



One Week Training Workshop on Design and Characterization of Devices and Circuits for Electronic Systems (DC2ES)

September 19, 2022 – September 25, 2022

Conducted by

Department of Electronics & Communication Engineering
National Institute of Technology Durgapur



DST-STUTI PROGRAMME OF INDIAN INSTITUTE OF TECHNOLOGY (ISM) DHANBAD-826004

Funded by: Department of Science & Technology (DST), Govt. of India

About the STUTI Program

The Department of Science and Technology (DST) intended to build human resources and knowledge capacity by arranging training programs through open access science and technology infrastructure across the country under the banner of 'Synergistic Training program Utilizing the Scientific & Technological Infrastructure (STUTI)'. **Each training session will be for seven (7) days and thirty (30) participants can be accommodated. No registration fee will be collected from the participants. All the training expenditures (travel by train, food and accommodation, training materials) will be borne by the DST.** The present proposed program will be organized by the Department of Electronics and Communication Engineering, National Institute of Technology Durgapur under the DST-STUTI program of Indian Institute of Technology (ISM) Dhanbad, to impart knowledge on some measurement and characterization instruments and design software's for carrying out the research works on RF Circuits, Antenna, Antenna Arrays, VLSI design, Semiconductor devices, Microelectronics, Communication Engineering as well as embedded systems. The participants must go through the classroom deliberations followed by the corresponding laboratory demonstration on the relevant instruments and software. The training program will be conducted during **September 19, 2022 – September 25, 2022.**

Eligibility Criteria of the Participants

Person of Indian origin; Minimum qualification should be Post Graduate (Science) or B.Tech. (Technology); Professors/Scientists/ Post-Doc Fellows/ Ph.D. Fellows/Industry persons who are actively involved in research and development (R&D). Not more than 3 participants from one institute per training should be allowed from outside the host institute.

About the Department

The embryonic formation of the Department of Electronics and Communication Engineering was in the year 1983 with

the introduction of an undergraduate course. The Department, over the time, has grown in several dimensions and provides a magnetic ambience in teaching and learning. Apart from the four years B. Tech course the Department also offers two full time M. Tech courses, one in Next Generation Wireless and Networks and the other in Microelectronics and VLSI. The Department also offers PhD in several domains in electronics and communication technology.

About the Institute

The National Institute of Technology, Durgapur (formerly Regional Engineering College, Durgapur), was established by an Act of Parliament in 1960 to function as a pace setter for engineering education in the country and to foster national integration. It is a fully-funded premier Technological Institution of the Government of India and is administered by an autonomous Board of Governors. The Institute is a university which awards B.Tech., M.C.A., M.Sc., M.B.A., M. Tech., and Ph.D. degrees to students after their successful completion of the specified courses. The Institute imparts education in the disciplines of Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering, Mechanical Engineering, Metallurgical and Materials Engineering, Information Technology, Biotechnology, Physics, Chemistry, Mathematics, Environmental science, Materials Science and Management Studies. As decided by the Ministry of Human Resource Development, Government of India, the procedure for selection of candidates for admission to the bachelor's degree Courses in Engineering/Technology in National Institute of Technology Durgapur and in other NITs is on the basis of State Rank/ All India Rank (AIR) of AIEEE and the same is executed through counselling under guidance from MHRD, GOI. In addition to the normal intake, a few seats

are reserved for Foreign Students who are nominated by the Ministry of External Affairs, Government of India, and the Indian Council for Cultural Relations, Government of India.

Outline of the Training Program

A one-week training workshop on "Design and Characterization of Devices and Circuits for Electronic Systems (DC2ES)" will be organized by the Department of Electronics & Communication Engineering, National Institute of Technology Durgapur under the aegis of 'Synergistic Training program Utilizing the Scientific & Technological Infrastructure (STUTI)' project of Department of Science and Technology (DST), Government of India partnered with IIT (ISM) Dhanbad. The training content is considered to impart knowledge on some measurement and characterization instruments as well as design and modeling tools widely used by Electronics, Electrical and other branches of science, engineering, and technology. The theory session will be followed by the relevant hands-on laboratory demonstration for the better understanding of the working principle and operation of the instruments as well as the use/ interpretation of the data. Tentative activities and deliverables of this training program are as follows:

| Activity | Deliverable |
|---|---|
| VNA (DST-FIST Supported) | Microwave and mm Wave Antenna and Circuit Measurement and Characterization |
| RF-DC Sputtering (DST Supported) | Sensor and Semiconductor Device Fabrication and Characterization |
| Cadence C2SD Supported | VLSI circuit design using Cadence |
| CST-MWS (DST Supported) | Antenna, RF and mm-wave circuit design. |
| Power Sensor and Spectrum Analyzer | To measure the ambient RF Power and observe the RF spectrum. |
| VNA (DST-FIST Supported) | Measurement of sub-millimeter-wave and millimeter wave channel response and data post-processing. |
| Antenna Measurement Setup (MoE Supported) | To measure various antenna radiation parameters and plot the radiation pattern |

How to Apply

The online google form is to be filled by the participants in the below mentioned link:

<https://forms.gle/LLwc1yeU1kV8YCu27> .

The applicant must fill the online application form latest by **09.09.2022**. The scan copy of the Institute ID card and completely filled-in registration form must be uploaded in the google form in either .jpg or .pdf format not exceeding maximum file size of 1 MB. For any query, please email us to stuti.nitdgp2022@gmail.com

REGISTRATION FORM

**One Week Training program on
Design and Characterization of Devices and Circuits for
Electronic Systems
Organized by Department of ECE, NIT Durgapur
September 19 - 25, 2022**

- Name:
(in Block letters)
- Father's Name:
- Designation:
- Institution / Organization:
- Address for Communication:
- Mobile No:
- E-mail :
- Gender: Male / Female / Other
- Caste: SC/ST/OBC/OP -
- Date of birth and Age:
- Aadhar Card No:
- Highest educational qualification with specialization:

DECLARATION

The information provided by me is true to the best of my knowledge. I agree to abide by the rules and regulations governing the STUTI organizing committee. If selected, I shall attend the program for the entire duration.

Place: Signature of the Applicant with date

SPONSORSHIP

Mr./ Ms./ Dr.

is an employee/student of our Institute / Organization and is hereby allowed to attend the training program under STUTI of DST. He/She will be permitted to attend the program, if selected.

Place:

Signature & Seal of the HOD/ Principal

Contact Persons

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