

For the December 2024 intake we have 84 Projects available for candidates, Out of which 3 Projects are supported by Industry Partners & 6 Department of Biotechnology Fellowships will be offered for projects in the area of Bio and allied areas

Project ID	Project Title	
IMURA1167	Development of single atom and cluster catalysts for photothermal cracking of ammonia at low temperature.	Industry Partner - BASF
IMURA1216	Novel polymeric compositions forming ceramic layer for cable insulation and sheathing when exposed to fire	Industry Partner - KEC Internationals Ltd
IMURA1218	Data-driven modeling of the coal/biomass gasification process	Industry Partner - Ansys
HSS1121	Energy security risk and asset pricing	
HSS1159	An empirical analysis of female labour force participation	
HSS1178	The role of Artificial Intelligence in Economic Decision making	
HSS1180	Caste, Technology and Social Reproduction of Labour: A View from the Margins	
HSS1181	Ethnic/Caste Boundary Breaking: Identity, Status, and Education in Inter-caste Marriages	
HSS1190	Sustainable Futures: G7, Bridging Gender Gap(s), Energy Transition - A Cross-Cultural Analysis of Western India and Australia	
HSS1203	The interaction between cognition and consciousness	
HSS1206	Sociological perspectives of social inequality through the lives and livelihoods of marginalised communities in India due to the impact of climate change, risk and environmental justice	
IDO0687	Sustainable design solutions for Agriculture practices in India	
IDO0897	Preventing Sexual Harassment in Indian Public Transport Spaces through Gender-Sensitive Co-Design with Women and Girls	
IDO0945	Bicycle logistics and mobility in India and Australia	
IDO1059	Accessibility solutions for healthcare emergencies for rural areas	
IDO1060	Emergency response mobility system for fire fighting in high density city situations	
IMURA0807	Effect of texture on formability of hexagonal metals (Zn and Mg)	
IMURA0808	2D iron for energy storage	
IMURA0832	Ultrafast dynamics in assemblies of nanomaterials	
IMURA0857	Development of green biorefinery technologies from lignocellulosic feedstock	
IMURA0901	Simulating polymer dynamics in a crowded nucleus	
IMURA0935	Fatigue Characteristics of Friction Stir Processed Magnesium Alloy	
IMURA0948	Distributed Algorithms for Mixed Integer Convex Optimization	
IMURA0970	Experimental and modeling studies of 2D/2D layered semiconductor heterointerfaces	
IMURA0991	Substructure and Residual Stresses in Aluminum Alloys	
IMURA1006	Modelling of Mechanics of Sliding in Biological Soft Tissues	
IMURA1010	Reliable Deep Learning and Statistical Inference for Medical Image Analysis	
IMURA1052	Role of local structure in the mechanical properties of disordered colloidal particle assemblies and nanocomposites	
IMURA1062	Geomechanical risk assessment and management in CO2 enhanced oil recovery	
IMURA1071	Development of Photo-Asymmetric Desymmetrization Reactions via C-H Functionalization	
IMURA1072	Asymmetric palladium catalyzed C-H functionalization of benzyl acetic acid derivatives via photocatalysis.	
IMURA1074	Floods in a changing climate: attribution of hazard, vulnerability and impact	
IMURA1076	Rheological design of biopolymeric food thickeners to make swallowing easier	
IMURA1085	Ferroelectric thin films for Photoelectrochemical Hydrogen Production	
IMURA1096	Scalable Algorithms for Structured Optimization Problems	
IMURA1101	Wireless Orthopedic Pin for Bone Healing and Growth	
IMURA1102	Design and Development of Machine Learning based Novel Control Schemes for Stable Grid-Forming Operation of Type-4 Wind Farms	
IMURA1109	Integrated study of landslide using ambient seismic noise continuous monitoring, remote sensing and geomechanical methods	
IMURA1112	Understanding earthquakes triggered by landslides	
IMURA1117	Micro-deformation in Ni based Superalloys	
IMURA1120	Characterising extreme water quality events and their drivers	
IMURA1134	Advancing Peptide-Based Biomaterials: Integrating Machine Learning, Molecular Dynamics, and Biophysical Experiments	
IMURA1142	Computational Modeling of Atomization and Breakup of Superheated Sprays	
IMURA1145	Interface engineering in 2D ferroelectrics for neuromorphic applications	
IMURA1149	Friction stir metal deposition: Additive manufacturing with waste metal	
IMURA1152	Dynamic Mechanisms for Skill Elicitation Using Reputation	

