

## FY: 2022-23

### Department of Applied Geology

| SL. No. | Project 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       | ISRO(13)/2022-2023/929/AGL       | Abiotic Synthesis of Methane At The Recess of Martian Crust And Prospect of Microbial Life In The Noachian Mars - Constraints From Experimental And Meteorite Studies                  | ISRO                        | 28.27                                          | 10.10.2022                            | 10.09.2025                          | Prof. Alik Sundar Majumdar |
| 2       | DST(SERB)(339)/2022-2023/930/AGL | Lithotype Control Over Gas Storage, Gas Permeability And Geomechanical Attributes of Coal Seams: Implications For Coalbed Methane Production And Carbon Dioxide Sequestration In India | DST-SERB, New Delhi         | 32.34                                          | 30.09.2022                            | 29.09.2024                          | Prof. Ashutosh Tripathy    |

### Department of Applied Geophysics

| SL. No. | Project 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                     |
|---------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|--------------------------------|
| 3       | DST(SERB)(330)/2022-2023/897/AGP | Joint Geopotential Field Modelling For Finding The Missing Link Between The Chotanagpur Granite Gneiss Complex (Cggc) And Shillong-Meghalaya Plateau                                                                                                                                                                                                                                          | DST-SERB, New Delhi                 | 44.20                                          | 24.05.2024                            | 23.05.2025                          | Prof. Gangumalla Srinivasa Rao |
| 4       | DGH (GOI) /2022-2023/ 925 / AGP  | Development of Integrated Geocellular Model For Cbm Resource Estimation With The Support of Machine Learning Based Sub-Surface Image Resolution Enhancement And Implementation of Joint-Inversion Algorithm From Newly Acquired Geoscientific Data In The South Rewa Basin, Wardha Valley (Wardha-Godavari Basin), Kamptee Sub-Basin, Cambay-Kutch-Saurashtra Basin And Rajasthan Basin India | Directorate General of Hydrocarbons | 12.9                                           | 20.09.2022                            | 19.03.2024                          | Prof. Saurabh Datta Gupta      |
| 5       | DST(SERB)(366)/2022-2023/970/AGP | Multi-Window Cross-Correlation of Ambient Noise: A Novel Approach for Machine Learning Tools in Seismic Hazard Analysis                                                                                                                                                                                                                                                                       | DST-SERB, New Delhi                 | 6.6                                            | 26.12.2022                            | 25.12.2025                          | Prof. Mohit Agrawal            |

### Department of Chemical Engineering

| SL. No. | Project 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          |
|---------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|---------------------|
| 6       | DST(TDT)(SHRI)(328)/2022-2023/891/CHEMICAL | Conservation of The Metallic Cultural Heritage Assets By Waterborne Superhydrophobic And Anti-Dust | DST-TDT, New Delhi                                        | 19.47                                          | 22.04.2022                            | 21.04.2024                          | Prof. Aditya Kumar  |
| 7       | DSIR/2022-2023/893/CHEMICAL                | Low-Cost Bio-Coal Production And Its Potential Impact On Steel Industries                          | Department of Scientific & Industrial Research, New Delhi | 4.50                                           | 05.01.2022                            | 31.05.2022                          | Prof. Ejaz Ahmad    |
| 8       | DST(SERB)(344)/2022-2023/938/CHEMICAL      | Investigation of Slow Flows of Non-Spherical Granular Materials                                    | DST-SERB, New Delhi                                       | 32.11                                          | 10.11.2022                            | 10.10.2024                          | Prof. Sandip Mandal |

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|----|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|------------|------------|-----------------------------|
| 9  | DST(SERB)(348)/2022-2023/943/CHEMICAL        | Explainable Deep Learning For Optimal Design And Robust Control of Coal Flotation Columns - Towards An Intelligent & Reliable Clean Coal Initiative                         | DST-SERB, New Delhi         | 30.84 | 11.01.2022 | 30.10.2024 | Prof. Priyanka Devi Pantula |
| 10 | DST(SERB)(353)/2022-2023/950/CHEMICAL (NPDF) | Environmentally Benign MnO <sub>2</sub> -Nanoflower Based Biopolymer-Nanocomposite For Packaging And Moisture/Gas Barrier Properties                                        | DST-SERB, New Delhi         | 21.31 | 24.11.2022 | 23.11.2024 | Mentor: Prof. Ejaz Ahmad    |
| 11 | DST(SERB)(360)/2022-2023/963/CHEMICAL        | Experimental Investigations For The Flow of Viscoelastic And Shear-Thinning Fluids Through Rigid And Deformable Tubes And Channels                                          | DST-SERB, New Delhi         | 31.10 | 11.10.2022 | 11.09.2024 | Prof. Bidhan Chandra        |
| 12 | DST(SERB)(375)/2022-2023/980/CHEMICAL        | High Temperature CO <sub>2</sub> Capture using Novel Fly-ash infused CaO-MgO Sorbents in Pre & Post Combustion Processes: Kinetics, Thermodynamics and Breakthrough Studies | DST-SERB, New Delhi         | 35.15 | 18.01.2023 | 17.01.2026 | Prof. Soubhik Kr. Bhaumik   |
| 13 | TATA STEEL/2022-2023/990/CHEMICAL            | Nitrogen Removal from Coal Tar                                                                                                                                              | Tata Steel Ltd., Jamshedpur | 19.99 | 10.01.2023 | 09.06.2024 | Prof. Ejaz Ahmad            |

