

Department of Electronics and Communication Engineering

National Institute of Technology Silchar

Ph. D. Thrust research areas:

VLSI and Device

- Solid State Device Modeling and Simulation (MOS, TFET and HEMT)
- Electronic Circuits
- Junction less Transistors
- Synthesis and Characterization of Nano structure materials,
- Nano generators for energy harvesting.
- Analog VLSI design
- Optimization of analog circuit
- VLSI Physical design and Optimization
- Smart vision system using analog and mixed mode approach
- Cloud computing and Security in cloud computing.
- MEMS

Signal and Image processing

- Speech/Image processing
- Biomedical image processing
- Data encryption
- VLSI-DSP based design
- Soft computing techniques and Machine learning
- Human Computer Interface
- Biometric based system design.

Communication engineering

- Cognitive radio
- Routing in wireless sensor network
- Antenna array optimization
- Electromagnetics
- Antenna artificial Intelligence paradigm in electromagnetics.