



INDIAN INSTITUTE OF TECHNOLOGY
DELHI

STUDENT PROFILE 2017-19



INDIAN INSTITUTE OF TECHNOLOGY
DELHI

CENTRE FOR APPLIED RESEARCH IN ELECTRONICS

MTech In Radio Frequency Design and Technology

With specialisation in Microelectronics ,

With specialisation in Microwave ,

With specialisation in Signal Processing .

STUDENT PROFILE 2017-19



Anjani Kumar Mishra

contactanjanimishra@gmail.com

Contact no: +91-8860691585

M. TECH in RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **MICROWAVE**.

Areas of Interest

1. Antenna Design and Measurements
2. CAD of RF and Microwave devices
3. Microwave Active Circuits
4. MOS VLSI Design
5. Mixed Signal Circuit Design

MTech Project

Antenna design at 28GHz for 5G communication using MIMO Technology.

Other Projects

1. Real-time Differentiator and Integrator design DSP processor TMS320C5510.
2. 10 dB Power Amplifier at 3.5 GHz.
3. Phased- Array antenna design at 28 GHz.

Software Knowledge

- | | | |
|------------|-------------------------|-----------|
| 1. Verilog | 4. ADS | 7. MATLAB |
| 2. Java | 5. CADENCE | |
| 3. HFSS | 6. CST MICROWAVE STUDIO | |



Anil Ramesh Sarode

sarodeanil35@gmail.com

Contact No : +91-9820536053

M. TECH IN RADIO FREQUENCY
DESIGN AND TECHNOLOGY (RFDT) with
specialisation in **SIGNAL PROCESSING**.

Areas of Interest

1. Statistical Signal processing
3. Machine Learning and Deep Learning
4. Spectral Analysis of Signals
5. Digital Signal Processing and Image Processing

MTech Project

High Resolution Range Doppler Imaging For Radar & Sonar.

Other Projects

1. Generation of Differentiation and Integration waveforms to a given input using TMS320C55x DSP processor.
2. 2D-To-3D Stereoscopic Conversion: Depth-Map Estimation in a 2D Single-View Image

Software Knowledge

1. MATLAB
2. C/ C++
3. Python 3



Anurag Singh

anuragsi003@gmail.com

Contact No : +91- 8373946559

M. TECH IN RADIO FREQUENCY
DESIGN AND TECHNOLOGY (RFDT) with
specialisation in **MICROELECTRONICS.**

Areas of Interest

1. Device structure & physics using- Sentaurus TCad.
2. Front and Back End VLSI development.
3. Semiconductor Memory Design
4. Analog and Digital IC Design
5. MEMS devices
6. Fabrication technique of RF and Solid State Devices.

MTech Project

Strain Induced Photoelectric effect of Nanowire FET.

Other Projects

1. Design of 256Kx8 bit Super Low Power and Low Voltage Full CMOS Static RAM..
2. Integration and Differentiation of Sinusoidal , Triangular an Square wave using TMS320C5510 DSP.
3. Semiconductor Device fabrication and characterization. (FET, Diodes)
4. Performed Design, fabrication and analysis of RF devices (Wilkinson Power divider, 3db Branch Line coupler and RF LPF)

Software Knowledge

1. CADENCE- Virtuoso
2. SENTAURUS TCAD
3. Xilinx ISE
4. VHDL
5. Linux
6. C, C++
7. HTML /CSS



Ayushi Agrawal

agrawalayushigg1314@gmail.com

Contact no: +91-8439251020

M. TECH IN RADIO FREQUENCY
DESIGN AND TECHNOLOGY (RFDT) with
specialisation in **SIGNAL PROCESSING.**

Areas of Interest

1. Wireless Communication
2. MOS VLSI Design
3. Machine Learning And Optimization theory
4. Spectral Analysis of Signals
5. Estimation and Detection theory
6. Architectures and Algorithm of DSP

MTech Project

Underwater communication systems under different noise conditions using neural network

Other Projects

1. Real-time Differentiator and Integrator design DSP Processor TMS320C5510.
2. Stair Counter using Sensor Tile Kit- IOT
3. Design, Fabrication and Analysis of RF Microwave devices (Power divider, Branch Line Coupler, LPF).

