



FACULTY DEVELOPMENT PROGRAMME(FDP) ON

CONTEMPORARY CRYPTOGRAPHIC SOLUTIONS FOR IOT BASED APPLICATIONS

(20-08-2021 to 30-08-2021)



Organized by

E & ICT Academy, NIT Warangal

in association with

SASTRA DEEMED TO BE UNIVERSITY,

Thanjavur, Tamil Nadu

(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 jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy's 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.

About the FDP:

With the recent advancements in wireless technologies and embedded computing, more and more physical devices are getting connected to the Internet and termed as Internet of Things (IoT). These IoT devices are constrained in terms of energy, processing and storage and thus, the traditional cryptographic security solutions are not applicable to these devices/systems. But, the IoT application are vulnerable to all sophisticated attacks that are possible on a typical computer system/network. More over, the impact of such an attack increases manifold because of the criticality of IoT applications like a smart grid, or an industrial control system. The constraints posed by these applications, the ubiquitous presence of the devices, and the ease of setting-up and use of such applications makes them prone to security vulnerabilities. Therefore, there is a need to understand the security requirements of IoT applications, attack surfaces and attack vectors on these devices, different types of attacks, countermeasures, etc., need to be understood to develop contemporary security solutions for these networks.

This Faculty Development Programme aims to impart knowledge about the real-time applications of IoT among the teaching community. Experts from academia and industry have been invited to deliver lectures about the contemporary cryptographic solutions for IoT applications. This FDP aims to provide a basic understanding of all the above aspects of application security in IoT. It will provide a comprehensive understanding on the contemporary cryptographic approaches of IoT applications that will help faculty to also pursue application development and research in this direction.

Major Course Contents:

- Introduction to cryptographic primitives
- Advanced cryptography techniques
- Lightweight cryptography
- Introduction to security and privacy
- Introduction to IoT and its applications.
- Connectivity Technologies for IoT
- IoT using Raspberry and Python
- IoT vulnerabilities
- Introduction to IoT device, connectivity and cloud security
- Blockchain platforms
- Permissioned/ Permission-less Blockchains
- Overview of Blockchain for IoT devices
- Use cases of Block chain for IoT environment

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.

Registration Fee Particulars:

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

Participants need to pay the Registration Fee Online using the following details.

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

How to apply:

Participants are required to fill the online registration form by clicking on the following link: <https://tinyurl.com/575y6xse>

Selection Criteria:

Selection will be done based on first-come-first-serve basis to a maximum number of 60 (sixty). Additionally, 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the DD 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 (Application & DD)	17-08-2021
Selection List by E- mail	18-08-2021
Duration	20-08-2021 to 30-08-2021
Timings	02.00PM – 06:00PM

About NIT Warangal:

National Institute of Technology, 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 Institute imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering, M.Tech. and Ph.D programmes in various specializations. All B. Tech and M. Tech programmes of NIT Warangal are NBA accredited.

About SASTRA Deemed University

The Shanmugha Arts, Science, Technology & Research Academy (SASTRA) is a private and Deemed to be University in the town of Thirumalaisamudram, Thanjavur district, Tamil Nadu, India. SASTRA is committed to quality education and offers various undergraduate and postgraduate courses in Engineering, Science, Education, Management, Law and Arts besides various Doctoral programmes and has state-of-the-art laboratories, a well-stocked library and on one of the best world class computing facilities.

About School of Computing

The School has highly sophisticated computing facilities and state-of-the-art laboratories for training and R&D activities in various areas of Computer Science & Information Technology. As part of R&D, the Centre named TIFAC-CORE has been established with a Supercomputer, VLSI & Embedded System Lab, Sun Lab, Cyber security lab etc. The school is equipped with a 32 Tera Flop HPC which comprises 1 head node & 16 compute nodes with NVIDIA Tesla K80 CPU cards. The Centre is set up to promote triangular linkage between industry, Academics and Government in the IT field. The faculty members have a good blend of industrial as well academic experience.



**FACULTY DEVELOPMENT PROGRAMME(FDP)
ON
CONTEMPORARY CRYPTOGRAPHIC SOLUTIONS
FOR IOT BASED APPLICATIONS
(20-08-2021 to 30-08-2021)**



**Organized by
E & ICT Academy, NIT Warangal
in association with
SASTRA DEEMED TO BE UNIVERSITY,
Thanjavur, Tamil Nadu**

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

1. Name :
2. Designation :
3. Institution :
4. Email :
5. Mobile No :
- 6.

Reference No:
Amount:
Bank:
Date:

7. Address for Correspondence:
8. Educational Qualification:
9. Subjects taught so far:
10. No. of refresher courses/workshops attended:
11. Experience (inyears):
Teaching: Research: Industry:
12. Do you belong to SC/ST : YES /NO

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.

Signature of the Applicant

SPONSORSHIP CERTIFICATE

Dr. /Mr. /Ms. is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on "Contemporary Cryptographic Solutions for IoT based Applications", sponsored by Electronics & ICT Academy during 20-08-2021 to 30-08-2021 at SASTRA Deemed to be University, Thanjavur, Tamil Nadu

Signature of Head of Institution
(with seal)

Address for correspondence
Post your application form

Dr. N. Sasikaladevi
Department of Computer Science & Engineering
School of Computing,
SASTRA Deemed University,
Tirumalaisamudram, Thanjavur - 613401.
Tamil Nadu, India

It is requested to all the delegates, after completion of application form, all the payment details, screenshot of the payment and scanned application form has to be uploaded in the following online registration link.

Registration Link:

For more details about Electronics & ICT Academy, NIT, Warangal, please visit: <https://nitw.ac.in/eict>

For more enquiries please contact:

Mobile: 08098846368, E-Mail: sasi@cse.sastra.edu

Coordinators

Dr. N. Sasikaladevi
Dept. of CSE, School of Computing
SASTRA Deemed University
Thanjavur - 613401
Tamil Nadu, India

Dr. R. Padmavathy
Dept. of CSE
National Institute of Technology
Warangal-506004
Telangana State, India