

Sponsored Projects - Underway

Sl. No.	Title of the project	Principal Investigator	Sponsoring Agency	Total Budget (INR)	Duration
1	CSR Funds from M/s. Redpine Signals India Pvt. Ltd., Hyderabad - 2022	Dr. M. Sabarimalai Manikandan & Dr. Subrahmanyam Mula	Redpine Signals India Pvt. Ltd., Hyderabad	1064745	September 2022 - September 2024
2	TECHIN Project	Dr. Praveena Gangadharan	HDFC CSR	207108278	01 January 2022 - 31 March 2025
3	Framework and Compiler for Social Network Analysis	Dr. Unnikrishnan C.	DST National Supercomputing Mission (NSM)	2334000	12 March 2021 - 30 June 2023
4	Study on Novocrete Stabilization Technology For Pavement Construction	Dr. Veena Venudharan	Nisco Builders and Developers Private Limited	849600	01 August 2021 - 01 August 2023
5	A novel class of functionally controlled macromolecules with tunable properties for material and biomedical applications	Dr.Mintu Porel	SERB- Ramanujan Fellowship	3800000	13 August 2018 - 12 August 2023
6	Towards Automating Deterministic Bug-reproduction during Post-silicon Validation	Dr. Sandeep Chandran	Semiconductor Research Corporation	USD 29,880	01 September 2020 - 31 August 2023
7	Resilient reinforced soil structures for the sustainable stabilization of steep slopes and landslide mitigation measures	Dr. Divya P. V.	Kerala Infrastructure Investment Fund Board (KIIFB)	7487280	01 September 2021 - 01 September 2023
8	Development of Membrane-confined Stem Grouted Piles and their Behaviour under Uplift Loading	Dr. Sudheesh T. K.	SERB CRG	3041700	07 March 2020 - 06 September 2023
9	Real-Time Air Quality and Weather Monitoring System for IIT Palakkad Campus	Dr. Praveena Gangadharan	IIT Palakkad	14596658	20 March 2021 - 19 September 2023
10	A Compressed Sensing based Framework for Physical Layer Security in Large Dimensional Wireless Communication Systems	Dr. Lakshmi Narasimhan Theagarajan	DST INSPIRE Fellowship	3500000	28 September 2018 - 27 September 2023
11	Raaz: A cryptographic library with formal guarantees	Dr. Piyush P. Kurur	DST ICPS	2268000	26 July 2019 - 30 September 2023
12	Discovery, single crystal synthesis and investigation of anisotropic physical properties of novel spin-orbit materials	Dr. Soham Manni	DST INSPIRE Fellowship	3500000	15 October 2018 - 14 October 2023
13	Design and Development of a new Sitting- Type Lower Limb Rehabilitation Robot	Dr. Santhakumar Mohan	Council of Scientific and Industrial Research (CSIR)	2210000	01 November 2020 - 31 October 2023
14	Robotics and Automation in Agriculture	Dr. Santhakumar Mohan & Prof. Laxmidhar Behera (from IIT Kanpur side)	Ministry of Electronics and Information Technology (MeitY)	5184000	01 November 2020 - 31 October 2023
15	Simulation Studies of electronic/photonic band gap materials for microwave applications	Dr. Sukomal Dey	ISRO RESPOND Programme, Department of Space	1368000	04 December 2021 - 03 December 2023
16	Design and fabrication of inorganic electrochromic devices using layer engineering	Dr. Revathy Padmanabhan	ISRO RESPOND Programme, Department of Space	2470000	07 December 2021 - 06 December 2023
17	Finding the Progenitors of Carbon Enhanced Metal-Poor Stars	Dr. Projjwal Banerjee	SERB SRG	1994335	13 December 2021 - 12 December 2023
18	Design and Synthesis of a Novel Class of Sequence-defined Macrocycles with Modular Post-synthetic Modification for Material and Biomedical Applications.	Dr. Mintu Porel	SERB CRG	5364832	21 December 2020 - 20 December 2023
19	Magneto transport studies in 2D materials	Dr. Jayakumar Balakrishnan	SERB CRG	4528383	28 December 2020 - 27 December 2023

20	Study of Thermoregulation and Ventilation in Termite Mound Structures: Biomimetic Design Concepts for Passive Cooled Buildings	Dr. Pramod Kuntikana	SERB SRG	3258030	29 December 2021 - 28 December 2023
