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SENSE – Centre for Sensors, Instrumentation and Cyber-Physical System Engineering
(former IDDC – Instrumentation Design & Development Center)

The Centre for Sensors, Instrumentation and Cyber Physical System Engineering (SeNSE) at IIT Delhi invites applications for Faculty positions at the levels of Assistant Professor, Associate Professor and Professor.

The Centre is currently seeking applications from outstanding researchers and professionals with a strong academic background, excellent teaching ability, capability to conduct and lead independent world class research, a proven/demonstrated history of hands-on product and prototype development at the individual and team level and of building world-class research facilities, and a demonstrated record of original contributions in terms of high quality publications, patents or product design/development activities performed at academic institutions or industry in the following **priority areas**:

Mixed signal ICs and circuits: Electronic circuit design (analog and digital), microprocessor / microcontroller based product design and testing, small signal conditioning, knowledge of EMI/EMC and signal interfacing, applied signal processing for instrumentation, CAD and simulation / HIL;

Sensors and Smart Systems, sensor networking and interfacing, mixed signal processing including DSP, Embedded systems including Application Specific Design, Design of electronic systems, Industrial quality control, signal and image processing, non-destructive testing, Instrumentation and Control.

Cyber-physical systems: *The preferred background is a PhD in EE/ECE/CSE/CS and allied areas / inter-disciplinary areas relevant to cyber-physical systems with a strong background in systems development, including algorithmic aspects.*

Smart user- and environment-aware infrastructure, Monitoring techniques and novel sensing technologies for modeling; Big data, data reliability and trust with emphasis on their application; Smart manufacturing (optimised production systems through enhanced sensorisation, networking machines, products, vehicles and people); Machine Learning and Artificial Intelligence applied to health applications/public health, genetics and biological networks, energy autonomous IoTs, resilient IoT and security of the Internet of Things, e.g., in the context of vehicular networks, the energy grid, the smart home, and other similar smart connected systems.

Communications for sensors/sensor systems: Applied research in communications (RF/Microwave, SONAR, Wireless Communications, Optical Communications) for advanced sensors and sensor systems, Applied research in Sensor and ad-hoc networks

Robotics/Mechatronics/Control Systems: Robotics, Mechatronics, Robotic/Mechatronic devices integrated with sensors and sensor systems, Instrumentation and Control, Nonlinear and Adaptive Control, Learning-based Control.

MOEMS/Sensors: *Preferred background is a PhD in EE/Physics/allied areas. Currently, we are looking for interests in system level aspects of sensors and their integration. Candidates with an interest in fabrication / packaging / material aspects of sensor devices and microelectronics are advised to seek a primary appointment with Units of IIT Delhi which have fabrication facilities such as Nano-Research Facility, EE, CARE , Dept of Materials Science and a joint appointment with SENSE.*