



# NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

## Sponsored Research Projects

Sr. No.	Year	Department	Faculty Name (P I & Co-PI)	Title of project	Funding Agency
1.	2014-17	Chemistry	Dr. Amilan Jose D.	Supramolecular fluorescent probes for the selective detection of biological signaling molecule (H <sub>2</sub> S) and real time assay	SERB-DST
2.	2014-17	Chemistry	Dr. Amrita Ghosh	Development of polyoxometalate based light induced water oxidation catalysts	SERB-DST
3.	2014-19	Chemistry	Dr. Avijit Kumar Paul	New Magnetic Materials Applicable as Colored Pigments and Catalysts	DST-INSPIRE
4.	2014-17	Chemistry	Dr. Chetti Prabhakar	Design, Synthesis and Optoelectronic Properties of Thiophene Based Functional Organic Materials	SERB-DST
5.	2014-17	Chemistry	Dr. Ghule Vikas D	Quantum Chemical design, synthesis and energetic properties study on tetrazole based high energy materials	SERB-DST
6.	2015-18	Chemistry	Dr. Avijit Kumar Paul	Multifunctional Metal Organic Framework Construction by O/-N Donor Ligands	SERB-DST
7.	2014-17	Chemistry	Dr. M. Senthil Kumar	Neutral and Cationic Ruthenium Complexes for Amidation and Related Reactions in Aqueous and Biphasic Medium	SERB-DST
8.	2014-17	Physics	Dr. R.P. Chauhan	Study of Ion Beam Induced Modifications in Semiconducting Nanostructures	IUAC
9.	2014-17	Physics	Dr. C.R. Mariappan	Silver nano-particle embedded bio-glasses: Electrical polarization and assessment of their biocompatibility	SERB-DST
10.	2014-17	Physics	Dr. Yashashchandra Dwivedi	Synthesis of Novel Random Laser Materials for Advance Photonic Applications	SERB-DST
11.	2014-17	Humanities & Social Sciences	Dr. Ashwani	Impact Assessment of Rice Varieties Developed by ICAR and SAUs in India	NCAER

12.	2016-19	Chemistry	Dr. Amilan Jose D	Nano-Scale Vesicles Modified Metal Complexes For Therapeutic Carbon Monoxide (CO) Delivery	CSIR-EMR
13.	2016-18	Computer Applications	Dr. Sarika Jain-PI Dr. Ashutosh Kumar Singh Co-PI	Intelligent Real Time Situation Awareness and Decision Support System for Indian Defense.	DR&IPR-DRDO
14.	2016-19	Chemistry	Dr. M. Senthil Kumar (Anita Bhatia Ph.D. Scholar)	Synthesis of Water Soluble Cobalt Complexes and their Catalytic activities in Aqueous and Biphasic Medium	DST under Women Scientific Scheme
15.	2016-19	Physics	Dr. Anurag Gaur	Investigations on Hexaferrites to search strong magnetoelectric compounds at room temperature	CSIR
16.	2016-19	Computer Engg.	Dr. B.B. Gupta	Defending Distributed Denial of Service (DDoS) Attacks using Dynamic Resource Ownership and Economic Incentive Based Solution	SERB-DST
17.	2017-19	Chemistry	Dr. Avijit Kumar Paul	Detailed investigations on crystal and magnetic structures of frustrated double perovskites $Ca_2BRuO_6$ (B=Ga, In, Y, Sc) and their Lanthanum composites	UGC-DAE-CSR
18.	2017-20	Civil Engg.	Dr. Mahesh Pal-PI Department of Civil Engg. Dr. Mantosh, Biswas Co-PI, Department of Computer Engg.,	Classification and feature selection of AVIRIS-NG airborne hyperspectral data for crop cover mapping/urban mapping	SAC (ISRO)
19.	2017-20	Physics	Dr. J.K. Quamara Dr. Anurag Gaur	Dielectric Relaxation Investigation in Swift Heavy Ion Irradiated Ferroelectric Ceramic/Polymer Nanocomposites	IUAC
20.	2017-18	MBA	Dr. Manish Kumar Jha	Students Perception About Introduction of Human Values and Professional Ethics As Compulsory Course In Engineering Education An Exploratory Study	ICPR
21.	2017-20	Mechanical Engg.	Dr. Avadhesh Yadav	Design and development of solar assisted solid desiccant air conditioning system for India	SERB-DST
22.	2017-20	Civil Engg.	Dr. Mahesh Pal-PI Department of Civil Engg. Dr. Mantosh, Biswas Co-PI, Department of Computer Engg.,	Fusion of Optical and Multi - frequency Multi - polarimetric SAR data for Enhanced Crop/Vegetation and Urban Mapping	SAC (ISRO)