21	Design and Development of a Software Solution for Enhanced Monitoring of Future Power System with High Renewable and Power Electronics Penetration	Dr. Manas Kumar Jena	SERB SRG	2905950	30 December 2021 - 29 December 2023
22	Solid state welding of Ti alloy and Ni alloy metal prints for aerospace, energy and health sectors	Dr. Buchibabu Vicharapu	SERB SRG	3259870	31 December 2021 - 30 December 2023
23	Mesoscale modeling of amorphous solids for large scale simulations	Dr. Pinaki Chaudhuri (Associate Professor, Physics, The Institute of Mathematical Sciences, Chennai)	DST National Supercomputing Mission (NSM)	4581000	24 March 2021 - 31 December 2023
24	Design and Development of an intelligent underwater vehicle with a manipulator for offshore oil/gas and other marine applications.	Dr. Santhakumar Mohan	Naval Research Board	4526850	25 January 2021 - 24 January 2024
25	An automated fluorescence slide imaging microscope for portable and low cost applications	Dr. Vijay Muralidharan	SERB SRG	3125350	28 January 2022 - 27 January 2024
26	Reinforcement corrosion in bridge bent caps - fatigue response: An experiment and analytical study	Dr. Madhu Karthik M	SERB CRG	3422232	10 March 2021 - 09 March 2024
27	Robust Multi-view Learning for Extreme Events Detection and Prediction in Time Series Data	Dr. Sahely Bhadra	SERB CRG	3617337	25 March 2021 - 24 March 2024
28	Production of biofertilizers from source separated urine	Dr. Shanmugaraju Sankarasekaran	Department of Science & Technology - Science For Equity Empowerment and Development (SEED)	8923790	31 March 2022 - 30 March 2024
29	Utilization of partially treated grey water and C&D waste for production of low-cost modular toilet units and other living units	Dr. Shanmugaraju Sankarasekaran	Department of Science & Technology - Science For Equity Empowerment and Development (SEED)	6812046	31 March 2022 - 30 March 2024
30	Theoretical Modelling Of High Pressure Chemistry & Study of Unusual Molecular Systems	Dr. Priyakumari C P	DST INSPIRE Fellowship	1394192	01 April 2019 - 31 March 2024
31	Design and Fabrication of an LED-based solar simulator with integrated electrical and optical measurement capability	Dr. Arvind Ajoy	DST (SERD 2019 - Solar Energy Research & Development)	6540601	15 April 2021 - 14 April 2024
32	Study of the interaction between synthetic sequence-defined macromolecules and lipid-membrane towards developing antibacterial and anticancer drug	Dr. Mintu Porel	Scheme for Transformational and Advanced Research in Sciences (STARS) - Ministry of Human Resource Development	9968000	15 May 2020 - 14 May 2024
33	DHR-GIA Proposal: Development of an Affordable Wearable IoT-GPS Enabled Intelligent Vital Signs Monitor for Smart Health Monitoring Services	Dr. Ram Bilas Pachori, Professor, IIT Indore	Indian Council of Medical Research (ICMR)	3035990	20 June 2022 - 19 June 2024
34	MoU with Kerala Highway Research Institute	Dr. Sudheesh T. K. (till 11.09.2022) & Dr. B. K. Bhavathrathan (from 12.09.2022)	Kerala Highway Research Institute (KHRI)	6000000	13 July 2021 - 12 July 2024
35	Studies on the performance of coir geotextile reinforced embankments	Dr. Divya P. V.	Central Coir Research Institute	2532000	24 July 2021 - 23 July 2024
36	Design and Development of Cost-Effective Floating-Solar Energy Generation Technologies and Infrastructure for Achieving Nearly Zero-Energy Villages	Dr. Srinivasa Bhaskar Karanki, IIT Bhubaneswar	DST (SERD 2019 - Solar Energy Research & Development)	4521200	14 September 2021 - 13 September 2024
