



GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY



UNIVERSITY SCHOOL OF INFORMATION, COMMUNICATION & TECHNOLOGY

**AICTE Training and Learning (ATAL) Academy
Faculty Development Programme (FDP) on**

Internet of Things (IoT): Architecture & System Level Design

September 27 - October 01, 2021

Inauguration @ 09.00 a.m. on September 27, 2021 (Monday)

Cisco Webex Meeting Link:

<https://rb.gy/md1ke7>



Prof. (Dr.) Padma Shri Mahesh Verma
Vice Chancellor, GGSIPU
Patron-in-Chief



Prof. Yogesh Singh
Vice Chancellor, DTU
Chief Guest



Sh. Ravi Dadhich
Registrar, GGSIPU
Advisor



Prof. Pravin Chandra
Dean
USIC&T, GGSIPU



Prof. Virendra Singh
Professor, IIT Bombay
Keynote Speaker



Dr. Anuradha Chug
Assistant Professor, USIC&T, GGSIPU
Course Coordinator



Dr. Jyotsna Yadav
Assistant Professor, USIC&T, GGSIPU
Course Co-coordinator



Dr. Rahul Johari
Assistant Professor, USIC&T, GGSIPU
Course Co-coordinator

STUDENT COORDINATORS

Ms. Shradha Verma, Ms. Anshul Bhatia, Ms. Sandhya Tarwani, Ms. Mansi Agnihotri, Ms. Nikhat Ali, Ms. Priyanka Sahu,
Ms. Juhi Chaudhary, Ms. Tanvi Dalal, Ms. Kirti Lakra, Mr. Prateek Thakur, Ms. Sonam, Mr. Amit Sengar

AICTE Training and Learning

(ATAL) Academy

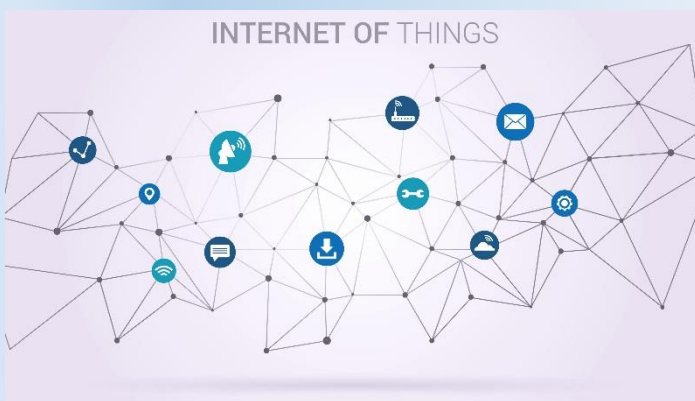
Faculty Development Programme (FDP)

On

Internet of Things (IoT): Architecture & System Level Design



27th Sept – 1st Oct, 2021



Patron

Prof. (Dr.) Padma Shri Mahesh Verma

Hon'ble Vice Chancellor, GGSIP University

Advisor

Shri. Ravi Dadhich

Registrar, GGSIP University

Dean, USIC&T

Prof. Pravin Chandra

Dean, USIC&T, GGSIP University

Course Coordinator

Dr. Anuradha Chug

USIC&T, GGSIP University

OBJECTIVE OF THE COURSE

The proposed FDP is designed to offer a unique opportunity to the participants to interact with the prominent experts from industry, faculty from premier academic institutions, and distinguished practitioners working in the area of recent trends & challenges in Internet of Things (IoT). Lectures will be delivered by eminent experts, having rich teaching and industrial experience in their respective field of application and hence will provide deeper insight and knowledge to the participants about the advances in the above mentioned field. The primary target group for the FDP are teachers of Colleges, University Department, Academic Institutions, Research Scholars, UG and PG students who are engaged in research (or) planning to undertake research and industry personnel.

COURSE CONTENTS

- Introduction to IoT
- IoT Architecture and Techniques
- Arduino and Mini projects
- Introduction to WSN
- Connection Configuration
- MQTT Protocol and hands on MQTT
- Installations of various sensors
- Collecting Sensors data using RIME
- Transmission of Sensor data over digital Node Network Map
- Sensor Performance Evaluation
- Applications of IoT: Case Studies
- Recent Advances in IoT
- Fog computing & Edge Computing
- Industrial IoT
- Protocol Analysis for IoT systems

ABOUT ATAL ACADEMY

Online ATAL academy is established with a vision to empower faculty to achieve goals of higher education such as access, equity and quality. The academy also help in imparting quality technical education in the country and support technical institutions in fostering research, innovation and entrepreneurship through training.

ELIGIBILITY OF PARTICIPANTS

Online ATAL FDP is open to regular faculty members of AICTE or UGC recognized educational institutions, technical universities/deemed universities and other research/ training institutions, Research Scholars, PG students and participants from Government, Industry (Bureaucrats/Technicians etc.).

REGISTRATION DETAILS

- There is **no registration fee** as the said Programme is sponsored by AICTE Training and Learning (ATAL) Academy.
- Interested participants can register using the following link:
<https://atalacademy.aicte-india.org/login>

Step 1: Sign-Up

Step 2: Select the Role 'Participant'

Step 3: Click on Workshops

Step 4: Select 'Faculty Development Programme on 'Internet of Things (IoT): Architecture & System Level Design'

Step 5: Click the plus sign button to register.

Participants will be selected on first come first serve basis.

RESOURCE PERSONS

Faculty and Experts from IIIT Delhi, JNU, DTU, GGSIPU, Thapar University, etc.

UNIVERSITY VISION

The University will stimulate both the hearts and minds of scholars, empower them to contribute to the welfare of society at large; train them to adopt themselves to the changing needs of the economy; advocate them for cultural leadership to ensure peace, harmony and prosperity for all.