### Department of Chemistry & Chemical Biology

| SL. No. | Project 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                           |
|---------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|--------------------------------------|
| 14      | DST(SERB)(337)/2022-2023/913/CCB        | Deconstruction of Lignocellulosic Biomass For Bioenergy                                                                                    | DST-SERB, New Delhi         | 28.25                                          | 13.07.2022                            | 07.12.2025                          | Prof. Madhulika Gupta                |
| 15      | IIT(ISM)/2022-2023/926/INSTITUTE        | Upgradation of Selective Flocculant For Commercial Trial                                                                                   | IIT (ISM), Dhanbad          | 6                                              | 26.09.2022                            | 25.09.2023                          | Prof. Saga Pal                       |
| 16      | DST(SERB)(340)/2022-2023/932/CCB        | Design, Synthesis And Biological Evaluation of Monopolar Spindle 1 Inhibitors As Potential Therapeutics For Triple Negative Breast Cancer" | DST-SERB, New Delhi         | 31.79                                          | 26.09.2022                            | 25.09.2024                          | Prof. Naga Rajiv Lakkaniga           |
| 17      | DST(SERB)(350)/2022-2023/946/CCB        | Modular Synthesis of Fluorinated Azole Pharmaceuticals Using Chan-Lam Coupling Variants                                                    | DST-SERB, New Delhi         | 37.55                                          | 11.07.2022                            | 11.06.2025                          | Prof. Parthasarathi Das              |
| 18      | DST(SERB)(364)/2022-2023/967/CCB (NPDF) | Photocatalytic Sp <sup>3</sup> C-N Bond Formation Extended by MHAT Catalysis                                                               | DST-SERB, New Delhi         | 19.2                                           | 05.01.2023                            | 04.01.2024                          | Mentor : Prof. Soumitra Maity, Assoc |
| 19      | DST(SERB)(374)/2022-2023/979/CCB        | Design, Syntheses and Applications of Bifunctional Compounds of Tetravalent Group 14 Elements                                              | DST-SERB, New Delhi         | 29.59                                          | 18.01.2023                            | 17.01.2026                          | Prof. H.P. Nayek                     |
| 20      | TATA STEEL-ICMMR/2022-2023/02/INSTITUTE | Tata Steel Innovation Centre on Mining and Mineral Research. (Tata Steel - ICMMR)                                                          | Tata Steel Ltd., Jamshedpur | 2315                                           | 24.01.2023                            | 23.1.2028                           | Prof Sagar Pal                       |

### Department of Civil Engineering

| SL. No. | Project 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              |
|---------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|-------------------------|
| 21      | TATA STEEL/2022-2023/898/CE | Feasibility Study For Construction of 10 Mtpa Washery On Ob Dump From Structural Strength And Stability Perspective                                             | Tata Steel Limited, West Bokaro               | 4.93                                           | 26.05.2022                            | 25.08.2022                          | Prof. Vishwas N. Khatri |
| 22      | BHEL/2022-2023/900/CE       | Performance Evaluation of Soil For Embankment And Blanketing (Moorum And Soil) For Railway Siding Formations Works At 3X800Mw Pvun (Phase - I) Patratu, Ramgarh | Bharat Heavy Electricals Limited              | 4.41                                           | 28.05.2022                            | 27.07.2022                          | Prof. Sowmiya Chawla    |
| 23      | SRCC/2022-2023/908/CE       | Performance Assessment of Skew And Curved Railway Bridges of Diverse Structural Configurations                                                                  | S.R. Chaudhuri Consultancy Services Pvt. Ltd. | 10.1                                           | 29.06.2022                            | 28.06.2025                          | Prof. Piyali Sengupta   |

