Joongheon Kim

Associate Professor, Korea University – School of Electrical Engineering, Seoul, Korea
Visiting Professor, Seoul National University Hospital, Seoul, Korea
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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)
    Communications, Information, Learning & Quantum (CLIQ) Group
  – 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)
  – B.S. (03/1999–02/2004) in **Computer Science and Engineering**

Professional Affiliations

- **Korea University**, Seoul, Republic of Korea
  – **Professor (09/2019–)**, School of Electrical Engineering (Graduate: Department of Electrical and Computer Engineering)
  – **Adjunct Professor (03/2023–02/2028)**, Department of Communications Engineering (Samsung Electronics)
  – **Adjunct Professor (11/2022–02/2028)**, Department of Future Science and Technology Business (Graduate School)
  – **Adjunct Professor (03/2021–02/2026)**, Department of Semiconductor Engineering (SK Hynix)
  – **Affiliated Professor (03/2025–)**, Department of Defense Convergence Technology (LIG Nex1, Graduate School)
- **Chung-Ang University**, Seoul, Republic of Korea
  – **Assistant Professor (03/2016–08/2019)**, School of Computer Science and Engineering
- **Intel Corporation**, Santa Clara (Silicon Valley), California, USA
  – **Systems Engineer (09/2013–02/2016)**, Platform Engineering Group
- **University of Southern California – Viterbi School of Engineering**, Los Angeles, California, USA
  – **Ph.D. Student in Computer Science (08/2009–08/2014)**, Thomas Lord Department of Computer Science
  – **Annenberg Graduate Fellow (2009)**, 4-Year Full Scholarship for the Ph.D. Program in Computer Science
  – **Research Assistant (01/2011–08/2014)**, Communications, Information, Learning & Quantum (CLIQ) Group
  – **Teaching Assistant (01/2012–05/2013)**, Computer Science and Electrical Engineering Major Courses
- **InterDigital**, San Diego, California, USA
  – **Intern (05/2012–08/2012)**, Wireless Systems Evolution Department
- **LG Electronics – CTO Division**, Seoul, Republic of Korea
  – **Research Engineer (01/2006–08/2009)**, Multimedia Research Lab, Seocho R&D Campus
- **Korea University**, Seoul, Republic of Korea
  – **M.S. Student in Computer Science and Engineering (03/2004–02/2006)**, Department of Computer Science and Engineering
  – **Research Assistant (03/2004–02/2006)**, Network Research Lab

Professional Affiliations – Visiting for Quantum Machine Learning Research Collaboration

- **Seoul National University Hospital**, **Visiting Professor (10/2025–09/2026)**, Healthcare AI Research Institute
  Quantum Reinforcement Learning for Propofol Infusion Control in Anethesia
  Quantum Split Learning for Privacy-Preserving Geo-Distributed Medical Systems

University and Government R&D/Administrative Positions

- ■ **R&D Leadership at Universities**
  - **Korea University**, Seoul, Republic of Korea
    – **Director (07/2024–12/2031)**, Net-Zero CAFE Research Center (University IT Research Center (ITRC) Program, IITP)
    – **PI (07/2024–12/2031)**, Software Star-Lab (Quantum AI Empowered Second-Life Platform Technology)
- ■ **Administrative Services at Universities**
  - **Korea University**, Seoul, Republic of Korea
    – **Vice Department Chair (01/2025–08/2025)**, Academic Affairs, School of Electrical Engineering
    – **Deputy Vice President (02/2022–08/2024)**, Office of Academic Affairs
    – **Dean (06/2021–08/2023)**, Center for Teaching and Learning (CTL)
- ■ **Services for Government/National R&D**
  - **National AI Strategy Committee**, **Advisory Committee (12/2025–Present)**
  - **National Research Foundation of Korea**, **Review Board (11/2024–10/2026)**

Awards and Honors

Research and Academic Excellence (International)

- **Finalist, AAAI Student Abstract and Poster Session – Oral Presentation** 2026 (Top 35), 2023 (Top 25)
- **IEEE ICTC Best Paper Award** – *IEEE Communications Society* 2022
- **Spotlight, Oral Presentation** – *ICML Workshop on Dynamic Neural Networks (2022)* 2022
- **IEEE MMTC Best Journal Paper Award** – *IEEE Communications Society* 2021
- **IEEE ICOIN Best Paper Award** – *IEEE Computer Society* 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
  Awarded with Ph.D. Admission: 4 Year Full Scholarship (Tuition Waiver and $120,000 Stipend ($30,000/year for 4 years))
- **IEEE Seoul Section Student Paper Contest** Gold (2019), Silver (2025), Bronze (2025, 2024, 2024, 2023, 2020)
- **IEEE VTS Seoul Chapter Award** – *IEEE Vehicular Technology Society* 2023, 2022, 2022, 2021, 2021, 2019

