

**Associate Professor**, Korea University – School of Electrical Engineering, Seoul, Republic of Korea  
 – *Director*, Net-Zero CAFE (Connectivity and Autonomy for Future Ecosystem) Research Center (ITRC)  
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## Educational Backgrounds

- **University of Southern California (USC) – Viterbi School of Engineering**, Los Angeles, California, USA
  - Ph.D. (08/2009–08/2014) in **Computer Science** (Advisor: *Prof. Andreas F. Molisch*, Department of Electrical Engineering)
  - M.S. (05/2014) in **Computer Science** with specialization in **High Performance Computing and Simulations**
  - M.S. (05/2012) in **Electrical Engineering**
- **Korea University – College of Informatics**, Seoul, Republic of Korea
  - M.S. (03/2004–02/2006) in **Computer Science and Engineering** (Advisor: *Prof. Wonjun Lee*, Department of Cyber Defense)
  - B.S. (03/1999–02/2004) in **Computer Science and Engineering**

## Professional Affiliations (R&D Positions)

- **Korea University**, Seoul, Republic of Korea
  - Associate Professor (03/2021–Present), Assistant Professor (09/2019–02/2021), School of Electrical Engineering
  - Adjunct Professor (03/2023–02/2028 (Expected)), Department of Communications Engineering (with **Samsung Electronics**)
  - Adjunct Professor (11/2022–02/2028 (Expected)), Department of Future Science and Technology Business (Graduate School)
  - Adjunct Professor (03/2021–02/2026 (Expected)), Department of Semiconductor Engineering (with **SK Hynix**)
- **Chung-Ang University – College of Computer Science and Software**, Seoul, Republic of Korea
  - Assistant Professor (03/2016–08/2019), School of Computer Science and Engineering
- **Intel Corporation – Platform Engineering Group**, Silicon Valley (Santa Clara), California, USA
  - Systems Engineer (09/2013–02/2016), WiGig & mmWave Standards and Advanced Technology (SAT) Team
- **University of Southern California (USC) – Viterbi School of Engineering**, Los Angeles, California, USA
  - Annenberg Graduate Fellow (08/2009), Awarded with Ph.D. admission in Computer Science from USC (2009)
  - Ph.D. Research Assistant (01/2011–08/2014), Communication Sciences Institute (CSI)
  - Teaching Assistant (01/2012–05/2013), Computer Science and Electrical Engineering Departments (CSCI455x and EE579)
- **InterDigital**, San Diego, California, USA
  - Intern (05/2012–08/2012), Wireless Systems Evolution Department
- **LG Electronics – CTO Office**, Seoul, Republic of Korea
  - Research Engineer (01/2006–08/2009), Multimedia Research Laboratory, Seocho R&D Campus

## Awards and Honors

### Research and Academic Excellence (International)

- |   |   |
|---|---|
| • Certificate of Appreciation – IEEE/IFIP WiOpt (2024)                                    | 10/2024   |
| • Best Editor Award – ICT Express (Elsevier)  | 07/2023   |
| • Finalist (Top 25), AAAI Student Abstract and Poster Session – Oral Presentation Contest | 02/2023   |
| • IEEE ICTC Best Paper Award – IEEE Communications Society                                | 10/2022   |
| • Spotlight, Oral Presentation – ICML Workshop on Dynamic Neural Networks (2022)          | 07/2022   |
| • IEEE MMTC Best Journal Paper Award – IEEE Communications Society                        | 2021  |
| • IEEE ICOIN Best Paper Award – IEEE Computer Society                                     | 01/2021   |
| • IEEE MMTC Outstanding Young Researcher Award – IEEE Communications Society              | 2020  |
| • IEEE Systems Journal Best Paper Award – IEEE Systems Council                            | 2020  |
| • Next Generation and Standards (NGS) Division Recognition Award – Intel Corporation      | Q1/2015   |
| • Annenberg Graduate Fellowship Award – University of Southern California                 | 2009–2013   |
| • IEEE Seoul Section Student Paper Contest  | 2024 (Bronze), 2024 (Bronze), 2023 (Bronze), 2020 (Bronze), 2019 (Gold) |
| • IEEE VTS Seoul Chapter Award – IEEE Vehicular Technology Society                        | 2022, 2023, 2022, 2021, 2021, 2019                                      |

