



## FACULTY DEVELOPMENT PROGRAMME (FDP) ON

### SIGNAL PROCESSING FOR 5G WIRELESS COMMUNICATIONS

**5<sup>th</sup> November – 10<sup>th</sup> November 2018**

Organized by

## LENDI INSTITUTE OF ENGINEERING & TECHNOLOGY

Jonnada mandal, Vizianagaram

In association with

### National Institute of Technology, Warangal

Under the scheme of Electronics & ICT Academy

(Sponsored by MeitY, Govt. of India)



**Preamble:** "Electronics & ICT Academy at NIT Warangal provides specialized training to the faculty of Engineering, Arts, Commerce & Science colleges, polytechnics etc., by developing state-of-the-art facilities. It is working towards enhancing the domain expertise of interested faculties with special focus on the faculties of Southern States Telangana, Andhra Pradesh, Karnataka, and the Union territories Goa, Puducherry and Andaman & Nicobar Islands. The academy is involved in multitude of activities including training, consultancy and entrepreneurship programmes. The academy offers faculty development programs in standardized courses and emerging areas of Electronics, Information Communication Technologies; provides training and consultancy for industry, CEP for working professionals, apart from rendering advice and support for technical incubation

#### About the Workshop

This FDP aims at providing strong theoretical background along with practical experience in the field of signal processing techniques in 5G wireless Communications. In Wireless Communications: Signal Processing Perspectives, leaders in the field describe state-of-the-art research in applying signal processing methodologies in the context of tomorrow's most important wireless applications, ranging from next-generation cellular telephony and personal communication services, to nomadic computing and wireless multimedia.

Representatives of industries and academia have started to look into the technological developments toward the next generation (5G), as the rollout of 4G mobile communication networks take place. Signal processing Techniques, algorithms and architectures have an increasing important role to play in meeting the central challenges faced in the design of advanced wireless communication systems. The 5G technologies aim to support broadband data rate more than 5 GBPS, latency less than 1 ms for high mobile users and high energy efficiency. In this FDP, we will discuss the technologies that are being proposed for candidate of 5G communication

#### Major Course Contents:

- Signal Processing techniques for 4G and 5G Communications.
- Introduction to wireless communications: Wireless Channels
- Fundamental limits in wireless Transmission.
- Diversity combining Techniques, Space time coding.
- MIMO Transmission and Detection Techniques.
- Channel Estimations and Equalization Techniques
- Digital Modulation Techniques Wireless Communications.
- Multicarrier Modulation Systems
- Hands-on Experiences.
- Mini Projects using MATLAB and Free open Source software

**Faculty conducting this program:** The program will be conducted by the faculty members from NIT Warangal; Academicians in the concerned field from IITs/NITs/IIITs are invited to deliver lectures in the program. Speakers from industries are also expected to deliver as part of the course.

**Eligibility:** The program is open to the Faculty of Engineering Colleges, MCA Colleges and other allied disciplines in India. Industry personnel working in the concerned /allied discipline can also attend.

**Organized at:** The programme will be coordinated and conducted by the electronics and Communication Engineering department of **LENDI Institute of Engineering and Technology, Vizianagram**. The whole course will be accomplished by academicians from premier institutions, Industry experts and Research advisors

**Accommodation:** No TA/DA will be paid to the participants.. Working Lunch, Tea & Snacks and Dinner would be provided during the training at LENDI campus.

**Venue:** Dept. of ECE, Lendi Institute of Engg. and Tech. Vizianagaram.

#### Registration Fee Particulars:

Faculty and Research Scholars	Rs. 2500/-
Faculty of SC/ST Category	Rs. 1250/-
Industry Participants	Rs. 7500/-

\*SC/ ST participants should submit the copy of their caste certificate to claim the concession along with application form and it is only for faculty. Research Scholars are not eligible for SC/ST concession.

