

## PROJECTS FLOATED FOR JULY 2022 INTAKE

S.No	IITB Project ID	Title
1	<b>HSS1007 (8)</b>	Assessment and Prediction of future events in younger and older drivers by means of assistive information
2	<b>HSS1008 (8)</b>	Working and prospective memory in the performance of young and old drivers
3	<b>ID00945 (8)</b>	Bicycle logistics and mobility in India and Australia
4	<b>IMURA0632 (2)</b>	Directing group assisted alkane synthesis leading to liquid fuel formation
5	<b>IMURA0652 (5)</b>	Geomechanical modelling of flow and deformation in coal measure rocks
6	<b>IMURA0695 (2)</b>	Synthesis of biologically relevant heterocycles via Aliphatic C-H Activation
7	<b>IMURA0779 (4)</b>	Tuning the dimensions of 2D materials with nanoscale machining
8	<b>IMURA0786 (1)</b>	The Investigation of Damage evolution under rail/wheel contact
9	<b>IMURA0795 (2)</b>	Electrochemical and photoelectrochemical reduction of water and CO <sub>2</sub> to fuels
10	<b>IMURA0797 (2)</b>	Soluble Polymer Supports for Peptide Synthesis
11	<b>IMURA0801 (2)</b>	Fluorescence Sensing of Nitroaromatics & Explosives
12	<b>IMURA0807 (1)</b>	Effect of texture on formability of hexagonal metals (Zn and Mg)
13	<b>IMURA0815 (5)</b>	Fluid dynamic investigation of gas hydrate bearing sediments.
14	<b>IMURA0842 (4)</b>	Optimizing Deep Adversarial Learning
15	<b>IMURA0861 (5)</b>	Effect of human factor and dynamics of connected and autonomous vehicles on highway infrastructure elements
16	<b>IMURA0885 (6)</b>	Application of Artificial Intelligence in Disease Modelling
17	<b>IMURA0894 (5)</b>	Algorithm for Improving Satellite Rainfall Estimates using Surface Soil Moisture
18	<b>IMURA0895 (5)</b>	Influence of large-scale atmosphere and ocean variability on past and future East Antarctic Ice Sheet mass balance
19	<b>IMURA0901 (6)</b>	Simulating polymer dynamics in a crowded nucleus
20	<b>IMURA0912 (2)</b>	Development of porous polymers as scaffolds for sodium ion-and potassium-ion supercapacitors
21	<b>IMURA0916 (5)</b>	Crustal evolution of the Archean basement and associated Proterozoic supracrustal rocks in the Aravalli

		Craton (NW India): Insights from the Bhilwara-Nadhwarra transect.
22	<b>IMURA0934 (5)</b>	Water availability and climate change: attribution and impacts
23	<b>IMURA0935 (3)</b>	Fatigue Characteristics of Friction Stir Processed Magnesium Alloy
24	<b>IMURA0937 (5)</b>	Passive Microwave Remote Sensing of Soil Moisture and Vegetation
25	<b>IMURA0948 (4)</b>	Distributed Algorithms for Mixed Integer Convex Optimization
26	<b>IMURA0949 (5)</b>	Rainfall-runoff relationships and catchment resilience in India
27	<b>IMURA0952 (3)</b>	Machine learning accelerated finite element squared multiscale solvers for additive manufacturing simulations
28	<b>IMURA0957 (5)</b>	Petrophysics and Rock physics modelling of carbonate reservoirs
29	<b>IMURA0958 (6)</b>	Agile sensing and imaging platform for bio-marker discovery
30	<b>IMURA0965 (2)</b>	Design and characterisation of new electrocatalysts for clean energy conversion
31	<b>IMURA0966 (3)</b>	Complex fluid dynamics of viscoelastic polymer solutions
32	<b>IMURA0967 (4)</b>	Safety and Coordination of Connected Autonomous Vehicles
33	<b>IMURA0968 (1)</b>	Recycling of Photovoltaic Modules
34	<b>IMURA0970 (1)</b>	Experimental and modeling studies of 2D/2D layered semiconductor heterointerfaces
35	<b>IMURA0971 (1)</b>	Experimental and modeling studies of metal/2D layered semiconductor interfaces
36	<b>IMURA0976 (4)</b>	Deep Learning Techniques for solving Combinatorial Optimization Problems
37	<b>IMURA0979 (1)</b>	Atomistic Thermal Transport in Semiconducting Solids
38	<b>IMURA0980 (5)</b>	Reconstruction of past glacier change in Ladakh Himalayas and future projections based on climate change scenario
39	<b>IMURA0981 (1)</b>	Unravelling the charge and heat transport in thermoelectric Heusler
40	<b>IMURA0987 (4)</b>	Testbed for Controlling a Lunar Lander
41	<b>IMURA0991 (1)</b>	Substructure and Residual Stresses in Aluminum Alloys
42	<b>IMURA0997 (2)</b>	Electric Vehicle Charging System with Grid Support Features