### Research and Academic Excellence (Korea Regional)

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|---|------------------|
| • Best Paper Award, The Journal of KICS – KICS  | 11/2024          |
| • HFR Paper Award (Area: Quantum Technologies and Quantum Communications) – KICS                        | 11/2023          |
| • Korea Electronics Technology Institute (KETI) President Award – KICS                                  | 06/2023          |
| • Haedong Paper Award – KICS  | 02/2023, 06/2021 |
| • Insung Research Grant Award – Korea University  | 01/2023          |
| For recognizing professors in research excellence during the first 3 years at Korea University (Top 5%) |                  |
| • Haedong Young Scholar Award – KICS and Haedong Foundation   | 12/2018          |
| For recognizing a researcher under the age of 40 who has made outstanding contributions to IT R&D       |                  |
| • Outstanding Paper Award – LG Electronics CTO Office, Multimedia Research Laboratory                   | 01/2008          |

- **RFID Expert Group President Award** – *The 3rd RFID/USN Research Paper Contest* 10/2007
- **ETRI President Award** – *The 2nd RFID/USN Research Paper Contest* 11/2006
- **Korea Association of RFID/USN (KARUS) President Award** – *The 1st RFID/USN Research Paper Contest* 10/2005
- **Scholarships for Academic Excellence** – *Korea University (Computer Science and Engineering)* Fall 2000, Fall 1999

### Teaching Excellence at Korea University (11 Times)

- **Granite Tower Best Teaching Award (Top 5%)** Spring 2024, Spring 2022, Fall 2021, Spring 2021, Fall 2019
- **Best Teaching Award (Top 20%)** Spring 2024, Spring 2024, Spring 2022, Fall 2021, Spring 2021, Fall 2020

### Academic and University Services

- **Outstanding Contribution Award** – KICS 2024, 2021, 2019
- **Outstanding Contribution Award** – KIISE Information Network Society 2023, 2022
- **2022 Best Chapter Award, IEEE Vehicular Technology Society Chapter**, Awarded as a Treasure 2022
- **Outstanding Contribution Award** – Open Standards and ICT Association (OSIA) 2021
- **Appreciation Recognition** – Daegu Gyeongbuk Institute of Science and Technology (DGIST) 2021
- **Fellow Employee Recognition [#3081146]** – Intel Corporation 2014
- **Certificate of Appreciation** – Department of Computer Science, University of Southern California 2010

## **R&D Projects (Totally, 15,795,033 USD $\approx$ 15,795,033,875 KRW)**

### University-Wide/Center Projects

- **Net-Zero CAFE Research Center** (07/2024–12/2031), **ITRC (Korea Univ) (Center Director)**
- **Intelligent 6G Wireless Access System Research Center** (04/2021–12/2025), **6G AI Research Center (Korea Univ)**
- **K-Starlink: Dynamic Reconfigurable and Intelligent Space-Terrestrial Networks** (06/2021–05/2024), **Basic Research Lab (Ajou)**
- **Nano UAV Intelligence Systems Research Lab** (10/2020–08/2023), **ADD Military Special Research Center (Kwangwoon)**
- **5G/Unmanned Vehicle Research Center (5G/UV-RC)** (06/2020–12/2022), **ITRC (Hanyang)**
- **Human Resource Development for the Biomedical Unstructured Big Data Analysis** (08/2018–12/2021), **ITRC (SNU-Hospital)**
- **Network Engineering: Development and Application of Novel Data Science Driven Framework for Efficient Network Design** (06/2017–05/2020), **Basic Research Lab (Chung-Ang)**
- **Intelligent Internet of Energy (IoE) Data Research Center** (02/2020–05/2020), **ITRC (Kookmin)**