The entire registration fee is to be collected in the form of DDs/online transfer using the following details:

DD Details	Online Transfer Details
Demand Draft in favor of "Director, NIT Warangal" payable at any bank in Warangal	Account Name: Electronics & ICT Academy NITW Account No: 62423775910 IFSC: SBIN0020149

**How to apply:** A filled in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with demand draft) should reach the coordinator by speed-post. It is also mandatory to send scanned application form and demand draft through e-mail to [srib105@gmail.com](mailto:srib105@gmail.com) and [ravikumar@nitw.ac.in](mailto:ravikumar@nitw.ac.in) as selection will be intimated only through mail. as selection will be intimated only through mail.

#### Selection Criteria:

Selection will be done based on *first-cum-first-serve basis* and the confirmed candidates will be notified immediately. The maximum number of participants will be 50 (fifty). Additionally 10 participants from industry are allowed to participate. The list of selected participants will be notified in the institute web site [www.lendi.org](http://www.lendi.org) and also will be sent to their personal e-mail ids. In case a candidate is not selected, the demand draft will be sent back. A test will be conducted at the end of the course. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

#### Important dates:

Last date for submission of application	25.10.2018
Selection-list intimation/display before	31.10.2018

#### About NITW & LIET:

**National Institute of Technology** (formerly Regional Engineering College), Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institution imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering and M.Tech. and Ph.D. programs in various specializations.

**LENDI Institute of Engineering and Technology (LIET)** is established under the aegis of Sai Dhamam Educational Trust, Visakhapatnam with a sacred objective of providing educational opportunities to the ever increasing engineering aspirants. The Institution is one of the premier Institution in Costal Andhra accredited by NBA & NAAC with 'A' Grade. The college is offering four UG Programmes in CSE, ECE, MECH & EEE branches and two PG M.Tech Programmes in CSE and VLSI specializations. Initially the Department of Electronics and Communication Engineering was started with an initial intake of 60 students and further secured approval for an additional intake of another 180 students at graduation level. Post-Graduation M.Tech program in Embedded Systems & VLSI Design was introduced in 2014 – 2015 with an intake of 18 seats. Department of ECE is equipped with state of art infrastructure in addition to licensed software tools.

## FACULTY DEVELOPMENT PROGRAMME

### APPLICATION FORM

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#### SPONSORSHIP CERTIFICATE

1. Name:

2. Designation:

3. Institution:

4. Email:

5. DD No:

Bank:

Date:

6. Address for Correspondence

7. Educational Qualifications with specialization:

8. Subjects taught so far:

9. No. of refresher courses/workshops attended:

10. Experience (in years)

Teaching:

Research:

Industry:

11. Accommodation required: YES / NO

12. Are you belong to SC/ST: YES/NO

Dr./Mr./Ms..... is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on *Signal Processing for 5G Wireless Communications* sponsored by **Electronics & ICT Academy** during 5<sup>th</sup> - 10<sup>th</sup> November, 2018 at LIET, VIZIANAGARAM.

Place:

Date:

Signature of Head of Institution

(With seal)

#### Address for correspondence

**Dr.B.Sridhar**

**Coordinator**

*FDP on Signal Processing For 5G Wireless Communications*

*Department of Electronics and Communication Engineering*

*LENDI Institute of Engineering & Technology,*

*Jonnada, Beside Vizag-Vizianagaram highway Road,*

*Vizianagaram-535005 Andhra Pradesh, India*

Mail the scanned copies of filled-in and duly signed application form with DD to [srib105@gmail.com](mailto:srib105@gmail.com)

[jrk.nitw@nitw.ac.in](mailto:jrk.nitw@nitw.ac.in)

For more information visit: <http://nitw.ac.in/eict/>

<http://lendi.org>

For any enquiry contact:

Mobile: 9959672809, 8332969363

Land line: 0870-2462444

#### Declaration

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the Coordinator in case, I am unable to attend the course.

Place:

Date:

Signature of the applicant

#### Coordinators

**Dr. J. RAVI KUMAR**

**Department of ECE,**

**Electronics & ICT Academy**

**NATIONAL INSTITUTE OF TECHNOLOGY**

**Dr.B.SRIDHAR**

**Department of ECE,**

**LENDI INSTITUTE OF ENGINEERING AND**

**TECHNOLOGY**