

# Current State of the Art of 5G with Focus on Research for Low-Latency and High-Reliability Applications

Jing Lei, Qualcomm

5G New Radio (NR) has the power to transform current industries, create new industries, and impact societies with faster speeds, lower latency and higher density. In particular, 5G will enable and enhance URLLC service category, which requires secure data communications from one end to another with ultra-high reliability and deadline-based low latency requirements to support applications including factory automation, autonomous driving, remote surgery, industrial internet and smart grid.

In this talk, we will discuss the design principles, physical layer and mac layer enabling technologies essential for latency reduction and reliability enhancement, with a focus on the state-of-the-art research topics that have been considered and envisioned for 3GPP 5G NR.