

Area of Online Internship

Name of Faculty Mentor	Area of Online Internship	Remarks
Discipline Of Astronomy, Astrophysics And Space Engineering (DAASE)		
Dr. Saurabh Das	<ol style="list-style-type: none"> 1. Weather prediction using ML/AI. 2. Space weather 3. Remote Sensing 4. Satellite based navigation and GNSS/GPS 5. Satellite communication 6. IoT and android 7. Pulsar Based Navigation 	
Discipline of Biosciences and Biomedical Engineering (BSBE)		
Dr. Parimal Kar	<ol style="list-style-type: none"> 1. Computer Aided Drug Design 2. Computer Modeling of Protein Dynamics 	
Discipline of Chemistry		
Discipline of Civil Engineering		
Dr. Munir Ahmad Nayak	<ol style="list-style-type: none"> 1. Stochastic Hydrology 2. Water Resources Systems 	
Dr. Gourab Sil	<ol style="list-style-type: none"> 1. Performance Based Geometric Design of Highways 2. Effects of roadways infrastructure on driver behaviour 3. Pedestrian Safety Evaluation 	

Dr. Guru Prakash	<ol style="list-style-type: none"> 1. Degradation modeling 2. Structural health monitoring 3. Reliability 4. Damage detection 5. Damage prognosis 	
Dr. Neelima Satyam	<ol style="list-style-type: none"> 1. Application of machine learning in a landslide forecasting 2. Discrete element modeling of stabilized clay 3. Multivariate analysis of MICP treated sand 	
Discipline of Computer Science and Engineering		
Dr. Anirban Sengupta	<ol style="list-style-type: none"> 1. Computer Processor Design and Security 	
Dr. Neminath Hubballi	<ol style="list-style-type: none"> 1. Network Security 2. Computer Networks 3. Digital Forensics 	
Discipline of Electrical Engineering		
Dr. Trapti Jain	<ol style="list-style-type: none"> 1. AI applications in power system 2. Big data analytics in smart grid 3. Control algorithms in microgrid 	
Dr. Abhinoy Kumar Singh	<ol style="list-style-type: none"> 1. Estimation and filtering theory for tracking application 2. Theoretical analysis of continuous glucose monitoring. 3. Specified drone design for practical applications. 	
Dr. Swaminathan R.	<ol style="list-style-type: none"> 1. Space-Air-Ground Integrated Networks (SAGIN) 2. Hybrid Optical-RF Wireless Communication 	

	<ul style="list-style-type: none"> 3. 5G and Beyond Wireless Systems 4. Channel Coding for 5G Communication 5. Non-Line-of-Sight (NLOS) Ultraviolet (UV) Optical Wireless Communication 6. Blind Channel Code and Interleaver Reconstruction Techniques 7. Index Modulation Techniques for Next-generation Wireless Communication 8. Energy Harvesting Schemes for Integrated Optical-RF Networks 9. Non-Orthogonal Multiple Access (NOMA) Techniques 10. Intelligent Reflecting Surface-based Wireless Communications 11. Machine Learning for Communication Systems/Wireless Communications 	
Dr. Vivek Kanhangad	<ul style="list-style-type: none"> 1. Signal and Image Analysis 2. Computer Vision 3. Deep Learning 4. Biometrics 	
Professor Vimal Bhatia	<ul style="list-style-type: none"> 1. AI/Machine/Deep Learning 2. Wireless Communications 3. 5G, 6G 4. Image/Video Processing 	
School of Humanities and Social Sciences		
Dr. Kalandi Charan Pradhan	<ul style="list-style-type: none"> 1. Data analysis for the development economics and sustainable development 	
Dr. Ananya Ghoshal	<ul style="list-style-type: none"> 1. Modern American Literature 2. The Parallel Cinema Movement in India 3. William Blake- Poet and Printmaker 4. History of Photography 5. Children's Literature 	

