

## 8 Days Offline Workshop On

### "Hands-on Training on Design, Fabrication and Testing of 5G Antenna using Machine Learning"

12th May 2023 - 19th May 2023



#### ABOUT SVNIT

This Institute was established in 1961 as one of the RECs for imparting technical education in Civil, Mechanical and Electrical Engineering. In the year 1983-84 the Under Graduate programmes in Electronics Engineering was introduced and in the year 1988-89 the UG programmes in Computer Engineering and Production Engineering was started. In the year 1995-96, UG programme in Chemical Engineering was introduced. In exercise of the powers conferred by section 3 of the University Grants Commission (UGC) Act, 1956, the Central Government on the advice of the University Grants Commission, has declared the Sardar Vallabhbhai Regional College of Engineering & Technology (SVREC), Surat to Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat with status of "Deemed University" with effect from 4th December 2002. The Institute has been granted the status of 'Institute of National Importance' w.e.f. Aug. 15, 2007. At present, the Institute is offering Six UG Programmes, Nineteen PG Programmes and Three M.Sc. Five Years Integrated Programme including doctoral programme in all above branches.

#### ABOUT THE KARYASHALA COURSE

KARYASHALA is an effort by the Science and Engineering Research Board (SERB), Government of India via Accelerate Vigyan to improve research productivity of promising PG and Ph.D. students from universities and colleges through high-end workshops on specific themes. This program aims to provide opportunities to acquire specialized research skills. The event will be conducted as a Karyashala intended towards Abhyaas mission scheme of Accelerate Vigyan, SERB in the offline mode during 12<sup>th</sup> to 19<sup>th</sup> May 2023 at SVNIT SURAT. In the workshop, the hands-on training on the design, characterization, fabrication and measurement of microwave printed circuits will be carried out.

#### ADVISORY BOARD

##### CHIEF PATRON

**Prof. (Dr.) Anupam Shukla, Director, SVNIT Surat**

##### CHAIRPERSON

**Dr. Rasika Dhavse, HOD, DoECE, SVNIT Surat**

##### CONVENERS

**Dr. Shilpi Gupta, Associate Professor, DoECE, SVNIT, Surat**

**Dr. Kishor P Upla, Assistant Professor, DoECE, SVNIT, Surat**

#### TENTATIVE SPEAKERS

Tentative speakers are invited from reputed institutes such as the Indian Institute of Technology (IITs), Indian Institute of Information Technology (IIITs) and National Institute of Technology (NITs).

#### WHO CAN ATTEND ?

- Only PG level students (i.e., the students pursuing their Masters or Ph.D. degree from a recognized university/institution) working in the relevant area of specializations are eligible to apply.
- The relevant areas of specializations include (but are not limited to) RF and Microwaves, Antennas, Communication Systems, Electronics and Telecommunication and other related areas of research.
- The applicants must produce a letter of authentication from their Supervisor/Head of the Department/Head of the Institute indicating their association with the institute and "No Objection Certificate (NOC)" for allowing their student to undergo training in the workshop, if selected. There is no dedicated format for the same however, it must be obtained on the institute/university letter head.

## PARTICIPANTS DESIRABLE QUALIFICATION

- Good academic record and experience in the relevant areas of specializations.
- GATE score in relevant engineering stream.
- Familiarization and understanding of Electromagnetic simulator like CST/HFSS/ADS etc.
- Publication(s) in recognized national/international conferences and journals of repute

## REGISTRATION GUIDELINES

The maximum number of participants is limited to 25.

- The course will be completely free of cost for the shortlisted candidates
- All the selected participants will be given accommodation in Institute hostel rooms with catering facilities.
- The participating students will be eligible for TA reimbursement for their journey to the host institute from their hometown/ institute, to and fro, as per the GoI norms.
- The participants will be provided with the necessary stationary and consumables items for the workshop.
- A certificate regarding successful completion of workshop shall be issued to the participants.

## ONLINE REGISTRATION LINK

<https://forms.gle/CQqhL83MNR2hw7Dy8>

## ONLINE REGISTRATION

- Please fill the Google form along with the requested details, scanned copies of certificates, resume and other supporting documents including the letter of authentication latest by Friday, 28<sup>th</sup> April 2023.
- The applications will be screened and the candidates will be selected on merit basis.
- The selected candidates will have to acknowledge and accept the offer for participating in the workshop through return email, failing which the waitlisted candidates may be called for the workshop.

## SUPPORT TEAM

Ramya R , Research Scholar , DoECE, SVNIT, SURAT.

Anjali Sarvaiyya , Research Scholar, DoECE, SVNIT, SURAT.

Durga Prasad M , M.Tech Student, DoECE, SVNIT, SURAT.

## TENTATIVE PROGRAM SCHEDULE

DAY	TOPIC
DAY 1	Expert Talk “Basics of Antenna Design”
	Expert Talk “FSS & Equivalent ckt modelling”
DAY 2	Expert Talk “ CP & Dielectric Resonator Antenna”
	Hands-on “Circularly polarized Antenna in HFSS”
DAY 3	Expert Talk “ MIMO antenna”
	Hands-on “MIMO antenna in HFSS and SIW Antenna”
DAY 4	Expert Talk “SIW Antenna” & “LP to CP converters”
	Hands-on “Fabrication and familiarization to VNA”
DAY 5	Expert Talk On “Machine Learning”
	Hands-on “testing antenna in anechoic chamber.”
DAY 6	Expert Talk On “Machine Learning”
	Hands-on “Introduction to python and machine learning.”
DAY 7	Expert Talk On “Machine Learning”
	Hands-on “Optimization of antenna parameters with machine learning.”
DAY 8	EXPERT TALK “Circularly Polarized Rectenna For RF Energy Harvesting In Smart City Applications “
	VALEDICTORY

## EVENT ORGANIZER DETAILS

Dr Shilpi Gupta

Email: [sgupta@eced.svnit.ac.in](mailto:sgupta@eced.svnit.ac.in) Ph : 9737011973

Dr. Kishor P Upla

Email: [kpu@eced.svnit.ac.in](mailto:kpu@eced.svnit.ac.in) Ph : 9998969067

Organized By

Department of Electronics Engineering,  
Sardar Vallabhbhai Institute of Engineering & Technology,  
SURAT

Funded by:

Science & Engineering Research Board (SERB)