

## Call for Papers

### Track 3 – PROTOCOLS FOR NEXT GENERATION WIRELESS SYSTEMS

#### Track Chairs:

Violet R. Syrotiuk, Arizona State University, USA (email: syrotiuk@asu.edu)

Shiwen Mao, Auburn University, USA (email: shiwen.mao@gmail.com)

#### Scope and Motivation:

The Protocols for Next Generation Wireless Systems Track focuses on the topics that are related to all aspects of MAC and higher layer protocols, including cross-layer design, for consumer communications and networking. With the arrival of 5G wireless, there is an exponential increase of wireless subscriptions. The advances in the Internet of Things (IoT) make it possible to interconnect billions of things. As a result, more and more wireless devices are concentrated into the spectrum ecosystem. There is a critical need for research to allow effective sharing of radio resources and harmonious co-existence of dense and heterogeneous wireless systems. In many cases, cross-layer design is exploited to obtain a larger design and optimization space for higher efficiency. This track aims to provide a forum for researchers and practitioners working on solutions for next generation wireless systems. Papers that describe original and unpublished work addressing the topics of interest are welcome.

#### Main Topics of Interest:

The Protocols for Next Generation Wireless Systems Track seeks original contributions in the following, as well as other closely related, topical areas:

- Low-delay MAC design
- Delay tolerant MAC design
- MAC protocols for 5G: e.g., for mmWave and massive MIMO networks
- Machine learning for MAC
- MAC for mesh, ad hoc, relay and sensor networks
- MAC for near-field communications, e.g., body area networks and RFID
- MAC for machine-to-machine communications
- MAC for cellular networks, such as HetNet and Cloud-RAN
- Network layer protocols for emerging network systems
- Congestion control mechanisms
- RF sensing based applications
- Joint sensing/radar and communications codesign
- Cross-technology communications
- Spectrum coexistence
- Cross-layer design for QoS/QoE provisioning
- Cross-layer design for massive MIMO networks
- Cross-layer design for AR/VR systems
- Cross-layer design for autonomous driving and vehicular networks
- Cross-layer design for mission critical applications
- Cross-layer design for Internet of Things (IoT)
- Cross-layer design for Cyber Physical Systems (CPS)
- Cross-layer design for security and privacy
- Scheduling and radio resource management
- Mobile edge computing and caching
- Wireless network virtualization
- Wireless charging and energy harvesting
- Indoor/outdoor localization and navigation
- Location based services
- Software defined radio and cognitive radio
- Implementation, testbeds and prototypes
- Standardization activities of emerging wireless technologies