Research and Academic Excellence (Korea Regional, *since 2016*)

- **HFR Paper Award (Area: Quantum Technologies and Quantum Communications)** – *KICS* 2025
- **Best Paper Award, The Journal of KICS** – *KICS* 2024
- **HFR Paper Award (Area: Quantum Technologies and Quantum Communications)** – *KICS* 2023
- **Haedong Young Scholar Award** – *KICS* and *Haedong Foundation* 2018
  For recognizing a researcher under the age of 40 who has made outstanding contributions to IT R&D

Korea University

- **Granite Tower Best Research Award (Top 3%)** – *Korea University* 2024
- **Best Research Achievement Award** –*Korea University, School of Electrical Engineering* 2024
- **Insung Research Grant Award** – *Korea University* 01/2023
  For recognizing professors in top 5% research excellence during the first 3 years at Korea University
- **Granite Tower Best Teaching Award (Top 5%)**, *Totally, 7 times*
  – Probability and Random Process KECE209-02 (2025)
  – Software Programming Basics GECT002-01 (2024), GECT002-06 (2025)
  – Computer Language and Laboratory EGRN151-07 (2019), EGRN151-06 (2021)
  – Introduction to Computers SEMI103 (2021)
  – Future Mobility Technology GEQR075 (2022)
- **Best Teaching Award (Top 20%)**, *Totally, 7 times*
  – Probability and Random Process KECE209-02 (2021), KECE209-02 (2022)
  – Software Programming Basics GECT002-02 (2024), GECT002-08 (2024), GECT002-09 (2025)
  – Computer Language and Laboratory EGRN151-09 (2020)
  – Object-Oriented Programming SEMI104 (2021)

Academic and University Services (International)

- **Certificate of Appreciation** – *IEEE Future Networks, AI/ML Working Group* 08/2025
- **Certificate of Appreciation** – *IEEE/IFIP WiOpt (2024)* 10/2024
- **Best Editor Award** – *ICT Express (Elsevier)* 07/2023
- **2022 Best Chapter Award, IEEE Vehicular Technology Society Chapter**, Awarded as a Treasure 2022
- **Appreciation Recognition** – *Daegu Gyeongbuk Institute of Science and Technology (DGIST)* 2021
- **Certificate of Appreciation** – *Department of Computer Science, University of Southern California* 2010

Academic and University Services (Korea Regional)

- **Outstanding Contribution Award**
  – The Korean Institute of Communication Sciences and Information Sciences (KICS) 2025, 2024, 2021, 2019
  – Korean Institute of Information Scientists and Engineers (KIISE) Information Network Society 2023, 2022
  – Open Standards and ICT Association (OSIA) 2025, 2021
  – The Institute of Electronics and Information Engineers (IEIE) 2025
- **Commemorative Plaque**, *KICS Excellent Lecture* (Title: Quantum Machine Learning and Software Technologies) 2025
- **Best Research Group Award**, *KICS Research Group in Quantum Communications and Quantum Computing* (Group Leader) 2025
- **Appreciation Recognition** – *Daegu Gyeongbuk Institute of Science and Technology (DGIST)* 2021

Student Awards (International)

- **IEEE TCSC Award for Excellence in Scalable Computing** (IEEE Computer Society), Awarded to *Soohyun Park* 2025
- **Young Scientist Award** (ICSANE 2025), Awarded to *Minji Lee* 2025
- **IEEE Vehicular Technology Society Student Scholarship Award (2025)**, Awarded to *Gyu Seon Kim* 2025
- **IEEE ICDCS Best Runner-Up Poster Paper Award (2025)**, Awarded to *Seok Bin Son, Soohyun Park* 2025

R&D Projects

University-Wide/Center Projects

- **Net-Zero CAFE Research Center** (07/2024–12/2031), **(Center Director)** — **ITRC (Korea Univ)**
- *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)**
- *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* (09/2020–11/2025) — **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), **(Software Star-Lab)** — **IITP**
- *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

- *Discovering Quantum-Advantage Cases for Industry Adoption* (09/2025–11/2025) — **KTL**
- *LEO Satellite Routing Research using Large Language Model and Reinforcement Learning* (05/2025–11/2025) — **ETRI**
- *Research on Generative Quantum Machine Learning Models* (04/2025–10/2025) — **ETRI Affiliated Research Institute**
- *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 Queuing 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, Selected Projects