23.	2017-20	Mechanical Engg.	Dr. J.P. Misra	Development of Ultrasonic Assisted Electrochemical Mechanical Finishing (UAECMF) Process with Modular Tooling System for Precision Finishing of Gears	SERB-DST
24.	2017-19	Electrical Engg.	Saurabh Chanana	Modelling and Simulation of Explosive Driven Helical Flux Compression Generator	TBRL-DRDO
25.	2017-19	Electronics & Comm. Engg.	Dr. Vikas Mittal-PI Dr. Monika Mittal Co-PI Department of Electrical Engg	Data Fusion Algorithms for Vehicle Detection and Classification System	TBRL-DRDO
26.	2017-20	Chemistry	Dr. Chetti Prabhakar (Ms. Vidya VM Ph.D. Scholar)	Computational Design, Synthesis and Optoelectronic Properties of Functionalized 1,3,5- Triazine compounds and their Metal Complexes	DST under Women Scientific Scheme
27.	2017-19	Electronics & Comm. Engg.	Dr. Ashutosh Nandi	Physics Based Accurate Analytical Modeling of AlGaIn/GaN High Electron Mobility Transistors	DRDO
28.	2017-20	Physics	Dr. Prakash Chand	Development of Novel Electrode Material for Supercapacitor Applications	SERB-DST
29.	2017-20	Mechanical Engg.	Dr. Rajneesh	Design and Development of a Hybrid Powered Liquid Desiccant System for Air Conditioning and Fresh Water Production	SERB-DST
30.	2017-20	Computer Engg.	Dr. Virender Ranga	Partition Recovery of Wireless Sensor Networks with the integration of Unmanned Aerial Vehicles (UAVs)	SERB-DST
31.	2017-20	Mechanical Engg.	Dr. Gulshan Sachdeva	Performance Enhancement of Vapor Compression Refrigeration System Using Ejector as an Expansion Device	SERB-DST
32.	2017-18	Computer Engg.	Dr. Jitender Kumar Chhabra	Design and Development of a Novel Approach for Secure Storage on External Media and Lossless Retrieval	JCB-DRDO
33.	2017-19	Computer Engg.	Dr. Brij Bhooshan Gupta	Implementation of Security Features in Smart Cards	JCB-DRDO

34.	2017-21	Physics	Dr. R.P. Chauhan	Modifications in the Properties of II-VI Semiconducting Nanostructures By Ion Beam	IUAC-UGC
35.	2017-21	Chemistry	Dr. Amilan Jose D.-PI Department of Chemistry & Dr. C.R. Mariappan, Co-PI- Department Physics	Photoinduced release of therapeutic Nitric Oxide (NO) from functionalized self-assembled nanovesicles.	DBT
36.	2018-19	Physics	Dr. Yashashchandra Dwivedi	Feasibility of Development of Spectrally Selective Absorbing Materials for Laser Absorbing Coatings	DRDO
37.	2018-21	Physics	Dr. Anurag Gaur -PI Dr. Ashok Kumar -Co-PI Dr. Dipti Gupta Co-PI-IIT, Bombay, Powai	Nanomaterials for stable and high efficiency inorganic-organic perovskite- tandem solar cells	CSIR
38.	2018-21	Chemistry	Dr. Chetti Prabhakar	Design Synthesis and Optoelectronic Properties of Squaraine and Croconine based Functional Organic Materials	CSIR
39.	2018-21	Physics	Dr. Neena Jaggi	Localized Surface Plasmon Resonance effect of metal nanoparticles (Au,Ag etc.) on the optical properties of nanophosphors for Plasmon Enhanced Fluorescence sensors	CSIR
40.	2018-21	Chemistry	Dr. Amilan Jose D.	Development of Highly Sensitive Colorimetric and Fluorescent Moisture Sensors, Based on Small Molecules, Chemically Modified Paper and Electrospun Nanofibrous Materials	SERB-DST
41.	2018-21	Mechanical Engg.	Dr. Punit Kumar-PI Dr. Lalit Thakur (Co-PI)	Synthesis and Characterization of Ceramic-Metal Multilayer Functionally Graded Armor Materials with Improved Ballistic Performance	DRDO (ARMREB)
42.	2018-19	Civil Engg.	Dr. S.N. Sachdeva	Research Project for Soil Strength Mapping & Stabilization	Engineer-in-Chief, Haryana PWD B&R, Chandigarh
43.	2018-19	Mechanical Engg.	Dr. Avadhesh Yadav	Development of Low Cost Scheffler Solar Concentrator for Domestic Indoor Cooking and Heating Application for Rural Areas	ONGC Energy Centre Trust