Software Knowledge

1. MATLAB
2. Python
3. C
4. Serenade
5. VHDL



Chandrakanth C

ckanth07@gmail.com

Contact No: +91- 9035304699

M. TECH IN RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **MICROELECTRONICS**.

Areas of Interest

1. Analog, Mixed Signal and RFIC Design
2. Microwave circuits (Active and Passive)
3. Digital VLSI Design (SoC, RTL, Physical Design)
4. Hardware modelling using Verilog.
5. Wireless Communication
6. RF Board Design
7. Automotive Component design

MTech Project

28GHz CMOS front end circuit design (LNA and PA) for 5G applications.

Other Projects

1. Design and Fabrication of 5GHz MIC LNA using GaAs FET with 1dB NF
2. Design of 12-bit low power SAR column ADC for imaging applications
3. Real-time Differentiator and Integrator design DSP processor TMS320C5510
4. High Linearity CMOS Mixer with on chip Balun in 2.4GHz ISM Band (UG Thesis)
5. Hybrid Race Car (Formula Hybrid, New Hampshire USA)
6. Prosthetic Arm (Texas Instruments Interns day runner up)
7. Work Experience & Internship project :

<https://www.linkedin.com/in/chandrakanthchoppa/>

Software Knowledge

- | | | |
|---------------------|------------------|--|
| 1. Cadence-Virtuoso | 4. Verilog | 7. MATLAB, C, Shell scripting |
| 2. ADS & Sernade | 5. Orcad Capture | 8. Assembly language for TMS320C5510 DSP |
| 3. HFSS | 6. Allegro | |



Gokul Chandran

gokulchandran4@gmail.com

Contact no: +91- 9497267013

M. TECH IN RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **MICROWAVE**.

Areas of Interest

1. CAD of RF and Microwave devices.
2. RF and Microwave Active Circuits
3. RF and Microwave Measurement System Tech.
4. MOS VLSI Design
5. Computational Electromagnetics

MTech Project

THz components – Low Pass filter, Metamaterials and imaging system.

Other Projects

1. Real-time Differentiator and Integrator design DSP processor TMS320C5510.
2. 10W power amplifier design at 2.4 GHz using CGH40010
3. Performed Design, fabrication and analysis of RF devices (Wilkinson Power divider, 3db Branch Line coupler and RF LPF).

Software Knowledge

1. HFSS
2. CST MICROWAVE STUDIO
3. MATLAB
4. ADS



Goverdhan M

goverdhanmaddi@gmail.com

Contact no: +91- 7738544613

M. TECH in RADIO FREQUENCY
DESIGN AND TECHNOLOGY (RFDT) with
specialisation in **SIGNAL PROCESSING**.

Areas of Interest

1. Statistical Signal Processing
2. Deep Learning
3. Spectral Analysis of Signals

MTech Project

Deep Learning Architecture and Algorithm for Audio Event and Spatial Environment Classification.

Other Projects

1. Real-time Differentiator and Integrator design DSP processor TMS320C5510.
2. Single and Double clap detection using Audio sensor in Sensor Tile kit.

Software Knowledge

1. MATLAB
2. PYTHON
3. C



Kunal Mahaseth

kunalmahaseth17@gmail.com

Contact No: +91-9996106349

M. TECH in RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **MICROWAVE**.

Areas of Interest

1. CAD of RF and Microwave devices
2. VLSI Physical Design
3. MOS VLSI Design and Digital IC design
4. Hardware Modeling using Verilog
5. RF and Microwave Active Circuits
6. RF Integrated Circuits
7. Antenna Design and Measurements

MTech Project

Automotive Radar at 77 GHz.

Other Projects

1. Multiplier design using CSA and Wallace Tree
2. Two Bit Multiplier STD Cell Design
3. Generation of Differentiation and Integration of given input waveforms using TMS320C55x DSP.
4. Design and Fabrication of RF Devices(Wilkinson Power divider, LPF, 3db Branch Line Coupler.
5. Design and Fabrication of Patch Antenna at 65 GHz

Software Knowledge

1. Verilog
2. HFSS
3. CST MICROWAVE STUDIO
4. CADENCE VIRTUOSO



Rutwik Joshi

rutya_joshi@yahoo.co.in

Contact No : +91- 9096609426

M. TECH in RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **MICROELECTRONICS.**

Areas of Interest

1. Sentaurus TCAD for Semiconductor Devices
2. VLSI design and Fabrication
3. RF semiconductor Devices and Physics
4. Semiconductor Memory Design
5. Back end development using CADENCE
6. Front end development and Hardware Modeling using VHDL
7. RF Measurements and CAD
8. Nanoelectronics

MTech Project

Physical Modelling and TCAD simulation of Coplanar waveguide.