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|----|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------|------------|------------|----------------------------|
| 24 | OECD/2022-2023/912/CE            | Contract For Intellectual Services Relative To Support The Itf Work In India In The Framework of The Decarbonising Transport In Emerging Economies (Dtee) And The Ndc Transpot Initiative For Asia (Ncd-Tia)           | Organisation For Economic Co-Operation And Development, Paris France | 19.12 | 07.08.2022 | 07.07.2023 | Prof. Leeza Malik          |
| 25 | NECL/2022-2023/922/CIVIL         | Bricks With Grooves And Projections In The Masonry Wall Without Using Mortar                                                                                                                                           | NECL                                                                 | 4.97  | 17.10.2022 | 16.10.2026 | Prof. S. C. Dutta          |
| 26 | TATA STEEL/2022-2023/928/CE      | Dump Bearing Strength Analysis                                                                                                                                                                                         | Tata Steel Ltd., Jamshedpur                                          | 6.82  | 10.10.2022 | 10.09.2023 | Prof. Vishwas N. Khatri    |
| 27 | NHSRCL/2022-2023/936/CE          | Optimization of High-Speed Railway Viaduct Design                                                                                                                                                                      | National High Speed Rail Corporation Limited                         | 33.05 | 27.10.2022 | 26.03.2024 | Prof. Piyali Sengupta      |
| 28 | MoES(17)/2022-2023/937/CE        | Performance Study of Steel Oil Storage Tanks Under Seismic Loading"                                                                                                                                                    | Ministry of Earth Sciences                                           | 17.35 | 09.09.2022 | 09.08.2025 | Prof. Tanish Dey           |
| 29 | TATA STEEL/2022-2023/948/CE      | Feasibility Study of M-Sand From Coal Ob                                                                                                                                                                               | Tata Steel Ltd., Jamshedpur                                          | 20.53 | 11.09.2022 | 11.08.2023 | Prof. S.K. Das             |
| 30 | ROTRANS/2022-2023/961/CE         | Design Rationalization of Bridge In Concurrence With National Standards                                                                                                                                                | Rotrans Infra Projects Private Limited, Bhubaneswar, Odisha          | 4.72  | 23.12.2022 | 22.11.2023 | Prof. Sanket Nayak         |
| 31 | DST(SERB)(332)/2022-2023/902/CE  | (Vritika) "Machine Learning Model For Assessing The Impact Response of Concrete Structures                                                                                                                             | DST-SERB, New Delhi                                                  | 0.3   | 15.06.2022 | 30.07.2022 | Prof. Satadru Das Adhikary |
| 32 | IIT(ISM)/2022-2023/915/INSTITUTE | Sustainable Infrastructure From Waste Plastic: An Approach From Laboratory To Field                                                                                                                                    | IIT (ISM) Dhanbad                                                    | 10.1  | 18.08.2022 | 17.02.2023 | Prof. Sanket Nayek         |
| 33 | PIONEER/2022-2023/916/CE         | Performance Evaluation of Box & Box Girder-Type Railway Bridges Under Sustained And Dynamic Loading                                                                                                                    | Pioneer Surveyors, Kolkata                                           | 15.79 | 19.08.2022 | 18.08.2025 | Prof. Piyali Sengupta      |
| 34 | MGM/2022-2023/981/CE             | Slope stability study of existing dumps and quarry related to mining leasehold for iron ore namely Patabeda iron and Manganese mine over 19.425 Ha in village Patabeda in Koida Tahasil of Sundargarh district, Odisha | M/s M.G. Mohanty, Odisha                                             | 11.51 | 19.01.2023 | 18.01.2024 | Prof. Vishwas N. Khatri    |
| 35 | DST(SERB)(379)/2022-2023/991/CE  | Development of Computer Program and Experimental set-up for Response Assessment of Concrete Structures under Drop-weight Impact and Contact Explosions                                                                 | DST-SERB, New Delhi                                                  | 34.14 | 22.02.2023 | 21.02.2026 | Prof. Satadru Das Adhikary |
| 36 | DST(SERB)(383)/2022-2023/996/CE  | Assessment of basin scale terrestrial water balance closure and evaluation of its uncertainty                                                                                                                          | DST-SERB, New Delhi                                                  | 22.26 | 24.02.2023 | 23.02.2026 | Prof. Kironmala Chanda     |

### Department of Computer Science & Engineering

| SL. No. | Project 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            |
|---------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|-----------------------|
| 37      | AEROQUBE/2022-2023/895/CSE          | Development of Machine Learning And Blockchain-Based Methods For Business Enhancement                             | Aeroqube Technologies Pvt. Ltd | 10.12                                          | 05.01.2022                            | 30.04.2024                          | Prof. Rajendra Pamula |
| 38      | DST(SERB)(352)/2022-2023/949/CSE    | Utility Driven Approach To Learn Credible Interpretations of Machine Learning Models                              | DST-SERB, New Delhi            | 30.9                                           | 28.10.2022                            | 27.10.2024                          | Prof. Koustav Rudra   |
| 39      | DST(INSPIRE)(373)/2022-2023/978/CSE | Towards Interpretable Information Systems: Leveraging Efficiency with Interpretability                            | DST, New Delhi                 | 35                                             | 03.10.2022                            | 02.10.2027                          | Prof. Koustav Rudra   |
| 40      | DST(INSPIRE)(376)/2022-2023/986/CSE | Autonomous and Privacy-Preserving Learning for Online and Intelligent Analysis of Urban Data                      | DST, New Delhi                 | 17.74                                          | 21.10.2020                            | 20.10.2025                          | Prof. Monidipa Das    |
| 41      | DST(NGP)(378)/2022-2023/989/CSE     | Semantics-driven Theory-guided Analysis for Understanding the Development Pattern and Impact of COVID-19 Pandemic | DST-NGP, New Delhi             | 4.61                                           | 25.10.2021                            | 24.07.2023                          | Prof. Monidipa Das    |

