

# Advanced Wireless Networks: Joint Design of Technology and Business Models

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## Overview

It is anticipated that the future wireless networks will be guided by the following three paradigms. First, wireless networks may have to serve very dense population of users with services requiring stringent QoS and thereby requiring significantly high capacity. Second, wireless networks will have to operate with very low/zero user exposure and low energy consumption in general and last but not the least wireless networks will also have to operate under joint multi-operator spectra management. Moreover, network design and operation need to consider multihop heterogeneous nature of networks that require relaying between the terminals belonging to different network operators with different level of sophistication and transmission range. For efficient control and systematic design of the networks necessary modifications of the general complex networks theory tools are required. In this course, we discuss possible options for improved solutions and provide comprehensive performance analysis of the system. These results may be used by the operators to develop optimal business plan for their organizations.

<b>Modules</b>	Advanced Wireless Networks: Joint Design of Technology and Business Models: <b>April 2-April 10</b>  <b>Number of participants for the course will be limited to 60.</b>
<b>You Should Attend If...</b>	<ul style="list-style-type: none"><li>▪ You are a 3<sup>rd</sup> &amp; 4<sup>th</sup> Year B.Tech in CSE/IT/ECE/EE, 1st and 2nd year M.Tech in CSE/IT/ECE/EE, PhD student of CSE/IT/ECE/EE/Mathematics.</li><li>▪ You are a CSE/IT/ECE/EE engineer or research scientist interested in learning the limitation (bottleneck) of the existing wireless networks and designing next-generation advanced wireless networks.</li><li>▪ You are a network professional interested to learn key issues to be addressed in upcoming advanced wireless networks and using innovative methodologies to explore new business opportunities.</li><li>▪ You are a student or faculty from academic institution interested in learning new research areas in advances wireless networks.</li></ul>
<b>Fees</b>	The participation fees for taking the course is as follows: <b>Participants from abroad : US \$400</b> <b>Industry/ Research Organizations: Rs. 7000</b> <b>Academic Institutions: Rs.1000 (Student), Rs. 4000 (Faculty)</b> The above fee include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with single bedded accommodation on payment basis.

## The Faculty



**Prof. Savo Glisic** is a Professor of Telecommunications at University of Oulu, Finland. He is the Head of the networking research group, and Director of Globalcomm Institute for Telecommunications. He has been working in the field of wireless communications for 30 years and has published a number of papers and books. His research interest is in the area of joint technology and business model design in wireless networks, network optimization theory, cognitive networks and game theory, radio resource management, QoS and queuing theory, protocol design, advanced routing and network coding, relaying, cellular, WLAN, ad hoc, sensor network, spectra sharing and network economics/microeconomics. Presently, he is actively involved within 5G PPP association preparing the projects for Horizon 2020 calls.



**Dr. Sudhan Majhi** is presently working as a Assistant Professor jointly in the department of Mathematics and EE. He has obtained his PhD in wireless communications from the school of computer engineering, Nanyang Technological University (NTU) Singapore. He has also obtained M.Tech. in computer science and data processing from IIT Kharagpur, India.



**Dr. Aneek Adhya** is an Assistant Professor of Electrical Engineering Department at Indian Institute of Technology, Patna. His research interest is in the area of energy efficiency in backbone and access networks, hybrid wireless-optical broadband access networks and communication networks.

## Course Co-ordinator

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