Other Projects

1. Back end Design of 256Kx8 bit Super Low Power and Low Voltage Full CMOS Static RAM.
2. Real-time Differentiation and Integration of incoming continuous data using TMS320C5510 DSP.
3. Design, fabrication and analysis of RF components.

Software Knowledge

- | | |
|--|---------------------------------------|
| 1. Cadence Virtuoso | 6. MATLAB |
| 2. SENTAURUS TCAD | 7. C, PYTHON |
| 3. VHDL | 8. SERENADE microwave simulation tool |
| 4. ARDUINO and R-pi Programming | |
| 5. Assembly language for TMS320C5510 DSP | |



Shimoli Shinde

shimolishinde@gmail.com

Contact No: +91- 9689930358

M. TECH in RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **SIGNAL PROCESSING**.

Areas of Interest

1. Wireless Communication
2. Statistical Signal processing
3. Deep Learning
4. Spectral Analysis of Signals
5. Architectures and Algorithms of DSP
6. MOS VLSI Design and Digital Circuit Design

MTech Project

Voice Activity Detection and Speech Enhancement using Machine Learning Techniques

Other Projects

1. Generation of Differentiation and Integration waveforms to a given input using TMS320C55x DSP processor.
2. Human Activity Tracker Using Sensor Tile Kit.
3. Ground-Station Software development for Student Satellite "Swayam"
4. Design and Development of NOAA Weather Satellite and Ham Signal Radio receiver

Software Knowledge

1. MATLAB , Labview
2. Python
3. C, C#
4. Embedded C
5. VHDL



Udit Jain

uditbhopal.jain@gmail.com

Contact No : +91-8989162401

M. TECH in RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **MICROELECTRONICS**.

Areas of Interest

1. Analog, Mixed Signal IC Design
2. MOS VLSI Design and Digital IC design.
3. VLSI design and Fabrication
4. Semiconductor Memory Design
5. Semiconductor Devices and Physics
6. Hardware modelling using Verilog
7. MEMS Design, Integration & Packaging
8. Microwave Passive Circuits
9. Nanoelectronics

MTech Project

Design and fabrication of MEMS based Non-Volatile memory for harsh environment conditions.

Other Projects

1. Design of 256Kx8 bit Super Low Power and Low Voltage Full CMOS Static RAM.
2. Analysis and Design of a High Speed and Low Power Comparator for handheld battery operated devices.
3. Generation of Differentiation and Integration waveforms to a given input using TMS320C55x DSP processor
4. Design, fabrication and analysis of RF components.

Software Knowledge

- | | |
|-----------------------------|--|
| 1. Cadence Virtuoso | 4. Assembly language for TMS320C5510 DSP |
| 2. COMSOL Multi Physics | |
| 3. Verilog , System Verilog | 5. SERENADE Microwave Simulation Tool |



Vaibhav Vaish

vaibhav.vaish@rocketmail.com

Contact No: +91-9455708558

M. TECH in RADIO FREQUENCY DESIGN AND TECHNOLOGY (RFDT) with specialisation in **SIGNAL PROCESSING.**

Areas of Interest

1. Machine Learning and Optimization Theory
2. Detection and Estimation Theory
3. Human/Machine speech Communication
4. MIMO Wireless Communication
5. Statistical and Array Signal processing
6. Architectures and algorithms for DSP System
7. MOS VLSI Design

MTech Project

Low Latency orientation estimation algorithms & measurement setup for VR Applications.

Other Projects

1. Real Time Implementation of algorithm for integration & Differentiation of waveforms on TI- DSP Processor.
2. Acoustic Beamforming for source Localisation and noise reduction.
3. Background Subtraction and image classification with machine Learning techniques.
4. Real time Health monitoring system on Sensor Tile - IoT module.
5. Design, Fabrication and Analysis of RF Microwave devices (Power divider, Branch Line Coupler, LPF).

Software Knowledge

- | | | |
|-----------|------------|-------------|
| 1. MATLAB | 3. PYTHON | 5. LAB VIEW |
| 2. C | 4. VERILOG | |

Placement Team

Dr. Mahesh P. Abegaonkar

Associate. Prof CARE , IIT Delhi

Email ID : mpjosh@care.iitd.ernet.in

Phone : +91-11-2659-6281

Udit Jain

MTech Student

Email ID : uditbhopal.jain@gmail.com

Phone : +91-8989162401 , +91- 7999028527



INDIAN INSTITUTE OF TECHNOLOGY
HAUZ KHAS, NEW DELHI
DELHI – 110016