37	Recycling C&D waste including non-concrete parts for geotechnical engineering applications	Dr. Divya P. V.	DST - WMT (Waste Management Technology Programme)	6618440	15 September 2021 - 14 September 2024
38	Dispersion Controlled in Silico Catalyst Design for the Selective Hydroarylation Reaction	Dr. Rositha Kuniyil	SERB SRG	3133844	26 September 2022 - 25 September 2024
39	A Molecular Dynamics Perspective on the Mechanism of Dioxygen Activation	Dr. Shyama Ramakrishnan (Mentored by Dr. Padmesh A.)	KSCSTE Back-to-Lab Post Doctoral Fellowship	1338000	01 November 2022 - 31 October 2024
40	Design and Development of Planar Tuneable RF Filters for 5G Communication Systems	Dr. Mary Rani Abraham (Mentored by Dr. Sukomal Dey)	KSCSTE Back-to-Lab Post Doctoral Fellowship	1338000	01 November 2022 - 31 October 2024

41	Towards Building Quantity-Rich Knowledge Bases	Dr. Koninika Pal	SERB SRG	2071870	09 November 2022 - 08 November 2024
42	Securing Deep Neural Networks against Adversarial Attacks in Medical Imaging	Dr. Vivek Chathurvedi	IHUB NTIHAC Foundation, IIT Kanpur	1303520	07 December 2021 - 06 December 2024
43	Sugar tailored NIR emitting fluorescent probes for biomedical applications	Dr. Shimi M. (mentored by Dr. Mintu Porel)	SERB National Post- Doctoral Fellowship	2025600	12 December 2022 - 11 December 2024
44	Study of skein algebras through quantization of Poisson algebras	Dr. Arpan Kabiraj	SERB SRG	1278662	09 January 2023 - 08 January 2025
45	Biomolecular characterization of a novel putative intracellular steroid hormone-binding receptor from Wuchereria bancrofti for the chemotherapeutic intervention of bancroftian filariasis	Dr. Suprabhat Mukherjee, Department Of Animal Science, Kazi Nazrul University	SERB CRG	108300	24 January 2022 - 23 January 2025
46	Multiscale Modeling of Ferroelectrics for Negative Capacitance Applications	Dr. Arvind Ajoy	SERB MATRICS	660000	18 February 2022 - 17 February 2025
47	Factorizing Matrices Under Structural Constraints	Dr. Lakshmi Narasimhan Theagarajan	SERB MATRICS	660000	21 February 2022 - 20 February 2025
48	On exact results in generalized Sachdev-Ye-Kitaev models	Dr. Prithvi Narayan P	SERB MATRICS	660000	23 February 2022 - 22 February 2025
49	Development of High RAP Mixtures: Laboratory Investigation on the Effect of Bio-Rejuvenators	Dr. C. V. Veena Venudharan	SERB POWER	5862032	28 June 2022 - 27 June 2025
50	Microphase Separation in the Bottlebrush Polymers under Confinement: An Effective Ruling Principle for Micoscopic Organization	Dr. Debarati Chatterjee	SERB POWER	1844832	28 June 2022- 27 June 2025
51	Eternal Vertex CoverProblem of Bipartite Graphs, Constant Treewidth Graphs and Planar graphs	Dr. Jasine Babu	SERB POWER	1745832	18 July 2022 - 17 July 2025
52	Multiplicities and graded algebras associated to filtrations of ideals	Dr. Parangama Sarkar	SERB POWER	1341840	18 July 2022 - 17 July 2025
53	Design and Evaluation of OTFS and OCDM Transceivers for Underwater Acoustic Communication	Dr. Jobin Francis	Naval Research Board	2136880	02 November 2022 - 01 November 2025
54	Seismic Fragility Analysis of Dams in the state of Kerala	Dr. Arun C. O.	KSCSTE ETP	1492800	21 November 2022 - 20 November 2025
55	Single crystal growth and investigation of topological materials.	Dr. Moumita Nandi	DST INSPIRE Fellowship	3500000	24 December 2020 - 23 December 2025
56	Stochastic Resonance based detectors using thin-film integrated ferroelectrics	Dr. Arvind Ajoy	SERB CRG	7373630	26 December 2022 - 25 December 2025
57	Relevance of Protein Secondary Structure in Polypeptide-Enzyme Interactions for Regulating the Enzymatic Function – A Combined Theoretical and Experimental Approach	Dr. Padmesh A.	SERB Core Research Grant	3483832	07 January 2023 - 06 January 2026