### Industry-Funded Projects

- **Advancement Technology Development for Torpedo Deception Strategies in Submarines** (11/2022–11/2026), **LIG Nex1**
- **Advancement Tech Dev for Submarine Target Identification and Engagement Support Intelligence** (11/2022–11/2026), **LIG Nex1**
- **Mapping between Real World and VR for End-Edged Cloud Real-Time VR Servers** (09/2020–09/2025), **Samsung Electronics**
- **Research on Learning-based Swarm Mission Planning Algorithms** (03/2024–02/2025), **LIG Nex1**
- **Quantum Machine Learning-based Objection Detection for Point Cloud and its Acceleration** (12/2022–04/2024), **Hyundai Motors**
- **Routing Algorithms for LEO Satellite Networks** (12/2022–08/2023), **Solvit System**
- **Optimal Positioning Algorithms for Wide-Area Relaying Networks** (12/2022–08/2023), **Solvit System**
- **Distributed Learning Algorithms to Build AI Models with Multi-Center Clinical Data** (11/2022–02/2023), **Cipherome**
- **Cellular/Wi-Fi Handover Technology Development** (02/2022–12/2022), **LG Electronics CTO Division – Smart Mobility Lab**
- **Research Trends in Digital Twin Applications to Autonomous Driving** (03/2022–04/2022), **Hyundai NGV**
- **Distributed Learning System Design and Implementation for Clinical Applications** (02/2022–03/2022), **Cipherome**
- **Super-Resolution Performance Optimization in Mobile Platforms** (05/2020–08/2020), **Samsung SDS**
- **Deep Learning Algorithms for mVOC Concentration Analysis** (03/2020–06/2020), **Samsung Electronics (C-Lab)**
- **Visual Recognition Software Implementation using Deep Learning Tools** (05/2019–11/2019), **Hyundai Motors**
- **A Priori Techniques Research for Efficient Multi-Edge Computing** (06/2017–12/2017), **Samsung Electronics (Software Center)**

### Government-Funded Projects

- **Quantum AI Empowered Second-Life Platform Technology** (07/2024–12/2031), **IITP (Software Star-Lab)**
- **Quantum-Empowered Spatio-Temporal Multi-Scale Digital Twin System** (03/2025–02/2028), **NRF**
- **6GARROW: 6G AI-Native Integrated RAN-Core Networks** (09/2024–08/2027), **IITP**
- **AI Bots Collaborative Platform and Self-Organizing Artificial Intelligence Technology Development** (04/2022–12/2026), **IITP**
- **Development of Integrated Development Framework that supports Automatic Neural Network Generation and Deployment optimized for Runtime Environment** (04/2021–12/2025), **IITP**
- **Quantum Hyper-Driving: Quantum-Inspired Hyper-Connected and Hyper-Sensing Autonomous Mobility** (03/2022–02/2025), **NRF**
- **Korea-Japan Joint Seminar Project for Generative and Multi-Modal AI Technologies** (10/2023–09/2024), **NRF**
- **Integrated Perception Technology Developments for Public Safety Platforms** (06/2019–05/2023), **NRF**
- **Development of Quantum Deep Reinforcement Learning Algorithm using QAOA** (10/2019–04/2022), **NRF**
- **mmWave Radar and Deep Reinforcement Learning based Optimal Policy Autonomous Driving** (06/2019–02/2022), **NRF**
- **Development of Privacy-Reinforcing Distributed Transfer-Iterative Learning Algorithm** (07/2019–12/2021), **MHW**
- **Virtual Presence in Moving Objects through 5G (PriMO-5G)** (06/2018–06/2021), **IITP**
- **Distributed Secure Platform for Scalable Clinical OMOP CDM Models** (04/2019–12/2020), **MHW**
- **mmWave High-Speed Networking Platform Design for Next-Generation Convergence Services** (06/2016–05/2019), **NRF**
- **Feasibility Study of 60 GHz IEEE 802.11ad for Virtual Reality (VR) Platforms** (04/2017–12/2017), **IITP**

