

# NATIONAL INSTITUTE OF TECHNOLOGY

WARANGAL – 506 004 (Telangana State)

MeitY, HRD division, Ministry of ICT, Govt. of India SPONSORED Faculty Development Programme (FDP)



# Advanced Antenna Pattern Synthesis and Beamforming with Computational Intelligence

Organized by

Electronics & ICT Academy and Department of Electronics and Communication Engineering  $(12^{th}-17^{th}$  November, 2019)

#### Preamble:

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka States and Pudicherry, Andaman & Nicobar Islands. This academy role is to offer faculty development programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies; training & consultancy services for Industry; Curriculum development for Industry; CEP for working professionals; Advice and support for technical incubation and entrepreneurial activities.

This FDP aiming at bringing together researchers from academia and industry on various cutting-edge research areas Antenna, Antenna Arrays, Intelligent Computing, Soft Computing, Bio Computing, Optimization, Communications, Smart Antennas to create awareness about these domains. The workshop will include sessions focused on technologies, techniques and applications with intent to foster the exchange of knowledge and ideas between experts. The objective of the course is to impart in-depth knowledge in the Computer-aided design of antennas through MATLAB and EM simulators. The workshop provides hands-on experience in using ANSYS HFSS simulator tools, leading to the design of patch antennas and other types of antennas. 6-day programme will enable the participants to understand the simulation principles and optimization procedures in the identified topics.

## **Major Course Contents:**

- Fundamentals of Electromagnetic and Antenna Theory
- Introduction to Advanced Antenna Arrays
- Introduction to Soft computing /Evolutionary (Numerical and optimization) Algorithms
- methods in antenna design Miniaturization of antenna array
- HFSS/CST Simulation and Basis Demonstrations
- Hands on design labs using simulators such as CST/HFSS
- Reconfigurable Antennas
- Multiple beam and beamforming antennas
- Antenna in IOT
- Antenna interactions and coupling analysis
- Antenna design using HFSS- Hands on session
- Reconfigurable and multi beam antennas/arrays
- Smart Antennas
- MIMO Antennas

## Faculty conducting this programme:

The programme 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 programme. Speakers from **industries** are also expected to deliver as part of the course.

### Eligibility:

The programme is open to faculty of Engineering Colleges and other allied disciplines in India. Industry personnel working in the concerned /allied discipline can also attend.

**Registration Fee Particulars:** 

Faculty and Research Scholars	Rs.2500/-
Industry Participants	Rs.7500/-

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 "E & ICT Academy, NIT Warangal" payable at any bank in Warangal	Account Name: Electronics & ICT Academy NITW Account No: 62423775910 IFSC: SBIN0020149		

#### Accommodation:

All the selected participants will be provided FREE boarding & lodging in the institute guest house. No TA will be paid for the participants.

### How to apply:

A filled in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with payment receipt) should reach the coordinator by speed-post. It is also mandatory to fill the following google form and selection will be intimated only through mail.

## $\underline{https://forms.gle/tU2hAVHg7RYk9Mzp8}$

### Selection Criteria:

Selection will be done based on first-come-first-serve basis to a maximum number of 50 (fifty). Additionally 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. 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: 25.10.2019

Selection-list intimation/display before: 30.10.2019

### Duration of Program: 12th – 17th November, 2019

# About the Institute, department and Warangal:

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.

The Department of Electronics and Communication Engineering offers an Undergraduate program in Electronics and communication Engineering and three Postgraduate programs in El, VLSI, and ACS Specializations. The Department has experienced faculty and well-established laboratories. The Department has liaison with reputed industries and R&D organizations like DRDO, ISRO ECIL, Analog Devices Bangalore and C-DAC. Department conducts various sponsored programmes throughout the year.

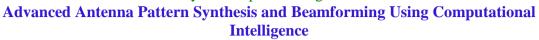
Warangal is known for its rich historical and cultural heritage. It is situated at a distance of 140Km. from Hyderabad. Warangal is well connected by rail and road. National Institute of Technology campus is 2 Km. away from Kazipet junction and 12Km. away from Warangal station.



# **Application Form**

# Electronics and ICT Academy

Faculty Development Programme on



(12th – 17th November, 2019)

1. Name:		SPONSORSHIP CERTIFICATE		
2. Designation :		Dr/Mr/Ms.		
3. Institution :		is		
4. email:		an employee of our Institute/Organization and is hereby		
5. DD No: Bank:	Date:	sponsored to participate in the FDP on "Advanced Antenna Pattern Synthesis and Beamforming with		
6. Address for Corresponder	nce	Computational Intelligence" sponsored by Electronics		
		& ICT Academy during 12th - 17th November, 2019		
		at Electronics & ICT Academy, National Institute of		
		Technology, Warangal.		
7. Educational Qualifications	with specialization:			
		Place:		
8. Subjects taught so far:		Date:		
9. No. of refresher courses/workshops attended:		Signature of Head of Institution (with seal)		
10. Experience (in years)				
Teaching: Research:		Address for correspondence		
Industry:		Post your application form with payment proof to		
11. Accommodation require 12. Are you belong to SC/ST (If yes, please specify and atta certificate to claim the conces	C: YES/NO ach a copy of caste	Dr. Gopi Ram Department of Electronics and Communication Engg, National Institute of Technology Warangal, WARANGAL - 506 004, Telangana State, India.		
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.		Fill the following google form with scanned copies of filled-in and duly signed application form along with payment proof as attachment.  https://forms.gle/tU2hAVHg7RYk9Mzp8		
Place: Date:	Signature of theapplicant	For more information visit: http://nitw.ac.in/eict/ For any enquiry contact: Mobile: 9679983382, 8248831950, 9491065971, Land line: 0870 2462421		

Coordinator

**Dr. Gopi Ram, Assistant Professor Department of ECE, NIT Warangal** 

Coordinator

**Dr. G. Arun Kumar**, Assistant Professor Department of ECE, NIT Warangal

**Organized by** 

Electronics & ICT Academy and

Department of Electronics and Communication Engineering

NATIONAL INSTITUTE OF TECHNOLOGY