58	The study of Turaev cobracket from a hyperbolic geometric perspective	Dr. Arpan Kabiraj	SERB MATRICS	660000	07 January 2023 - 06 January 2026
59	Information Geometric Approach to Estimation Error Bounds	Dr. M. Ashok Kumar	SERB MATRICS	660000	10 January 2023 - 09 January 2026
60	Fix Point Computation of Herbrand Equivalence of Expressions in Data Flow Frameworks using Abstract Interpretation	Dr. Jasine Babu	SERB MATRICS	660000	10 January 2023 - 09 January 2026
61	Complexity of Graph Contraction Problems	Dr. Krithika Ramaswamy	SERB MATRICS	660000	12 January 2023 - 11 January 2026

62	Balance in Chaos - Searching for Equitable Patterns in Edge- Colored Graphs	Dr. Krithika Ramaswamy	SERB CRG	1919082	23 January 2023 - 22 January 2026
63	Semilinear Elliptic Boundary Value Problems on Unbounded Domains in R2	Dr. Lakshmi Sankar K.	SERB CRG	2675596	23 January 2023 - 22 January 2026
64	Design and development of an underwater cleaning robot for marine applications	Dr. Santhakumar Mohan	IITG TIDF	2360000	31 January 2023 - 30 January 2026
65	Compact, High-gain Ultrawideband Antennas for Real-time Underwater Wireless Communication	Dr. Sukomal Dey	IITG TIDF	1180000	31 January 2023 - 30 January 2026
66	Fabrication of low cost sensor devices for early detection of biomarkers related to neurological disorders using 2D nanomaterials	Dr. Abdul Rasheed P.	Department of Biotechnology	11360000	01 September 2021 - 31 August 2026
67	Bills & Melinda Gates Foundation	Dr. Vivek Chaturvedi	Bills & Melinda Gates Foundation	\$25,28,935.00	24 March 2022 - 31 March 2027
68	Wearable/Portable Biomimetic Nanosensors for On-site Detection of Organophosphate Nerve Agents and Illicit Drugs	Dr. Yugender Goud Kotagiri	SERB Ramanujan Fellowship	3800000	09 May 2022 - 08 May 2027
69	Coding for Low-Latency Communication	Dr. Nikhil Krishnan M.	DST INSPIRE	3500000	19 September 2022 - 18 September 2027
70	A novel chemical proteomics approach to elucidate the mechanism of action of (- Epigallocatechin-3- Gallate (EGCG)), the major green tea polyphenol using Strategic Bioorthogonal Probe, and improving the bioavailability of EGCG	Dr. Sushabhan Sadhukhan	Council of Scientific and Industrial Research (CSIR)	1100000	02 September 2021 to 01 September 2024
71	Pilot lab course on NPTEL & Development of Kits	Dr. Arvind Ajoy	IIT Madras	500000	July 2022 - July 2023
72	Study of Impact of Biodiversity in the pest control management of rice based agroecosystem	Dr. Merlin Lopez	DST Women Scientist A	2962272	30 September 2022 - 31 January 2025
73	Isolated Transition Metal Atoms on Defect- Engineered Graphene: Synthesis and Catalytic Oxidation of Indoor Volatile Organic Compounds	Dr. Dinesh Jagadeesan	SERB CRG	3767070	05 February 2020 - 04 August 2023
74	Formal Analysis and Verification of Redundancy Management Logic for Inertial Navigation Processing Systems	Dr. Jasine Babu	ISRO RESPOND	1884520	23 March 2023 - 22 March 2025
75	CSR Funds from M/s. Redpine Signals India Pvt. Ltd., Hyderabad - 2023	Dr. M. Sabarimalai Manikandan	Redpine Signals India Pvt. Ltd., Hyderabad	810704	23 March 2023 - 22 March 2025
76	Engineering porous silicon for capacitive deionization	Dr. Revathy Padmanabhan	SERB POWER	5815832	28 June 2022 - 27 June 2025
77	Synthesis of layered transition metal oxides and oxysulfides for optoelectronic applications	Dr. Tanushree Holme Choudhury, Assistant Professor, IIT Bombay	SERB POWER	0	14 September 2022 - 13 September 2025
78	Study for improved estimation as well as understanding of deep cloud particles and melting layer microphysical properties using phase based polarimetric radar simulations and measurements	Dr. Swaroop Sahoo	SERB CRG	1800120	07 February 2023 - 06 February 2026
