

# **SFRF-2021 Mentor List**

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
1	Applied Mechanics	Gaurav Singh	Fracture Mechanics
2	Biochemical Engineering and Biotechnology	D. Sundar	Bioinformatics
3	Central Library	Nabi Hasan	<a href="https://web.iitd.ac.in/~hasan/">https://web.iitd.ac.in/~hasan/</a>
4	Centre for Applied Research in Electronics	Ankur Gupta	Analog Circuit Design, Sensors and System Design, MOS Device Design, Nanoelectronics
5	Centre for Applied Research in Electronics	Arun Kumar	Signal Processing, Underwater and Air Acoustic Signal Processing, Speech Processing, Machine Learning
6	Centre for Applied Research in Electronics	Mahesh P. Abegaonkar	Printed antennas, metamaterials
7	Centre for Applied Research in Electronics	Monika Aggarwal	Signal Processing, Image Processing and communication
8	Centre for Applied Research in Electronics	Pushparaj Singh	Microelectronics, MEMS Sensors, Material Science
9	Centre for Applied Research in Electronics	Rahul Mishra	microelectronics
10	Centre for Applied Research in Electronics	Samaresh Das	NANOELECTRONICS, THz Detectors and Modulators, Photodetectors

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
11	Centre for Applied Research in Electronics	Shiban Kishen Koul	Microwave integrated circuits,CAD, microwave phase shifters, optical and millimeter wavedielectric integrated guides and circuits.
12	Centre for Atmospheric Sciences	Sagnik Dey	Air pollution
13	Centre for Automotive Research and Tribology	Akhil Garg	Battery pack design, Thermal management of batteries, Energy storage
14	Centre for Automotive Research and Tribology	Deepak Kumar	Multifunctional Coatings, Tribology and Lubricants
15	Centre for Automotive Research and Tribology	Shahab Fatima	Automotive NVH, Machine Condition Monitoring, Noise Control Materials, Reliability & Maintenance
16	Centre for Biomedical Engineering	Arnab Chanda	Biomechanics, Biomimetics, Biomedical Devices, Wearable Technology, Entrepreneurship
17	Centre for Biomedical Engineering	Biswarup Mukherjee	Bionics, Biomechatronics, Ultrasound Imaging, Human Machine Interfaces, Haptics
18	Centre for Biomedical Engineering	Deepak Joshi	Biomedical Signal Processing, Machine Learning, Neuroscience, Robotics
19	Centre for Biomedical Engineering	Dinesh Kalyanasundaram	Design and manufacturing, especially medical devices
20	Centre for Biomedical Engineering	Jayanta Bhattacharyya	Biomaterials, Cancer, wound Healing, Diabetes
21	Centre for Energy Studies	Bibhuti Bhusan Sahu	Quest for ECR/microwave thermal/non-thermal plasmas in open air for different applications
22	Centre for Energy Studies	Debaprasad Sahu	Plasma physics and technologies

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
23	Centre for Energy studies	Dibakar Rakshit	Cooling of solar photovoltaic (SPV) panels using Phase Change Materials (PCMs), Thermal management Syster of Li-ion batteries
24	Centre for Energy Studies	Rahul Goyal	High-Performance Computing (CFD simulations) of Turbulent Flows in Complex Geometries (Turbines and Pumps)
25	Centre for Energy Studies	Ramesh Narayan	Experimental Plasma Physics Studies, RF/Microwave Plasma Sources Characterization, Nonlinear Dynamical Characterization of plasma discharges
26	Centre for Energy Studies	Ravi Kumar K.	Solar Thermal, Thermal Energy Storage, Industrial Process Heating, Solar Radiation Forecasting
27	Centre for Energy Studies	S K Tyagi	Solar Refrigeration, Atmospheric Water Generation, Smart Combustion Devices, Carbon Capture & Storage, Solar-Biomass Thermal Applications, Thermal Performance and Emission Characteristics from Jaggery Plants, Desalination, Argo-residues to Syngas for Bio-H <sub>2</sub> Production
28	Centre for Energy Studies	Satyananda Kar	Cold atmospheric plasma for biomedical applications
29	Centre for Energy Studies	Vipin Kumar	Eletrochemical Energy Storage Devices, e.g., Batteries and Supercapacitors
30	Centre for Rural Development and Technology	Anushree	Environmental Biotechnology, Algal Technologies, Wastewater Treatment, Herbal Products
31	Centre for Rural Development and Technology	HariPrasad. P.	Agricultural Biotechnology and Phytochemistry

