

## ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)

ON

### High Performance and Parallel Computing

(11<sup>th</sup> August- 22<sup>th</sup> August 2022)

Organized By

E & ICT Academy & Department of Computer Science & Engineering,  
NIT Warangal

In Association With

Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)



**Preamble:** Electronics & ICT Academy was set up at NIT Warangal with financial assistance from MeitY, GoI. The role of academy is to offer faculty development programmes in 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 is designed to address research advancements in Computer Science & Engineering and Computational needs for complex problems. To expose researchers in High performance and parallel computations, for providing effective solutions in their diversified domain applications. To encourage various zonal professionals'/students/academicians towards research and for their Academic Quality Improvement too. This course will offer a unique opportunity to all the participants in Real Time through theoretical, laboratory-based sessions and demonstrations. The penetration of AI and Machine learning in real-time applications demand higher computational requirements which can be met through aggregative computing power of low-end machines through High performance and parallel computations.

**Objectives:** FDP aims at giving scope for future research.

- High Performance Computing Architectures
- Parallel Programming Paradigms
- Shared Memory Prog. - POSIX Thread Library and OpenMP:
- Explicit Message Passing - MPI Library
- Implementation of Matrix Computations, Graph and Sorting Algorithms
- Programming on Accelerators – Intel Xeon Phi Co-processors
- Introduction to GPGPU programming - CUDA and OpenCL
- An Overview of Distributed Computing Technologies – Hadoop MapReduce Programming – App. Kernels
- Hands on Sessions for various programming paradigms on parallel processing platforms

**Registration Fee Particulars:**

Faculty and Research Scholars	Rs. 750 /-
Industry Participants	Rs. 2250/-

**Participants are required pay the Registration Fee Online using the following NEFT transfer details:**

Online Transfer Details	
Account Name	: Electronics & ICT Academy NITW
Account No	: 62423775910
IFSC code	: SBIN0020149
Bank and Branch	: State Bank of India, NIT(REC) Warangal

**Resource Persons:** Young & Energetic eminent & finest Researchers & Faculty from International Universities IITs, NITs, IIITs & Industry experts.

**Eligibility:** Faculty/Ph. D scholars of computer Science & Engineering/ allied disciplines & Industry Personnel

**How to apply:** Participants are required to apply through online registration form by clicking on the following link:

<https://forms.gle/hWc2Vr7tqmwDhpNXA>

**Selection Criteria:**

Selection will be done based on first- come-first-serve basis to a maximum number of 100 (hundred). The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the Online/DD payment will be sent back. 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 Application with fee: 4<sup>th</sup> August 2022

Selection List by Email: 8<sup>th</sup> August 2022.

FDP Duration: 11<sup>th</sup> August to 22<sup>th</sup> August 2022.

**About NITW, CSE Department, Warangal:**

**NIT Warangal**, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 32 post-graduate programmes besides doctoral programmes. About 5000 students across the country and about 500 international students' study on the campus. Its R & D activities have gained momentum with funding/MoU from governmental agencies/industries.

**The Department of Computer Science & Engineering**

The Department of Computer Science & Engineering was established in the year 1991. The department offers high quality undergraduate, postgraduate and doctoral programs. The B. Tech (Computer Science and Engineering) program was started in the year 1983 with an intake of 20 students. The intake was subsequently increased to 120 in 2008. M. Tech (Computer Science and Engineering) program was started in 1987 with an intake of 18 and subsequently increased to 20 in 2008.

**About GRIET, CSE Department, Hyderabad:**

**GRIET** is a premier institute of engineering, established in the year 1997 under the patronage of the Gokaraju Rangaraju Educational Society. The college is approved by AICTE and is affiliated to JNTU, Hyderabad. It has been given autonomous status by UGC. All the programs are accredited by NBA under Tier-I. The Institute is accredited by NAAC with A++ grade. The mission of GRIET is to achieve and impart quality education with an emphasis on practical skills and social relevance. GRIET strives to provide state-of-art infrastructure.

**The Department of Computer Science and Engineering**

Computer Science and Engineering Department started in the year 1997. It conducts B. Tech and M. Tech programmes in Computer Science and Engineering. The Department has well- equipped laboratories. It focuses on practical applications in the field of Data Mining and Image Processing. The Department is accredited by NBA in 2006, 2009, 2014 and 2019. In addition to quality teaching, students are exposed to certification courses and workshops along with personality development programs. HPC center of Excellence of CSE extends facilities for research projects and publications.

**Coordinators:**

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