79	Performance evaluation of tunnel and slope support systems against the coupled effect of freeze-thaw cycle and dynamic loading	Dr. Ankesh Kumar	SERB EMEQ	4457332	28 February 2023 - 27 February 2026
80	Two Dimensional Covalent Organic Frameworks: Design Principles and Material Applications in Sustainable Energy and Environment	Dr. Umadevi D.	DST Women Scientist A	3224247	14 March 2023 - 13 March 2026
81	DST INSPIRE Fellowship	Dr. Mayarani M.	DST INSPIRE	3500000	02 January 2023 - 01 January 2028

Sponsored Projects - Completed

Sl. No.	Title of the project	Principal Investigator	Sponsoring Agency	Total Budget (INR)	Duration
1	Low-cost Medical Ventilator - Mechanical	Dr. Afzaal Ahmed	Covid 19 Project funded by Federal Bank	600000	April 2020 - August 2020
2	Low-cost Medical Ventilator - Electrical	Dr. Sreenath V.	Covid 19 Project funded by Federal Bank	600000	April 2020 - August 2020
3	Pulse Plethysmograph for ICUs	Prof. Vinod A. Prasad	Covid 19 Project funded by Federal Bank	600000	April 2020 - August 2020
4	Automated Lung Ultrasound for COVID-19 Screening and Monitoring	Dr. Mahesh R. Panicker	Covid 19 Project funded by Federal Bank	600000	April 2020 - August 2020
5	Low-cost Test Kit for Fast Screening of COVID-19 Patients	Dr. Shanmugaraju Sankarasekaran	Covid 19 Project funded by Federal Bank	500000	April 2020 - August 2020
6	Real-time Crowd Sensing using Mobile Phone tracking	Dr. Lakshmi Narasimhan Theagarajan	Covid 19 Project funded by Federal Bank	600000	April 2020 - August 2020
7	Learn at Home	Dr. Dinesh Setti	Western India KINFRA Ltd - CSR	322926	01 February 2022 - 31 March 2022
8	Creation of selected geo-spatial open data set for Pudussery Grama Panchayat using Community Participatory Mapping	Dr. Athira P.	Western India KINFRA Ltd - CSR	242927	01 February 2022 - 31 March 2022
9	Porous transition metal doped TiO2 catalysts for the thermal oxidation of volatile organic compounds	Dr. Dinesh Jagadeesan	Western India KINFRA Ltd - CSR	352926	01 February 2022 - 31 March 2022
10	Diagnosis tool for Breast Cancer Detection using Novel Microwave Medical Imaging (MMI) Techniques followed by Method Validations on the Concealed Object Detections - a Prototype	Dr. Sukomal Dey	Western India KINFRA Ltd - CSR	322926	01 February 2022 - 31 March 2022
11	Design of heterogeneous catalysts to improve the selectivity of high-temperature, gas- phase reactions	Dr. Dinesh Jagadeesan	SERB Ramanujan Fellowship	13,65,654.00	2013 - 2018
12	Graphene and other 2D materials base spintronics and topological insulators	Dr. Jayakumar Balakrishnan	DST INSPIRE Fellowship	1031488	2014 - 2019
13	On the Role of Proton Transfer in Triggering Disulfide Bond Reductions in Biological Systems- A Computational Approach	Dr. Padmesh A.	SERB Start Up Research Grant	1101613	2016 - 2019
14	Improving water availability in hilly rain shadow regions through conservation measures	Dr. Athira P.	DST INSPIRE Fellowship	1248598	2015 - 2021
15	On positive solutions for classes of nonlinear elliptic boundary value problems	Dr. Lakshmi Sankar K.	DST INSPIRE Fellowship	1691680	2016 - 2021
16	Structural design of Crash Guard Fencing	Dr. Anil Kumar M. V.	Vigilance and Forest Intelligence, Thiruvananthapuram	84,960	08 August 2018 - 08 October 2018
17	Performance evaluation of a cryogenic coolant through a modified tool holder in machining of Inconel 625 super alloy	Dr. Dupadu Chakradhar	SERB ECRA	1483160	06 November 2017 - 05 November 2020
18	Pulse Oximeter Design and Development	Prof. Vinod A. Prasad	ITI Limited Palakkad	275000	May - June 2021