## Government-Funded Research Institute Projects

- Quantum Reinforcement Learning for Satellite Backhaul Routing in Disaster Networks (05/2024–11/2024), **ETRI**
- NOMA-based Resource Allocation Research in Space-Air-Ground Integrated Networks (09/2023–11/2023), **ETRI**
- Autonomous Intelligent COA Search Methods for Cyber-Attacks (12/2021–11/2022), **ADD**
- Research on Intelligent Agent-based CPS Security and Reliability (04/2021–11/2021), **TTA**
- Multi-GPU based Automotive HPC Platform Development (04/2020–10/2020), **ETRI**
- Cooperative Deep Reinforcement Learning for Online Game Multi-Agents (04/2020–08/2020), **ETRI**
- Verification Testbed Implementation for Privacy-Preserving Trust Data Generation (10/2019–11/2019), **ETRI**
- Measurement and Analysis of Multi-Task GPU Scheduling Delays (05/2019–10/2019), **ETRI**
- Probabilistic Decision Making and Econometric Methods for Micro-Grid (05/2017–04/2019), **KEPCO Research Institute**
- GPU Scheduling Performance Analysis under Queueing Delay Considerations (05/2018–10/2018), **ETRI**
- Improving Massive Deep Learning Training via Computation and Communication Acceleration (04/2018–10/2018), **ETRI**
- Parsing Techniques for Artificial Neural Network (ANN) Data Processing (09/2017–11/2017), **ETRI**

## University of Southern California (USC) – Viterbi School of Engineering (Ph.D. Research Projects)

- Video Aware Wireless Networks (VAWN) Research Program, **Intel Labs, Verizon Wireless, and Cisco Systems**
- 60 GHz Real-Time Wireless Video Broadcasting, Supported by a Gift from **Disney Research Zürich**

## Awards and Fellowship Funds

- **Insung Research Grant Award** (03/2023–02/2024), **Korea University**  
For recognizing Korea University professors in research excellence during the first 3 years at Korea University (Top 5%)
- **Annenberg Graduate Fellowship Award** (08/2009–06/2013), **University of Southern California**  
Awarded Fund: 4 Year Full Scholarship (Tuition Waiver and \$120,000 Stipend (\$30,000/year for 4 years))

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## **Selected Publications**

- **9223+ Citations** (H-index: 45+, i10-index 198+), obtained from Google Scholar Profile (as of February 26, 2025)

### Books

- *Fundamentals of 6G Communications and Networking*, Springer (2023) (Editors: X. Lin, J. Zhang, Y. Liu, [J. Kim](#))

### Selected Papers

#### ■ **Top-Tier Conferences**

- [**IPDPS'25**] AQUA: Hardware-Agnostic Qubit Allocation for Quantum Multi-Programming, **IPDPS (2025)** (X. Piao, J. Shim, [J. Kim](#), J. Kim)
- [**CIKM'24**] Hands-On Introduction to Quantum Machine Learning, **CIKM (2024)** (S.Y.-C. Chen, [J. Kim](#))
- [**WiOpt'24**] Advanced Taxiing Path Guidance using Multi-Agent Reinforcement Learning for Air Traffic Management, **WiOpt (2024)** (S. Lee, G.S. Kim, S. Park, [J. Kim](#))
- [**CIKM'23**] Quantum Split Learning for Privacy-Preserving Information Management, **CIKM (2023)** (S. Park, H. Baek, [J. Kim](#))
- [**CIKM'23**] Logarithmic Dimension Reduction for Quantum Neural Networks, **CIKM (2023)** (H. Baek, S. Park, [J. Kim](#))
- [**AAAI'23**] Quantum Multi-Agent Meta Reinforcement Learning, **AAAI (2023)** (W.J. Yun, J. Park, [J. Kim](#))
- [**CIKM'22**] Hierarchical Reinforcement Learning using Gaussian Random Trajectory Generation in Autonomous Furniture Assembly, **CIKM (2022)** (W.J. Yun, D. Mohaisen, S. Jung, J.-K. Kim, [J. Kim](#))
- [**WiOpt'22**] Cooperative Video Quality Adaptation for Delay-Sensitive Dynamic Streaming using Adaptive Super-Resolution, **WiOpt (2022)** (M. Choi, W.J. Yun, [J. Kim](#))
- [**INFOCOM'22**] Joint Superposition Coding and Training for Federated Learning over Multi-Width Neural Networks, **INFOCOM (2022)** (H. Baek, W.J. Yun, Y. Kwak, S. Jung, M. Ji, M. Bennis, J. Park, [J. Kim](#))
- [**ICDCS'20**] Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications, **ICDCS (2020)** (Ü. Meteriz, N.F. Yildiran, [J. Kim](#), D. Mohaisen)
- [**IJCAI'19**] Randomized Adversarial Imitation Learning for Autonomous Driving, **IJCAI (2019)** (M. Shin, [J. Kim](#))
- [**ICDCS'18**] ShmCaffe: A Distributed Deep Learning Platform with Shared Memory Buffer for HPC Architecture, **ICDCS (2018)** (S. Ahn, [J. Kim](#), E. Lim, W. Choi, A. Mohaisen, S. Kang)
- [**MM'17**] REQUEST: Seamless Dynamic Adaptive Streaming over HTTP for Multi-Homed Smartphone under Resource Constraints, **ACM-MM (2017)** (J. Koo, J. Yi, [J. Kim](#), M.A. Hoque, S. Choi)
- [**MobiSys'10**] Energy-Efficient Rate-Adaptive GPS-based Positioning for Smartphones, **MobiSys (2010)** (J. Paek, [J. Kim](#), R. Govindan)

