Webinar on Next-Generation IoT

The Ninth Edition

IEEE Communication Society Technical Committee on Communications Software Special Interest Group on "NFV and SDN Technologies"

All participants need to pre-register by 5:00 PM May 15, 2025, by filling up the following form: Registration Link



Professor Mohamed-Slim Alouini IEEE Fellow and Distinguished Professor King Abdullah University of Science and Technology (KAUST), Saudi Arabia

Tapping into the Full Potential of the Stratosphere

Abstract: High-Altitude Platform Stations (HAPS) are emerging as a key complement to LEO satellite mega-constellations, offering a scalable solution for global connectivity and bridging digital divides where terrestrial and satellite networks fall short. Operating from the stratosphere, HAPS leverage advanced beamforming and free-space optics (FSO) to deliver high-capacity and low-latency communications across diverse geographical areas. This talk explores the technological connectivity advancements driving HAPS by highlighting how intelligent beam management and optical feeder and inter-HAPS links can democratize broadband access and provide also unique solutions for disaster recovery, paving the way for a more connected world.



Prof. Dr.-Ing. Wolfgang Kellerer *IEEE Fellow* Chair of Communication Networks Technical University of Munich, Germany

Twin your Network to (Auto-)Manage Flexibility

Abstract: Autonomous network management is still the holy grail for the operation of future communication networks. In particular, almost unlimited flexibility promised by modern network systems is constantly challenged by highly varying demands of emerging applications. This poses a multitude of requirements to network operations and management to adapt network configuration to those demands. In this presentation, the challenges of operating flexible communication networks will be motivated by mobile network examples. Network digital twins are proposed as a solution concept towards autonomous network management. We show the role artificial intelligence and machine learning play for the creation and use of network digital twins and for future network management. We illustrate our findings with examples from software-defined networking and kubernetes platforms.

Dr. Arijit Roy, IIT Patna, India Dr. Ayan Mondal, IIT Indore, India Prof. Sudip Misra, IIT Kharagpur, India More details can be found <u>here</u> Date: May 16, 2025 Time: 06:30 PM - 08:00 PM, Indian Time (IST)