



Indian Institute of Technology, Mandi

Placement Brochure 2020-21

M.Tech in Communication & Signal processing,
School of Computing and Electrical Engineering

The Career & Placement Cell

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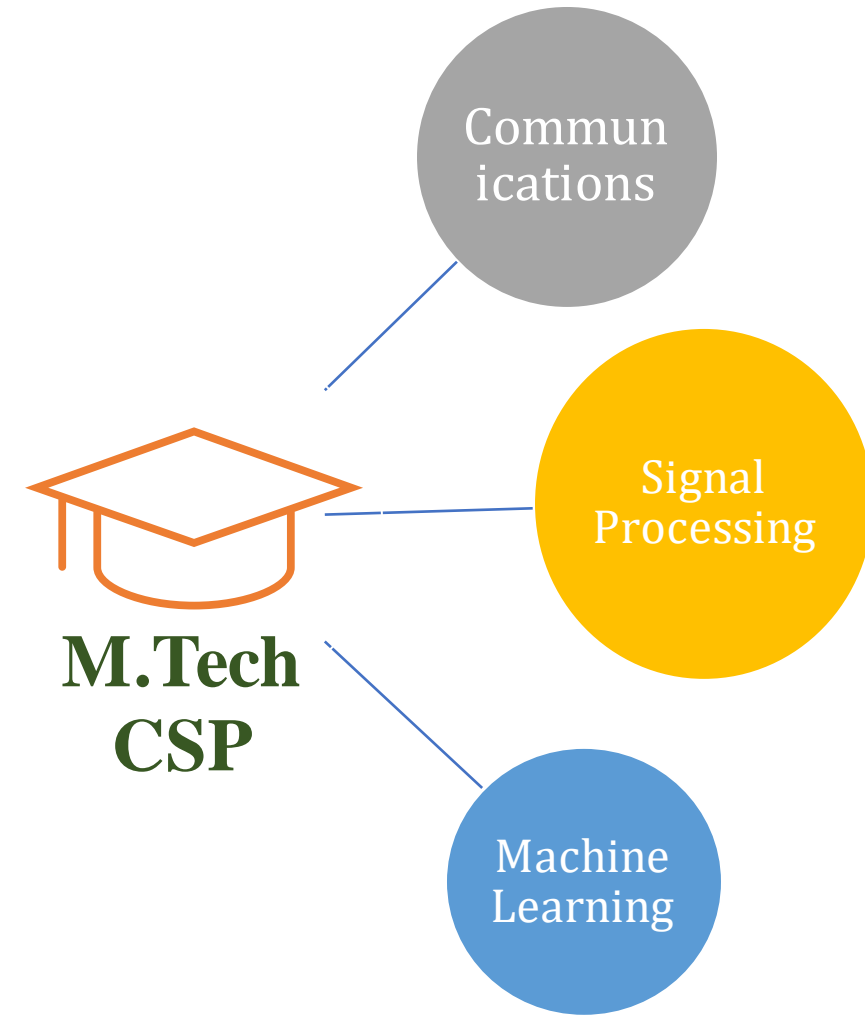
<http://www.iitmandi.ac.in/placements/>



About the program

The M.Tech in Communication and Signal Processing is being offered in the School of Computing and Electrical Engineering (SCEE) since August 2017. The program is designed giving importance to theory as well as exposure to industry needs. It consists of two parts: course work and a year-long project. The course work is structured to give solid theoretical foundations and practical, hands-on experience which would enable the student to tackle problems in the area of signal processing, communications, and machine learning in a holistic manner.

In order to prepare the students for product development by the end of first year, courses like Advanced Programming Practicum, Embedded Systems, IoT Systems, and Systems Design are included in the curriculum. In addition to the post graduate project, these courses familiarize the students with the system design aspects relevant to signal processing, communications, and machine learning.



Specializations offered

Courses: *Theory and practical courses to give solid foundations*

First sem

Second sem

Discipline core

Probability and Random Processes

Applied Optimization

Matrix Theory for Engineers

IoT Systems

Programming practicum

Specialization electives

Communications

- *Advanced Communication Theory*
- *Wireless Communications and Networks*
- *Information Theory*
- *Radiating Systems*

Signal Processing

- *Advanced Digital Signal Processing*
- *Digital Image Processing*
- *Speech Processing*
- *Embedded Systems*

Machine Learning

- *Pattern Recognition*
- *Computer Vision*
- *Deep Learning*
- *Estimation and Detection Theory*

Courses: *Making the students industry ready*

Systems Design

- To provide hands-on experience in system design
- To prepare them for specializations they may plan to pursue
- To help them in understanding the practical application of various core and elective courses
- To introduce them to challenges involved in product development.

Postgraduate Project

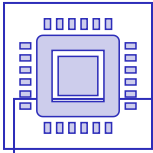
- Projects related to the specializations offered.
- Apply the concepts learned from coursework to solve real-world problems.
- Learn how to present a technical work and document it.

Outside discipline electives

- To expose them to courses from other domains, e.g., management, sciences, economics etc.