### Department of Electronics Engineering

| SL. No. | Project 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                    |
|---------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|-------------------------------|
| 42      | DST(SERB)(334)/2022-2023/904/ECE        | Detection of Platinol Drug Using 2D-Pd/Rh-Doped And Layered Transitional Metal Dichalcogenide Materials: A Dft-Based Approach                             | DST-SERB, New Delhi                                | 0.9                                            | 07.01.2022                            | 31.08.2022                          | Prof. Manodipan Sahoo         |
| 43      | DST(SERB)(TETRA)(336)/2022-2023/910/ECE | Design And Investigation of High-Performance In0.52Al0.48As/In0.53Ga0.47As Mosfet With Optimized Switching Efficiency                                     | DST-SERB(TETRA), New Delhi                         | 30.1                                           | 30.05.2022                            | 29.05.2024                          | Prof. Kaushik Mazumdar        |
| 44      | DRDO(19)/2022-2023/914/ECE              | Design And Development of Frequency Stable And High Q-Factor Optoelectronic Oscillator Assisted By Microwave Photonic Techniques                          | DRDO                                               | 30.77                                          | 09.07.2022                            | 09.06.2025                          | Prof. Sanjeev Kr. Raghuwanshi |
| 45      | DST(SERB)(349)/2022-2023/945/ECE        | Advanced Greedy Algorithms For Sparsity-Aided Generalized Online Caching                                                                                  | DST-SERB, New Delhi                                | 15.21                                          | 11.01.2022                            | 31.10.2024                          | Prof. Samrat Mukhopadhyay     |
| 46      | DST(SERB)(356)/2022-2023/955/ECE        | Design of A Webserver-Based Hybrid Physiological Sensor With Optical Cloth For Real-Time Health Specialist Care                                           | DST-SERB, New Delhi                                | 40.16                                          | 19.12.2022                            | 18.12.2025                          | Prof. S.K. Raghuwanshi        |
| 47      | MeitY/2022-2023/958/ECE                 | Capacity Building For Human Resource Development In Unmanned Aircraft System (Drone And Related Technology)                                               | Ministry of Electronics And Information Technology | 150.91                                         | 23.12.2022                            | 22.12.2027                          | Prof. R.K. Gangwar            |
| 48      | IIITB COMET/2022-2023/959/ECE           | Smart Radio Environments: Implementation And Deployment For Targeted Use-Cases                                                                            | IIITB Comet                                        | 50.81                                          | 12.08.2022                            | 12.07.2026                          | Prof. Samrat Mukhopadhyay     |
| 49      | DST(SERB)(359)/2022-2023/962/ECE        | Generation of High Chirp Rate Dual Chirp Microwave Waveform In Ku Band Using Novel Microwave Photonic Techniques For High Performance Radar Application   | DST-SERB, New Delhi                                | 33.84                                          | 22.12.2022                            | 21.12.2025                          | Prof. S.K. Raghuwanshi        |
| 50      | DST(SERB)(365)/2022-2023/969/ECE        | Development of spectrally efficient low complexity fast sparse channel estimation algorithms for orthogonal time frequency space (OTFS) modulation scheme | DST-SERB, New Delhi                                | 6.6                                            | 11.01.2023                            | 10.01.2026                          | Prof. Himanshu Bhusan Mishra  |
| 51      | DST(SERB)(370)/2022-2023/974/ECE        | Multi-Carrier Waveforms for Intelligent Reflecting Surface (IRS) assisted Next-Generation Wireless Communication Systems                                  | DST-SERB, New Delhi                                | 19.8                                           | 13.01.2023                            | 12.01.2026                          | Prof. Himanshu Bhusan Mishra  |
| 52      | DST(SERB)(377)/2022-2023/988/ECE        | Design and Development of Substrate Integrated Waveguide based Self-multiplexing Antennas for 5G communication systems                                    | DST-SERB, New Delhi                                | 58.03                                          | 10.02.2023                            | 09.02.2026                          | Prof. Santanu Dwari           |

### Department of Electrical Engineering

| SL. No. | Project 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                          |
|---------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| 53      | IITI DRISHTI/2022-2023/911/EE | Development of A Low-Cost Digital Instrumentation System For Angular Position Measurement of A Rotating Shaft Using Tunneling Magneto-Resistance Angle Sensor | IITI DRISHTI                | 11.57                                          | 18.07.2022                            | 17.07.2023                          | Prof. Kishor Bhaskarrao Nandapurkar |

