

**OFFICE OF THE DEAN (R&C)**  
**NATIONAL INSTITUTE OF TECHNOLOGY CALICUT**  
**Faculty Research Seed Grant (FRG) Funding Scheme Phase V - 2024**

<b>SI</b>	<b>Ref. No</b>	<b>Name of the Faculty (PI)</b>	<b>Title of Proposal</b>	<b>Budget</b>
<b>DEPARTMENT OF CIVIL ENGINEERING</b>				
1	NITC/PRJ/CED/2024-25/FRG/15	Dr. SUDHA DAS KHAN	Development of a Comprehensive Condition Assessment Approach for Reinforced Concrete Bridges	<b>5,00,000</b>
2	NITC/PRJ/CED/2024-25/FRG/70	Dr. ANIKET SANJAY DESAI	Site characterization and seismic hazard analysis of Kozhikode	<b>5,00,000</b>
3	NITC/PRJ/CED/2024-25/FRG/34	Dr. CHANDRU P	Quantifying the performance of the alternate reinforcements and its impact on the corrosion free service life of the reinforced concrete structures	<b>5,00,000</b>
4	NITC/PRJ/CED/2024-25/FRG/8	Dr. RANJITH K	Evaluation of progressive collapse mechanism and identification of methods to increase the robustness in different single-layer spatial structures	<b>4,70,000</b>
5	NITC/PRJ/CED/2024-25/FRG/29	Dr. PRETHIV KUMAR R	Experimental Investigation on Response Control Mechanism of Vortex-Induced Vibration of the Flexible Cylindrical Structures Subjected to Shear Flow	<b>5,00,000</b>
6	NITC/PRJ/CED/2024-25/FRG/126	Dr. Punith Raj G	Dynamic Monitoring of Surface Soil Moisture Fluctuations using Synthetic Aperture Radar and Data-Driven Algorithms	<b>4,63,000</b>
7	NITC/PRJ/CED/2024-25/FRG/30	Dr. KONDALRAJ R	Development of optimum strut- and – tie model for design of reinforced concrete disturbed regions using Artificial Intelligence	<b>5,00,000</b>

8	NITC/PRJ/CED/2024-25/FRG/68	Dr. SEELAM NAGA POOJITHA	Reliability-based Multi-objective Phasing Design Accounting for Rehabilitation of Water Distribution Networks	<b>5,00,000</b>
9	NITC/PRJ//2024-25/FRG/89	Dr. Abhishek Narayana Srivastava	Biowaste to Bioplastic: Enhanced Polyhydroxyalkanoates (PHA) Bioplastic Production from Organic Wastes	<b>5,00,000</b>
<b>DEPARTMENT OF CHEMICAL ENGINEERING</b>				
10	NITC/PRJ/CHED/2024-25/FRG/95	Dr. BHARATHI GANESAN R	Modelling and experimentally verifying continuous extraction of mineral salts from reverse osmosis (RO) reject brine through membrane assisted crystallization	<b>4,97,000</b>
11	NITC/PRJ/CHED/2024-25/FRG/28	Dr. DIVIJ KISHAL	Studying the effect of rheology (non-Newtonian behaviour - shear thickening/thinning and/or viscoelasticity) on instability in surfactant-laden liquid films in cylindrical flows	<b>5,00,000</b>
<b>DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING</b>				
12	NITC/PRJ/CSED/2024-25/FRG/18	Dr. CHANDRAMANI CHAUDHARY	Next-Generation Biomedical Knowledge Graphs: Integrating Data, Enhancing Discoveries	<b>3,85,000</b>
13	NITC/PRJ/CSED/2024-25/FRG/9	Dr. VIDHYA KAMAKSHI	Interpretable Automatic Speech Recognition (IASR)	<b>1,00,000</b>
<b>DEPARTMENT OF ARCHITECTURE AND PLANNING</b>				
14	NITC/PRJ/DAP/2024-25/FRG/133	Dr. Shraddha Dhananjay Bahirat	Examining the relationship between active frontage and street enclosure ratio on street vitality and user engagement	<b>4,47,900</b>
15	NITC/PRJ//2024-25/FRG/86	Mrs. Labeeba K	Design Interventions for Algorithmic Literacy; Addressing the Lack of User's Awareness about curation algorithms in algorithmic social media platforms	<b>5,00,000</b>
16	NITC/PRJ/DAP/2024-25/FRG/132	Mrs. SAJANA	Exploration of Possible Interfaces for Personal Health Data Systems to Nudge Positive and Sustained Behavioural Change in Digital Immigrants	<b>5,00,000</b>
<b>DEPARTMENT OF MANAGEMENT STUDIES</b>				

17	NITC/PRJ/DMS/2024-25/FRG/125	Dr. ARJUN ANIL KUMAR	Impact of Anthropogenic, Weather and Terrain features on the Severity of Urban floods in Bangalore - A Remote Sensing Perspective	<b>4,93,000</b>
<b>DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING</b>				
18	NITC/PRJ/ECED/2024-25/FRG/93	Dr. Abhishek Mondal	Deep Reinforcement Learning Approach for IRS-Assisted Energy-Efficient UAVs Utilization of Digital Twin in Data Collection System	<b>4,97,000</b>
19	NITC/PRJ/ECED/2024-25/FRG/56	Dr. ARJUNAN M S	Design and Development of Broad-band Optical Limiter Using Phase Change Materials	<b>4,95,000</b>
20	NITC/PRJ/ECED/2024-25/FRG/59	Dr. GANGIREDDY NARENDRA KUMAR REDDY	Energy Efficient PPG Signal Analysis for Automated Blood Pressure Classification and Prediction for Resource-Constrained Wearable Health Monitoring Devices	<b>5,00,000</b>
21	NITC/PRJ/ECED/2024-25/FRG/58	Dr. JAGADEESH V K	Physical Layer security Analysis of dual hop hybrid RF/FSO-UWOC system	<b>4,99,140</b>
22	NITC/PRJ/ECED/2024-25/FRG/76	Dr. SAIKAT CHANDRA BAKSHI	FSS/Metamaterial based lightweight Stealth Radome design for 5G Fighter Aircrafts	<b>5,00,000</b>
23	NITC/PRJ/ECED/2024-25/FRG/114	Dr. V ANUDEEP	Development of an AI -Based Ultrasound System with Advanced Transmission and Signal Processing capabilities for various applications	<b>5,00,000</b>
24	NITC/PRJ/ECED/2024-25/FRG/123	Dr. DEBJANI GOSWAMI	Resource allocation in multi-band NOMA systems under imperfect Successive Interference Cancellation	<b>5,00,000</b>