#### ■ **IEEE Journals and Magazines (97 publications)**

- [**IOTJ.accepted**] Entanglement-Controlled Quantum Federated Learning, **IEEE Internet of Things Journal** (S. Park, H. Lee, S. Jung, J. Park, M. Bennis, [J. Kim](#))
- [**TIV.accepted**] Adaptive Quantum Federated Learning for Autonomous Surveillance Multi-Drone Networks, **IEEE Transactions on Intelligent Vehicles** (S. Park, C. Park, S. Jung, [J. Kim](#))
- [**TIV.accepted**] Neural Myerson Auction for Truthful and Distributed Mobile Charging in UAV-Assisted Digital-Twin Networks, **IEEE Transactions on Intelligent Vehicles** (S. Jung, H. Baek, [J. Kim](#))
- [**TVT'25.05**] Dynamic Quantum Federated Learning for UAV-based Autonomous Surveillance, **IEEE Transactions on Vehicular Technology**, 74(5):ppp-ppp (2025) (S. Park, S.B. Son, S. Jung, [J. Kim](#))
- [**TNSM'25.04**] Intelligent Extra Resource Allocation for Cooperative Awareness Message Broadcasting in Cellular-V2X Networks, **IEEE Transactions on Network and Service Management**, 22(2):ppp-ppp (2025) (S. Jung, J.-H. Kim, [J. Kim](#))



