



Second International Conference on SMART IOT SYSTEMS: INNOVATIONS IN COMPUTING

January, 2019, Jaipur, India

School of Computing and Information Technology (SCIT)

Manipal University Jaipur

Website: <https://www.ssic2019.com/>

Chief Patrons:

K Ramnarayan, Chairperson, MUJ
Gopalkrishna Prabhu, President, MUJ

Patron:

Niti Nipun Sharma, Pro-President, MUJ

General Charis:

Arun K Somani, Iowa State University, USA
Rajveer S. Shekhawat, Director-SCIT, MUJ

Program Chairs:

Rajesh Kumar, MNIT, Jaipur
Deepak Garg, Bennett University, India

Convener:

Sumit Srivastava, Manipal University Jaipur

Organizing Chairs:

S. C. Kulhari, Manipal University Jaipur
V. S. Dhaka, Manipal University Jaipur
Pankaj Vyas, Manipal University Jaipur

Organizing Co-Chair:

Ankit Mundra, Manipal University Jaipur

Workshop Coordinator:

Anshuman Kalla, Manipal University Jaipur

Workshop Co-Coordinator:

Shikha Mundra, Manipal University Jaipur

Industry Collaboration Chair(s):

Arjun Singh, Manipal University Jaipur

Workshop and Tutorial Chair(s):

S. Chaurasia, Manipal University Jaipur
Gulrej Ahmed, Manipal University Jaipur

Technical Collaboration Chair(s):

Neha Chaudhary, Manipal University Jaipur
Punit Gupta, Manipal University Jaipur

Contact Person:

Dr. Anshuman Kalla
Associate Professor, Dept. of CCE,
Manipal University Jaipur

Email ID: anshuman.kalla@jaipur.manipal.edu

Phone: +91-6375579901, 8560916261

Three-day Pre-Conference Workshop on 5G and Software Defined Networking (SDN) (16th Jan - 18th Jan, 2019)

Abstract:

The emerging networking techniques such as Software Defined Network (SDN) is promising and is complete paradigm shift in how we would manage our future networks. With its enormous benefits, which include reducing the operational cost, better resources utilization and easier management requirements, the adoption of such technologies is gaining momentum. Supported by a well-defined basis such as network virtualization and the decoupling of the data and control planes, the integration of SDN with current systems might be a straightforward process. However, this might incur many challenges, which require deep analysis to propose creative solutions.

On the other hand, 5G represents the next mobile wireless standard. It is intended to keep up to pace with the flood of devices that require a mobile internet connection. Based upon the foundation laid by 4G LTE, 5G will enable people to send messages, make phone calls, download videos and surf the web, while significantly increasing the speed that data is transferred across the network. Major telcos are working to create global standards for 5G, which is expected to be commercially available by 2020.

The digital transformation of network infrastructure through Network Functions Virtualization (NFV) and Software Defined Networking (SDN) is anticipated to play a pivotal role with the respect to the commercialization of 5G. There are several major architectural obstacles facing 5G networks, which can only be overcome leveraging NFV and SDN. This workshop has focused on developing the basic knowledge of students on SDN and NFV technologies which are the foundation of 5G networks. Moreover, it offers the opportunity for students to run SDN experiments on Emulated environments.

Schedule

Day 1

Session 1 (10:00 - 12:30)

- Introduction
- 5G and 5G technologies
- Software Defined Networking

Session 2 (14:00 - 16:30)

- OpenFlow Protocol
- SDN Experiments - Introduction to Mininet: Part 1

Day 2

Session 3 (10:00 - 12:30)

- SDN Application
- SDN Security

Session 4 (14:00 - 16:30)

- SDN Experiments with Mininet: Part 2

Day 3

Session 5 (10:00 - 14:30)

- Network Function Virtualization
- MEC and Network Slicing
- Research Towards 6G

Prerequisites: Basic Networking Knowledge, Basic knowledge on Python



Resource Person:

Prof. Madhusanka Liyanage received Ph.D. degree from the University of Oulu, Oulu, Finland. From 2011 to 2012, he worked a Research Scientist at the I3S Laboratory and Inria, Sophia Antipolis, France. He is currently an adjunct professor at the Center for Wireless Communications, University of Oulu. He has been a Visiting Research Fellow at the Department of Computer Science, University of Oxford, Data61, CSIRO, Sydney, Australia, the Infolabs21, Lancaster University, U.K., and Computer Science and Engineering, The University of New South Wales

during 2015-2018.

He has co-authored over 50 publications including two edited books with Wiley and one patent. He served as a Technical Program Committee Members at EAI M3Apps 2016, 5GU 2017, EUCNC 2017, EUCNC 2018, Bodynet 2018, 5GWF 2018, WCNC 2019 conferences and Technical program co-chair in SecureEdge workshop at IEEE CIT2017 conference. He has also served as the session chair in a number of other conferences including IEEE WCNC 2013, CROWNCOM 2014, 5GU 2014, IEEE CIT 2017, IEEE PIMRC 2017, Bodynet 2018, 5GWF 2018, ICC 2018. Moreover, He has received two best Paper Awards in the areas of SDMN security (at NGMAST 2015) and 5G Security (at IEEE CSCN 2017). Additionally, he has been awarded two research grants and 21 other prestigious awards/scholarships during his research career.

Prof. Liyanage has worked for more than twelve EU, international and national projects in ICT domain. He held responsibilities as a leader of work packages in several national and EU projects. Currently, he is the Finnish national coordinator for EU COST Action CA15127 on resilient communication services. In addition, he is/was serving as a management committee member for four other EU COST action projects namely EU COST Action IC1301, IC1303, CA15107 and CA16226. Liyanage has over three years' experience in research project management, research group leadership, research project proposal preparation, project progress documentation and graduate student co-supervision/mentoring, skills. In 2015, 2016 and 2017, he won the Best Researcher Award at the Centre for Wireless Communications, University of Oulu for his excellent contribution in project management and dissemination activities. Additionally, two of the research projects (MEVICO and SIGMONA projects) received the CELTIC Excellence Award in 2013 and 2017 respectively.

Prof. Liyanage's research interests are SDN, IoT, Blockchain, MEC, mobile and virtual network security.

Web link: <http://www.oulu.fi/university/researcher/madhusanka-liyanage>

Registration Fee:

Category	Early Bird (Till 7 th Jan, 2019)	Regular (From 8 th Jan, 2019)
Student (UG/PG)	INR 1000	INR 1500
Researcher (PhD Pursuing)	INR 1200	INR 1800
Faculty Member / Industry Person	INR 1500	INR 2000
Workshop plus Conference Attendee*	INR 3000	INR 3000

Registration fee (to be paid online) would include workshop kit/conference kit*, conference lunch, workshop certificate (plus conference certificate*) and entry to any session on all the conference days. *To register follow two-step process by clicking [here](#)*

**Accommodation facility will be available on request and will be payable at MUJ itself; INR 920/- per day for single occupancy and INR 460/- per day for twin occupancy (based on availability).

Note: There are limited seats and will be filled on first-come first-serve basis.

Workshop Link: <https://ssic2019.com/gworkshop.html>