<b>DEPARTMENT OF ELECTRICAL ENGINEERING</b>				
25	NITC/PRJ//2024-25/FRG/83	Dr. Greeshma Mohan U	Design and Performance Evaluation of High-Frequency Planar Magnetics for DC-DC Converters	<b>5,00,000</b>
26	NITC/PRJ/EED/2024-25/FRG/37	Dr. S. N. Deepa	Design and Development of AI-Machine Learning and Deep Learning Models for Power Prediction in Renewable Energy Sector and Chronic Disease diagnosis and classification in Health Care Sector	<b>5,00,000</b>
27	NITC/PRJ/EED/2024-25/FRG/122	Dr. Sandeep J	Development of a Multi Output DC-DC Converter for On-Board Electric Vehicle Charging Application	<b>4,93,000</b>
28	NITC/PRJ/EED/2024-25/FRG/60	Dr. SOUMYA RANJAN MEHER	Single-phase Isolated Battery Charger with Minimum Components and Single Controlled PWM Signal for E-rickshaw	<b>5,00,000</b>
29	NITC/PRJ/EED/2024-25/FRG/48	Dr. SUKRITI TIWARI	Comparative Performance Assessment of Photovoltaic Technologies in South Western Coastline	<b>5,00,000</b>
30	NITC/PRJ/EED/2024-25/FRG/104	Dr. Nimal Madhu M	Mode Decomposition-Based Prediction of Spatially Correlated Stochastic Parameters in Power Systems	<b>5,00,000</b>
31	NITC/PRJ/EED/2024-25/FRG/107	Dr. Devesh Shukla	Edge computing-based Modelling of Integrated Transmission and Distribution Systems	<b>5,00,000</b>
32	NITC/PRJ/EED/2024-25/FRG/106	Dr. Rahul Radhakrishnan	Augmented physics-based deep learning algorithms for target tracking and localization	<b>4,75,500</b>
<b>DEPARTMENT OF MECHANICAL ENGINEERING</b>				
33	NITC/PRJ/MED/2024-25/FRG/43	Dr. ANOOP K P	Bus route network design and scheduling for Calicut city area	<b>4,88,990</b>
34	NITC/PRJ/MED/2024-25/FRG/22	Dr. ARUN S	Bio-Functional Coatings on Niobium Metal for Enhanced Maxillofacial and Dental Implant Applications	<b>5,00,000</b>
35	NITC/PRJ/MED/2024-25/FRG/33	Dr. ATHKURI SAI SAKETHA CHANDRA	Development of higher-order (third and fourth) schemes for large eddy simulations on unstructured meshes	<b>5,00,000</b>

36	NITC/PRJ/MED/2024-25/FRG/45	Dr. JITHIN M	Prediction of scaling factor for non-Newtonian fluid flow in porous material	<b>5,00,000</b>
37	NITC/PRJ/MED/2024-25/FRG/26	Dr. NEHEM TUDU	Investigation of tribological and corrosion behaviour of surface modified additively manufactured Ti-6Al-4V for joint bone implant	<b>5,00,000</b>
38	NITC/PRJ/MED/2024-25/FRG/27	Dr. NITINKUMAR DAHYABHAI BANKER	Development of an experimental model of a concentrated photovoltaic system integrated with solar still to generate enhanced electricity and distilled water	<b>4,60,000</b>
39	NITC/PRJ/MED/2024-25/FRG/52	Dr. PRANESH DUTTA	Development of Vibration Assisted Machining setup to generate micro texturing on hardened steel	<b>5,00,000</b>
40	NITC/PRJ/MED/2024-25/FRG/49	Dr. SANGHAMITRA DAS	Structural Integrity Evaluation for Metal Additive Manufacturing Processes	<b>5,00,000</b>
41	NITC/PRJ/MED/2024-25/FRG/44	Dr. UMMEN SABU	Integrated bond coat-EBC systems in C-SiC ceramic matrix composites for extreme environments	<b>5,00,000</b>
<b>DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING</b>				
42	NITC/PRJ/MSED/2024-25/FRG/51	Dr. TELAGATHOTI SURESH KUMAR	Development of structure-property correlation in additively manufactured nickel-based superalloy in as-built and post-processed microstructure conditions	<b>4,89,900</b>
43	NITC/PRJ/MSED/2024-25/FRG/84	Dr. JEETU S BABU	Nanomaterial Design for Targeted and Therapeutic Antifungal Drug Delivery	<b>5,00,000</b>
<b>DEPARTMENT OF PHYSICS</b>				
44	NITC/PRJ/PHY/2024-25/FRG/12	Dr. RAJESH MONDAL	Delving into the dark ages and early Universe	<b>5,00,000</b>