43	<b>IMURA0998 (1)</b>	Understanding evaporative assembly mechanism of nanoscale materials and exploring assembly structure for optical applications
44	<b>IMURA1000 (5)</b>	Adaptive Network Traffic Signal Control Systems using machine learning
45	<b>IMURA1001 (5)</b>	Modelling heterogeneous non-lane based traffic flow: microscopic vs macroscopic approach
46	<b>IMURA1003 (3)</b>	Reasoning about Resource-Bounded Multi-Agent Systems
47	<b>IMURA1004 (5)</b>	Development of Integrated Health Monitoring System for Concrete Structures using Smart FRP Bars
48	<b>IMURA1005 (1)</b>	Simultaneous Effects of Nanostructure and Alloy Composition for Remarkable Oxidation/Corrosion Resistance
49	<b>IMURA1006 (1)</b>	Modelling of Mechanics of Sliding in Biological Soft Tissues
50	<b>IMURA1009 (8)</b>	The green behind the electric vehicle supply chain: A psychological perspective
51	<b>IMURA1010 (4)</b>	Reliable Deep Learning and Statistical Inference for Medical Image Analysis
52	<b>IMURA1011 (5)</b>	Regionalizing Sustainable Development Goals related to water, food, and energy
53	<b>IMURA1012 (5)</b>	Adaptive planning under deep uncertainty for large scale water infrastructure projects
54	<b>IMURA1013 (1)</b>	Spin orbit torques using 2D materials and heterostructures
55	<b>IMURA1014 (5)</b>	Modelling the water use efficiency of orange orchards
56	<b>IMURA1015 (4)</b>	Data driven model for real-time OD predictions
57	<b>IMURA1016 (4)</b>	Data driven model for real-time overall networkwide predictions
58	<b>IMURA1017 (6)</b>	Biophysical characterization of mycobacterial membranes: Towards understanding membrane-centric host-pathogen interactions and for drug screening applications
59	<b>IMURA1018 (2)</b>	2-D topological quantum field effect transistors for emerging low-power electronics
60	<b>IMURA1020 (5)</b>	A data-model fusion approach for flood-inundation forecasting
61	<b>IMURA1022 (5)</b>	Climate change, air pollution and human health in India: Current impacts and future risks
62	<b>IMURA1023 (1)</b>	Structure-function relationship in Non-fullerene based Organic Solar Cells

63	<b>IMURA1025 (6)</b>	Pathogen-Induced Transcriptional Re-programming in Host Defense Response
64	<b>IMURA1026 (4)</b>	Co-simulation framework for Bikes using traffic and driver simulators
65	<b>IMURA1027 (3)</b>	Characterising and controlling complex quantum dynamics on quantum computers
66	<b>IMURA1028 (1)</b>	Investigating the Feasibility of Adsorption-Based Personal Wearable Cooling Devices
67	<b>IMURA1029 (8)</b>	THE GOVERNANCE OF PLACE-BASED TRANSITIONS TO CIRCULAR ECONOMIES IN THE GLOBAL SOUTH: COMPARING WATERBODY REJUVENATION INTERVENTIONS TO CIRCULAR ECONOMY IN INDONESIA AND INDIA
68	<b>IMURA1030 (4)</b>	Clustering of nonstationary and nonlinear time series
69	<b>IMURA1031 (3)</b>	Machine Learning in Additive Manufacturing
70	<b>IMURA1032 (6)</b>	Advanced microgels for delivery and penetration of CAR-T cells into solid tumors