IMURA1157	CO2 storage site characterization and development in enhanced coalbed methane recovery
IMURA1162	Exploring metabolomics and computational biology-based approaches for predicting kidney disease
IMURA1164	Computational Fluid Dynamics (CFD) of turbulent flows containing particles and polymers
IMURA1165	Systems Biology Investigation of Ethanol Metabolites in the Modulation of Immune Signaling Pathways to Progress the Pathogenesis of Breast Cancer and Curcumin Response Using an Animal Model
IMURA1166	A look at the change point problem in the context of spatio-temporal data
IMURA1168	Integrative Analysis of Diabetic Mellitus-Associated Chronic Kidney Failure: Bridging Experimental and Clinical Approaches to Unravel mechanistic insights and Biomarkers for Predictive Diagnosis
IMURA1170	A microfluidic platform to develop uniformly-sized microparticles with different surface chemistries and their application in healthcare
IMURA1172	Antimicrobial edible films: Exploring Synergy with Bismuth Compounds and Manuka Honey
IMURA1175	Transmembrane Ion Transport with Peptidomimetic Oligoacrylamides
IMURA1177	Sticky Polymers in Flow
IMURA1185	Explainability, Interpretability of deep learning models via the lens of discreteness of deep neural networks
IMURA1186	Investigation of Cell Fates and Disease Progression through Structural Insights on Skp1-FBXO36 in context of prostate cancer
IMURA1187	Developing phage-based therapy for Carbapenem-resistant Acinetobacter baumannii
IMURA1188	Service quality assessment framework for end mile connection integrated mass public transit systems
IMURA1189	Mechanism Design for Smart Energy Grids
IMURA1191	Development of stronger and tougher laser-cladded rails
IMURA1192	Data Science and AI Techniques for Signal/Image Reconstruction from Samples at Unknown Locations
IMURA1193	Identifying optimal policies for greening Indian MSME?s
IMURA1194	Optimal coordinating mechanisms in agricultural supply chain to reduce inefficiencies through policy interventions.
IMURA1195	High-performance electrocatalysts for CO2 reduction and O2 evolution reactions using advanced multiscale modelling and AI
IMURA1196	Federated learning for enabling cost-efficient distributed LLMs for mobile sensing data in healthcare
IMURA1197	Essays on Sovereign Green Bond Markets
IMURA1198	Developing an integrated computational model to study structure and dynamics of actively driven biopolymers.
IMURA1199	Development of Bio-Inspired Heterogeneous Catalysts for Biomass-Derived Feedstock Valorisation to High-Value Chemicals and Fuels
IMURA1200	Flight Test Platform and a Methodology for Constructing Control-Oriented Digital Twins of Flapping-Wing Aircraft
IMURA1201	Analysing the Energy Transition Pathways in Transportation Sector in India using Bottom-up Modelling Approach
IMURA1204	Understanding cloud microphysical processes using direct numerical simulations and observations
IMURA1205	MMLAGEN: A Multimodal Learning Analytics and Generative AI Framework for Personalized Educational Scaffolding
IMURA1207	Anomalous Photovoltaic effect (APVE) and Ferroelectricity in New Perovskite Derived Materials
IMURA1208	Laser micromachining of nanostructures for biomedical applications
IMURA1209	Machine Learning for design and development of superior copper alloys using Additive Manufacturing
IMURA1211	Multidimensional Healthcare Poverty in India
IMURA1212	Geophysical Characterization of Proterozoic Orogenic Terrains in Northern India: Implications on Rodinia Supercontinent Assembly
IMURA1213	Plasmonic platforms for vector beam spectroscopy
IMURA1214	Geodynamics of Burmese arc and adjoining regions: Geophysical and numerical modelling
IMURA1215	Predictive and Prescriptive Analytics for Energy Management in a Building Cluster
IMURA1217	Stability Assessment of Wind Turbine foundations against Climate Change Effects
IMURA1220	Intracellular microscopy for elucidation of programmed cell death mechanisms