

## Major International Sponsored Research Projects Undertaken During the Financial Year 2021-22

Title	Sponsoring Agency/ Collaborating Institutes	Sanctioned Funds (Rs. Lacs)	Principal Investigator / Department
Fixing the Leak: Advancing STEM Innovation and Inclusion in India, One Woman Scientist at a Time	Co-Impact -New Venture Fund, USA	375.00	Ravinder Kaur Dept. of Humanities & Social Sciences
Combating environmental pollution through internationalization of education in Germany and India (COMPOLL)	UGC, India & DAAD, Germany  <u>Collaborating Institute :</u> Technical University of Dresden	312.00	Ashish Kamalakar Darpe Dept. of Mechanical Engineering
Quantum materials: growth of single crystals and physical property characterization	Max Planck Partner Groups Germany	87.00	Kaustuv Manna Dept. of Physics
Investigation of charge carrier dynamics and fluctuations of skyrmions in ultrathin film multilayers with interfacial Dzyaloshinskii-Moriya interaction	Indo-French Centre for the Promotion of Advanced Research  <u>Collaborating Institutes :</u> Joint CNRS/Thales Physics Unit, Palaiseau, France	85.47	Pintu Das Dept. of Physics
Investigation into the influence of clinker content on the performance of limestone calcined clay cements (LC3)	Lafarge Centre de Recherche, France	83.71	Shashank Bishnoi Dept. of Civil Engineering
An integrated approach to uncover genetic, molecular, and cellular mechanisms underlying severe neurodevelopmental disorders	Indo-French Centre for the Promotion of Advanced Research  <u>Collaborating Institute:</u> INSERM Unit 1231 University of Burgundy, France	83.34	Shilpi Minocha School of Biological Sciences
Engineering rhizosphere microbiota for enhanced resistance to plant disease and human pathogens through compost amendments	Indo-French Centre for the Promotion of Advanced Research  <u>Collaborating Institute:</u> INRAE Unit de Recherche OPAALE, Rennes, France	80.78	Shilpi Sharma Dept. of Biochemical Engineering & Biotechnology
SAMOSA: Sensor-based Air Measurement Observatory for South Asia	Silicon Valley Community Foundation, USA	64.57	Sagnik Dey Centre for Atmospheric Sciences

Adaptive Credit Policy - Application of Reinforcement learning in Order and Credit Management	BASF SE, Germany	53.04	Arpan Kumar Kar Dept. of Management Studies
Preparation and physical-chemical characterization of self-monitoring and self assembling protein particles for biomedical application	Global Innovation and Technology Alliance (GITA), DST  <u>Collaborating Institute</u> : National Chiao Tung University, Taiwan	45.16	Tapan Kumar Chaudhuri School of Biological Sciences
Strontium titanate for CO2 utilization of nanostructures: one step closer to a carbon-free environment	International Bilateral Cooperation Division, DST India  <u>Collaborating Institute</u> : University of Szeged, Hungary	41.81	Pravin Popinand Ingole Dept. of Chemistry
Understanding synergies and tensions in air quality climate adaptation needs	Natural Environment Research Council, UK <u>Lead Partner</u> : University of Birmingham, UK	28.22	Sri Harsha Kota Dept. of Civil Engineering
CMOS Sub-Terahertz Front End IC Building Blocks for Auto-RADAR and 6G	Semiconductor Research Corporation USA	27.00	Mustafijur Rahman Dept. of Electrical Engineering
Design and Exploration of Hybrid Systems for ML, Analytics, and Simulation-based Applications	Semiconductor Research Corporation USA	26.84	Smruti Ranjan Sarangi Dept. of Computer Science & Engg.
The Road Less Travelled: Contextualizing and Measuring Bias in Crowd sourced Street Safety Ratings in India	Google Asia Pacific Pvt. Ltd Singapore	22.55	Nandana Sengupta School of Public Policy
Clean air action plans in Indore, India; Jakarta, Indonesia; and Addis Ababa, Ethiopia	World Resources Institute USA	22.48	Sri Harsha Kota Dept. of Civil Engineering
Studying End-End Modeling of Symbolic Components in Neural Architectures for Mixed-Mode Tasks	Google Asia Pacific Pvt. Ltd Singapore	22.13	Mausam Dept. of Computer Science & Engg.
Scaling up novel techniques for data augmentation and learning from unbalanced data to develop an AI/ML diagnostic system for Covid based on X Ray images	American India Foundation, USA	22.10	Jayadeva Dept. of Electrical Engineering