### Department of Environmental Science & Engineering

| SL. No. | Project 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 |
|---------|-------------|----------------------|-----------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|------------|
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| 54 | IIT(ISM)/2022-2023/905/INSTITUTE | Rejuvenation of Existing Waterbodies And Identification of Suitable Locations For Storing Surface Water For Sustainable Water Supply In Dhanbad Municipal Corporation Area                        | IIT (ISM) Dhanbad                                           | 8.2   | 18.07.2022 | 17.07.2023. | Project Leader: Prof. S.R. Samadder |
| 55 | CSTEP/2022-2023/906/ESE          | Developing Emission Inventory For The Non-Attainment City of Dhanbad                                                                                                                              | Centre For Study of Science, Technology & Policy, Bangalore | 9.09  | 23.06.2022 | 22.12.2022  | Prof. Suresh Pandian Elumalai       |
| 56 | DST(SERB)(338)/2022-2023/927/ESE | Coastal Risk Analysis (Coral): An India'S Perspective                                                                                                                                             | DST-SERB, New Delhi                                         | 20.59 | 23.09.2022 | 22.09.2024  | Prof. Vittal H                      |
| 57 | DST(SERB)(342)/2022-2023/934/ESE | Catalytic/Non-Catalytic Co-Hydrothermal Liquefaction of Integrated Plastic Wastes With Food Waste/Agricultural Residue To Produce Renewable Transportation Fuel                                   | DST-SERB, New Delhi                                         | 27.61 | 14.10.2022 | 13.10.2024  | Prof. Madhumita Patel               |
| 58 | IIT(ISM)/2022-2023/952/INSTITUTE | Developing Low-Cost Portable Electrochemical Biosensors For Metal Detection                                                                                                                       | IIT (ISM) Dhanbad                                           | 4.55  | 28.11.2022 | 27.11.2023  | Prof. Vipin Kumar                   |
| 59 | ECL/2022-2023/968/ESE            | Monitoring of Air Quality in Non-Monsoon Period at Identified Locations of Kendra Area (ECL), both Ambient and the process area to arrive at the impact of proposed changes in the cluster No. 11 | Eastern CoalFields Limited                                  | 20.39 | 01.01.2023 | 30.05.2023  | Prof. Suresh Pandian E              |
| 60 | DST(SERB)(371)/2022-2023/975/ESE | Development of dynamic geospatial framework and land suitability database for best alternative livelihood options in Indian Sundarban region                                                      | DST-SERB, New Delhi                                         | 17.09 | 18.01.2023 | 17.01.2026  | Prof. S.R. Samadder                 |
| 61 | JSPCB/2022-2023/987/ESE          | Carrying Capacity Study of Dhanbad city under National Clean Air Program (NCAP)                                                                                                                   | Jharkhand State Pollution Control Board, Ranchi             | 9.44  | 14.02.2023 | 13.02.2023  | Prof. Suresh Pandian Elumalai       |

### Department of Fuel, Minerals & Metallurgical Engineering

| SL. No. | Project 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                 |
|---------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|----------------------------|
| 62      | ISRO(12)/2022-2023/892/FMME              | Development of Microstructure-Property-Processing Correlations For Nickel Based Superalloys                           | ISRO                                  | 0                                              | 24.02.2022                            | 23.02.2024                          | Co-PI: Prof. Rahul M R     |
| 63      | OTPP/2022-2023/919/FMME                  | Testing And Analysis of Coal Sample For Otps, Obra                                                                    | Obra Thermal Power Project            | 2.54                                           | 09.02.2022                            | 09.01.2024                          | Prof. Shalini Gautam       |
| 64      | DST(SERB)(343)/2022-2023/935/FMME        | Machine Learning-Enabled Framework For The Design of New Multicomponent Alloys                                        | DST-SERB, New Delhi                   | 30.91                                          | 18.10.2022                            | 17.10.2024                          | Prof. Rahul M R            |
| 65      | MMIPL/2022-2023/941/FMME                 | Characterization And Beneficiation Studies On Auriferous Quartzite Ore For Producing Concentrate For Recovery of Gold | Manmohan Mineral Industries Pvt. Ltd. | 4.72                                           | 10.03.2022                            | 10.02.2023                          | Prof. Pankaj Kumar Jain    |
| 66      | DST(SERB)(354)/2022-2023/951/FMME (NPDF) | Rare Earth Elements Identification And Its Recovery In Indian Coals And Coal By-Products                              | DST-SERB, New Delhi                   | 15.74                                          | 28.11.2022                            | 27.11.2024                          | Mentor: Prof. Aarti Kumari |
| 67      | BCCL/2022-2023/953/FMME                  | Sampling And Analysis of 58000 Mt of Reject From Heap No. 4 B(R) Ext. New of Dahibari Coal Washery                    | Bharat Coaking Coal Limited           | 54.75                                          | 24.11.2022                            | 23.11.2024                          | Prof. Shravan Kumar        |
| 68      | BCCL/2022-2023/997/FMME                  | Sampling and analysis of 40,000 MT Slurry from Heap no. 'B', Heap no. 'C' and Heap no. 'E' at Moonidih Coal Washery   | Bharat Coking Coal Limited            | 2.6                                            | 16.03.2023                            | 15.09.2023                          | Prof. Pankaj Kumar Jain    |

### Department of Humanities & Social Sciences

| SL. No. | Project 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 |
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| 69 | ICSSR(8)/2022-2023/890/HSS  | The Lost Identity: A Sociological Study of The Silversmiths of Odisha                                                                                                                                                                                                                                                      | Indian Council of Social Science Research, New Delhi       | 3.67  | 03.09.2022 | 03.08.2022 | Prof. Sruti Kanungo |
| 70 | APMDC/2022-2023/920/HSS     | Socio Economic Survey And Social Impact Assessment Study For The Project Affected Families (PaFS) And Project Displaced Families (PdFS) And Preparation of Social Impact Assessment Management Plan Along With R&R Layout & R&R Plan For Brahmadiha Coal Mine of Apmdc Ltd. Located In Giridih District of Jharkhand State | The Andhra Pradesh Mineral Development Corporation Limited | 35.06 | 09.08.2022 | 12.07.2022 | Prof. Ahmed Sameer  |
| 71 | ICHR(GOI)/2022-2023/923/HSS | The Study of Evidence of Deep Ecology In The Early Buddhist Text                                                                                                                                                                                                                                                           | Indian Council of Historical Research                      | 2.5   | 16.08.2022 | 15.08.2024 | Prof. Gyan Prakash  |

