**5G IoT Networks**

**Abstract**

5G networks with limited services, mainly enhanced mobile broadband (emBB), are being deployed worldwide. The deployment of 5G is a turning point in the evolution of cellular networks from personal communications to a general-purpose technology. 5G networks will make possible new classes of advanced IoT applications that will bring transformative automation benefits to industry and critical infrastructure. The talk will give an overview of the main 5G benefits and its new technologies. The stringent requirements of 5G for mission critical services, such as ultrahigh reliability and low latency, have made it the most challenging feature of 5G. The talk will give an overview of recent research results on ultra-reliable low latency communications (URLLC) for 5G and the design of a 5G Software Defined Networks (SDN) platform with URLLC algorithms and protocols. The talk will highlight opportunities for participating in PhD research on further evolution of 5G and developing multiple new IoT services in energy grids, industrial automation and smart cities enabled by 5G connectivity.

**Biography of Branka Vucetic**

Branka Vucetic is an ARC Laureate Fellow and Director of the Centre of Excellence for IoT and Telecommunications at the University of Sydney.

Her current research work is in wireless networks and the Internet of Things. In the area of wireless networks, she works on ultra-reliable low-latency communications (URLLC) and system design for millimetre wave frequency bands. In the area of the Internet of Things, Vucetic works on providing wireless connectivity for mission critical applications.

Branka Vucetic is a Fellow of IEEE, the Australian Academy of Technological Sciences and Engineering and the Australian Academy of Science.