- *Video Aware Wireless Networks (VAWN) Research Program* — **Intel Labs, Verizon Wireless, Cisco Systems**

- *60 GHz Real-Time Wireless Video Broadcasting* — **Disney Research Zürich**
- *Annenberg Graduate Fellowship Award* — **University of Southern California**

Korea University (KU), Selected Projects

- *Towards Agentic AI-Enabled Edge IoT Systems for Proactive Physical World Sensing and Control* (08/2025–07/2026)
  PKU-KU Joint Research Grant (Collaboration with Prof. Kaigui Bian at Peking University)
- *AI Teaching Assistant Research for LLM-based Large-Scale Education* (10/2024–02/2025) — **KU University College**
- *Autonomous Mobility Control using Quantum Deep Learning* (03/2023–02/2024) — **KU Insung Research Grant**
- *Mobile Access Algorithm Design using Economic Theory and AI* (03/2020–02/2021) — **KU Future Research Grant**

Selected Publications

- **10775+ Citations** (H-index: 51+, i10-index: 231+), obtained from Google Scholar Profile (as of December 14, 2025)
- **Journals and Magazines: 153** publications; among them, **114** IEEE/Nature/APS publications

Books

- *Fundamentals of 6G Communications and Networking*, Springer (2024) *(Editors: X. Lin, J. Zhang, Y. Liu, J. Kim)*

Selected Papers

■ *Magazines*

[MM'25.10-12] Quantum Jump to Virtual Worlds: High-Quality Multiple Virtual Meta-Space Realization in Metaverse, *IEEE MultiMedia*, 32(4):ppp–ppp *(S. Park, J. Kim)*

[CIM'25.08] Quantum-Eyes: Scalable Quantum Convolutional Neural Networks for Low-Overhead Object Detection, *IEEE Computational Intelligence Magazine*, 20(3):63–74 *(J. Kim, E. J. Roh, C. Im, S. Park)*

[CM'24.12] The Matrix: Quantum AI for Interacting Two Worlds in Prioritized Metaverse Spaces, *IEEE Communications Magazine*, 62(12):97–103 *(S. Park, H. Baek, 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 *(S. Park, G. S. Kim, Z. Han, J. Kim)*

[CM'24.06] Quantum Multi-Agent Reinforcement Learning for Autonomous Mobility Cooperation, *IEEE Communications Magazine*, 62(6):106–112 *(S. Park, J. P. Kim, C. Park, S. Jung, 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 *(S. Park, H. Feng, C. Park, Y. K. Lee, S. Jung, J. Kim)*

[CSM'22.06] Recent and Future Evolution of Wi-Fi, *IEEE Communications Standards Magazine*, 6(2):8–11 *(E. Au, L. Wilhelmsson, T. Baykas, J. Kim)*

[PIEEE'21.05] Communication-Efficient and Distributed Learning Over Wireless Networks: Principles and Applications, *Proceedings of the IEEE*, 109(5):796–819 *(J. Park, S. Samarakoon, A. Elgabli, J. Kim, M. Bennis, S.-L. Kim, M. Debbah)*

[CM'19.03] New Challenges of Wireless Power Transfer and Secured Billing for Internet of Electric Vehicles, *IEEE Communications Magazine*, 57(3):118–124 *(L. Park, S. Jeong, D. S. Lakew, J. Kim, S. Cho)*

[VTM'17.03] The Useful Impact of Carrier Aggregation: A Measurement Study in South Korea for Commercial LTE-Advanced Networks, *IEEE Vehicular Technology Magazine*, 12(1):55–62 *(S. Lee, S. Hyeon, J. Kim, H. Roh, W. Lee)*

■ *Top-Tier Journals*

[TAES.*accepted*] Integrated Control, Communication, and Computing for Mission-Critical Embedded Unmanned Aerial Vehicles, *IEEE Transactions on Aerospace and Electronic Systems*, v(n):ppp–ppp *(G. S. Kim, S. Park, S. Jung, D. Mohaisen, J. Kim)*

[TMC'26.01] Quantum Multi-Agent Reinforcement Learning for Cooperative Mobile Access in Space-Air-Ground Integrated Networks, *IEEE Transactions on Mobile Computing*, 25(1):1200–1218 *(G. S. Kim, Y. Cho, J. Chung, S. Park, S. Jung, Z. Han, J. Kim)*