### Department of Management Studies & Industrial Engineering

| SL. No. | Project 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                 |
|---------|-------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|----------------------------|
| 72      | AARNAV/2022-2023/909/MS | A Study On Consumers' Attitude And Future Prospects Towards Buying Green Clothing In India | Aarnav Fashions Limited                                          | 1.29                                           | 07.01.2022                            | 30.06.2024                          | Prof. Krishnendu Shaw      |
| 73      | MPL/2022-2023/944/MS    | Strategic Intervention For Developing Sustainable Entrepreneurial Ecosystem In Jharkhand   | Maithon Power Limited                                            | 59.95                                          | 27.10.2022                            | 26.10.2025                          | Prof. Shashank Bansal      |
| 74      | J-PAL/2022-2023/960/MS  | Sustainable Digital Interventions For Resource Poor Farmers                                | J-Pal (The Abdul Latif Jamil Poverty Action Lab), Cambridge, Usa | 7.99                                           | 03.01.2023                            | 28.02.2024                          | Prof. Aparna Krishna       |
| 75      | CCL/2022-2023/983/MS    | Review of Social Impact Assessment Framework for Coal Mining Industry in India             | Central Coalfields Limited                                       | 24.1                                           | 03.02.2023                            | 02.02.2024                          | PI-I: Prof. Aparna Krishna |

### Department of Mining Engineering

| SL. No. | Project 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                |
|---------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|---------------------------|
| 76      | SAIL(7)/2022-2023/889/ME              | Geo-Referencing of Cadastral Map (Showing Mine Lease Boundary) of Ramnagore Indikata Block of Ramnagore Colliery                                                         | Steel Authority of India Limited | 2.65                                           | 19.07.2019                            | 18.07.2022                          | Prof. Dheeraj Kumar       |
| 77      | MCL/2022-2023/899/ME                  | Auto-Evaluation of Tenders Using Artificial Intelligence / Machine Learning At Mahanadi Coalfields Limited                                                               | Mahanadi Coalfields Limited      | 61.34                                          | 06.01.2022                            | 11.01.2023                          | Prof. Siddhartha Agarwal  |
| 78      | NCL/2022-2023/982/MNE                 | Review of Social Impact Assessment Framework for Coal Mining Industry in India                                                                                           | Northern Coalfields Limited      | 72.61                                          | 01.03.2023                            | 31.08.2024                          | Prof. Sheo Shankar Rai    |
| 79      | HCL/2022-2023/985/MNE                 | Regular Subsidence Monitoring Survey of Surda Mining Lease, Kendadih Mining Lease and Rakha Mining Lease for three (03) years                                            | Hindustan Copper Limited         | 88.5                                           | 08.05.2023                            | 07.05.2026                          | Prof. Mohammad Soyeb Alam |
| 80      | DST(SERB)(382)/2022-2023/995/MNE      | Slope Instability Severity (SIS) Assessment at Coalfield Level using Integration of Innovative Spaceborne InSAR and Relevant Data for Enhanced Slope Failure Predictions | DST-SERB, New Delhi              | 56.95                                          | 07.03.2023                            | 06.03.2026                          | Prof. Mohammad Soyeb Alam |
| 81      | CIL/CII CENTRE/2022-2023/01/INSTITUTE | CIL Innovation and Incubation Centre                                                                                                                                     | Coal India Limited               | 9995                                           | 15.01.2022                            | 14.01.2027                          | Prof. R.K. Sinha          |

