



IIT Kanpur, IIT Roorkee, IIT Guwahati,
NIT Patna, NIT Warangal, IIITDM Jabalpur



**Chairman, EICT Academy &
Director MNIT Jaipur**

Prof. Narayana Prasad Padhy

Chief Investigator, EICT Academy

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Coordinator, EICT Academy

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Co- Chief Investigators, EICT Academy

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Dr. Ravi Kumar Maddila, ECE

Objective (Electronics & ICT Academy-Phase II)

- 1) To conduct specialized FDPs for faculty/mentor training in line with the vision of MeitY by promoting emerging areas of technology and other high-priority areas that are pillars of both the "Make in India" and the "Digital India" programs.
- 2) To promote synergy and collaboration with industry, academia, universities and other institutions of learning, especially in emerging technology areas.
- 3) To support the National Policy on Electronics 2019 (NPE 2019) which envisions positioning India as a global hub for ESDM sector, including MeitY Schemes/policies such as Programme for Semiconductors and Display Fab Ecosystem; India AI; National Programme on AI, Production Linked Incentive Scheme for IT Hardware & Large-Scale Electronics Manufacturing; EMC; SPECS; Chips to System (C2S); etc.
- 4) To promote standardization of FDPs through Joint Faculty Development Programmes.
- 5) To support the vision of the National Education Policy (NEP 2020), which mandates that Indian educators go through at least 50 hours in professional development programmes per year.
- 6) To design, develop & deliver specialised FDPs on emerging technologies/ niche areas/ specialised modules for specific research areas for Faculty in Higher Education Institutions (HEI), besides FDPs on multi-disciplinary areas connected with ICT tools and technologies and other digital hybrid domains, covering a wide spectrum of engineering and non-engineering colleges, polytechnics, ITIs, and PGT educators.

An intensive **20-day-40-hour** Training Programme in **Online Mode** is being organized for faculty and doctoral students in engineering & science institutions. It is also open to industry professionals. The programme will be run for **two hours daily** from **2 PM to 4 PM (Mon to Sat)**. **QT-07: Quantum Sensing** is the **sixth** in a series of Faculty Development programmes aligning to the **Minor Course Curriculum on Quantum Computing**, approved by AICTE, DST & IBM.

<https://facilities.aicte-india.org/Minor Quantum Technologies.pdf>

Experts/Speakers-

- 1) Prof. Ranjan Jha, IIT Bhubaneswar
- 2) Dr. Richa Goel, IBM
- 3) Dr. Anirban Chowdhury, IBM
- 4) Dr. Aswath Babu, IIIT Dharwad
- 5) Dr. Arup Samanta, IIT Roorkee
- 6) Dr. Vaibhav Gupta, IIT Mandi
- 7) Dr. Jaskaran Singh, IIT Mandi
- 8) Dr. Ramachandra Rao Yalla, University of Hyderabad
- 9) Dr. Tarun Dutta, University of Hyderabad
- 10) Dr. Akash Bain, DRDO DYSL-Quantum Technologies
- 11) Dr. Md Noaman, WaveRyde Instruments

Programme Modules:

Classical sensing, photo detection, Classical Noise, Johnson Noise, Telegraph noise, flicker or 1/f noise, Sensitivity of classical measurements, Classical Fisher information, Cramer-Rao bounds.

Quantum measurements, projective/orthogonal measurements, Approximate/non-orthogonal measurements, Weak continuous measurements, Error-disturbance relations, Standard quantum limits, Quantum non-demolition measurements

States of light, Fock states, Coherent states, Squeezed states, Tomography, Wigner quasi-probability distribution, P-distribution, Husimi Q function, Quantum photo detection, Square-law detectors, Intensity measurements, and Photo-detection, Linear Detectors and Quadrature Measurements

Single photon-based sensing applications, Entanglement-based sensing applications, atomic state-based sensing, solid-state spin-based sensing applications (gravimetry, magnetometry)

Principal Coordinator

Dr. Manoj Kumar

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Joint-Principal Coordinator

Dr. Kamalendra Awasthi

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Registration:

Registration is open to faculty, working professionals, industry persons, doctoral, postgraduate and graduate students. Participants will be admitted on first-come first-served basis.

Register online at-<http://online.mnit.ac.in/eict/>



Certification Fee:

- Academic (Faculty/PhD Scholars) [(India/SAARC/African countries)]: ₹500/-
- Professionals / Industry / Others [India / SAARC / African countries]: ₹1000/-
- Participants from the **Rest of the World USD: US\$ 60**

(A) The fee covers online participation, material and certification charges.

(B) Webinar Classes will be on Cisco **WebEx**, Notes / Slides will be shared and Quizzes / Assignments will be conducted on **Canvas e - Learning Platform**,

→ For any other query, email us at fdp.academy@mnit.ac.in

Malaviya National Institute of Technology (MNIT) Jaipur one of the oldest NITs, the institute has a rich heritage of sixty years producing world class engineers, managers, architects and scientists. Ranked 43rd nationally in the NIRF ranking2024 (Engineering), the institute offers learning opportunities for undergraduate, postgraduate students, and researchers in various domains. Having a lush green campus of over 317 acres, MNIT offers a world class teaching infrastructure, state-of-art laboratories and a safe & lively environment.