

| Department of Mechanical Engineering |                                                                                                                                                     |                                                                                                                                   |                                                |                                       |                                      |                               |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------|--------------------------------------|-------------------------------|
| Sl. No.                              | Title of The Project                                                                                                                                | Full Name of Funding Agency                                                                                                       | Sanctioned Amount including Manpower (in Lakh) | Start Date of Project (in dd-mm-yyyy) | End Date of Project (in dd- mm-yyyy) | Name of PI                    |
| 1                                    | Design and Development of 6-DoF Parallel Simulation Platform for Desktop Applications                                                               | Axial Aero Private Limited, Hyderabad, Telangana                                                                                  | 36.53                                          | 01.07.2025                            | 31.01.2026                           | Prof. Zafar Alam              |
| 2                                    | Development of Test Rig for Deep-Sea Exploration and/or Mining using Low Turbulence Underwater Robot                                                | TEXMiN (Technology Innovation in Exploration & Mining Foundation), Institute Innovation Hub, Dhanbad                              | 13.08                                          | 27.06.2025                            | 26.06.2027                           | Prof. Subhankar Sen           |
| 3                                    | Development of Bio-Mimicking Underwater Robots for Sustainable Mining                                                                               | Jharkhand Council on Science, Technology and Innovation (JCSTI), Department of Higher and Technical Education, Govt. of Jharkhand | 7.34                                           | 29.05.2025                            | 28.05.2028                           | Prof. Antarip Poddar          |
| 4                                    | Ultra-High Molecular Weight Polyethylene (UHMWPE) nanocomposites using alloying and composite technology for bio-medical applications               | Anusandhan National Research Foundation (ANRF)                                                                                    | 57.24                                          | 11.07.2025                            | 10.07.2028                           | Prof. Ashis Mallick           |
| 5                                    | Minimizing the effect of pegging and blinding in screens using Beating Phenomenon                                                                   | Tata Steel Limited, Jamshedpur                                                                                                    | 33.79                                          | 11.08.2025                            | 10.02.2028                           | Prof. Madan Lal Chandravanshi |
| 6                                    | Error quantification of a porous brain perfusion model based on experiments and non-porous simulations for accelerated stroke treatment development | The Royal Society, London, United Kingdom                                                                                         | 14.00                                          | 01.09.2025                            | 31.09.2027                           | Prof. Ajay Bhandari           |

|    |                                                                                                                                                                                                                  |                                                                                                              |        |            |            |                                    |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------|------------|------------|------------------------------------|
| 7  | Improvement in Mechanical Properties of Nanostructures Embedded GFRP Radar Absorbing Composite Structures                                                                                                        | DRDO (ADE),Bangalore (Defence Research and Development Organisation, Aeronautical Development Establishment) | 9.72   | 21.08.2025 | 20.08.2026 | Prof. Vivek Bajpa                  |
| 8  | Exploring the Usage of Wire Mesh for Facile Fabrication of Monodisperse Hydrogel Beads and Reinforced Hydrogel Sheet: Prospects for Drug Release, Tissue Engineering, Water Harvesting, and Oil-Water Separation | Anusandhan National Research Foundation (ANRF), New Delhi                                                    | 29.04  | 01.12.2025 | 30.11.2027 | Prof. Deepak Kumar Mandal (Mentor) |
| 9  | Development and validation of digital twin to improve adjuvant treatment planning and prevent glioblastoma (GB) recurrence in post-surgical GB patients                                                          | Indian Council of Medical Research (ICMR), Govt. of India,                                                   | 41.47  | 01.01.2026 | 31.12.2028 | Prof. Ajay Bhandari                |
| 10 | Design and Development of Advanced Anti-collision System for Heavy Vehicles in Mining Sectors                                                                                                                    | Northern Coalfields Limited (NCL), Singrauli, Madhya Pradesh                                                 | 49.19  | 24.02.2026 | 23.02.2028 | Prof. Kalyan Kumar Singh           |
| 11 | Development of Reservoir-on-a-Chip: an Electrically-Assisted Platform Handling Polymeric Fluids for Enhanced Oil Recovery Applications                                                                           | Anusandhan National Research Foundation (ANRF), New Delhi                                                    | 69.68  | 30.03.2026 | 29.03.2029 | Prof. Antarip Poddar               |
| 12 | Design and fabrication of an automated modular system for mechanical dismantling of solar panels & recovery of valuable components                                                                               | TEXMiN (Technology Innovation in Exploration & Mining Foundation), DST, New Delhi                            | 269.02 | 25.03.2026 | 24.11.2027 | Prof. Amit Rai Dixit               |
| 13 | Minimac's Centre of Excellence in Fluid Testing, Research and Analytics, IIT (ISM) Dhanbad                                                                                                                       | Minimac Systems Pvt. Ltd., Pune                                                                              | 137.25 | 01.12.2025 | 30.11.2030 | Prof. Ajit Kumar                   |