

**A Workshop/Tutorial on
Designing and Simulating Smart City and Wireless Networks
AT
2nd International Conference on Smart IoT Systems: Innovations in Computing
January 17, 2019
Manipal University, Jaipur, India**



Speaker

Dr. Adarsh Kumar
Department of Systemics, School of Computer Science
University of Petroleum and Energy Studies
Bidholi, Dehradun, India

OBJECTIVES

The aim of this workshop is to promote research aspects in cities that provide core infrastructure and high quality of life to its citizens. High quality environment includes: clean and sustainable environment, public safety, time and convenience, health etc. This platform will enable deeper communication and a more practical approach to resolve these issues and proposes solutions for individuals, researchers and organisations working towards making smart cities a reality. In addition, hands-on session will be delivered for simulating and implementing smart cities network using wireless sensor networks (WSN) and internet of things (IoTs).

WORKSHOP SCHEDULE

Half-day Workshop Schedule

- 9:00-10:00: Short Talk on Wireless Sensor Networks, Internet of Things and Ad-hoc Networks
- 10:00-11:00: Hands-on Session-1 (Programming sensor nodes, interconnecting sensor nodes, creating wireless sensor network, performing computation over sensor nodes, sending and receiving messages over sensor nodes)
- 11:00-11:15: Break
- 11:15-12:15: Hands-on Session-2 (Programming broadcast and multicast message routing, simulation of neighbour discover routing protocols, performance evaluation of wireless sensor networks and Ad-hoc Networks)
- 12:15-13:30: Hands-on Session-3 (Implementing google maps, designing Internet of Things (IoTs) over google map, predicting coordinated of things over google map, searching in IoT network, programming and simulating advanced algorithms (routing, switching, key management, cryptography primitives and protocols etc.)

BRIEF ABOUT SPEAKERS

Dr. Adarsh Kumar received his Master degree (M. Tech) in Software Engineering from Thapar University, Patiala, Punjab, India, in 2005 and earned his PhD degree from Jaypee Institute of Information Technology University, Noida, India in 2016 followed by Post-Doc from Software Research Institute, Athlone Institute of Technology, Ireland during 2016-2018. From 2005 to 2016, he has been associated with the Department of Computer Science Engineering & Information Technology, Jaypee Institute of Information Technology, Noida, Uttar-Pardesh, India, where he worked as Assistant Professor. Currently, he is working with University of Petroleum & Energy Studies, Dehradun, India as Associate Professor in School of Computer Science. His main research interests are cybersecurity, cryptography, network security, and ad-hoc networks. He has published 30+ research papers in reputed journals, conferences and workshops. He participated in one European Union H2020 sponsored research project and he is currently executing two research projects sponsored from UPES SEED division.

IMPORTANT DATES AND TIME

17 January, 2019 & 09:00 to 13:30

REGISTRATION FEE PARTICULARS

All conference participants are invited free-of-cost to attend this workshop. However, selection will be done based on first-come-first-serve basis to a maximum number of 50 (fifty). Additionally 10 participants from students are allowed to participate. The list of selected participants will be intimated through e-mail. Candidates may be issued certificates on successful completion of the course.

Registration Link: https://docs.google.com/forms/d/e/1FAIpQLScYBdAnAIAv8pYYK51E2LgMb_HWm_0gvL1z7J1WU45rFU0UyQ/viewform

ADDITIONAL REQUIREMENTS

In order to successfully execute programming codes, it is mandatory for all participants to bring their laptops with administrator rights. All other equipment (sensor nodes, wires, adapters etc.) will be provided by speakers.

CONTACT US

All inquiries should be directed to the attention of speakers:

Dr. Adarsh Kumar, University of Petroleum and Energy Studies, Dehradun, India (Email: adarsh.kumar@ddn.upes.ac.in)

FUNDING

This work is part of a research project sponsored from UPES SEED Division (Project Grant ID: UPES/R&D/180918/14, Project Website: <https://sites.google.com/view/adarshproject2/>)