[TON'25.08] Slimmable Federated Reinforcement Learning for Energy-Efficient Proactive Caching, *IEEE Transactions on Networking*, 33(4):2079–2094 *(H. Baek, G. S. Kim, S. Park, A. F. Molisch, J. Kim)*

[TAES'25.08] Quantum Multiagent Reinforcement Learning for Joint Cube-Satellites and High-Altitude Long-Endurance Aerial Vehicles in SAGIN, *IEEE Transactions on Aerospace and Electronic Systems*, 61(4):9490–9510 *(G. S. Kim, Y. Cho, S. Park, S. Jung, 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 *(E. J. Roh, H. Baek, D. Kim, 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 *(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 *(S. Park, J. Chung, C. Park, S. Jung, M. Choi, S. Cho, 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 *(B. Lim, W. Yun, J. Kim, Y.-C. Ko)*

[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 *(W. 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 *(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 *(W. Yun, Y. Kwak, H. Baek, S. Jung, M. Ji, M. Bennis, J. Park, J. Kim)*

[TMC'22.05] Supremo: Cloud-Assisted Low-Latency Super-Resolution in Mobile Devices, *IEEE Transactions on Mobile Computing*, 21(5):1847–1860 *(J. Yi, S. Kim, J. Kim, S. Choi)*

[TMC'21.06] A Personalized Preference Learning Framework for Caching in Mobile Networks, *IEEE Transactions on Mobile Computing*, 20(6):2124–2139 *(A. Malik, K. S. Kim, J. Kim, W.-Y. Shin)*

[TWC'21.04] Probabilistic Caching and Dynamic Delivery Policies for Categorized Contents and Consecutive User Demands, *IEEE Transactions on Wireless Communications*, 20(4):2685–2699 *(M. Choi, A. F. Molisch, D.-J. Han, D. Kim, J. Kim, J. Moon)*

[TWC'20.12] Joint Distributed Link Scheduling and Power Allocation for Content Delivery in Wireless Caching Networks, *IEEE Transactions on Wireless Communications*, 19(12):7810–7824 *(M. Choi, A. F. Molisch, J. Kim)* **(IEEE ComSoc MMTC Best Journal Paper Award)**

[TWC'19.12] Markov Decision Policies for Dynamic Video Delivery in Wireless Caching Networks, *IEEE Transactions on Wireless Communications*, 18(12):5705–5718 *(M. Choi, A. No, M. Ji, J. Kim)*

[TWC'19.10] Dynamic Power Allocation and User Scheduling for Power-Efficient and Delay-Constrained Multiple Access Networks, *IEEE Transactions on Wireless Communications*, 18(10):4846–4858 *(M. Choi, J. Kim, J. Moon)*

[TCAD'19.09] TEI-ULP: Exploiting Body Biasing to Improve the TEI-Aware Ultra-Low Power Methods, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 38(9):1758–1770 *(W. Lee, T. Kang, J. Lee, K. Han, J. Kim, M. Pedram)*

[TMC'19.07] Seamless Dynamic Adaptive Streaming in LTE/Wi-Fi Integrated Network under Smartphone Resource Constraints, *IEEE Transactions on Mobile Computing*, 18(7):1647–1660 *(J. Koo, J. Yi, J. Kim, M. A. Hoque, S. Choi)*

[JSAC'18.11] SGCO: Stabilized Green Crosshaul Orchestration for Dense IoT Offloading Services, *IEEE Journal on Selected Areas in Communications*, 36(11):2538–2548 *(N.-N. Dao, D.-N. Vu, W. Na, J. Kim, S. Cho)*

[JSAC'18.06] Wireless Video Caching and Dynamic Streaming under Differentiated Quality Requirements, *IEEE Journal on Selected Areas in Communications*, 36(6):1245–1257 *(M. Choi, J. Kim, J. Moon)*

[TON'16.08] Quality-Aware Streaming and Scheduling for Device-to-Device Video Delivery, *IEEE/ACM Transactions on Networking*, 24(4):2319–2331 *(J. Kim, G. Caire, A. F. Molisch)*

■ *Top-Tier Conferences: AI (especially, Quantum Machine Learning) and Networks*

[IJCAI-ECAI'26] (Double Blind Review) *(S. Oh, C. Im, S. Park, J. Kim)*

[ICDCS'26] (Double Blind Review) *(E. J. Roh, C. Im, Y. Zheng, S. Park, J. Kim, W. Lee)*

