongoing
2	Dr. T. Umasankar Patro	Metallurgical & Materials Engineering	PI	Development of open-cell polyurethane foam with simultaneous improvement in sound insulation and fire-retardant properties	Naval Research Board	25 Jan 2024	Rs. 27.869 Lakhs	Ongoing
3	Prof. Sangeeta Kale	Applied Physics	PI	Progression from a well-validated prototype of a non-invasive, blood-free RBC indices and morphology detector towards a product in a market	BITS BioCynTiH	14 Feb 2024	Rs 27.50 Lakhs	Completed
4	Dr. Shyamal Mondal	Applied Physics	PI	Design and development of ultrafast fiber laser for broadband THz generation and detection	CARS-DRDO	1115/TS/SPL/ CARS-100-2023 DT 10/04/2024 10 April 2024 to 24 months	Rs. 138.00 Lakhs	Completed
1.	Prof. Sangeeta Kale	Applied Physics	PI	Fabrication of functionalised flexible resonators as nerve gas detectors	BRNS-DAE	Feb 2024	Rs 40.00 Lakhs	Completed
2.	Dr. Vijay Hiwarkar	Metallurgical & Materials Engineering	PI	Fatigue resistance of selectively laser-melted (SLM) Ti-6Al-4V alloy	SERB-DST	19 Feb 2024	Rs. 45.72136 Lakhs	Ongoing
3.	Dr. Rahul Yadav	School of Energy	PI	Coupled 1D-3D Dynamic Simulations of Hydrogen	DIAT	08 Feb 2024	Rs. 9.86 Lakhs	Completed

		&Environmental systems		Refuelling station with pressure Cascading				
4.	Dr. Manisha Nene	School of Computer Engg & Mathematical Sciences	PI	Proposal to conduct Security Analysis of Modern Hash Functions and Password Hashing Schemes using Crypt Analysis	DIAT	18 Mar 2024	Rs. 9.90 Lakhs	Completed
5.	Dr. Vijay Hiwarkar	Metallurgical & Materials Engineering	PI	Analysis and Design of GP Cartridge Assembly	HEMRL	26 March 2024	Rs. 9.97 Lakhs	Ongoing
6.	Prof. Bazil Raj Dr Soumya	Electronics Engg. Aerospace	PI Co-PI	Full-duplex FSO link analysis for HAPS and PoC for beam tracking system	DEAL	12 Sep 2024 Got Extn up to 11 Sept 2026	294.82 Lakhs 16 Months	Ongoing
7.	Dr. Devnath Dhirhe	Applied Physics	PI	Investigation of Laser-assisted Photoacoustic Wave generation for underwater communication	Ministry of Earth Science	30 Sept 2024	446.97461 Lakhs 02 Years	Ongoing
8.	Prof. R.K Satapathy Mrs. Prajcta Koratkar	School of Robotics	PI Co-PI	AI enabled analysis internal soundness defects in steel grades(R43 and C38)	Saarioha Advanced Materials Pvt. Ltd.	15 Oct 2024	Rs. 2.90 Lakhs 04 Months	Completed
9.	Dr Odelu Ojjela	Applied Mathematics	PI	Mathematical modelling and simulation of Temperature dependent nanofluid flows through porous boundaries	SPARC, Ministry of Educations	02 Years w.e.f. 01 st April 2024.	Rs. 65 Lacs	Ongoing