- [TMC'25.02] Fast Quantum Convolutional Neural Networks for Low-Complexity Object Detection in Autonomous Driving Applications, *IEEE Transactions on Mobile Computing*, 24(2):1031–1042 (2025) (E.J. Roh, H. Baek, D. Kim, J. Kim)
- [CM'24.12] The Matrix: Quantum AI for Interacting Two Worlds in Prioritized Metaverse Spaces, *IEEE Communications Magazine*, 62(12):97–103 (2024) (S. Park, H. Baek, J. Kim)
- [TON'24.12] Spatio-Temporal Multi-Metaverse Dynamic Streaming for Hybrid Quantum-Classical Systems, *IEEE/ACM Transactions on Networking*, 32(6):5279–5294 (2024) (S. Park, H. Baek, J. Kim)
- [TMC'24.12] Joint Quantum Reinforcement Learning and Stabilized Control for Spatio-Temporal Coordination in Metaverse, *IEEE Transactions on Mobile Computing*, 23(12):12410–12427 (2024) (S. Park, J. Chung, C. Park, S. Jung, M. Choi, S. Cho, J. Kim)
- [IOTI'24.12] Markov Decision Policies for Distributed Angular Routing in LEO Mobile Satellite Constellation Networks, *IEEE Internet of Things Journal*, 11(23):38744–38754 (2024) (S. Park, G.S. Kim, S. Jung, J. Kim)
- [CM'24.10] Quantum Multi-Agent Reinforcement Learning is All You Need: Coordinated Global Access in Integrated TN/NTN Cube-Satellite Networks, *IEEE Communications Magazine*, 62(10):86–92 (2024) (S. Park, G.S. Kim, Z. Han, J. Kim)
- [Access'24.10] Sensing-to-Sky Intermittent Connectivity Realization for LTE-Enabled Drone Platforms: Embedded Design, Measurement Study, and Positioning Applications, *IEEE Access*, 12:137360–137372 (2024) (J. Kim, S. Park, U. Jo, T. Kim, S. Jung, J. Kim)
- [TNSM'24.08] Cooperative Multi-UAV Positioning for Aerial Internet Service Management: A Multi-Agent Deep Reinforcement Learning Approach, *IEEE Transactions on Network and Service Management*, 21(4):3797–3812 (2024) (J. Kim, S. Park, S. Jung, C. Cordeiro)
- [Access'24.08] Enhancing Cost-Effective 5G Virtualized RAN Pooling Gain on Clouds: An Intelligent Auto-Scaling Approach, *IEEE Access*, 12:111322–111333 (2024) (K. Cho, J. Kim, S. Jung)
- [TVT'24.07] Age-of-Information Aware Caching and Delivery for Infrastructure-Assisted Connected Vehicles, *IEEE Transactions on Vehicular Technology*, 73(7):10681–10696 (2024) (S. Park, C. Park, S. Jung, M. Choi, J. Kim)
- [CM'24.06] Quantum Multi-Agent Reinforcement Learning for Autonomous Mobility Cooperation, *IEEE Communications Magazine*, 62(6):106–112 (2024) (S. Park, J.P. Kim, C. Park, S. Jung, J. Kim)
- [TVT'24.04] Learning-Based Cooperative Mobility Control for Autonomous Drone-Delivery, *IEEE Transactions on Vehicular Technology*, 73(4):4870–4885 (2024) (S. Park, C. Park, J. Kim)
- [Access'24.04] Dynamic Quantum Federated Learning for Satellite-Ground Integrated Systems using Slimmable Quantum Neural Networks, *IEEE Access*, 12:58239–58247 (2024) (S. Park, S. Jung, J. Kim)
- [Access'24.04] Quantum Reinforcement Learning for Spatio-Temporal Prioritization in Metaverse, *IEEE Access*, 12:54732–54744 (2024) (S. Park, H. Baek, J. Kim)
- [TWC'24.03] Joint User Clustering, Beamforming, and Power Allocation for mmWave-NOMA with Imperfect SIC, *IEEE Transactions on Wireless Communications*, 23(3):2025–2038 (2024) (B. Lim, W.J. Yun, J. Kim, Y.-C. Ko)
- [TGCN'24.03] Joint Delay-Sensitive and Power-Efficient Quality Control of Dynamic Video Streaming using Adaptive Super-Resolution, *IEEE Transactions on Green Communications and Networking*, 8(1):103–117 (2024) (M. Choi, W.J. Yun, S.B. Son, S. Park, J. Kim)
- [TIV'24.02] Intelligent Caching for Seamless High-Quality Streaming in Vehicular Networks: A Multi-Agent Reinforcement Learning Approach, *IEEE Transactions on Intelligent Vehicles*, 9(2):3672–3686 (2024) (M. Choi, T. Xiang, J. Kim)
- [TNNLS'24.02] Hierarchical Deep Reinforcement Learning-based Propofol Infusion Assistant Framework in Anesthesia, *IEEE Transactions on Neural Networks and Learning Systems*, 35(2):2510–2521 (2024) (W.J. Yun, M. Shin, D. Mohaisen, K. Lee, J. Kim)
- [TMC'24.01] Learning Location from Shared Elevation Profiles in Fitness Apps: A Privacy Perspective, *IEEE Transactions on Mobile Computing*, 23(1):581–596 (2024) (U. Meteriz, N.F. Yildiran, J. Kim, D. Mohaisen)
- [TON'23.12] SlimFL: Federated Learning with Superposition Coding over Slimmable Neural Networks, *IEEE/ACM Transactions on Networking*, 31(6):2499–2514 (2023) (W.J. Yun, Y. Kwak, H. Baek, S. Jung, M. Ji, M. Bennis, J. Park, J. Kim)
- [IOTI'23.11] Quantum Multiagent Actor-Critic Networks for Cooperative Mobile Access in Multi-UAV Systems, *IEEE Internet of Things Journal*, 10(22):20033–20048 (2023) (C. Park, W.J. Yun, J.P. Kim, S. Park, T.K. Rodrigues, S. Jung, J. Kim)
- [TVT'23.11] Two-Stage Self-Adaptive Task Outsourcing Decision Making for Edge-Assisted Multi-UAV Networks, *IEEE Transactions on Vehicular Technology*, 72(11):14889–14905 (2023) (S. Jung, C. Park, M. Leorato, J.-H. Kim, J. Kim)
- [IC'23.09-10] EQuaTE: Efficient Quantum Train Engine for Run-Time Dynamic Analysis and Visual Feedback in Autonomous Driving, *IEEE Internet Computing*, 27(5):24–31 (2023) (S. Park, H. Feng, C. Park, Y.K. Lee, S. Jung, J. Kim)
- [OJCS'23.09] Real-Time High-Quality Visualization for Volumetric Contents Rendering: A Lyapunov Optimization Framework, *IEEE Open Journal of the Computer Society*, 4:243–252 (2023) (H. Baek, R. Lee, S. Jung, J. Kim, S. Park)
- [TIV'23.08] Multi-Agent Reinforcement Learning for Cooperative Air Transportation Services in City-Wide Autonomous Urban Air Mobility, *IEEE Transactions on Intelligent Vehicles*, 8(8):4016–4030 (2023) (C. Park, G.S. Kim, S. Park, S. Jung, J. Kim)
- [IOTI'23.06] Quantum Multiagent Actor-Critic Neural Networks for Internet-Connected Multirobot Coordination in Smart Factory Management, *IEEE Internet of Things Journal*, 10(11):9942–9952 (2023) (W.J. Yun, J.P. Kim, S. Jung, J.-H. Kim, J. Kim)
- [Access'23.05] Entropy-Aware Similarity for Balanced Clustering: A Case Study with Melanoma Detection, *IEEE Access*, 11:46892–46902 (2023) (S.B. Son, S. Park, J. Kim)
- [Access'23.03] Audio-to-Visual Cross-Modal Generation of Birds, *IEEE Access*, 11:27719–27729 (2023) (J.Y. Shim, J. Kim, J.-K. Kim)
- [Access'23.02] Workload-Aware Scheduling using Markov Decision Process for Infrastructure-Assisted Learning-Based Multi-UAV Surveillance Networks, *IEEE Access*, 11:16533–16548 (2023) (S. Park, C. Park, S. Jung, J.-H. Kim, J. Kim)
- [TITS'23.01] Self-Configurable Stabilized Real-Time Detection Learning for Autonomous Driving Applications, *IEEE Transactions on Intelligent Transportation Systems*, 24(1):885–890 (2023) (W.J. Yun, S. Park, J. Kim, D. Mohaisen)
- [JCN'22.12] Neural Myerson Auction for Truthful and Energy-Efficient Autonomous Aerial Data Delivery, *Journal of Communications and Networks*, 24(6):730–741 (2022) (H. Lee, S. Kwon, S. Jung, J. Kim)

