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Intelligent Connectivity for Smart World

Workshop on Short Packet Communications for 6G Mission-Critical Applications

General Co-chairs

- **Di Zhang**
  SMIEEE, SMEAI (EU),
  Zhengzhou University, China
- **Victoria Kostina**
  California Institute of
  Technology (Caltech), USA
- **Mahyar Shirvanimoghaddam**
  SMIEEE, The University of
  Sydney, Australia
- **Hyoungju Ji**
  SMIEEE, Samsung, South
  Korea

Main contact

dr.di.zhang@ieee.org,
mahyar.shirvanimoghaddam@sydney.edu.au

Important Dates

- ❖ Paper submission deadline:
  January 20, 2022
- ❖ Notification of acceptance:
  March 06, 2022
- ❖ Camera-ready papers:
  March 15, 2022

Submission link

https://edas.info/N28800

Webpage link

https://sites.google.com/site/dizhangzzu/cfp/icc-2022-wkps

Scope

ShortPacket-6G intends to leverage technological advancements and techniques to address fundamental, disruptive, as well as regular challenges arising in short packet communications for sixth generation (6G) mission-critical applications. In these regimes, the control commands and the device status updates are vastly transmitted with ultra-reliable and low latency communications (URLLC) requirements, which are with short block length that is comparable to the preamble length. It is difficult to appeal to coding methods in line with Shannon theorem to average out the thermal noise and channel propagation interference. We thus need to give some new fundamental theorems and related transmission mechanisms to cater to these trends. Apart from the URLLC requirements, information security/privacy are some other indispensable issues of the 6G mission-critical applications. Higher latency drawbacks due to processing procedures, redundancy bits of the current encryption/decryption mechanisms, and patch-based information security schemes turn out to be some inferior solutions. Besides, they are also invalid to intra-network attacks. Some novel information security/privacy methods that can be coalesced into the URLLC are needed.

Topics

We seek original completed and unpublished work not currently under review by any other journal/magazine/conference. Topics of interest include, but are not limited to:

- Fundamental non-asymptotic information theory for short packet communications.
- Diversity technology for short packet communications.
- Spectrum usage and optimization for short packet communications.
- Source and channel coding for short packet communications.
- Channel estimation for short packet communications.
- Fingerprint classification/identification for secured short packet delivery.
- Endogenous security technology for short packet communications.
- Artificial intelligence-enabled security technologies for short packet communications.
- Identity authentication for short packet communications.
- HetNets for short packet communications.
- Queuing theory and optimization for short packet communications.
- Protocol design and optimization for short packet communications.
- Cross layer optimization for short packet communications.

Paper Submission

The workshop accepts only novel, previously unpublished papers. The page length limit for all initial submissions for review is SIX (6) printed pages (10-point font) and must be written in English. All final submissions of accepted papers must be written in English with a maximum paper length of six (6) printed pages (10-point font) including figures. No more than one (1) additional printed page (10-point font) may be included in final submissions and the extra page (the 7th page) will incur an overlength page charge of USD100. For more information, please see IEEE ICC 2022 official website: https://icc2022.ieee-icc.org/authors