

## REGISTRATION FORM

One Week National Level Online Short Term Training Program (STTP)

on

“Trends and Challenges in Design and Implementation of Reconfigurable Antennas for Increased Spectrum Access in Cognitive Radio Communication”

**STTP-II 24<sup>th</sup> -29<sup>th</sup> August 2020**

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Institution/Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Number: \_\_\_\_\_

Email: \_\_\_\_\_

Qualifications: \_\_\_\_\_

Experience in years: \_\_\_\_\_

Teaching: Research: Industry: \_\_\_\_\_

**Signature of the Participant**

**Last date for Registration: 19<sup>th</sup> August 2020**

**Address for Communication:**

**Dr. A. Jhansi Rani**

Professor, ECE Dept.

V.R. Siddhartha Engg. College

Kanuru, Vijayawada-520007, AP

**Mail id: [aictesttp2020.ece@gmail.com](mailto:aictesttp2020.ece@gmail.com)**

**Mobile. No: 9949894526 & 9494049281**

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**Sri N. Venkateswarlu**, President,  
Siddhartha Academy of General & Technical  
Education (SAGTE), Vijayawada

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**Dr. N. N. Sastry**, Prof. of ECE & Dean R & D  
**Dr. B. Panduranga Rao**, Prof. of CE & Dean SA

### Convener

**Dr. P. V. Subbaiah**  
Professor & Head of ECE

### Organizing Advisory Committee

Faculty members of ECE Department

### Registration link:

<http://tiny.cc/VRSEC-ECE-STTP2-CRC>

### Eligibility

The STTP is open to faculty members of AICTE approved Institutions, Research scholars and persons from industry and R&D organizations from all over country.

**Registration Fee: \*\*\*NIL\*\*\***

Online meeting link will be provided through **whatsapp**.

**The number of Participants will be limited to 150**

**\*Note:** E- Certificates will be provided to those participants who attend all the sessions of the program and also appear for the online test as per the norms of AICTE.

**AICTE Sponsored**



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on

**“Trends and Challenges in Design and Implementation of Reconfigurable Antennas for Increased Spectrum Access in Cognitive Radio Communication”**

**STTP-II 24<sup>th</sup> -29<sup>th</sup> August 2020**

### Coordinators

**Dr. A. Jhansi Rani**, Prof. of ECE

### Co-Coordination

**Dr. M. Padmaja**, Prof. of ECE  
**Mr. A. Raviraja** Asst. Prof. of ECE

**Organized by**



**Department of**

**Electronics & Communication Engineering**

**Velagapudi Ramakrishna**

**Siddhartha Engineering College**

(Autonomous)

(Sponsored by Siddhartha Academy of General & Technical Education)

Kanuru, Vijayawada-520007

Andhra Pradesh

[www.vrsiddhartha.ac.in](http://www.vrsiddhartha.ac.in)

**☎: 0866-2582333, 2584930**

### About the College:

Velagapudi Ramakrishna Siddhartha Engineering College (VRSEC) was established in the year 1977 as the first Self-financing Engineering College in the state of A.P. It is located in a vast expanse of 24.05 acres of land on the outskirts of Vijayawada city at a distance of about 6Kms from the city centre. The college is offering 7 UG (B.Tech) Courses with intake of 1140, 9 PG- M.Tech with 180, MBA with 60 and MCA with 60. The college has been accredited four times by National Board of Accreditation (NBA) of All India Council for Technical Education (AICTE), New Delhi in respect of all Engineering disciplines and also certified for ISO 9001:2008. It is affiliated to Jawaharlal Nehru Technological University, Kakinada, AP. Autonomous status was conferred by UGC in the year 2006 and extended for 10 years upto 2027-28 without visit to the college, first in AP. It is one among the top 16 Engineering Colleges selected with Rs 6 crores funding under World Bank aid for R&D and PG enhancement programme called TEQIP –II (S.C.1.2) by MHRD, Govt. of India. The institute secured AAA ranking and all India 7<sup>th</sup> position for the participation by students and faculty in NPTEL/SWAYM. The College received Platinum Award in years 2017, 2018 & 2019 as a Best Industry Linked Technical Institute by AICTE-CII Survey. It is also recognized as “Scientific & Industrial Research Organization (SIRO)” by DSIR, MST, Govt. of India since August 2017.