### Department of Mechanical Engineering

| SL. No. | Project 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                    |
|---------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|-------------------------------|
| 82      | DST(SERB)(335)/2022-2023/907/MECH       | Measurement of Evaporating Thin Film Thickness In Microchannels                                                                                                                    | DST-SERB, New Delhi                                  | 0.6                                            | 25.06.2022                            | 24.09.2022                          | Prof. Pawan Kr. Singh         |
| 83      | DST(INSPIRE)(329)/2022-2023/896/MECH    | Studies In Nonlinear Dynamics of Mechanical Systems                                                                                                                                | DST, New Delhi                                       | 36.64                                          | 20.07.2021                            | 19.07.2026                          | Prof. Aman Kumar              |
| 84      | DRDO(DRDL)(20)/2022-2023/931/MECH       | Design, Development And Establishment of Vibration Assisted Wire Electrical Discharge Turning For Aerospace Materials To Achieve Better Surface Integrity                          | DRDO-DRDL                                            | 31.05                                          | 23.09.2022                            | 22.09.2024                          | Prof. Alok Kr. Das            |
| 85      | ETPL/2022-2023/918/MECH                 | Development of Numerical Algorithm And Cdm Model For Fatigue Life Estimation of Hydraulic Cylinder Under Various Loading Conditions                                                | Ekin Techprudent Pvt. Ltd.                           | 2.97                                           | 09.05.2022                            | 09.04.2024                          | Prof. K.P. Ajit               |
| 86      | RDCIS ( SAIL ) (8)/2022-2023/921/MECH   | Collaborative Work For Laboratory Study On Nano-Lubrication In Hot Rolling                                                                                                         | RDCIS, SAIL                                          | 6.49                                           | 09.03.2022                            | 07.02.2023                          | Prof.Subrata Kumar Ghosh      |
| 87      | DST(SERB)(345)/2022-2023/939/MECH       | Role of Free Stream Excitation On The Separation-Induced Transition In Low Pressure Turbines Using An Accuracy-Preserving Parallel Algorithm                                       | DST-SERB, New Delhi                                  | 13.3                                           | 13.10.2022                            | 10.12.2024                          | Prof. Aditi Sengupta          |
| 88      | DST(SERB)(346)/2022-2023/940/MECH       | Experimental And Numerical Investigation of Non-Isothermal Droplet Dynamics In Viscoelastic Fluids                                                                                 | DST-SERB, New Delhi                                  | 31.67                                          | 31.10.2022                            | 30.10.2024                          | Prof. Antarip Poddar          |
| 89      | DST(SERB)(TARE)(347)/2022-2023/942/MECH | Performance Improvement of Darrieus Hydrokinetic Turbine Using Different J-Shape Blades And Vortex Generator                                                                       | DST-SERB (TARE), New Delhi                           | 7.5                                            | 10.06.2022                            | 10.05.2025                          | Mentor: Prof. Shibayan Sarkar |
| 90      | DST(SERB)(380)/2022-2023/992/MECH       | Aerodynamic and aeroacoustic characteristics and noise control of isolated and tandem propellers with and without installations                                                    | DST-SERB, New Delhi                                  | 36.84                                          | 17.02.2023                            | 16.02.2026                          | Prof. Kabilan B               |
| 91      | DRDO[R&DE(E)](21)/2022-2023/993/MECH    | Development of Algorithms for Collaborative Dual Arm Manipulation and Control                                                                                                      | DRDO                                                 | 285                                            | 03.03.2023                            | 02.03.2025                          | Prof. Arun Dayal Udai         |
| 92      | DST(SERB)(381)/2022-2023/994/MECH       | Biomechanical analysis on the use of Pulsating Liquid Jet in cement removal from the femoral canal in Revision Total Hip Arthroplasty: A novel approach for biomedical application | DST-SERB, New Delhi                                  | 55.29                                          | 02.03.2023                            | 01.03.2026                          | Prof. A.R. Dixit              |
| 93      | NSM/2022-2023/998/MECH                  | High accuracy computing of thermally-stratified free shear layers: Combined Kelvin-Helmholtz instability                                                                           | National Supercomputing Mission                      | 27.48                                          | 16.02.2023                            | 15.02.2024                          | Prof. Aditi Sengupta          |
| 94      | DST(SERB)(384)/2022-2023/999/MECH       | 3D printing of overhang structures through different metal                                                                                                                         | DST-SERB, New Delhi                                  | 24.97                                          | 17.03.2023                            | 16.03.2026                          | Prof. Alok Kr. Das            |
| 95      | NVCHCCUST/2022-2023/03/INSTITUTE        | Naresh Vashisht Centre for Hydrogen and Carbon Capture, Utilization and Storage Technologies                                                                                       | Shri Naresh Vashisht, President, Vashisht Foundation | 1000                                           | -                                     | -                                   | Prof. Sandipan Kr. Das        |

### Department of Mathematics & Computing

| SL. No. | Project 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             |
|---------|----------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|------------------------|
| 96      | DRDO(18)/2022-2023/894/MnC       | Design And Analysis of Code Based Public-Key                                                       | DRDO                        | 49.89                                          | 05.01.2022.                           | 30.10.2024                          | Prof. Abhay Kr. Singh  |
| 97      | DST(SERB)(331)/2022-2023/901/MnC | Machine Learning Algorithms And Models For Anomaly Detection In High-Dimensional Longitudinal Data | DST-SERB, New Delhi         | 10.72                                          | 08.01.2022                            | 30.11.2022                          | Prof. G.K. Vishwakarma |
| 98      | DST(SERB)(333)/2022-2023/903/MnC | Online Portfolio Optimization                                                                      | DST-SERB, New Delhi         | 0.9                                            | 27.06.2022                            | 26.08.2022                          | Prof. Ruchika Sehgal   |