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1.	Dr. Shanmugasundaram T.	Metallurgical & Materials Engineering	PI	Development of high-entropy alloys electrodes for hydrogen-generation from sea water electrolysis	Ministry of Earth Science (MoES)	MoES/PAMC/DOM/48/2023 (E-12936) DTD. 26 Dec. 2023 Got extension up to 31.03.2026	Rs. 71.63785 Lakhs 02 Years	Ongoing
2.	Dr. A.V.R. Murthy and Suwarna Datar	Applied Physics	PI Co-PI	Biophysical investigation on lipid nanoparticle interactions in biomimetic lipid membranes.	DIAT	DIAT/F/Admin/Project/OM dated 09th Nov 2023	Rs. 10.00 Lakhs 2 Years	Completed
3.	Dr. Sunil Chandel	Mechanical Engg.	PI	Study of an Air Lift System for vertical transport of Sea Water Nodule Slurry	Ministry of Earth Science (MoES)	DIAT/F/Admin/Project/OM dated/Corr/p-49 Dtd. 01 Nov 2023	Rs. 34.49392 Lakhs	Completed
4.	Dr. Rishi Raj Sharma	Electronics Engg	PI	An advanced signal processing and doppler signature based novel methodology for contact free heart rate measurement	DIAT	DIAT/F/Admin/Project/OM dated 17 Oct 2023	Rs. 8.45 Lakhs 2 Years	Completed
5.	Dr. Shanmugasundaram T.	Metallurgical & Materials Engineering	PI	Development of high-temperature high entropy alloys for aero engine applications	GTRE	GTRE/23CR0004/MTG/GN/CMS-III Year: 2023 2023-2026	Rs. 282.00 Lakhs	Ongoing
6.	Prof. Sangeeta Kale	Applied Physics	PI	Development of tactile sensors for object identification and	CARS	DIAT/F/Adm/Project/OM/C	Rs. 95.75 Lakhs	Completed

	& Ms. Prajkta VK		Co-PI	gripping using a combination of sensing materials and sensor arrays.	R&DE (Engrs),Pune	orr/P-49 dtd.10April 2023	02 Years	
7.	Dr. Ramkrishna Bharath	School of Computer Engineering and Mathematical Science	PI	Development of Data-Driven Machine Learning Algorithms for Engine Health Prognostics based on FADEC data.	ADA	ADA/PS/IVH M-DIAT/3301/2023/1 Dt:17/02/2023	Rs. 9.72757 Lakhs 1 Year February 2023 to January 2024.	Completed
8.	Dr Upasna Singh	School of Computer Engineering and Mathematical Science	PI	Unified Drone Forensic Tool for fly Reconstruction, Resident file, Directories, Network Artifacts, Events	DSCI	Dt:15/02/2023	Rs. 4.60 Lakhs 6 Months	Completed
9.	Dr. Ajay Mishra Dr. Ganpati Joshi Dr. Ganpati Joshi Dr Hari Om Verma	Aerospace	PI& Co-PI changed PI& Co-PI	Aerodynamic Characterization of Grid Fins in Subsonic Regime	ARMREB	ARMREB/AD MB/2023/266 dt:12/01/2023	Rs. 44.64952 Lakhs 3 Years	Ongoing
10.	Dr. Sunita Dhavale	School of Computer Engineering and Mathematical Science	PI	Prognostic Engine Health Assessment based on Borescope Image using AI Approach	ADA	ADA/PS/IVH MDIAT/3301/2023/2 Dt:17/02/2023	R. 21.00039 Lakhs 1 Year	Completed
11.	Dr. Fiyanshu Kaka	Metallurgical & Materials Engineering	Co-PI	Thermal Barrier Coatings with Enhanced Radiation Rejection Performance: Computational Design to Prototype Fabrication	DIAT	DIAT/F/Admin/Project/OM dated 23 rd May 2023	Rs 7.85 Lakhs	Ongoing
12.	Dr. Ramkrishna Bharath	School of Computer Engineering and Mathematical Science	PI	Development of AI Frameworks for Improving Maritime Traffic Situational Awareness			Rs 16 Lakhs November 2023 to January 2026.	Completed