19	An automated lung ultrasound workflow for diagnostic assistance in COVID-19 and beyond	Dr. Mahesh R. Panicker	SERB CRG Covid 19 Project	608960	05 August 2020 - 04 August 2021

20	Performance of mechanically stabilised reinforced soil structures with locally available marginal lateritic backfills	Dr. Divya P. V.	Techfab India Industries Ltd., Mumbai	1105046	01 June 2020 - 01 January 2022
21	Energy positive microbial osmotic- electro desalination cell for wastewater treatment and high- quality water recovery	Dr. Praveena Gangadharan	SERB- EMEQ (Empowerment and Equity Opportunities for Excellence in Science)	3994500	02 March 2019 - 01 March 2022
22	Reversible Diradical Mediated Self-Assembly Formation of Discrete Organic Cages for the Construction of Stimuli-Responsive Supramolecular Functional Materials	Dr. Shanmugaraju Sankarasekaran	SERB- EMEQ (Empowerment and Equity Opportunities for Excellence in Science)	3763000	16 March 2019 - 15 March 2022
23	Complex network analysis of granular materials	Dr. Krishnaraj K P	DST Inspire	700000	01 November 2021 - 30 April 2022
24	Regional Road Resilience using Landslide Susceptibility model	Dr. Rakesh J. Pillai	Coalition for Disaster Resilience Infrastructure (CDRI)	732000	10 May 2021 - 09 May 2022
25	Soot Modelling and measurements in a counterflow diffusion flame	Dr. Krishna Sesha Giri	SERB- ECRA (Early Career Research Award)	4655040	16 May 2019 - 15 May 2022
26	Identification of the Substrates of DHHC Palmitoyl Acyltransferases by Rational Design of Trifunctional Probe and Exploration of Protein S- Palmitoylation	Dr. Sushabhan Sadhukhan	SERB- ECR (Early Career Research)	3312452	15 December 2018 - 14 June 2022
27	Investigation of a portable, affordable and self-guided bedside ultrasound system for tissue and blood velocity imaging	Dr. Mahesh Raveendranatha Panicker	SERB- ECRA (Early Career Research Award)	4901830	30 March 2019 - 29 June 2022
28	DST INSPIRE Fellowship (Transferred from Chennai Mathematical Institute)	Dr. Parangama Sarkar	DST INSPIRE	1339329	01 September 2016 - 31 August 2022
29	MoU with Bexel India Consulting LLP	Dr. Senthilkumar V.	Bexel India Consulting LLP	216000	13 October 2021 - 12 October 2022
30	Design and Development of RF Front-end (RFFE) Passive Components for Indian Fifth Generation (5G) Cellular Mobile Network Applications from Microwave to Millimeterwave	Dr. Sukomal Dey	SERB- ECRA (Early Career Research Award)	4211530	14 May 2019 - 13 October 2022
31	Ocean Acoustic Data Archival and Analytics Framework	Dr. Sahely Bhadra	Naval Research Board	2899657	27 October 2021 - 26 October 2022
32	Integrating wastewater treatment to groundwater softening and defluoridation using microbial desalination cell	Dr. Praveena Gangadharan	SERB- ECRA (Early Career Research Award)	3519480	15 May 2019 - 14 November 2022
33	Behaviour and Design of CFS Channel compression members with partial LIP Stiffened Flanges	Dr. Anil Kumar M. V.	SERB- CRG (Core Research Grant)	3426691	15 May 2019 - 14 November 2022
34	SERB International Travel Support (ITS) - IEEE World Congress on Computational Intelligence (IEEE WCCI 2022), Italy	Dr. Narayanan C. Krishnan	SERB ITS	113673	18 July 2022 - 30 November 2022
35	An Algorithm for Automated Identification of Geometric Inconsistencies on Road Networks by Employing Cluster-Calibrated Speed Prediction Models	Dr. B. K. Bhavathrathan	SERB SRG	2659820	19 December 2020 - 18 December 2022
36	High- Speed Online Monitoring of Software Applications	Dr. Sandeep Chandran	SERB SRG	2259790	19 December 2020 - 18 December 2022
37	HARKAL: Hardware Accelerated Robust Kernel Adaptive Learning	Dr. Subrahmanyam Mula	SERB SRG	1724280	19 December 2020 - 18 December 2022
