Workshop on
Internet of Things & Blockchain in Civil Engineering
April 17-18, 2020

Organized by
Department of Civil Engineering, BITS Pilani-Hyderabad Campus

Introduction

Blockchain and its distributed ledger technology is being explored for many uses today and the world of the Internet of Things (IoT) is no exception. Billions of smart devices will be available in digital world due to the advancement of the IoT. However, it also would create serious security, privacy, and connectivity service provisioning and data storage challenges. The current centralized architecture models in IoT systems will struggle to scale up to meet the demands of future IoT systems. To solve these issues, the decentralized and consensus-driven Blockchain and the combination of cryptographic processes behind it can offer an intriguing alternative. In this workshop on IoT and Blockchain, the participant will learn more about these two of the most exciting paradigms in emerging technology along with their applications to Civil Engineering. The workshop will cover not only an overview of IoT and Blockchain but also on how Blockchain holds the potential to securely unlock business and operational value of IoT to support common tasks, such as sensing, processing, storing information, and communicating. The workshop is open for undergraduate students, post graduate students, research scholars and field experts interested to learn and improve their understanding and knowledge.

Workshop Topics

The main focus of this workshop is to present an in-depth coverage of IoT and Blockchain technology along with most recent applications in research and Industry. Eminent experts from academia and industry, will demonstrate in-depth knowledge sharing on the following topics:

- ✓ Introduction to IoT, IoT Architecture, Sensors, IoT Prototyping using Arduino & NodeMCU platforms, Cloud Platforms, Uploading Sensor data to Cloud using API's
- ✓ Introduction to Blockchain, Cryptocurrency, Distributed ledger technology, Smart contracts
- ✓ Current State-of-the-art and research trends
- ✓ Case Studies in Civil Engineering

Registration Fees

Registration is limited to 50 participants. The registration will be on first-come, first serve basis.

Registration fee for the workshop including GST is Rs. 2500/-.

Participants can pay the registration fees via SBI Collect or by a demand draft. The details for the same is given below:

Online Payment using SBI Collect using Internet banking, Credit Card or Debit card

- ➤ Access the link via **https://www.onlinesbi.com/sbicollect/icollecthome.htm**
- ➤ Read the terms and conditions. Select the check box at the bottom and click on Proceed tab.
- ➤ Select state as 'Telangana' from the combo-box 'State of Corporate/Institutions'.
- ➤ Select 'Type of Corporate/Institution' as 'Educational Institutions' & click GO.
- ➤ Select 'BITS-PILANI Hyderabad Campus' from the 'Educational Institutions Name' & click SUBMIT.
- ➤ Select 'Payment Category' **IoTBC - 2020** from the combo provided.
- ➤ Kindly fill all details in the form provided and make the payment.
- ➤ Pay 'online' using Internet Banking/Credit Card/Debit Card and print the receipt for your record.

Payment via Demand Draft

- ➤ Drawn in favour of "BITS Pilani, Hyderabad Campus" payable at "SBI, BITS Pilani, Hyderabad Campus, Jawahar Nagar Branch"
- ➤ Write your full name and phone number and email ID with pencil on the backside of the DD and post it to the workshop co-ordinator.

Registration fee covers lunch and refreshments during both days of workshop. Participants are expected to be of engineering or relevant background related to theme of the workshop.

Participants are requested to register via the following link: **http://bit.ly/2Gd56EN**

Important Dates

Last date of receipt of registration form	**March 30, 2020**
Intimation of selection to the candidates	**April 2, 2020**

Accommodation

Limited accommodation for participants is available in hostels on payment basis (Rs.500/- per day). Interested participants can send their request via email the Workshop Co-ordinators in this regard.

About BITS Pilani, Hyderabad Campus

BITS, Pilani started functioning its fourth campus in Hyderabad, Telangana since 2008. Other Campuses are located at Pilani, Dubai & Goa. It is a fully residential campus, with close to 5000 and 400+ faculty and staff members. The scenic campus is housed in 200 acres of rugged, rocky terrain characteristic of the region. It is equipped with state of the art infrastructure required for instruction, research, and extra-curricular activities. The campus is located in Jawahar Nagar on Karimnagar Highway, Hyderabad. It is approximately 25 kilometres from Secunderabad railway station, about 33 Kilometres from Hyderabad railway station (Nampally)/ Imliban (Mahatma Gandhi Bus Station-MGBS) bus station and about 70 km from Rajiv Gandhi International Airport, Shamshabad. There is a direct bus (Route No. 212) from Gurudwara Point near Secunderabad railway station to BITS Pilani Hyderabad Campus. Participants can also take the bus numbers 211S, 211A, 211C, 211D, 211E, 211J, 211K, 211T, 211U, 567, 568, 569 and get down at Thumkunta stop to take an auto-rickshaw to reach BITS Pilani Hyderabad Campus.

About Department of Civil Engineering

The Department of Civil Engineering offers undergraduate, postgraduate and Ph.D programs, with emphasis on fundamental theory and practice in Civil Engineering, keeping in view the current and continuously changing scenarios in this discipline. The department runs post graduate programs in Structural and Transportation Engineering. The Department has established state-of-art laboratories, Centre of Excellence in Water Resources Management which can provide opportunities for the students at all levels to get acquainted with the latest developments in various avenues of Civil Engineering. In addition to teaching and instruction, the faculty is also engaged in active research with an aim to generate innovative concepts and ideas or apply the existing technologies to new applications. The department has a number of ongoing/completed/applied research projects and industrial consultancy work from various agencies.

Co-ordinators
Prof. A.Vasan and **Prof K. Srinivasa Raju**
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