- [JCN'22.12] Parallelized and Randomized Adversarial Imitation Learning for Safety-Critical Self-Driving Vehicles, *Journal of Communications and Networks*, 24(6):710–721 (2022) (W.J. Yun, M. Shin, S. Jung, S. Kwon, J. Kim)
- [TII'22.10] Cooperative Multi-Agent Deep Reinforcement Learning for Reliable Surveillance via Autonomous Multi-UAV Control, *IEEE Transactions on Industrial Informatics*, 18(10):7086–7096 (2022) (W.J. Yun, S. Park, J. Kim, M. Shin, S. Jung, D. Mohaisen, J.-H. Kim)
- [TVT'22.07] Joint Pilot Design and Channel Estimation using Deep Residual Learning for Multi-Cell Massive MIMO under Hardware Impairments, *IEEE Transactions on Vehicular Technology*, 71(7):7599–7612 (2022) (B. Lim, W.J. Yun, J. Kim, Y.-C. Ko)
- [ISJ'22.06] Securing Heterogeneous IoT with Intelligent DDoS Attack Behavior Learning, *IEEE Systems Journal*, 16(2):1974–1983 (2022) (N.-N. Dao, T. Phan, U. Sa'ad, J. Kim, T. Bauschert, D.-T. Do, S. Cho)
- [CSM'22.06] Recent and Future Evolution of Wi-Fi, *IEEE Communications Standards Magazine*, 6(2):8–11 (2022) (E. Au, L. Wilhelmsson, T. Baykas, J. Kim)
- [TMC'22.05] Supremo: Cloud-Assisted Low-Latency Super-Resolution in Mobile Devices, *IEEE Transactions on Mobile Computing*, 21(5):1847–1860 (2022) (J. Yi, S. Kim, J. Kim, S. Choi)
- [TVT'22.05] Stabilized Detection Accuracy Maximization using Adaptive SAR Image Processing in LEO Networks, *IEEE Transactions on Vehicular Technology*, 71(5):5661–5665 (2022) (K. Kim, J.-H. Lee, S. Jung, J. Kim, J.-H. Kim)
- [ISJ'22.03] LiteZKP: Lightening Zero-Knowledge Proof-based Blockchains for IoT and Edge Platforms, *IEEE Systems Journal*, 16(1):112–123 (2022) (E. Boo, J. Kim, J. Ko)
- [TVT'22.02] Quality-Aware Deep Reinforcement Learning for Streaming in Infrastructure-Assisted Connected Vehicles, *IEEE Transactions on Vehicular Technology*, 71(2):2002–2017 (2022) (W.J. Yun, D. Kwon, M. Choi, J. Kim, G. Caire, A.F. Molisch)
- [ISJ'21.09] Intelligent Active Queue Management for Stabilized QoS Guarantees in 5G Mobile Networks, *IEEE Systems Journal*, 15(3):4293–4302 (2021) (S. Jung, J. Kim, J.-H. Kim)
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## Academic Activities