ABOUT GGSIP UNIVERSITY

Guru Gobind Singh Indraprastha (GGSIP) University is the first University established in 1998 by the Govt. of NCT of Delhi under the provisions of Guru Gobind Singh Indraprastha University Act, 1998 read with its Amendment in 1999. The University is recognized by University Grants Commission (UGC), India under section 12B of UGC Act. It is a teaching and affiliating University with the explicit objective of facilitating and promoting studies, research and extension work in emerging areas of higher education with focus on professional education. The University promotes establishment of colleges and schools of Studies as Centre's of Excellence in emerging areas of education with focus on professional education in disciplines of engineering, technology, medicine, education, pharmacy, law, etc.

KEYPOINTS

- There is **no registration fee** for any participant.
- The FDP will be conducted in Online mode.
- Test will be conducted at the end of the Programme.
- Participants will be selected on first come first serve basis. Selected candidates will be intimated by email only.
- The certificates will be issued to those participants who have attended the Programme with minimum 80% attendance and scored minimum 60% marks in the test.
- Certificate will be issued by AICTE Training and Learning (ATAL) Academy.

ABOUT USIC&T DEPARTMENT

The University School of Information, Communication & Technology (USIC&T) has been established to design and implement courses with a twin objective of generating effective professionals and to keep pace with the R & D activities of this fast emerging and changing field of Information & Communication Technology. The school aims at inculcating essential skills as demanded by the global software industry, through the interactive learning process.

The school was set up with an aspiration to generate manpower, with the ability to take on challenges and fare forward in the realm of information & communication technology. The curriculum has been designed to cater to the ever-changing demands of information, communication technology, with the necessary inputs from the industry. The school has highly qualified & experienced faculty who excel in their respective areas. The school also encourages research work in various areas of information & communication technology. The school aspires to produce individuals equipped to contribute for progress at all levels: individual, national and global.

ORGANIZING COMMITTEE

Dr. Anuradha Chug
Dr. Jyotsna
Dr. Rahul Johari

STUDENT ORGANIZING COMMITTEE

Ms. Shradha Verma
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Ms. Kriti Lakra
Mr. Prateek Thakur
Ms. Sonam
Mr. Amit Sengar

SUPERVISORY COMMITTEE

Prof. Nupur Prakash
Prof. B. V. Ramana Reddy
Prof. Navin Rajpal
Prof. C. S. Rai
Prof. Arvinder Kaur
Prof. Anjana Gosain
Prof. Udayan Ghose
Prof. Bharti Suri
Prof. Amit Prakash Singh
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Prof. Ravinder K Purwar
Prof. Anju Saha
Prof. R. Rama Kishore
Prof. V. P. Vishvakarma
Prof. Manoj Taleja
Prof. Anurag Jain
Prof. Sanjay Malik

ADDRESS OF CORRESPONDENCE

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(Programme Schedule)
Online AICTE Training and Learning (ATAL) Faculty Development
Programme (27th Sept to 01st Oct 2021)
Internet of Things (IoT): Architecture & System Level Design



Organized By: University School of Information, Communication and Technology (USIC&T), Guru Gobind Singh Indraprastha University, New Delhi, India

	Day-1 27.09.2021	Day-2 28.09.2021	Day-3 29.09.2021	Day-4 30.09.2021	Day-5 01.10.2021
Session 1 (09:30 AM-11:30 AM)	Inauguration Ceremony By Prof. (Dr.) Mahesh Verma, Hon'ble Vice Chancellor, GGSIPU, Prof. Yogesh Singh, Hon'ble Vice Chancellor, DTU and Mr. Ravi Dadhich, Registrar, GGSIPU Keynote Address By Prof. Virendra Singh IIT Bombay	IoT in Environmental Monitoring and Public Transport By Dr. Pravesh Biyani, IIIT Delhi.	Role of Machine Learning Algorithms on the Data Collected through Sensors By Prof. Ruchika Malhotra, DTU	Routing in IoT Network Using MQTT Protocol By Dr. Rahul Johari, USIC&T, GGSIPU	Sensing as a Service for IoT Clouds By Dr. Jyoti Sahni, Victoria University of Wellington, New Zealand
Tea Break (11:30 AM to 12:00 PM)					
Session 2 (12:00 PM-02:00 PM)	Development of Applications using IoT and Associated Technologies By Dr. Anuradha Chug, USIC&T, GGSIPU	Attribute based Discovery Architecture for Devices in IoT By Dr. Shachi Sharma, South Asian University	Reliability Analysis of IoT Communication Protocol For Safety Critical Systems By Dr. Lalit Singh, Department of Atomic Energy, NPCIL-BARC	Flying IoT: IoD Architecture By Dr. Ashish Payal, USIC&T, GGSIPU	Spiritual Session on "How to stay balanced and perform better: Transition from thoughtless awareness to doubtless awareness" By Ms. Alka Gupta and Dr. Shilpa Baweja, Sahaj Yog, Vishwa Nirmal Mahayog
Lunch Break (02:00 PM to 03:00 PM)					
Session 3 (03:00 PM-05:00 PM)	Applications of IoT in Agriculture Sector By Prof. Amit Prakash Singh, USIC&T, GGSIPU	Applications of IoT and their Implementations: Steps, Challenges and Best Practices By Dr. Ashim Saha NIT Agartala	IoT Toolkit Demonstration of SENSENUTS By Eigen Technologies, Delhi	Ensuring Optimal Resource Utilization while developing Real Time IoT Applications By Dr. Nitin K Saluja, Associate Director (Research), Chitkara University	Post Training Evaluation and Valedictory