[CVPR'26] (Double Blind Review) *(S. Oh, C. Im, S. Park, J. Kim)*

[WiOpt'26] (Review) LLM-Guided Model Adaptation for Agentic Quantum-AI in Large-Scale Differentiated Short-Form Video Services *(H. Ahn, H. Lee, K. Bian, S. Park, S. Jung, M. Choi, J. Kim)*

[ICASSP'26] How Can Quantum Deep Learning Improve Large Language Models? *(E. J. Roh, H. Ahn, S. Y.-C. Chen, S. Park, J. Kim)*

[ICLR'26] (Double Blind Review) *(H. Lee, J. Kim, S. W. Yoon)* *(Acceptance Rate: xx.xx%)*

[CIKM'25] Quantum-Amplitude Embedded Adaptation for Parameter-Efficient Fine-Tuning in Large Language Models *(E. J. Roh, J. Kim)* *(Acceptance Rate: 30.63%)*

[CIKM'25] Filtered One-Shot Training for Quantum Architecture Search *(S. B. Son, S. Y.-C. Chen, J. Kim, S. Park)* *(Acceptance Rate: 30.63%)*

[CIKM'25] LLM-based Interactive Coding Education via Predictive Query Management and Student-Centered Fine-Tuning: Design and Implementation with 1500-Student Class Data *(G. Youn, J. Lee, J. Kim, C. Yoo)* *(Acceptance Rate: 30.63%)*

[IPDPS'25] AQUA: Hardware-Agnostic Qubit Allocation for Quantum Multi-Programming *(X. Piao, J. Shim, J. Kim, J. Kim)* *(Acceptance Rate: 24.71%)*

[WiOpt'25] Stabilized Robust Control for Lightweight Autonomous Aircraft Mobility: A Quantum Reinforcement Learning Approach *(G. S. Kim, J. Chung, T. Q. Duong, S. Park, J. Kim)*

[NOMS'25] Joint Multi-Agent Reinforcement Learning and Message-Passing for Distributed Multi-UAV Network Management using Conflict Graphs *(Y. Cho, H. Lee, S. Park, J. Kim)*

[ICASSP'25] Quantum Reinforcement Learning for Coordinated Satellite Systems *(G. S. Kim, S. Chen, S. Park, J. Kim)*

[CIKM'24] Hands-On Introduction to Quantum Machine Learning *(S. Y.-C. Chen, J. Kim)*, **ACM CIKM Tutorial (2024)**

[WiOpt'24] Advanced Taxiing Path Guidance using Multi-Agent Reinforcement Learning for Air Traffic Management *(S. Lee, G. S. Kim, S. Park, J. Kim)*

[CIKM'23] Quantum Split Learning for Privacy-Preserving Information Management *(S. Park, H. Baek, J. Kim)* *(Acceptance Rate: 27.44%)*

[CIKM'23] Logarithmic Dimension Reduction for Quantum Neural Networks *(H. Baek, S. Park, J. Kim)* *(Acceptance Rate: 27.44%)*

[AAAI'23] Quantum Multi-Agent Meta Reinforcement Learning *(W. Yun, J. Park, J. Kim)* *(Acceptance Rate: 19.61%)*

[CIKM'22] Hierarchical Reinforcement Learning using Gaussian Random Trajectory Generation in Autonomous Furniture Assembly *(W. Yun, D. Mohaisen, S. Jung, J.-K. Kim, J. Kim)* *(Acceptance Rate: 29.64%)*

[WiOpt'22] Cooperative Video Quality Adaptation for Delay-Sensitive Dynamic Streaming using Adaptive Super-Resolution *(M. Choi, W. Yun, J. Kim)*

[INFOCOM'22] Joint Superposition Coding and Training for Federated Learning over Multi-Width Neural Networks *(H. Baek, W. Yun, Y. Kwak, S. Jung, M. Ji, M. Bennis, J. Park, J. Kim)* *(Acceptance Rate: 19.93%)*

[ICDCS'20] Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications *(Ü. Meteriz, N. F. Yildiran, J. Kim, D. Mohaisen)* *(Acceptance Rate: 17.98%)*

[IJCAI'19] Randomized Adversarial Imitation Learning for Autonomous Driving *(M. Shin, J. Kim)* *(Acceptance Rate: 17.89%)*

[ICDCS'18] ShmCaffe: A Distributed Deep Learning Platform with Shared Memory Buffer for HPC Architecture *(S. Ahn, J. Kim, E. Lim, W. Choi, A. Mohaisen, S. Kang)* *(Acceptance Rate: 20.63%)*

