김효일 Hyoil Kim

전기전자공학과 / Electrical Engineering

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Curriculum Vitae

2020.09-Present: Professor, School of ECE, UNIST
2020.02-Present: Dean of Academic Information Affairs
2015.09-2020.08: Associate Professor, School of ECE, UNIST
2011.08-2015.08: Assistant Professor, School of ECE, UNIST
2010.12-2011.07: Post-Doctoral Researcher, IBM T.J. Watson Research Center (NY, USA)

Academic Credential

Ph.D in EE: Systems, University of Michigan (Ann Arbor), 2010.
M.S. in EE: Systems, University of Michigan (Ann Arbor), 2005.
B.S. in EE, Seoul National University, 1999.

Awards/Honors/Memberships

Best paper award, KICS Fall Conf., 2019.

Best paper award, ICTC, 2015.
Senior Member of the IEEE.
Member of the IEEE ComSoc.

Wireless & Mobile Networking Laboratory
무선 및 모바일 네트워킹 연구실

The Wireless & Mobile Networking Laboratory (WMNL) is directed by Hyoil Kim, an associate professor in the School of Electrical and Computer Engineering (ECE) at UNIST. The WMNL's research focuses on the cutting edge technology in wireless/wired networking, including:
1. Cognitive radio (CR) and dynamic spectrum access (DSA) technologies
2. Next-generation WLAN (e.g., IEEE 802.11ax)
3. 5G/6G communications (e.g., URLLC, MEC, NR-U)
4. AI-empowered networking
5. Vehicular networks (e.g., V2X, Hyperloop communications)

관심분야	희망분야
Cognitive radio, WLAN, 5G/6G, mobile cloud computing, V2X for VANET, AI-empowered networking, Hyperloop communications	Communications-Computing convergence, Flying ad-hoc networks (FANET)

Research Keywords and Topics

Network optimization and scheduling, spectrum resource management and allocation, performance and capacity analysis, Quality-of-Service (QoS) and Quality-of-Experience (QoE) provisioning, spectrum pricing and measurement, and AI-empowered networking.

Research Publications

[1] ACM MobiCom, "X-Array: Approximating Omnidirectional Millimeter-Wave Coverage Using an Array of Phased Arrays," S. Wang, J. Huang, X. Zhang, H. Kim, S. Dey, Sep. 2020.
[2] IEEE Trans. Mobile Comput. (TMC), "QoE-aware Computation Offloading to Capture Energy-Latency-Pricing Tradeoff in Mobile Clouds," S.-T. Hong and H. Kim, Sep. 2019.
[3] IEEE Trans. Mobile Comput. (TMC), "Performance Analysis of License Assisted Access LTE with Asymmetric Hidden Terminals," H. Lee, H. Kim, H.J. Yang, J.T. Kim, and S. Baek, Sep. 2018.

Patents

[1] Smart road-side infrastructure (SRI) based guided driving mechanism, Hyoil Kim, Kyunghan Lee, Suhwan Jung, 10-2019-0172323, Dec. 20, 2019.
[2] Proactive Listen-before-Talk (P-LBT) method for cellular operations in unlicensed bands, SeungKwon Baek, Hyoil Kim, Hyun Jong Yang, Harim Lee, 10-2016-0010767, Jan. 28, 2016.