13	Prof. SVSSNVG Krishna Murthy	Applied Mathematics	Co-PI(s) : Prof. B V Rathish Kumar (IIT Kanpur) International PI : Prof. Kambiz Vafai (University of California, Riverside (UCR))	Multiphysics & Entropy Generation in Complex Porous Cavities with Nanofluids under Magnetic Effect: Modelling & Simulation	SPARC, Min. of Education, Govt of India	No.: SPARC/2019-2020/P2465/S L Dt.: 28.07.2023	Rs. 50.77347 Lakhs	Completed
14	Dr. Suwarna Datar	Applied Physics	PI	Development of Sensor Array Systems detection of H2S, NO and CO in breath sample of mountaineers at high altitude.	ER & IPR (DRDO)	ERIP/ER/2023 04001/M/01/1 823 dtd. 21 June 2023 w.e.f 10 Aug 2023	Rs. 112.13940 Lakhs 3 Years w.e.f 10 Aug 2023	Ongoing
15	Dr. AA Bazil Raj	Electronics	PI	NXXO-CO3-PS-Study	DIAT	DIAT/F/Adm/Project/OM/Corr/P-49. 06 Sept. 2023	Rs. 5.00 Lakhs 06 months w.e.f. 06 Sept 2023 Revised upto 31 May 2025	Completed
16	Dr. Upasana Singh	School of Computer Engineering and Mathematical Science	PI	Drone forensics Tool (DFT) for Fly path Reconstruction, Resident, Files, Directories, Network Artifacts and Event Logs Analysis	DIAT	DIAT/F/Adm/Project/OM/Corr/P-49. 06 Sept. 2023	Rs. 2.48732 Lakhs	Completed
17	Dr. Amrita Nighojkar, Prof. Balasubramanian K	Technology Management	PI Co-PI	Artificial Intelligence-enabled analysis of sludge-derived biochar for the treatment of heavy metal and dye pollutants in aqueous system	DIAT	DIAT/F/Adm/Project/OM/Corr/P-49. 08 Sept. 2023	Rs. 9.39 Lakhs	Completed

		Metallurgical & Materials Engineering				(02 Years) Got extension two months w.e.f. 08/09/2025		
18	Dr. Bhaskar Majumdar Dr. Shanmugamsundaram T	Metallurgical & Materials Engineering	PI Co-PI	Futuristic W Alloys and Composites	ARMREB	ARMREB/M AA/2023/276 DTD. 07 July 2023	Rs. 53.08486 Lakhs 03 Years w.e.f. 22 Sept 2023	Ongoing
19	Dr. Rajesh K. Singh	Electronics	PI	Development of wide band Antenna array and wide band RF Power Combiner/Splitter Network for wideband RF systems	CARS SSPL (DRDO)	1115/TS/SPL/CARS-104/23 DTD. 08 Aug 2023	Rs. 13.53 Lakhs 01 Year	Completed
20	Dr. TU Patro	Metallurgical & Materials Engineering	PI	Development of polymer lend electrolyte for batteries with morphology optimization and improved ionic transport through experimental and computational techniques	DIAT	DIAT/F/Adm/Project/OM/Corr/P-49. 12 Sept. 2023 (01 Years)	Rs. 8.94 Lakhs 01 Year	Completed 06 Jul 2026
21	Dr. Sushma Kumari	School of Computer Engineering and Mathematical Science	PI	Random Projection for enhanced machine learning algorithms: A Comprehensive Investigation	DIAT	DIAT/F/Adm/Project/OM/Corr/P-49.12 Sept. 2023(02 Years)	Rs. 8.29150 Lakhs (02 Years)	Completed

22	Dr. Nilesh Ware	Technology Management	PI	Study of physics of failure-based approach towards reliability enhancements of TRMs (AAAU) of phased array data.	CARS LRDE (DRDO)	LRDE/CARS-93/DQA/2023 DTD. 6 June 2023	Rs. 10.00 Lakhs 15 Months	Completed
23	Prof. D.G. Thakur	Mechanical Engg.	PI	Numerical Investigation of Ballistic Impact on Additively manufactured AISi10Mg Alloy for Aerospace Applications	DIAT	DIAT/F/Adm/Project/OM/Corr/P-49. 11 Jan. 2023 10 Months	4.50 lakhs	Completed
24	Dr. TU Patro Dr. Fiyanshu Kaka	Metallurgical & Materials Engineering	PI Co-PI	Development of Open Cell polyurethane foam with simultaneous improvement in sound insulation and fire-retardant properties	NRB	DGTM/NRB/GIA/23-24/252 DTD. 01 Nov 2023	Rs. 27.869 Lakhs	Completed
25	Dr. Pooja Agrawal	School of Robotics	PI	Underwater Vision Base Surveillance and Tracking using Machine Learning	IIT Guwahati	TIH/TD/0309 dt:28/09/2022	Rs.10.00 Lakhs 1 Year <i>Got extension up to 31 March 2027</i>	Ongoing