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
32	Centre for Rural Development and Technology	J K Sahu	Isolation, encapsulation and value addition of bio actives; 3D printing of biological materials; measurement and monitoring of trans fats in fried foods
33	Centre for Rural Development and Technology	Kavya Dashora	Application of nanotechnology, actinomycetes, value chain analysis
34	Centre for Rural Development and Technology	Vijayaraghavan M Chariar	Design for Sustainability, Circular Economy, Frugal Innovations, Traditional Knowledge Systems, Visit URL <a href="https://web.iitd.ac.in/~chariarv">https://web.iitd.ac.in/~chariarv</a>
35	Chemical Engineering	Anil Verma	Electrochemical Devices
36	Chemical Engineering	Anupam Shukla	Electrochemical Engineering, Supercapacitor, Graphene
37	Chemical Engineering	Ashok N. Bhaskarwar	Interfacial Engineering, Chemical Reaction Engineering, Pollution Prevention Technologies
38	Chemical Engineering	Hariprasad Kodamana	Machine learning, graphs, Optimization, model predictive control, fault detection and diagnosis
39	Chemical Engineering	Kamal K. Pant	Heterogeneous catalysis and reaction engineering, Biomass conversion and Waste to energy
40	Chemical Engineering	Mohammad Ali Haider	Catalysis, Batteries, Fuel Cells, Biofuels, Biorenewable Chemicals
41	Chemical Engineering	Sudip K Pattanayek	Polymer near interfaces, proteins near interfaces, Food safety
42	Chemistry	A K Ganguli	electrocatalysts, materials research, superconductivity, nanomaterials

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
43	Chemistry	Biswarup Chakraborty	Metal-oxide Nanostructure for Photo(electro)catalysis, Water splitting and CO2 reduction
44	Chemistry	Hemant Kumar Kashyap	Molecular Dynamics Simulation, Theoretical Physical Chemistry
45	Chemistry	Kuntal Manna	INORGANIC CHEMISTRY, CATALYSIS
46	Chemistry	Ravi P Singh	Synthetic Organic Chemistry
47	Chemistry	Shivajirao L. Gholap	Organic Synthesis, Total Synthesis of Natural Products.
48	Chemistry	Soumik Siddhanta	Vibrational spectroscopy, molecular imaging, plasmonics, Biophotonics
49	Chemistry	Sudipta Raha Roy	Photo and electrocatalysis for the synthesis of small molecules
50	Civil Engineering	Arun Kumar	water reuse, emerging contaminants, human health risk assessment
51	Civil Engineering	Arvind Nema	Environmental Engineering, Integrated Waste Management, Systems Optimization, Risk Assessment
52	Civil Engineering	Bappaditya Manna	Geotechnical Engineering, Foundation Engineering, Soil Dynamics, Machine Foundations
53	Civil Engineering	Deo Raj Kaushal	Hydraulic and Water Resources Engineering, Fluid Mechanics, Sediment Transport, Hydraulic Structures, Multiphase Flows, Slurry Pipeline and Flume, Computational Fluid Dynamics, Flow Instrumentation

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
54	Civil Engineering	Dhanya C T	Hydrology, Water Resources Engineering, Climate Change, Remote Sensing Applications in Hydrology
55	Civil Engineering	Dipti Ranjan Sahoo	Earthquake engineering, Steel structures, Seismic retrofitting, RC structures
56	Civil Engineering	Kumar Neeraj Jha	Construction project management, construction safety and quality, green building, lean construction, construction technology
57	Civil Engineering	Manabendra Saharia	Hydrology, land surface modeling, flood forecasting, data analysis, and machine learning
58	Civil Engineering	R. Ayothiraman	Geotechnical Engineering (Pile foundations, Tunnelling in soils and rocks, Rock Engineering, Ground Improvement)
59	Civil Engineering	Sahil Bansal	Structural Dynamics, Uncertainty quantification ,Sensitivity analysis ,System Identification , Optimal Sensor Placement , Robust analysis and optimization , Reliability analysis and optimization
60	Civil Engineering	Tanusree Chakraborty	Geotechnical Engineering, Rock Engineering
61	Civil Engineering	Vasant Matsagar	Multi-Hazard Protective Structures; Structural Engineering
62	Computer Science and Engineering	Sayan Ranu	Machine Learning and Data Mining for Graphs
63	Computer Science and Engineering	Smruti R. Sarangi	Computer Architecture and Operating Systems
64	Computer Services Centre	Ajay Guleria	Software defined networking, information centric networking, network security and vehicular ad hoc Networks

