

Call for papers

AI and Machine Learning for Communications and Networking Symposium (AMCN)

IEEE ICNC 2023

Honolulu, Hawaii, USA, Feb 20-22, 2023

<http://www.conf-icnc.org/2023>

Symposium Co-Chairs

Yuanzhu Chen, Memorial University, Canada (yzchen@mun.ca)

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Scope

Artificial Intelligence and Machine learning have shown significant potentials in facilitating human-centered cognitive systems. With AI and ML, communication and networking systems can become cognizant, implementing agile reconfiguration and optimization processes based on measured data. The AI and Machine Learning for Communications and Networking symposium focuses on topics related to all aspects of machine learning applied to communication and networking systems, and seeks original unpublished papers focusing on theoretical analysis, algorithm/protocol design, novel system architectures, experimental studies, emerging applications, standardizations, testbeds, etc. The goal is to bring together and disseminate the latest developments and technical solutions concerning all facets of the broad area of AI and ML for communication and networking systems, including emerging intelligent and/or self-aware communications and networking technologies to improve network resource utilization and optimization, and make future communication and networking systems intelligent, autonomous, efficient, and trustworthy. The symposium calls for original, previously unpublished papers on the topics including, but not limited to, the following:

- AI and ML for communication and network operation and control
- AI and ML for communication and network resource optimization
- AI and ML for cognitive communication and networks architecture
- AI and ML for communication and network security management
- AI and ML for self-aware network management
- AI and ML for the Internet of Things
- AI and ML for cyber-physical systems
- Machine intelligence-enabled communication and network big data analytics
- Machine intelligence-enabled cloud/edge/fog computing for communication and networking systems
- Machine intelligence-driven communication network theory and algorithms
- AI and ML for RF signal processing
- AI and ML for collaborative spectrum sharing
- AI and ML for distributed communications and sensing
- AI and ML for next-generation cognitive networks
- AI and ML for next-generation wireless networks such as 5G networks
- AI and ML for new network architectures such as software-defined networking and network function virtualization
- AI and ML for constrained networks such as sensor networks, tactical networks, etc.
- AI and ML for supporting ultra-low latency and highly reliable communications

Submission Guidelines

Perspective authors should follow the instructions at <http://www.conf-icnc.org/2023/author.htm> to prepare their manuscripts. All papers should be submitted via EDAS. Submission information can be found at <http://www.conf-icnc.org/2023/cfp.htm>.

Short Biographies of Co-Chairs

Yuanzhu Chen received the B.Sc. degree from Peking University, China, in 1999, and the Ph.D. degree from Simon Fraser University, Canada, in 2004. He has been a Professor of computing science since 2005 and is currently affiliated with School of Computing, Queen's University. From 2004 to 2005, he was a Postdoctoral Researcher with Simon Fraser University. In 2005, Dr. Chen joined Memorial University as a tenure-track Assistant Professor. While at Memorial, he was the Deputy Head for Undergraduate Studies from 2012 to 2015, the Deputy Head for Graduate Studies from 2016 to 2019, and Department Head from 2019 to 2021. He then joined Queen's School of Computing in 2021 started serving as Undergraduate Program Chair from 2022. Dr. Chen's research interests include complex networks, computer networking, online social networks, mobile computing, graph theory, Web information retrieval, and evolutionary computation, with funding from national agencies and various university programs and awards. He was a recipient of the President's Award for Distinguished Teaching in 2018.

Himal A. Suraweera (Senior Member, IEEE) is a senior lecturer in the Department of Electrical and Electronic Engineering, University of Peradeniya, Sri Lanka. He is in the editorial boards of IEEE Transactions on Communications and IEEE Open Journal of the Communications Society. Previously he has served as an editor for IEEE Communications Letters, IEEE Transactions on Wireless Communications and IEEE Transactions on Green Communications and Networking. He was a recipient/co-recipient of the IEEE ComSoC AP Outstanding Young Researcher Award in 2011 and the IEEE ComSoc Leonard G. Abraham Prize in 2017. He has been involved as a co-chair, Signal Processing for Communications Symposium of IEEE GLOBECOM 2015, and track chair of Full-Duplex Communications Track, Symposium on Selected Areas in Communications of IEEE ICC 2022. His research interests are in the areas of wireless communications, signal processing for communications and communication theory, in particular, cooperative communications systems, full-duplex wireless techniques, energy harvesting communications, massive MIMO systems, cognitive radio and machine learning for communications.