44.	2018-21	Mechanical	Dr. M.P. Maiya- PI, IIT Madras, Dr. Saourav Mitra, Co-PI, IIT Kharagpur Dr. Avadhesh Yadav Co-PI, NIT KKR	Desiccant Solar Still	IMPRINT-II SERB-DST
45.	2018-21	Electronics & Comm. Engg.	Dr. Gargi Dixit, Prof. Brahmjit Singh, Mentor/Guide)	Performance and Improvement Study of Bi-Frequency MILO	DST under Women Scientific Scheme A (WOS-A)
46.	2018-21	Electrical	Dr Bhanu Pratap-PI Electrical Engg. Deptt. Dr Punit Kumar Co-PI, Mechanical Engg. Deptt., Dr Pankaj Chandna Co-PI, Mechanical Engg. Deptt.	Design, Fabrication & Testing Of Active Magnetic Bearing For Centrifugal Pumps With VFD	Indian Navy
47.	2018-21	Physics	Dr. C.R. Marriappan	Development of spinel-type metal oxide/reduced, graphene oxide novel nanocomposites for NO <sub>x</sub> gas sensing application	UGC-DAE CSR
48.	2018-21	Chemistry	Dr. Ghule Vikas D.-PI Dr. Ram Kumar Tittal Co-PI	Development of Insensitive High Energy Materials Containing Heterocyclic Backbone Substituted with Amino, Azido and Nitro Explosophores	DRDO (ARMREB)
49.	2018-21	Mathematics	Dr. Smita Sonker	Study of Degree of Approximation and Absolute Summability Factors of Infinite Series	SERB-DST
50.	2018-21	Physics	Dr. Anurag Gaur-PI Physics Deptt. Dr. Amrish Panwar, Co-PI, AP Physics DTU Delhi	Utilization of agricultural waste as an electrode material for energy storage devices	SERB-DST
51.	2019-22	MBA	Dr. Neeraj Kaushik-PI Dr. Rajender Kumar Co-PI	Correlation between Psychological and Physiological Parameters of Stress Among Staff and Students-AN Empirical Study	LSRB (DRDO)
52.	2019-22	Civil Engg.	Dr. Shailu Dalal Guin-PI Prof. Surinder Deswal (Mentor/Guide)	Removal of organic and inorganic toxins from electronic waste using isolated bacterial species and competent phytoremediators	DST under Women Scientific Scheme A (WOS-A)
53.	2019-22	Physics	Dr. C.R. Mariappan	"Development of novel solid lithium ionic conductors for advanced lithium ion battery applications"	Alexander von Humboldt Foundation, Germany

54.	2019-22	Civil Engg.	Praveen Aggarwal	"Performance Assessment of Roads Constructed Using Waste Plastics	NRIDA
55.	2019-22	Physics	Dr. R.P. Chauhan	"Behavior of Indoor radon-thoron decay products: CFD Simulations and Validation through measurement "	BRNS
56.	2021-22	Mechanical Engg.	Dr. Gian Bhushan-PI Dr. Pankaj Chandna Co-PI	Design and Analysis of Jet Deflector and its Support Structure	SPIC (DRDO)
57.	2021-24	MCA Deptt.	Dr. Sarika Jain	Multilingual and Culturally Customized Knowledge Management for Legal Information Processing and Management	DST
58.	2021-22	Mechanical Engg.	Dr. Pankaj Chandna-PI Dr. Gian Bhushan Co-PI	Design of a light weight container for transportation and storage of a store	SPIC (DRDO)
59.	2021-24	Electrical Engg,	Dr. Preet Lata-PI Dr. Shelly Vadhera, Mentor/Guide	Waste Management in North Indian Villages by Developing Reliability based Microgrid with Solar and Biomass Energy	WOS-B Scheme Under DST
60.	2021-24	Physics	Dr. Ashavani Kumar-PI Dr. Prakash Chand Co-PI	Development of synergetic dielectric and magnetic loss materials composite for high performance microwave absorption applications	DRDO
61.	2022-25	Chemistry	Dr. Amilan Jose D.-PI Dr. Vikas D. Ghule Co-PI	Smartphone assisted portable chemical sensor for the detection to toxic Heavy Metals and Pesticides in water bodies of Haryana	DST Haryana