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
65	Computer Services Centre	Jaya	Data Mining , Web Mining
66	Computer Services Centre	Manepalli Mallikharjuna Rao	MIS, ERP implementation, ANN, AI
67	Computer Services Centre	Rajesh Bhat	Artificial Intelligence, Block Chain, Internet of Things, Image Processing, Education Technologies, Data Science.
68	Computer Services Centre	Ram Lal	MACHINE LEARNING,DIGITAL IMAGE PROCESSING AND CRYPTOGRAPHY
69	Design	Charu Monga	Visual Communication, Immersive media design, Cultural Construction towards heritage preservation, innovation, empowering educational areas and science communication
70	Design	Jyoti Kumar	UX Design for Rural Entrepreneurship, Human Computer Interaction design.
71	Electrical Engineering	Amit Kumar Jain	Electric vehicles, Electric Drives, Power Electronics
72	Electrical Engineering	Amol Choudhary	Optical Communication, Nonlinear Optics, microwave Photonics, Integrated Optics, Laser sources
73	Electrical Engineering	Anandarup Das	Power Electronics, Multilevel Converter
74	Electrical Engineering	Ankesh Jain	Analog and mixed signal circuit design, Data converter, Power converter
75	Electrical Engineering	Arpan Chattopadhyay	Wireless communication, networks, radar signal processing, machine learning, IoT, cyber-physical systems, cyber-security

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
76	Electrical Engineering	Bijaya Ketan Panigrahi	Smart Grid, Protection, EVs, AI and ML
77	Electrical Engineering	Dhiman Mallick	Brain computer interface using Nano devices
78	Electrical Engineering	Madhusudan Singh	Flexible electronics, materials science, low cost sensors
79	Electrical Engineering	Nilanjan Senroy	Power System Dynamics, Renewable Energy Systems.
80	Electrical Engineering	Seshan Srirangarajan	Signal processing, optimization, wireless networks, machine learning
81	Electrical Engineering	Shankar Prakriya	5G Communications, backscatter communications, full-duplex signaling, energy harvesting, IoT, interference management
82	Electrical Engineering	Sukumar Mishra	Renewable Energy, Intelligent Algorithm
83	Electrical Engineering	Sumantra Dutta Roy	Computer Vision, Image Analysis, Machine Learning
84	Electrical Engineering	Swades De	Communication networks with emphasis on performance modeling and analysis
85	Electrical Engineering	Tapan K. Gandhi	Brain Imaging, Biomedical signal/image processing, assistive technology, Computational Neuroscience, Medical Electronics, Artificial Intelligence
86	Humanities and Social Sciences	Kamlesh Singh	Positive Psychology & its applications, Psychometrics, Community Psychology, Mental Health of Rural Women and Adolescents



<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
87	Humanities and Social Sciences	Purnima Singh	Applied Social Psychology and Organizational behaviour
88	Humanities and Social Sciences	Reetika Khera	Development economics: Economic impact of covid impact, social support, health
89	Humanities and Social Sciences	Varsha Singh	Cognitive Psychology, Neuropsychology
90	Humanities and Social Sciences	Vibha Arora	Environmental Sociology, Development, Internet and society
91	Kusuma School of Biological Sciences	Vivekanandan Perumal	virology, epigenetics, next generation sequencing, genomics, microbial diagnostics, antimicrobial resistance
92	Management Studies	Arpan Kumar Kar	Data science, text mining, machine learning, social media, network science, information systems
93	Management Studies	Biswajita Parida	Consumer Behavior, Advertising, Branding, Product Management
94	Management Studies	Gourav Dwivedi	Sustainable Supply Chain Management, Transportation/Logistics Modelling, and Industry 4.0,
95	Management Studies	P. Vigneswara Ilavarasan	Memes Ecosystem; Digital Loan Sharks; Social Commerce [Details: <a href="https://web.iitd.ac.in/~vignes/">https://web.iitd.ac.in/~vignes/</a> ]
96	Management Studies	Sanjay Dhir	Strategic Innovation, Ambidexterity, Strategic Thinking, Strategic Management, Strategic Alliances / Joint Ventures, Technology Transfer, Creative Problem Solving and Management of Change and Transformation
97	Management Studies	Shuchi Sinha	Employee Well-Being, Counterproductive Work Behaviours, Employability Issues

