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 Umebayashi (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; Jeyyun 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 Umebayashi (Tokyo University of Agriculture and Technology)

15:30  Refreshments break

16:00  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 Umebayashi, Tokyo University of Agriculture and Technology