



Dr. Shyama Prasad Mukherjee International Institute of Information Technology, Naya Raipur

(a Joint Initiative of Govt. of Chhattisgarh & NTPC)

Email: iiitnr@iiitnr.ac.in, Tel: (0771) 2474040, Web: www.iiitnr.ac.in; Est.2015

Faculty Research Interest Details for Outreach Internship Programme (OIP) 2023

S.No.	Faculty Name	Research Topic
1	Dr. Vivek Tiwari	<ol style="list-style-type: none">1. Human Activity Recognition2. Hate speech classification with NLP3. Human body Semantic segmentation4. Feature Ranking
2	Dr. Kavita Jaiswal	<ol style="list-style-type: none">1. Wireless Sensor Networks2. Internet of Things3. Cloud Computing4. Fog/Edge Computing
3	Prof. Rajesh Ingle	<ol style="list-style-type: none">1. Edge Computing (Privacy preservation, federated learning)2. Consensus Algorithms3. Self-Sovereign Identity4. Distributed Algorithms5. IoT, CPS, VoiceBook (language translation)
4	Dr. Maifuz Ali	<ol style="list-style-type: none">1. High-frequency communication technology
5	Dr. Ramakrishna Bandi	<ol style="list-style-type: none">1. Error-correcting codes2. Quantum Error correction3. Secret Sharing schemes
6	Prof. Srinivasa K G	<ol style="list-style-type: none">1. Quantum AI2. AI in Education3. Metaverse (AR/VR/XR)4. Explainable AI5. Machine Consciousness
7	Dr. Santosh Kumar	<ol style="list-style-type: none">1. Metaverse (Augmented reality (AR), Virtual reality (VR), and Extended reality2. Explainable AI/Digital Twins3. Quantum AI/Blockchain/Federated Learning4. Semantic Communication5. Multimodal Knowledge Graph/Sensing Graph
8	Dr. Lakhindar Murmu	<ol style="list-style-type: none">1. Microwave passive components2. SIW Technology3. Planar Antennas
9	Dr. Debanjan Das	<ol style="list-style-type: none">1. Intelligent sensing2. AIoT3. Predictive Maintenance



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10	Dr. Amit Agrawal	<ol style="list-style-type: none">1. Entrepreneurship2. Marketing3. Social Media Marketing4. Services Marketing
11	Dr. Mallikharjuna Rao K	<ol style="list-style-type: none">1. Artificial Intelligence2. Machine Learning3. NLP4. AI in Healthcare5. Threat Intelligence (Toxic/Non-Toxic)
12	Dr. Shailesh Khapre	<ol style="list-style-type: none">1. Anonymous vehicle authentication2. Computer Vision for Robotics3. AI and ML applications in Robotics4. Smart Transport Systems using Artificial Intelligence
13	Dr. Anirban Bhowal	<ol style="list-style-type: none">1. Reconfigurable Intelligent Surfaces (involves ML/DL)2. Short Packet Communication3. Channel estimation using ML/DL4. Free-space optical communication5. THz communication
14	Dr. Satyanarayana Vollala	<ol style="list-style-type: none">1. Optimizing routing algorithms in Underwater Communication
15	Dr. Bipin Chandra Mandi	<ol style="list-style-type: none">1. Power management circuits2. SRAM cell design3. IoT device for Emerging Applications4. FPGA-based Embedded system design
16	Dr. Mithilesh Kumar Chaube	<ol style="list-style-type: none">1. Mathematical Modeling of the ecological system.2. Mathematical Modeling of infectious diseases.3. Biofluid Mechanics.4. Numerical Methods.
17	Dr. Anurag Singh	<ol style="list-style-type: none">1. Biomedical signals and image processing2. ECG, PPG, EEG-based healthcare applications3. Artificial Intelligence and Machine Learning4. NLP and speech processing5. AI in Healthcare and agriculture
18	Dr.J.Vijaya	<ol style="list-style-type: none">1. Business Data Analytics2. Artificial Intelligence and Machine Learning3. Optimization Techniques



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19	Dr. Punya P. Paltani	<ol style="list-style-type: none">1. Photonic Crystal based devices2. All optical logic gates and devices3. Nonlinear optics and Photonics
20	Dr. Abhishek Sharma	<ol style="list-style-type: none">1. Person's identification through ear pattern2. Stock price prediction using machine learning techniques3. Online signature verification4. Image processing5. Machine learning
21	Dr. Rohit Chaurasiya	<ol style="list-style-type: none">1. Hardware-Efficient Digital VLSI Architecture Design, Hardware-Friendly VLSI Algorithm Formulation, ASIC Chip Design and Implementation, and FPGA Prototyping of:<ul style="list-style-type: none">• Sub-Nyquist Sampling based Wideband Spectrum Sensor for Cognitive Radio Network.• Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio Network.• Eigenvalue-Based/ Cyclostationary based Spectrum Sensor for Cognitive Radio Network.2. Digital VLSI Design of Arithmetic Units based on Posit Arithmetic/ Vedic Mathematics.