



VTC2022-Spring

Helsinki, Finland

19 - 22 June 2022

Digital-twin-assisted AI for 6G Wireless Networking

Workshop Organizers	Call for Papers
<p align="center">General Chairs</p>	<p>With the explosion of user/network data volume and the increase of network complexity, future six generation (6G) wireless networks are foreseen to incorporate artificial intelligence (AI) and pervasive computing to automate centralized/distributed decision making for intelligent network management. However, the explosive data volume with information redundancy will inevitably lead to less efficient data processing and prolonged decision responsiveness. In certain cases where the access to data is not available in real time due to restrictions, the accuracy of networking decisions can diverge upon outdated network information. The digital twin (DT) technology, as an effective means of data digitalization, provides concise and accurate virtualization/abstraction of data and user/network-level functions from their physical counterparts, which can be applied to improving the data processing efficiency and guiding network intelligence modules for decision making in 6G. Creating effective DTs for different 6G scenarios to assist network management tasks is important but challenging. Potential issues remain to be solved to maintain a good digital twining performance, for instance, how to create synthetic data to reflect the completeness of a physical network and how to efficiently synchronize between DTs and their physical hosts with less overhead.</p> <p>This workshop invites high quality submissions with innovative ideas, insights, methodologies, modeling/learning frameworks, and simulation/implementation results on applying DTs in assisting intelligent 6G network management. The topics of this workshop include but are not limited to:</p> <ul style="list-style-type: none"> • DT-assisted intelligent network deployment for 6G • DT-assisted edge intelligence for 6G • DT-assisted intelligent resource management for 6G • DT-assisted intelligent network slicing for 6G • Network traffic prediction with DT • DT network synchronization • DT-assisted AI and distributed learning • Cooperative AI model training/inference • DT enabling technologies for 6G • DT-enabled industrial IoT • DT-enabled intelligent transportation systems • DT-assisted security/privacy preservation for 6G • DT simulation/implementation for 6G
<p>Qiang Ye, Memorial University, Canada Berk Canberk, Istanbul Technical University, Turkey Octavia A. Dobre, Memorial University, Canada Bin Lin, Dalian Maritime University, China</p>	
<p align="center">TPC Chairs</p>	
<p>Ning Zhang, University of Windsor, Canada Khaled Rabie, Manchester Metropolitan Univ., UK Zijun Gong, HKUST (Guangzhou), China Dajiang Chen, UESTC, China</p>	
<p align="center">Publicity Chairs</p>	
<p>Zhi Liu, University of Electro-Communications, Japan Lei Liu, Xidian University, China</p>	
<p align="center">TPC Members</p>	
<p>Hassan Aboubakr Omar, Huawei, Canada XuanliWu, Harbin Institute of Technology, China Khalid Aldubaikhy, Qassim University, Saudi Arabia Tao Huang, James Cook University, Australia Mushu Li, University of Waterloo, Canada Muhammad Ismail, Tennessee Tech University, USA Huaqing Wu, McMaster University, Canada Tao Han, New Jersey Institute of Technology, USA Junling Li, University of Waterloo, Canada Wen Wu, Peng Cheng Laboratory, China Jie Gao, Marquette University, USA Weisen Shi, Huawei Technologies, Canada Haixia Peng, California State Long Beach, USA He Fang, Soochow University, China Zehui Xiong, SUTD, Singapore Nan Chen, Tennessee Tech University, USA Peng Yang, Huazhong University of Science and Technology, China Kaige Qu, University of Waterloo, Canada Yuan Zhang, UESTC, China Cheng Huang, University of Waterloo, Canada</p>	
<p align="center">Important Dates</p>	
<ul style="list-style-type: none"> • Workshop paper submission Extended: March 10, 2022 • Acceptance notification: Apr. 17, 2022 • Final paper submission due: May 1, 2022 • Workshop date: Jun. 19, 2022 	