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A Digital Twin Framework with Field Calibrated Propagation Modeling for Vehicular Network Applications	1934
<i>Sharan Karthick BL, Raja VaraPrasad Yerra, Purav Shah, Ramona Trestian, Hrishikesh Venkataraman, Deepak Gangadharan</i>	
Digital Twin-Assisted Measurement Design and Channel Statistics Prediction	1940
<i>Robin J. Williams, Mahmoud Saad Abouamer, Petar Popovski</i>	
Enabling Stable Proactive Handover in O-RAN Through Digital Twin-Driven What-If Analysis	1946
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A Network-Aware Digital Twin Architecture for Dual-Mode Transition to IATA Modern Airline Retailing	1952
<i>Burcu Sakiz, Mehmet Rasit Eskicioglu</i>	
Synthetic Graph Data Augmentation for Generative Digital Twins	1958
<i>Eren Olug, Resul Tugay, Mehmet Ozdem, Elif Ak, Sule Gunduz Oguducu</i>	
3D Depth-Sensing Framework for Hand-Object Interaction in Microgravity Environments	1964
<i>Vijay Teja Uppalapati, Neji Mensi, Danda B. Rawat</i>	
Joint Spectrum and Transmission Adaptation System Under Combat Electromagnetic Environment via Parallel Reinforcement Learning	1970
<i>Xinlei Jing, Yifan Xu, Chunguo Li, Runfeng Chen, Guoxin Li, Zhibin Feng, Yuhua Xu</i>	
LLM-Based Net Analyzer rApp for Explainable and Safe Automation in O-RAN Non-RT RIC	1976
<i>Tuan V. Ngo, Mao V. Ngo, Binbin Chen, Tony Q. S. Quek, Tejaswita Kumari, Maziar Nekovee</i>	
LyMARL: Lyapunov-Guided MARL for Energy-Constrained User Association	1982
<i>Wonhyeok Ko, Yeonsoo Jeong, Sungweon Hong, Hyung-Taig Lim, Songnam Hong</i>	
Deep Graph Unfolding for QoS-Aware Distributed Beamforming in Cell-Free Massive MIMO	1988
<i>Tianwei Yang, Cheng Zhang, Wen Wang, Changwei Zhang, Yongming Huang</i>	
FedTGR: Topology-Guided Byzantine Robust Federated Learning for Trustworthy AI-Native RAN	1994
<i>Yan Zhang, Weikang Liu, Bin Cao, Mingrui Cao, Qinquan Hu</i>	
SemiRoot: A Semi-Supervised Deep Learning Framework for Root-Cause Analysis of QoE Degradations in Mobile Networks	2000
<i>Qizhe Li, Haolong Chen, Siliang Fu, Ziheng Zou, Guangxu Zhu</i>	
KP-A: A Unified Network Knowledge Plane for Catalyzing Agentic Network Intelligence	2006
<i>Yun Tang, Mengbang Zou, Zeinab Nezami, Syed Ali Raza Zaidi, Weisi Guo</i>	
HCBQ: A Hierarchical Clustering-and-Branching Deep Q-Learning Framework for User Scheduling in Cell-Free MU-MIMO Systems	2012
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spkLLR: A Spiking Neural Network-Based Energy-Efficient Soft Demodulation Scheme for 6G	2018
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