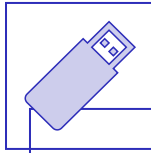
Facilities & Infrastructure

Hardware



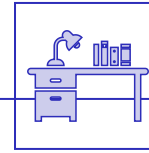
- **USRP**
- **NVIDIA Jetson Kits**
- **Embedded Systems Development kits**
- **Wireless Sensor Nodes**
- **HPC cluster**

Software



- **MATLAB**
- **LabVIEW**
- **CST μ wave studio**

Labs



- **Signal Processing & Communications lab**
- **Multimedia Analytics and Systems Research lab**
- **Infocomm lab**

Faculty: Specialization wise

Communications

Dr. Adarsh Patel

Dr. Gopi Shrikanth Reddy

Dr. Samar Agnihotri

Dr. Satyajit Thakor

Dr. Siddhartha Sarma

Dr. Sreelakshmi

Signal Processing

Dr. Anil Kumar Sao

Dr. Padmanabhan Rajan

Dr. Renu Rameshan

Machine Learning

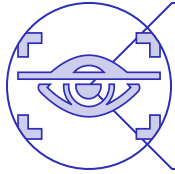
Dr. A. D. Dileep

Dr. Aditya Nigam

Dr. Arnav Bhavsar

Dr. Rameshwar Pratap

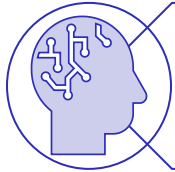
A selected list of projects undertaken: Area-wise



Computer Vision: Object tracking; Vision controlled car



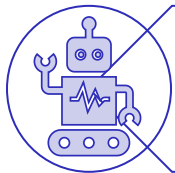
5G & Wireless: MIMO Systems; Cognitive radios; Next generation WiFi; Antenna correlation analysis



Neural Networks: Biometrics; Tweet Analysis



Image processing: Medical imaging; Image forensics-
number plate rectification



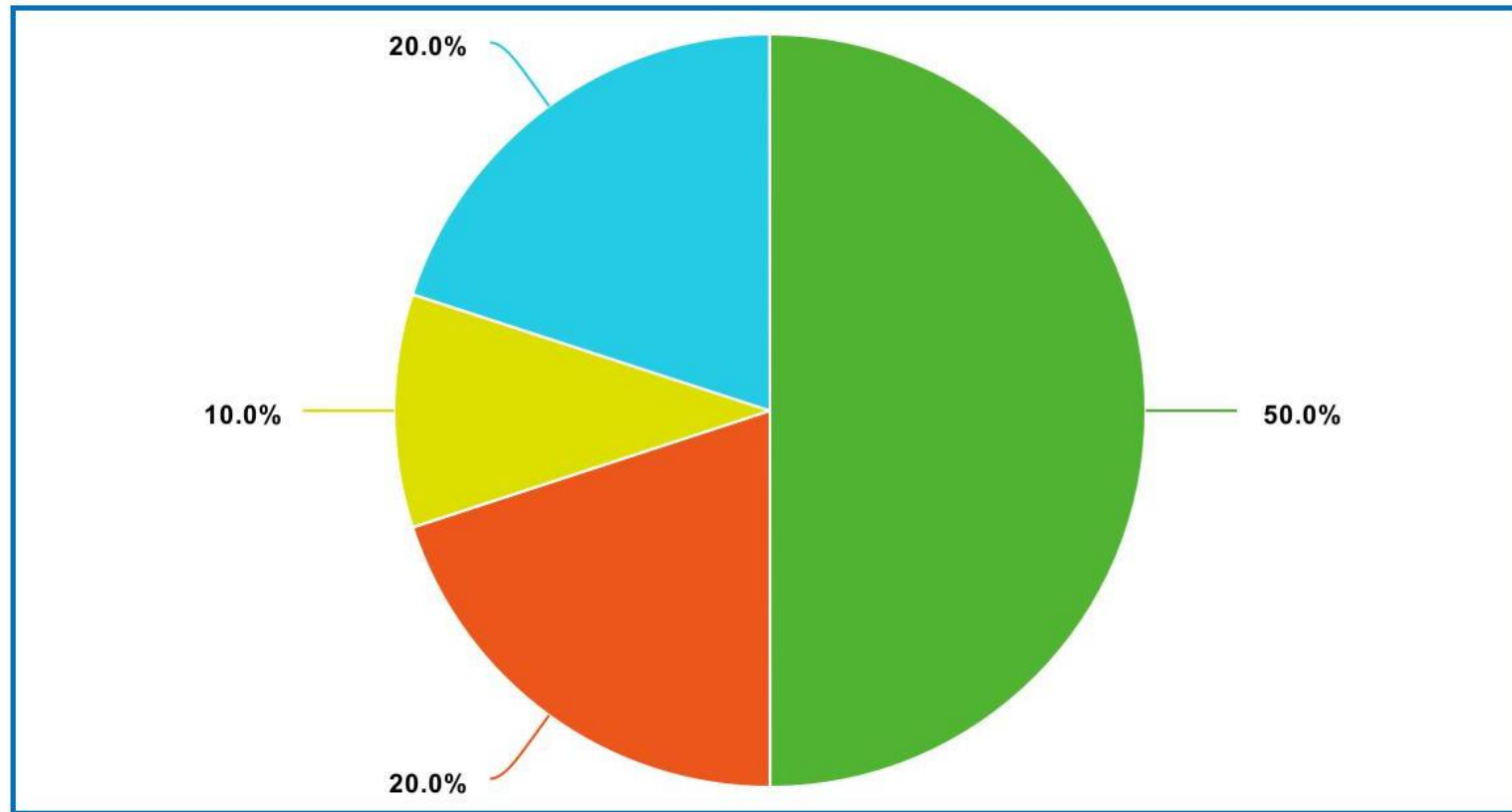
Machine learning: Compressed Bag-of-visual words;
Count-min sketch

Placement

Graduates of this program are currently placed in different R&D labs and MNCs, such as,

- **Continental**
- **National Instruments**
- **Hughes Systique Cooperation**
- **TCS Innovation Labs**
- **TCS Digital**
- **Aindra Labs**
- **Decision Point Analytics**
- **Vehant Technologies**
- **eClerx**

PLACEMENT RECORD



PRIVATE PHD GOVT Under Process

Contact us

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