

Centre for MEMS (Micro Electro Mechanical System) Design

A National MEMS Design Center (NMDC) at IIIT has been established under the National Program on Micro and Smart Systems (NPMASS) in the year 2009 as a part of the institute's response to launch MEMS activity. The program focuses on collaborative research efforts related to MEMS and smart sensors by the Department of Electronics and Communication Engineering and the Department of Physics and Materials Science, IIIT Noida. The departments involved promote the area of sensors and smart systems through independent departmental courses at the UG and PG levels to involve students and faculty in developing MEMS-related projects and research activities. In the absence of comprehensive in-house facilities for complete fabrication of MEMS-based sensors and actuators, the approach is to focus on MEMS device design, modeling, and characterization, with outside foundries chosen as an option for fabrication and packaging.

Centre for Innovation in VLSI and Smart Systems (CIVSS)

The Centre aims to work on the emerging technologies of VLSI, Internet of Things (IOT), AI and Embedded Systems through democratization of innovation, standardization, realization of prototype and products which leads to better job prospect, Incubation and overall development. Established in 2019, the Centre offer complete chip design expertise from RTL to GDSII implementations upto 22nm technology node including pre silicon testing & FPGA/Simulation-based prototyping. The vision of the Centre is to become a worldwide coveted landmark of scientific knowledge, expertise, and cutting-edge technology in VLSI, Smart Systems and other related fields, while also serving as a boon to global growth and society.

Centre of Excellence on UAV and Electronic Border Security

Centre of Excellence on UAV and Electronic Border Security was setup in 2022 at Jaypee Institute of Information Technology, Noida to support the research and educational activity under the theme of Antenna and RF systems design for radar based applications. Initial objective was proposed to developed Acoustic systems for drone detections and Antenna systems design for high frequency applications. As a result of the undergoing activities, the Department of Electronics and Communication Engineering received one Government funded project in the domain of Acoustic Systems design for drone detections and also received one Industry funded consultancy projects for the prototyping and development of antenna systems for X-band frequency regions for low distance radar

communication. The CoE on UAV and Border Security has also filed patents in the area of Antenna design focus to cover 360 degree coverage at K and Ka band frequency regions. Under the theme of the CoE, the faculty at the Department of Electronics and Communication Engineering also published journals and conferences papers to fulfill the scope of the objective set the CoE.