IEEE International Workshop on Wireless Networking Innovations for Mobile Edge Learning

June 14–18, 2021
Montreal, Canada

General Co-chairs

Sameh Sorour
Queen's University, Canada

Hatem Abou-Zeid
Ericsson, Canada

Yansha Deng
King's College London, UK

Jun Zhang
Hong Kong Polytechnic University, Hong Kong

Keynote Speakers

Prof. Deniz Gündüz
Imperial College London, UK

Julien Forgeat
Ericsson Global A.I. Accelerator

Panelists

Shiqiang Wang
IBM T. J. Watson Research Center

Julien Forgeat
Ericsson Global A.I. Accelerator

Daniel Desjardins
King's Distributed Systems

Main contact
samehsorour@queensu.ca

Important Dates
- ❖ Paper submission deadline:
  January 20, 2021
- ❖ Notification of acceptance:
  February 20, 2021
- ❖ Camera-ready papers:
  March 1, 2021

Submission link
https://edas.info/N27513

Webpage link
https://sites.google.com/view/wireless-networking-mel

Scope
Achieving significant advancements to facilitate the operation of machine learning (ML) and AI at the network edge is becoming more and more indispensable due to the massive amounts of data generated at the edge. Forecasts envision that 90% of such data will be analyzed in a distributed manner on edge devices. Being mostly wireless/mobile, resource-constrained, and highly heterogeneous, implementing one or multiple ML/AI jobs on such devices requires fundamental changes in and innovative designs of wireless networking protocols. Meanwhile, training powerful ML models based on the enormous data generated by these devices demands highly efficient task/data/parameter exchanges in harsh mobile environments and various network settings, while preserving data privacy. These trends have recently established the new research direction of Mobile Edge Learning (MEL), which calls for innovations in wireless networking, ranging from transmission technologies, network protocols, to MEL-friendly architectures.

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We seek original completed and unpublished work not currently under review by any other journal/magazine/conference.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:
- Adaptive allocation of distributed learning tasks in MEL environments
- Joint allocation of distributed learning tasks and wireless resources for MEL
- Energy/mobility awareness and management for MEL
- Mitigation of physical networking and computing uncertainties for MEL
- Network formations and routing for multiple MEL jobs
- URLLC for MEL
- Theoretical modeling and performance analysis for networks involved in MEL
- Physical, MAC, scheduling, and network layer protocols for MEL
- 5G/6G/ Wi-Fi/Bluetooth, ad-hoc, sensor, vehicular, UAV enabled MEL
- Self-organizing MEL networks
- Network standardization efforts and/or requirements for MEL
- Network authentication and security measures for MEL
- Network architectures and protocols for privacy-preserving MEL
- Applications of MEL in wireless/mobile XR, MEC, IoT, V2X, Robotics environments
- MEL field tests and experimental testbeds

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 over length page charge of USD100. For more information, please see IEEE ICC 2021 official website: https://icc2021.ieee-icc.org/authors