

URLLC – the 3rd International Workshop on Ultra-Reliable and Low-Latency Communications in Wireless Networks Supported by the IEEE ETC Technical Sub-Committee Tactile Internet in conjunction with IEEE GLOBECOM 2016, Dec 8, Washington, DC

Workshop Call for Papers
www.urlc-wireless-workshop.com/

Future wireless communications will support countless emerging use cases and applications with a high variability of their performance attributes. Beyond content distribution, where typically throughput per area is the most relevant KPI, we will see more and more applications where the system capacity may not be the critical point, but they rather have stringent latency and/or reliability requirements. In this regard, ITU-R finalized in September 2015 its vision for IMT for 2020 and beyond, which envisages to expand and support diverse families of usage scenarios and applications, including Ultra-Reliable and Low-Latency Communications (URLLC). Also the standardization work in 3GPP to support the IMT-2020 requirements in 5G – including the URLLC use case – has started. Some of the new applications will demand an end-to-end latency of a few milliseconds, while fields such as wireless automation and control may in addition require reliabilities in terms of block error rates on the order of 10^{-9} . Ultra-high reliability and ultra-responsive network connectivity, hereby, will be the key technological advancements to enable various applications like for example the Tactile Internet for remotely real-time control and tactile experience delivery, user-specific 3D video rendering and augmented reality, wireless automation of production facilities, vehicular traffic efficiency and safety, mobile gaming, etc.

Optimizing wireless communications for latency and reliability requires a complete paradigm change in wireless systems design, and has to be reflected in various technology fields, such as air interface design, signal processing on both the device and infrastructure side, network infrastructure and architecture considerations, control / user plane design, session management and protocol stack design. The workshop provides a platform for technical experts from the radio, core network and application side to elaborate on latency and reliability requirements of future applications or provide solutions to significantly reduce end-to-end latency and/or increase reliability in wireless communications systems. The workshop chairs and TPC chairs solicit original, unpublished technical papers in the fields of (but not limited to):

- Latency and/or reliability requirements of future application domains,
- Means to reduce end-to-end latency and/or introduce higher reliability in either legacy systems (e.g. UMTS/WCDMA, LTE-A, WLAN, Bluetooth, WSA-N-FA), in 5G cellular communications and Tactile Internet applications, including
 - Air interface and signal processing concepts,
 - Device-to-device / vehicle-to-vehicle communications, vehicle-to-infrastructure communications,
 - Advanced radio resource management techniques,
 - Redundant or multi-point transmission, multi-point connectivity,
 - Novel approaches towards session management and protocol stack,
 - Network infrastructure and core network concepts,
 - Cloud-RAN and mobile edge-cloud concepts in the context of latency- or reliability-critical applications,
 - Architectural enablers for distributed or edge computing,
- Technical solutions to allow for a co-existence of traffic with stringent latency/reliability requirements and other traffic (e.g. with ultra-high throughput requirements).

GENERAL CHAIRS:

Dr. Beatriz Soret
Nokia Bell Labs, Denmark
Dr. Meryem Simsek
Technische Universität Dresden, Germany
Dr. Patrick Marsch
Nokia Bell Labs, Poland
Dr. Andreas Festag
Technische Universität Dresden, Germany
Prof. Hans Schotten
Universität Kaiserslautern, Germany

TPC CHAIRS:

Prof. Preben Mogensen,
Aalborg University, Denmark
Dr. Peter Fertl,
BMW, Germany

TECHNICAL PROGRAM COMMITTEE:

To be confirmed

IMPORTANT DATES:

Paper submission: **July 1, 2016**
Author notification: **September 1, 2016**
Camera-ready: **October 1, 2016**

PAPER SUBMISSION:

Papers should follow the 2-column IEEE conference template and not exceed 6 pages (one additional page is possible for an extra fee of USD 100 upon acceptance), and be submitted through the [EDAS paper submission website](#). Accepted papers will be available at IEEEExplore. At least one author of accepted papers is required to register at the full workshop rate.