[ACM-MM'17] REQUEST: Seamless Dynamic Adaptive Streaming over HTTP for Multi-Homed Smartphone under Resource Constraints *(J. Koo, J. Yi, J. Kim, M. A. Hoque, S. Choi)* *(Acceptance Rate: 27.63%)*

[MobiSys'10] Energy-Efficient Rate-Adaptive GPS-based Positioning for Smartphones *(J. Paek, J. Kim, R. Govindan)* *(Acceptance Rate: 19.84%)*

■ *Journals*

[IOTJ.*accepted*] Hybrid Large Language Model and Reinforcement Learning for Energy-Efficient Multi-Satellite Scheduling: Boosting the Performance from Scratch, *IEEE Internet of Things Journal*, v(n):ppp–ppp *(H. Ahn, G. S. Kim, I.-S. Cho, S. Jung, J. Kim)*

[TVT'26.04] Large-Scale Battery-Conscious Collision-Free Path-Finding for Sustainable and Autonomous Multi-AGV Mobility Control, *IEEE Transactions on Vehicular Technology*, 75(4):ppp–ppp *(Y. Cho, S. Ahn, S. Park, J. Kim)*

[TIV'25.11] Adaptive Quantum Federated Learning for Autonomous Surveillance Multi-Drone Networks, *IEEE Transactions on Intelligent Vehicles*, 10(11):5055–5059 *(S. Park, C. Park, S. Jung, J. Kim)*

[JS'25.10] Joint Scalable Quantum Convolutional Neural Network and Reverse-Fidelity Training for High-Accurate Recognition in Unmanned Aerial Vehicle Surveillance, *The Journal of Supercomputing*, 81(16):1495 *(E. J. Roh, J. Kim, S. Jung, S. Park)*

[TASE'25.09] Adaptive Excavation Automation in Complex Soil Environments using Reinforcement Learning, *IEEE Transactions on Automation Science and Engineering*, 22:21181–21194 *(M. Shin, J. Cho, J. Kim, S. Jung)*

[ESWA'25.09] Correlation-Assisted Spatio-Temporal Reinforcement Learning for Stock Revenue Maximization, *Expert Systems with Applications*, 289:128361 *(J. Chung, M. Kim, S. Min, H. Choi, S. Park, J. Kim)*

[IOTJ'25.08] Joint Interference Approximation and Guard-Band Management for Spectrum-Efficient Integrated NTN-TN Networks, *IEEE Internet of Things Journal*, 12(15):32220–32236 *(J. Jang. J. Kim, J. Kim, S. Jung)*

[IOTJ'25.08] Carbon-Aware Edge Computing for Internet of Everything Networks: A Digital Twin Approach, *IEEE Internet of Things Journal*, 12(15):29240–29251 *(D. V. Huynh, S. R. Khosravirad, V. Sharma, J. Kim, B. Canberk, T. Q. Duong)*

[JCN'25.08] Stabilized Classification Control using Multi-Stage Quantum Convolutional Neural Networks for Autonomous Driving, *Journal of Communications and Networks*, 27(4):264-272 *(E. J. Roh, S. Park, S. Jung, J. Kim)*

[JCN'25.08] Special Issue on Quantum Technologies for Communication Systems, *Journal of Communications and Networks*, 27(4):217–221 *(S. Y. Shin, Z. Han, S. Ali, S. Y.-C. Chen, Y. Liu, S. Park, J. Kim)*

[IOTJ'25.07] Quantum Reinforcement Learning for Lightweight LEO Satellite Routing, *IEEE Internet of Things Journal*, 12(14):28986–29004 *(G. S. Kim, S. Lee, I.-S. Cho, S. Park, J. Kim)*

[IOTJ'25.07] Privacy-Preserving Uncertainty Calibration using Perceptual Encryption in Cloud-Edge Collaborative Artificial Intelligence of Things, *IEEE Internet of Things Journal*, 12(13):25424–25441 *(I. Ahmad, J. Kim, S. Shin)*

[IOTJ'25.07] Joint Quantum Reinforcement Learning and Neural Myerson Auction for High-Quality Digital-Twin Services in Multitier Networks, *IEEE Internet of Things Journal*, 12(13):23722–23735 *(S. Park, G. S. Kim, J. Kim)*

[NN'25.07] Quantum Federated Learning with Pole-Angle Quantum Local Training and Trainable Measurement, *Neural Networks*, 187:107301 *(S. Park, H. Lee, S. B. Son, S. Jung, J. Kim)*