Discipline of Mathematics		
Dr. Mohd. Arshad	<ol style="list-style-type: none"> 1. Statistical Inference 2. Statistical Decision Theory 	
Dr. Md. Aquil Khan	<ol style="list-style-type: none"> 1. Mathematical Logic 	
Dr. Santanu Manna	<ol style="list-style-type: none"> 1. Seismic intensity analysis in material 2. Earthquake statistics 3. Study of global minima and local minima in Data Science 	
Discipline of Mechanical Engineering		
Professor Anand Parey	<ol style="list-style-type: none"> 1. Noise control of electric vehicles 2. Vibration control of electric vehicles 3. Noise control of drones 4. Vibration analysis of tennis racket 5. Fault detection of Gearbox using vibration analysis 	
Dr. Santosh Kumar Sahu	<ol style="list-style-type: none"> 1. Synthetic Jet impingement 2. Jet impingement cooling of curved surfaces 3. Thermal management of electronic components 4. Phase change materials for energy storage 	
Dr. Harekrishna Yadav	<ol style="list-style-type: none"> 1. Experimental Fluid Dynamics and Heat Transfer 2. Fluid-Structure Interaction 3. Shear Flow 4. Flow and Turbulence Measurement using Optical Techniques 5. Heat Transfer Enhancement 6. Renewable and Sustainable Energy 	
Dr. Shanmugam Dhinakaran	<ol style="list-style-type: none"> 1. Computational Fluid Dynamics (<i>Bluff body Aerodynamics, Drag reduction</i>) 	<i>Students with all</i>

	<p><i>techniques)</i></p> <ol style="list-style-type: none"> 2. Electronic cooling 3. Nanofluids; Non-Newtonian fluid flows 4. Single and multi phase flows 5. Heat pipes 6. Solar thermal collectors 7. Solar air heaters 8. Development of higher order convective schemes 9. Lattice Boltzmann methods 10. Finite volume methods 11. Biofluid Mechanics and Bio-heat transfer 12. Respiratory air flow 13. Blood flow in diseased arteries 14. Catalysis and all other areas in CFD and Heat Transfer <p><u>BSBE Department:</u></p> <ol style="list-style-type: none"> 1. Biofluid Mechanics and Bioheat Transfer 2. Biofluids 3. Biological fluid flows 4. Respiratory air flow 5. Blood flow in diseased arteries 6. Drug delivery 7. Cancer treatment 8. Biomedical device development 9. Tissue Engineering 10. Bioenergy 11. Catalysis and all other relevant areas. 	<p><i>background in Engineering, Applied Mathematics, Chemistry, Physics, Physical Education, etc. can apply as the topics mentioned are interdisciplinary in nature)</i></p> <p><i>Students with a background in Engineering, Applied Mathematics, Biotechnology, Life Sciences, Biomedical Engineering, Physical Education (B.P.Ed), etc can apply.</i></p>
<p>Dr. I. A. Palani</p>	<ol style="list-style-type: none"> 1. Mechatronics system design 2. Soft robotics systems 	

	3. Micro additive manufacturing	
Discipline of Metallurgy Engineering and Materials Science		
Dr. Jayaprakash Murugesan	<ol style="list-style-type: none"> 1. Advanced materials joining techniques 2. Mechanical testing of materials 3. Alloy development 	
Dr. Ram Sajeevan Maurya	<ol style="list-style-type: none"> 1. Requirements, design and development of Fibre-reinforced plastic (FRP) Composite. 2. Methodology of composite manufacturing techniques. 3. Additive manufacturing 4. High entropy Alloys 	
Discipline of Physics		
Dr. Pankaj R. Sagdeo	1. Materials synthesis and characterizations for Solar Cell and related applications	
Dr. Manavendra Mahato	<ol style="list-style-type: none"> 1. Quantum mechanics 2. Statistical mechanics 3. General relativity and black holes 	
Dr. Rajesh Kumar	<ol style="list-style-type: none"> 1. Device Physics 2. Electrochromic Materials and Device 3. Raman Spectroscopy 4. Nanomaterials 	

**Note: The Undergraduate Students are requested to contact concerned faculty mentor for any query/clarification.
Consent from the faculty mentor of IIT Indore is a must.**