|     |                                        |                                                                                                                         |                                                                     |       |             |            |                            |
|-----|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------|-------------|------------|----------------------------|
| 99  | DST(SERB)(341)/2022-2023/933/MnC       | Geometric Facility Optimization Problems In Imprecise Domain                                                            | DST-SERB, New Delhi                                                 | 13.45 | 13.10.2022  | 10.12.2024 | Prof. Ankush Acharyya      |
| 100 | DST(SERB)(TARE)(351)/2022-2023/947/MnC | Investigating The Impact of Pore Geometry On The Non-Liner Filtration Characteristics In Porous Media                   | DST-SERB (TARE), New Delhi                                          | 0     | NA          | NA         | Prof. M. K. Singh          |
| 101 | DST(SERB)(361)/2022-2023/964/MnC       | Inference on parameters of discriminant functions and model-based classification for multivariate distributions         | DST-SERB, New Delhi                                                 | 6.6   | 05.01.2023  | 04.01.2026 | Prof. Nabakumar Jana       |
| 102 | DST(SERB)(363)/2022-2023/966/MnC       | Wave scattering by new-type floating barriers in deep water                                                             | DST-SERB, New Delhi                                                 | 6.6   | 05.01.02023 | 04.01.2026 | Prof. Ramanababu Kaligatla |
| 103 | DST(SERB)(369)/2022-2023/973/MnC       | Development of Estimation Strategies for the Parameters of Stigmatized Characteristics Using Randomized Response Models | DST-SERB, New Delhi                                                 | 6.6   | 12.01.2023  | 11.01.2026 | Prof. G.N. Singh           |
| 104 | NBHM(4)/2022-2023/977/MnC              | Discontinuous Galerkin Finite Elements for Load Generation Mechanism in Titled pad Slider Bearing Lubrication           | National Board for Higher Mathematics (Department of Atomic Energy) | 16.85 | 19.01.2023  | 18.01.2026 | Prof. P.S. Rao             |

### Department of Petroleum Engineering

| SL. No. | Project 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              |
|---------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|-------------------------|
| 105     | BINSYS/2022-2023/917/PE         | Feasibility Study of Existing Pipelines For Hydrogen Storage And Transportation                                                                                                                                                       | Binsys Technologies Private Limited, New Delhi | 5.42                                           | 23.08.2022                            | 22.08.2024                          | Prof. Vinay Kumar Rajak |
| 106     | DGH (GOI) /2022-2023/ 924 / PE  | Cbm Resource Estimation And Feasibility Study of Field Development Using Fully-Integrated Geocellular Model Approach Coupled With Ai/MI Algorithms In The Damodar River Valley, Godavari, Mahanadi, Satpura And Rajmahal Basin, India | Directorate General of Hydrocarbons            | 12.96                                          | 20.09.2022                            | 19.03.2024                          | Prof. Rajeev Upadhyay   |
| 107     | DST(SERB)(355)/2022-2023/954/PE | Methane Production From Gas Hydrates Using Slow Depressurization And Carbon Dioxide Injection                                                                                                                                         | DST-SERB, New Delhi                            | 28.75                                          | 14.01.2023                            | 13.01.2025                          | Prof. Pawan Gupta       |
| 108     | DST(SERB)(372)/2022-2023/976/PE | Evaluation and Synthesis of Green Hydrate Inhibitors with Enhanced Hydrate Inhibition and Biodegradability                                                                                                                            | DST-SERB, New Delhi                            | 17.88                                          | 18.01.2023                            | 17.01.2026                          | Prof. Ajay Suri         |
| 109     | OU/2022-2023/984/PE             | Coupled Geomechanical and Fluid Flow Study of High-temperature Wells Using FEM and CFD Analysis                                                                                                                                       | University of Oklahoma, Norman, USA            | 6.19                                           | 24.01.2023                            | 23.01.2024                          | Prof. Raj Kiran         |

### Department of Physics

| SL. No. | Project 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                      |
|---------|--------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|---------------------------------------|-------------------------------------|---------------------------------|
| 110     | DST(SERB)(357)/2022-2023/956/PHYSICS | Study of Strongly Coupled Non-Ideal Plasma States of Carbon At Extreme Conditions                  | DST-SERB, New Delhi         | 30.10                                          | 12.02.202                             | 12.01.2024                          | Prof. Amitava Adak              |
| 111     | DST(SERB)(358)/2022-2023/957/PHYSICS | Investigations of Strongly Correlated Topological Phases In Heavy Fermion And Rare-Earth Materials | DST-SERB, New Delhi         | 25.68                                          | 12.08.2022                            | 12.07.2024                          | Prof. Sudeshna Sen              |
| 112     | DST(362)/2022-2023/965/PHYSICS       | Monitoring the aggregation kinetics of amyloid-beta and its inhibition                             | DST, New Delhi              | 32.59                                          | 29.12.2022                            | 28.12.2025                          | Mentor: Prof. Umakanta Tripathy |
| 113     | DST(SERB)(367)/2022-2023/971/PHYSICS | Topological characterisation and entanglement content of the Mott metal-insulator transition       | DST-SERB, New Delhi         | 6.6                                            | 09.01.2023                            | 08.01.2026                          | Prof. Sudeshna Sen              |



|     |                                      |                                                                                                                                    |                     |       |            |            |                       |
|-----|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|------------|------------|-----------------------|
| 114 | DST(SERB)(368)/2022-2023/972/PHYSICS | Single Crystal Growth and Study of Frustrated Magnetism in Triangular Lattice Cuprates<br>Ba <sub>3</sub> Cu(Nb/Ta)2O <sub>9</sub> | DST-SERB, New Delhi | 26.52 | 09.01.2023 | 08.01.2025 | Prof. Tusharkanti Dey |
|-----|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|------------|------------|-----------------------|