### Research Supervision

#### ■ Ph.D. Alumni

- Dr. Soohyun Park ('19.03–'23.08 (MS-PhD), '23.09–'24.02 (Postdoc)), Sookmyung Women's University (Professor)

- **Dr. Hankyul Baek** ('21.03–'24.02 (MS-PhD), '24.03–'26.02 (Postdoc)), Korea University (Postdoctoral Scholar)

#### ■ M.S. Alumni

- **Kyeongseon Kim** ('17.09–'19.08), POSTECH
- **Dohyun Kwon** ('18.03–'20.02), Hyundai Motors Group
- **Dohyun Kim** ('18.03–'20.02), Naver Webtoon
- **MyungJae Shin** ('18.03–'20.02), Naver
- **Jaeho Choi** ('19.03–'21.02), Korea Meteorological Administration [Military Service Exception]
- **Anna Yoo Jeong Ha** ('21.03–'23.02), The University of Chicago, Department of Computer Science (Ph.D. Student)

#### ■ Postdoctoral Scholars

- **Dr. Minseok Choi** ('18.09–'19.02, jointly with Prof. Andreas F. Molisch (USC)), **Kyung Hee University (Professor)**
- **Dr. Soyi Jung** ('21.03–'21.08, jointly with Prof. Marco Levorato (UC-Irvine)), **Ajou University (Professor)**
- **Dr. Ju-Hyung Lee** ('22.03–'23.02, jointly with Prof. Andreas F. Molisch (USC)), Nokia USA (Principal Engineer)

#### IEEE Activities (Membership, Editorial Boards, and Services)

- *Senior Member* (2018–), *Member* (2006–2017)
- *Associate Editor* (2025–), **IEEE Communications Surveys and Tutorials**
- *Editor* (2023–), **IEEE Internet of Things Journal**
- *Associate Editor* (2020–), **IEEE Transactions on Vehicular Technology**
- *Guest Editor*, **Journal of Communications and Networks** (S.I. on Quantum Technologies for Communication Systems)
- *Guest Editor*, **IEEE Communications Standards Magazine** (S.I. on Recent and Future Evolution of Wi-Fi)

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## References

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