Call for papers

AI and Machine Learning for Communications and Networking (AMCN)

IEEE ICNC 2024

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http://www.conf-icnc.org/2024

Symposium Co-Chairs

- Tao Han, New Jersey Institute of Technology (NJIT), USA Email: tao.han@njit.edu
- Karl Andersson, Luleå University of Technology, Sweden Email: karl.andersson@ltu.se
- Rui Ning, Old Dominion University, USA Email: rning@odu.edu

Scope

Artificial Intelligence and Machine learning have shown significant potential 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on topics related to all aspects of machine learning applied to communication and networking systems and seeks original unpublished papers focusing on theoretical analysis, algorithm/protocol design, novel system architectures, experimental studies, emerging applications, standardizations,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 The symposium calls for original, previously unpublished papers on the topics including, but not limited to, the following: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

Prospective authors should follow the instructions at http://www.conf-icnc.org/2024/author.htm to prepare their manuscripts. All papers should be submitted via EDAS. Submission information can be found at http://www.conf-icnc.org/2024/cfp.htm.

Short Biographies of Co-Chairs

Dr. Tao Han is an Associate Professor in the Department of Electrical and Computer Engineering at the New Jersey Institute of Technology (NJIT) and an IEEE Senior Member. Before joining NJIT, Dr. Han was an Assistant Professor in the Department of Electrical and Computer Engineering at the University of North Carolina at Charlotte. Dr. Han received his Ph.D. in Electrical Engineering from NJIT in 2015 and is the recipient of the NSF CAREER Award 2021, the Newark College of Engineering Outstanding Dissertation Award 2016, and the NJIT Hashimoto Prize 2015. His papers win IEEE International Conference on Communications (ICC) Best Paper Award 2019, the IEEE Communications Society's Transmission, Access, and Optical Systems (TAOS) Best Paper Award 2019, and the Wireless and Optical Communications Conference 2023. His research interest includes mixed and augmented reality systems with AI-generated content, edge computing systems for accelerated generative adversarial networks (GAN), and NextG mobile computing systems.

Dr. Karl Andersson: After receiving his master degree in Computer Science and Technology from the Royal Institute of Technology, Stockholm, Sweden, Karl Andersson started his professional career as a consultant, project manager, business developer, and branch manager within the Capgemini Group. Returning to academia as a PhD Student he obtained his PhD degree after defending his thesis "On Access Network Selection Models and Mobility Support in Heterogeneous Wireless Networks". After visiting Columbia University in the City of New York as a postdoctoral researcher and National Institute of Information and Communications Technology, Tokyo, Japan as a JSPS Fellow, Karl is now Professor in Pervasive and Mobile Computing at Luleå University of Technology (LTU), Skellefteå, Sweden. Since 2017, Karl is leading Centre for Distance-spanning Technology at LTU specialising in research centred around fifth generation mobile networks (5G), Internet of Things (IoT), and datacenters. Karl is currently coordinating a number of projects funded by the EU, VINNOVA, and the Swedish Energy Agency. Moreover, since 1 January 2022, Karl is Dean for Faculty of Science and Technology at Luleå University of Technology.

Karl is a senior member of the IEEE and a senior member of ACM. He has served as reviewer for a number of journals including IEEE Transactions on Mobile Computing, IEEE Transactions on Computers, IEEE Vehicular Technology Magazine, Computer Networks, Wireless Personal Communications, Wireless Networks, Wireless Communications and Mobile Computing, Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications, International Journal of Ad Hoc and Ubiquitous Computing, and ETRI Journal. Furthermore, he has served as reviewer for many conferences including ICC, Globecom, VTC, WCNC, WiMob, IWCMC, and NTMS. Also, he is serving on a number of TPCs and the editorial boards of Journal of Internet Services and Information Security and Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications. During 2020 and 2021, Karl was general chair for IEEE Conference on Local Computer Networks (LCN).

Dr. Rui Ning is an Assistant Professor in the Department of Computer Science at Old Dominion University (ODU). His academic journey started in China, where he earned a B.S. degree in Computer Science & Engineering from Lanzhou University in 2011. He later pursued an M.S. degree in Computer Science from the University of Louisiana at Lafayette (ULL), graduating in 2016. His dedication to the field led him to a Ph.D. degree in Electrical & Computer Engineering, which he received from ODU in 2020. His research interests are centered around cybersecurity and secure, privacy-preserved AI. His contribution to the field has been recognized through various awards including the Mark Weiser Best Paper Award at the IEEE PERCOM 2018, the IEEE INFOCOM 2019 Best In-session Presentation Award, and the NSF CRII Award in 2022.