

W1: 5G and Beyond Technologies for Ultra-Dense Environments

Sunday 22 September 2019 • 09:00 – 17:45 • Salon B (3rd floor)

- 09:00 Welcome: Haesik Kim, VTT
- 09:10 Keynote: Enhancing The Physical Layer of 5G Networks Through Knowledge-Aware Deep Learning
 Yuanzhang Xiao, University of Hawaii
- 09:55 Session 1—Chair: Haesik Kim (VTT)
- Game Theoretical Approach of Blockchain-based Spectrum Sharing for 5G-enabled IoTs in Dense Networks
 YeJin Choi, Il-Gu Lee, Sungshin University
- Clustering of Signal Power Distribution Toward Low Storage Crowdsourced Spectrum Database
 Yoji Uesugi, Keita Katagiri, The University of Electro-Communications; Koya Sato, Tokyo University of Science; Kei Inage, Tokyo Metropolitan College of Industrial Technology; Takeo Fujii, The University of Electro-Communications
- 10:30 Refreshments break
- 11:00 Session 2—Chair: Kenta Umabayashi (Tokyo University of Agriculture and Technology)
- Analysis of RF Energy Harvesting in Uplink-NOMA IoT-based Network
 Zhou Ni, Ziru Chen, Qinbo Zhang, Chi Zhou, Illinois Institute of Technology
- Partial Non-Orthogonal Multiple Access (P-NOMA) with respect to User Fairness
 Beomju Kim, Yonsei University; Jehyun Heo, University of Yonsei; Daesik Hong, Yonsei University
- Sensor Selection based on Dempster-Shafer Evidence Theory under Collaborative Spectrum Sensing in Cognitive Radio Sensor Networks
 Ying GAO, Ming DIAO, Harbin Engineering University; Takeo Fujii, The University of Electro-Communications
- Distributed User Pairing and Transmission Mode Selection in a Single Cell Full Duplex Network
 Yao-Yuan Chang, Hsuan-Jung Su, National Taiwan University
- Coded Caching for Energy Efficient HetNets with Bandwidth Allocation and User Association
 Fangfang Yin, Minyin Zeng, Zhilong Zhang, Danpu Liu, Beijing University of Posts and Telecommunications
- 12:30 Lunch (on your own)
- 14:00 Session 3—Panel: 5G and Beyond Technologies for Ultra-dense Environments: Perspectives and Key Challenges
- Moderator: Haesik Kim (VTT)
- Panelists: Yuanzhang Xiao (University of Hawaii)
 Amitabha Ghosh, (Nokia Bell Labs)
 Takehiro Nakamura (NTT DoCoMo)
 Takeo Fujii (The University of Electro-Communications)
 Kenta Umabayashi (Tokyo University of Agriculture and Technology)
- 15:30 Refreshments break
- 11:00 Session 4—Chair: Takeo Fujii (The University of Electro-Communications)
- An Efficient Algorithm for Dense Network Flow Maximization with Multihop Backhauling and NFPS
 Abdullateef Almohamad, Mazen O. Hasna, Tamer Khattab, Qatar University; Mohamed Haouari, Old Dominion University
- Integrated Access Backhauled Networks
 Oumer Teyeb, Ajmal Muhammad, Gunnar Mildh, Erik Dahlman, Filip Barac, Behrooz Makki, Ericsson
- Opportunistic Routing Protocol For Ad-Hoc Networks Using mmWave and Random Beamforming
 Mustafa Aljumaily, University of Tennessee, Knoxville; Husheng Li, University of Tennessee
- Angular-Based 3D Hybrid Precoding for URA in Multi-User Massive MIMO Systems
 Asil Koc, Ahmed Masmoudi, Tho Le-Ngoc, McGill University
- Hybrid Beamforming in Massive-MIMO mmWave Systems Using LU Decomposition
 Mustafa Aljumaily, University of Tennessee, Knoxville
- 17:30 Closing talk: Kenta Umabayashi, Tokyo University of Agriculture and Technology