Anticipating Futures: Forecasting and Climate Preparedness for Co-located Hazards in India (ANTICIPATE)	British Academy UK <u>Collaborating Institutes :</u> The University of Brighton, UK Institute of Development Studies, University of Sussex UK	17.42	Krishna Mirle Achutarao Centre for Atmospheric Sciences
Study of social emotional competencies during early childhood	Mind and Life Institute USA	14.42	Jyoti Kumar Dept. of Design
Micro-resolved finite element modeling and simulation of nonwovens (Indo-German Joint project)	International Multilateral Regional Cooperation Division, DST, India & DAAD, Germany <u>Collaborating Institute :</u> FAU Erlangen, Germany	12.16	Ajeet Kumar Dept. of Applied Mechanics
Ensemble-based Hardware Predictors for Computer Vision Applications (Qualcomm Faculty Award 2021)	Qualcomm, USA	11.08	Smruti Ranjan Sarangi Dept. of Computer Science & Engg.
A Unified Land Surface-Subsurface Information System for Water Management of A Tropical Basin	International Bilateral Cooperation Division, DST India <u>Collaborating Institute :</u> Institute for Bio- and Geosciences (IBG-3), Germany	7.73	Dhanya C T Dept. of Civil Engineering
Innovative Structural Protection System for Resilient Community Against Multiple Hazards	Coalition for Disaster Resilient Infrastructure USA <u>Collaborating Institute:</u> University of California Berkeley (UCB), USA	7.47	Vasant A Matsagar Dept. of Civil Engineering
Building AI-based Market Intelligence Systems for Farmer Collectives	Google Asia Pacific Pvt. Ltd Singapore	7.40	Aaditeshwar Seth Dept. of Computer Science & Engg.
Indo-UK Workshop on Urbanization and Resilience against Natural and Man-Made Disaster - Developing a Roadmap to Build Resilient Cities in India (DST-UKIERI Partnership Development Workshop)	International Bilateral Cooperation Division, DST, India <u>Collaborating Institute :</u> University of Wolverhampton	5.82	Vasant A Matsagar Dept. of Civil Engineering
Google exploreCSR Award	Google Asia Pacific Pvt. Ltd Singapore	4.44	Naveen Garg Dept. of Computer Science & Engg.

## Major International Consultancy Jobs Undertaken During the Financial Year 2021-22

Title	Sponsoring Agency	Sanctioned Funds (Rs. Lacs)	Consultant Incharge / Department
Efficient Food Grain Supply Chain for FCI and Uttarakhand	United Nations World Food Programme	39.00	Nomesh Bhojkumar Bolia Dept. of Mechanical Engineering
Development of Emission Inventory Tool for Energy, Vehicles and Domestic Sectors in India	Centre for Research on Energy and Clean Air Finland	21.40	Sri Harsha Kota Dept. of Civil Engineering
Editorial Work of JAMR (Phase IX)	Emerald Publishing Limited UK	16.36	Ravi Shankar Dept. of Management Studies
Tribo-Performance Evaluation and Performance Analysis of Cu-free NAO Brake-Pads	Imerys Graphite & Carbon Switzerland Ltd. Switzerland	2.50	Jayashree Bijwe Centre for Automotive Research and Tribology (CART)