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
98	Management Studies	Surya Prakash Singh	Operations Management, Supply Chain Management, Optimization
99.	Materials Science and Engineering	Bhabani Satapathy	Engineered Polymer composites and Nanomaterials; Dental Materials Dental composites; Tribology of polymer Composites; Deformation and Fracture Behaviour of Polymer Based Materials, Morphology and Phase Behaviour
100	Materials Science and Engineering	Bijay P Tripathi	Polymer synthesis, nanomaterials, membranes, separation, water, energy
101	Materials Science and Engineering	Jayant Jain	Microstructure-property-processing correlation in advanced materials such as Mg alloys, high entropy alloys, Nano mechanical behaviour of materials
102	Materials Science and Engineering	Josemon Jacob	Biodegradable Polymers, polymers for agricultural applications, chelating materials for heavy metal ion removal from aqueous waste fire retardant materials
103	Materials Science and Engineering	Lakshmi Narayan R	Microstructure-Mechanical properties of 3D printed alloys (Steels, AlMgSi, Ni-Based superalloys)
104	Materials Science and Engineering	Leena Nebhani	Macromolecular surface engineering and functionalization of surfaces via combination of orthogonal and controlled free radical polymerization techniques, preparation of organically modified mesoporous silica nanoparticles and its application in nanomedicine and as clean energy source, antimicrobial

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
			hydrogels and cryogels for water disinfection, functionalized silica derived from rice husk ash, hybrid polybenzoxazines for high thermal applications
105	Materials Science and Engineering	Nirat Ray	Computational design of novel materials, Electronic transport in low-dimensional materials
106	Materials Science and Engineering	Nitya Nand Gosvami	Nanoscale mechanics and tribology of materials, thin films and coatings, 2D materials and nanoparticle based lubricants, surface engineering
107	Materials Science and Engineering	Rajesh Prasad	Physical Metallurgy, Mechanical behaviour of materials
108	Materials Science and Engineering	Sampa Saha	Biodegradable polymeric materials
109	Materials Science and Engineering	Suresh Neelakantan	Mechanical behaviour of advanced materials: bulk and porous forms; in situ phase transformation effect on deformation behaviour; structure-property correlations of materials; materials characterization. Current interest in High entropy alloys (HEAs) and $\beta$ Titanium alloys for various structural applications; TRIP/TWIP steels & Ti-, Ni- and Fe- based: shape memory alloys, stochastic fibre networks, auxetic (i.e. negative Poisson's ratio) materials/composites for structural and biological applications.
110	Mathematics	Bhawani Sankar Panda	Graph Theory, Algorithms, Data Mining

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
111	Mathematics	Harish Kumar	Numerical Differential Equations
112	Mathematics	K. Sreenadh	Partial Differential equations, control theory
113	Mathematics	Niladri Chatterjee	Natural Language Processing, AI, Data Science
114	Mathematics	Punit Sharma	Distance problems for control systems, perturbation analysis of matrix polynomials and their applications in control systems
115	Mathematics	Rajendra K Sharma	Algebra, Cryptography
116	Mathematics	S Dharmaraja	Stochastic Modeling, Financial Mathematics
117	Mathematics	S. Chandra Sekhara Rao	Numerical Linear Algebra, Computational ODE/PDE, Parallel Computing
118	Mathematics	V V K Srinivas Kumar	Numerical Analysis, Finite Element Methods(FEMs), Numerical Methods for Partial Differential Equations, Fractional PDEs, Inverse Problems, Statistical Methods and Econometrics, Price and Load prediction of electricity, R-language,
119	Mechanical Engineering	Bahni Ray	Multiphase Computational Fluid Dynamics
120	Mechanical Engineering	Krishnakant Agrawal	Gas Turbines, Turbulent Combustion, Internal Combustion Engines, Aero-acoustics
121	Mechanical Engineering	Kusum Meena	Additive manufacturing, Auxetic metamaterials, Laser material processing

<b>Sl. No.</b>	<b>Department/ Centre/ School</b>	<b>Faculty Mentor (Prof./Dr.)</b>	<b>Research Area/s</b>
122	Mechanical Engineering	Naresh Datla	Fracture mechanics, Composites
123	Mechanical Engineering	P.Vekateswara Rao	Manufacturing
124	Mechanical Engineering	Varun Ramamohan	Operations Research in Healthcare Systems
125	Physics	Brajesh Kumar Mani	Computational condensed matter physics, Computational atomic physics, Electronic structure calculations.
126	Physics	J P Singh	SERS, biosensors, nano mechanics
127	Physics	Rajendra S Dhaka	<a href="http://web.iitd.ac.in/~rsdhaka/">http://web.iitd.ac.in/~rsdhaka/</a>
128	Textile and Fibre Engineering	Abhijit Majumdar	Protective textiles; Piezoelectric textiles; Fiber reinforced composites; 3D weaving; Sustainable supply chain; Soft computing; Multi-criteria decision making
129	Textile and Fibre Engineering	Apurba Das	Clothing Comfort, Technical Textiles, Protective Clothing, Nonwovens
130	Textile and Fibre Engineering	Bhanu Nandan	Fibrous materials for energy storage and catalytic support; Electrospinning; Polymer crystallization
131	Textile and Fibre Engineering	Bipin Kumar	E-Textiles, Knitting, Protective Textiles