[JS'25.07] Quantum Infidelity Codistillation for Fast and Accurate Distributed Quantum Machine Learning, *The Journal of Supercomputing*, 81(10):1151 *(S. Oh, J. Kim, J. Park, H. Baek, H. Lee, J. Kim, S.-L. Kim)*

[IOTJ'25.06] Entanglement-Controlled Quantum Federated Learning, *IEEE Internet of Things Journal*, 12(11):18318–18330 *(S. Park, H. Lee, S. Jung, J. Park, M. Bennis, J. Kim)*

[JS'25.06] SQUAD: Software Testing for Quantum Distributed Learning Software, *The Journal of Supercomputing*, 81(9):1071 *(S. Park, J. H. Cho, H. J. Yook, G. S. Jhun, Y. K. Lee, J. Kim, S. Park)*

[TVT'25.05] Dynamic Quantum Federated Learning for UAV-based Autonomous Surveillance, *IEEE Transactions on Vehicular Technology*, 74(5):8158-8170 *(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):1677–1689 *(S. Jung, J.-H. Kim, J. Kim)*

[JS'25.02] Hybrid Quantum-Classical 3D Object Detection using Multi-Channel Quantum Convolutional Neural Network, *The Journal of Supercomputing*, 81(3):455 *(E. J. Roh, J. Y. Shim, J. Kim, S. Park)*

[EL'25.01] Fast Batch Gradient Descent in Quantum Neural Networks, *IET Electronics Letters*, 61(1):e70162 *(J. Y. Shim, J. Kim)*

[IOTJ'24.12] Markov Decision Policies for Distributed Angular Routing in LEO Mobile Satellite Constellation Networks, *IEEE Internet of Things Journal*, 11(23):38744–38754 *(S. Park, G. S. Kim, S. Jung, J. Kim)*

[TIV'24.11] Neural Myerson Auction for Truthful and Distributed Mobile Charging in UAV-Assisted Digital-Twin Networks, *IEEE Transactions on Intelligent Vehicles*, 9(11):7326–7338 *(S. Jung, H. Baek, 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 *(J. Kim, S. Park, U. Jo, T. Kim, S. Jung, J. Kim)*

[FGCS'24.10] AQUA: Analytics-driven Quantum Neural Network (QNN) User Assistance for Software Validation, *Future Generation Computer Systems*, 159:545-556 *(S. Park, H. Baek, J. W. Yoon, Y. K. Lee, J. Kim)*

[ETRI'24.10] Trends in Quantum Reinforcement Learning: State-of-the-Arts and the Road Ahead, *ETRI Journal*, 46(5):748-758 *(S. Park, 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 *(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 *(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 *(S. Park, C. Park, S. Jung, M. Choi, J. Kim)*

[MTAP'24.07] Stabilized Performance Maximization for GAN-based Real-Time Authentication Image Generation over Internet, *Multimedia Tools and Applications*, 83(22):62045-62059 *(J. Y. Shim, S. Jung, J. Kim, J.-K. Kim)*

[TVT'24.04] Learning-Based Cooperative Mobility Control for Autonomous Drone-Delivery, *IEEE Transactions on Vehicular Technology*, 73(4):4870–4885 *(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 *(S. Park, S. Jung, J. Kim)*

[Access'24.04] Quantum Reinforcement Learning for Spatio-Temporal Prioritization in Metaverse, *IEEE Access*, 12:54732–54744 *(S. Park, H. Baek, J. Kim)*

[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 *(M. Choi, W. 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 *(M. Choi, T. Xiang, J. Kim)*

[EL'23.12] Two-Stage Architectural Fine-Tuning for Neural Architecture Search in Efficient Transfer Learning, *IET Electronics Letters*, 59(24):e13066 *(S. Park, S. B. Son, Y. K. Lee, S. Jung, J. Kim)*

[IOTJ'23.11] Quantum Multiagent Actor–Critic Networks for Cooperative Mobile Access in Multi-UAV Systems, *IEEE Internet of Things Journal*, 10(22):20033–20048 *(C. Park, W. 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 *(S. Jung, C. Park, M. Levorato, J.-H. Kim, J. Kim)*

[ETRI'23.10] Joint Frame Rate Adaptation and Object Recognition Model Selection for Stabilized Unmanned Aerial Vehicle Surveillance, *ETRI Journal*, 45(5):811–821 *(G. S. Kim, H. Lee, S. Park, J. Kim)*

[ETRI'23.10] Two Tales of Platoon Intelligence for Autonomous Mobility Control: Enabling Deep Learning Recipes, *ETRI Journal*, 45(5):735–745 *(S. Park, H. Lee, C. Park, S. Jung, M. Choi, J. Kim)*