38	Mapping the folding/misfolding mechanism of SOD1 using single molecule fluorescence spectroscopy	Dr. Supratik Sen Mojumdar	SERB SRG	2870000	22 December 2020 - 21 December 2022
39	Modeling Latency In Cell-Free Massive MIMO To Enable URLLC In 5G Cellular Systems	Dr. Jobin Francis	SERB SRG	1100950	22 December 2020 - 21 December 2022
40	Characterizing quantum computers: Entanglement in noisy quantum error correcting codes	Dr. Amit Kumar Pal	SERB SRG	2266771	23 December 2020 - 22 December 2022

41	Energy-Efficient Multicore Programmable Accelerator for ULP massive edge computing	Dr. Satyajit Das	SERB SRG	1624980	25 December 2020 - 24 December 2022
42	An Accurate and Efficient Parallel R-C Digitizer for Moisture Sensing	Dr. Sreenath V.	SERB SRG	2805440	30 December 2020 - 29 December 2022
43	Bio-inspired Hybrid Underwater Vehicle for Ocean Observations	Dr. Santhakumar Mohan	SERB Core Research Grant (CRG)	2838284	17 July 2019 - 16 January 2023
44	Research Methodology for Construction Management	Dr. Senthilkumar V.	Global Initiative of Academic Networks (GIAN)	912000	30 January 2023 - 10 February 2023
45	Estimation of the thermal contact conductance of realistic spacecraft bolted joints	Dr. Samarjeet Chanda	ISRO RESPOND Programme, Department of Space	3044000	19 February 2021 - 18 February 2023
46	Diffuse interface immersed boundary/finite volume framework for compressible viscous flows	Dr. Ganesh Natarajan	SERB MATRICS	660000	21 February 2020 - 20 February 2023
47	Oriented Diameter of Graphs	Dr. Deepak Rajendraprasad	SERB MATRICS	660000	21 February 2020 - 20 February 2023
48	Understanding the role of protein S-palmitoylation, the only reversible protein lipidation, in regulating mitochondrial dynamics and functioning	Dr. Sushabhan Sadhukhan (NDPF - Dr. Anupama Binoy)	SERB NPDF	2025600	09 March 2021 - 08 March 2023
49	Multiscale modelling of chromatin assembly and dynamics	Prof. Ranjith Padinhateeri, Biosciences and Bioengineering, Indian Institute of Technology Bombay	DST National Supercomputing Mission (NSM)	2426520	06 April 2021 - 05 April 2023
50	An investigative Study on the Temporal Geometrical Damage Assessment through LIDAR - A Case of Surface and Profile Damage Detection in Bridge Infrastructure	Dr. Senthilkumar V	Kerala Highway Research Institute (KHRI)	396000	01 November 2022 - 30 April 2023
51	Spin transport in 2D material(graphene)/ perovskites(LSMO) heterostructures	Dr. Jayakumar Balakrishnan	DST-NanoMission	540361	2016 - 2019
52	Mechanistic correlation between homeostatic pressure and metastatic competence in cancer cells	Dr. Bibhu Ranjan Sarangi	SERB ECRA	537147	15 July 2017 - 14 January 2021
53	Sustainable and resilient environment friendly solutions for hill road design through a pilot study on Mannarkkad - Chinnathadagam Road	Prof. Tom V. Mathew	Kerala PWD	2498760	12 February 2020 - 11 March 2021
54	Synthesis, characterization and evaluation of TiO2 - polymer nanocomposite for photocatalytic oxidation of ethylene	Dr. Dinesh Jagadeesan	Defence Food Research Laboratory (DFRL)	945000	06 September 2019 - 05 September 2021
55	Analytical and Experimental Investigation on Frequency Dependent Linear Control Algorithm for Performance Enhancement of Real Life Civil Structures under Random Excitation	Dr. Sanjukta Chakraborty	SERB SRG	2156240	18 December 2019 - 17 December 2021
56	Deep learning and Reinforcement learning: New algorithms with improved interpretability, scalability, reliability and efficiency	Dr. Chandra Shekar Lakshminarayanan	SERB SRG	1566200	30 December 2019 - 29 December 2021
57	Multi-functional optically-sensitive devices with high efficiencies using perovskites	Dr. Revathy Padmanabhan	SERB SRG	3087770	02 January 2020 - 01 January 2022