### About ECE Department:

Established in the year 1977, the department of ECE offers B.Tech Programme in Electronics & Communication Engineering with an intake of 240 and two M.Tech Programmes in Communication Engineering & Signal Processing and VLSI Design & Embedded Systems with an intake of 18 each. The department has been accredited by NBA of AICTE four times. More than 40% faculties are with Ph.D. qualification. Led by a team of highly qualified experienced faculty with specializations such as RF & Microwave, Antennae, Digital Signal

Processing, Wireless Communications, Digital Image Processing, VLSI and Embedded systems etc, the department provides excellent academic and research environment to the UG, PG and research students. A centre of Excellence (TIFAC CORE- DST) in Telematics was established in the year 2009 with the state of the art facilities. Having successfully completed many research projects funded by UGC, AICTE, NRSC-ISRO DLRL & ANURAG-DRDO etc., it is also recognized by JNTUK as "**Research Center.**" Faculty members extend guidance to research scholars, produce Ph.D.'s and publish their findings in peer reviewed national and international journals and conferences.

### About STTP:

Cognitive radio (CR) is a cutting edge technology for wireless communications that requires the design of novel spectrum sensing schemes with high degree of reliability. These networks can dynamically allocate spectrum to multiple users, thereby easing network congestion. Reconfigurable antennas play important roles in smart and adaptive systems which offer several advantages such as multifunctional capabilities, low front-end processing efforts with no need for a filtering element, good isolation, and sufficient out-of-band rejection. These make them well suited for use in wireless applications such as 4G and 5G mobile terminals.

**Note:** The STTP is planned in three phases. The basic concepts and fundamentals in the first STTP, current technologies and applications in the second STTP and futuristic trends and challenges in the third STTP. However they are independent. The dates for the other two STTPs will be informed later.

### Objectives of STTPs:

The program focuses on Antenna design aspects and simulation for cognitive radio Communication with a synthesis approach and progressively builds up the background through an illustrative design and characterization set of learning activities of some of the basic concepts of spectrum access techniques

### Course Contents:

- Role of AI in 5G – Opportunities and Challenges
- Reconfigurable Antennas- Part II
- Cognitive Radio : Reconfigurable Antennas: Spectrum Sensing
- Reconfigurable Antennas: Time Optimal Spectrum Sensing
- Design of Microstrip Patch Antenna using Probe feed using HFSS
- Aspects of RF IC design
- SDR – Fundamentals, Hardware Configuration
- GNU Radio
- Cellular networks operation on the unlicensed spectrum
- Challenges in Reconfigurable antenna design
- Application about Reconfigurable antenna in Cognitive radio Communication

### Resource Persons:

#### **Dr. Samar Shailendra**

Scientist at TCS Research & Innovation & Visiting faculty at IIIT Bangalore

#### **Dr. G. Rama Murthy**, Prof. of CSE

Mahindra University, Hyderabad

**Dr. Abhinav Kumar**, Associate Professor, Dept. of Electrical Engineering, IIT Hyderabad

**Dr. P. Sreehari Rao**, Associate Professor of ECE, NITW, Warangal

**Dr. D. Vakula**, Associate Professor of ECE, NITW, Warangal

**Mr. Hemant Katakhar**, Director, Technical, Akademika

**Ms. Kalyani**, Application Engineer, Akademika

**Mr. Shankar Nair**, Director, Sales & Marketing, Akademika

**Er. M. Vinoth Manoharan**, Co-Founder & CTO, Wilma Communications Groups (Asia | US | Europe)

**Er. Shashikumar R**, Application Engineer