58	Bayesian Deep Models for Efficient Privacy - Aware Learning in the Era of Big Data and Personalization	Dr. Mrinal Kanti Das	SERB SRG	1780900	04 February 2020 - 03 February 2022
59	ZIGBEE based wireless sensor network for landslide	Dr. Albert Sunny	ISRO RESPOND Programme, Department of Space	1552000	21 March 2020 - 20 March 2022
60	Feedback control of stochastic hybrid systems with state- dependent noise	Dr. Shaikshavali Chitraganti	SERB MATRICS	660000	22 March 2019 - 21 March 2022
61	Ultra-precision machining of brittle materials - Material micro-structural perspective and cutting edge radius effect	Dr. Afzaal Ahmed	SERB SRG	3165190	03 December 2019 - 02 June 2022

62	Linkage of Large Scale Ocean-Atmospheric Phenomena on Hydroclimatic Extremes in India	Dr. Sarmistha Singh	SERB SRG	1973180	03 December 2019 - 02 June 2022
63	Drought preparedness in Kerala: A comprehensive assessment with respect to climate change	Dr. Subhasis Mitra	Kerala State Council for Science, Technology & Environment	1288000	18 December 2019 - 18 June 2022
64	Low voltage MEMS actuation using Negative Capacitance	Dr. Arvind Ajoy	SERB SRG	2773690	21 December 2019 - 20 June 2022
65	Design and Development of a Composite Heat Sink based Battery Thermal Management System for Indian Electric Vehicle Industry	Dr. Samarjeet Chanda	SERB SRG	3070370	26 December 2019 - 25 June 2022
66	Development of Failure Limiting Diagram For Surface Modified Wheel-rail and Wind-turbine Bearing Materials Through Rolling Contact Fatigue Studies	Dr. D. Kesavan	SERB EMEQ	4927120	27 November 2019 - 26 November 2022
67	Analysis of Evacuation Options considering Citizen Mobility Patterns and Disaster Vulnerability in a Himalayan Region Transportation Network	1. Dr. B. K. Bhavathrathan 2. Dr. Manoj M (Asst. Prof. IIT Delhi) 3. Dr. Rahul T. M. (Asst. Prof., IIT Ropar)	National Mission on Himalayan Studies (NMHS)	1353836	10 December 2019 - 09 December 2022
68	A multimodal brain-machine interface-based neuro-enhancement system for retarding the decline of cognitive and motor functions in the early-stages of Dementia, Stroke and Parkinson's Disease patients	Dr. Mahesh R. Panicker	DST CSRI	6717160	18 January 2020 - 17 January 2023
69	Credit access and employment opportunities for women with disabilities	Dr. Amrita Roy	ICSSR	300000	23 March 2022- 22 March 2023
70	An Environmentally Benign and Sustainable Strategy to Degrade Plastic Wastes by Novel Immobilized Dual-enzyme Chimera and Protein Engineering	Dr. Sushabhan Sadhukhan	KINFRA CSR (22-23)	150000	23 February 2023 - 22 March 2023
71	Procurement of educational kits for needy students through various outreach activities of IIT Palakkad	Dr. Bibhu Ranjan Sarangi & Dr. Sarath Sasi	KINFRA CSR (22-23)	90000	23 February 2023 - 22 March 2023
72	Design, Development and Validation of Smart Weather Station for Crop Yield Enhancement	Dr. Sreenath V. & Dr. Satyajit Das	KINFRA CSR (22-23)	270000	23 February 2023 - 22 March 2023
73	Fabrication of Sustainable Products From Used Paper by 3-D Printing	Dr. S. Kanmani Subbu & Dr. Samarjeet Chanda	KINFRA CSR (22-23)	300000	23 February 2023 - 22 March 2023
74	Optical Sensor Network for Detecting Elephant Movement	Dr. Arvind Ajoy	KINFRA CSR (22-23)	350000	23 February 2023 - 22 March 2023
75	Low-cost multipurpose material for removal of toxic pollutants from environment towards developing a healthy life	Dr. Mintu Porel	KINFRA CSR (22-23)	140000	28 February 2023 - 27 March 2023
76	Study of approximation theoretic properties of the space of compact operators on Banach spaces	Dr. Jayanarayanan C. R.	SERB MATRICS	660000	10 July 2018 - 09 October 2021