[ETRI'23.10] Special Issue on Autonomous Unmanned Aerial/Ground Vehicles and their Applications, *ETRI Journal*, 45(5):731-734 *(J. Kim, Y.-C. Lee, J. H. Lee, J. S. Choi)*

[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 *(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 *(C. Park, G. S. Kim, S. Park, S. Jung, J. Kim)*

[NN'23.08] Stereoscopic Scalable Quantum Convolutional Neural Networks, *Neural Networks*, 165:860-867 *(H. Baek, W. Yun, S. Park, J. Kim)*

[IOTJ'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 *(W. Yun, J. P. Kim, S. Jung, J.-H. Kim, J. Kim)*

[ICTE'23.06] Quantum Distributed Deep Learning Architectures: Models, Discussions, and Applications, *ICT Express*, 9(3):486-491 *(Y. Kwak, W. Yun, J. P. Kim, H. Cho, J. Park, M. Choi, S. Jung, J. Kim)*

[Access'23.05] Entropy-Aware Similarity for Balanced Clustering: A Case Study with Melanoma Detection, *IEEE Access*, 11:46892–46902 *(S. B. Son, S. Park, J. Kim)*

[ComNet'23.04] Self-Adaptive End-to-End Resource Management for Real-Time Monitoring in Cyber-Physical Systems, *Computer Networks*, 225:109669 *(H.-C. Jo, H.-W. Jin, J. Kim)*

[ComNet'23.04] Truthful and Performance-Optimal Computation Outsourcing for Aerial Surveillance Platforms via Learning-based Auction, *Computer Networks*, 225:109651 *(S. Jung, J.-H. Kim, D. Mohaisen, J. Kim)*

[CIBM'23.04] Deep Reinforcement Learning-based Propofol Infusion with a 3,000-subject Dataset in Anesthesia, *Computers in Biology and Medicine*, 156:106739 *(W. Yun, M. Shin, S. Jung, J. Ko, H.-C. Lee, J. Kim)*

[Access'23.03] Audio-to-Visual Cross-Modal Generation of Birds, *IEEE Access*, 11:27719–27729 *(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 *(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 *(W. 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 *(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 *(W. 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 *(W. Yun, S. Park, J. Kim, M. Shin, S. Jung, D. Mohaisen, J.-H. Kim)*

[ICTE'22.09] Trustworthy Handover in LEO Satellite Mobile Networks, *ICT Express*, 8(3):432-437 *(S. Jung, M. Lee, J. Kim, M. Yun, J. Kim, J. 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 *(B. Lim, W. Yun, J. Kim, Y.-C. Ko)*

[ITU'22.07] Dynamic Resource Scheduling for Real-Time Group Broadcasting in 6G Cellular Vehicular Networks, *ITU Journal on Future and Evolving Technologies*, 3(1):81-88 *(S. Jung, M. Levorato, J. Kim)*

[ISJ'22.06] Securing Heterogeneous IoT with Intelligent DDoS Attack Behavior Learning, *IEEE Systems Journal*, 16(2):1974–1983 *(N.-N. Dao, T. Phan, U. Sa'ad, J. Kim, T. Bauschert, D.-T. Do, S. Cho)*

[TVT'22.05] Stabilized Detection Accuracy Maximization using Adaptive SAR Image Processing in LEO Networks, *IEEE Transactions on Vehicular Technology*, 71(5):5661–5665 *(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 *(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 *(W. Yun, D. Kwon, M. Choi, J. Kim, G. Caire, A. F. Molisch)*

[Nature'22.01] Feasibility Study of Multi-Site Split Learning for Privacy-Preserving Medical Systems under Data Imbalance Constraints in COVID-19, X-Ray, and Cholesterol Dataset, *Nature Scientific Reports*, 12:1534 *(Y. J. Ha, G. Lee, M. Yoo, S. Jung, S. Yoo, J. Kim)*

[RTIP'21.10] Adaptive and Stabilized Real-Time Super-Resolution Control for UAV-Assisted Smart Harbor Surveillance Platforms, *Journal of Real-Time Image Processing*, 18(5):1815-1825 *(S. Jung, J. Kim)*

[ISJ'21.09] Intelligent Active Queue Management for Stabilized QoS Guarantees in 5G Mobile Networks, *IEEE Systems Journal*, 15(3):4293–4302 *(S. Jung, J. Kim, J.-H. Kim)*

[Access'21.09] Spatio-Temporal Split Learning for Privacy-Preserving Medical Platforms: Case Studies with COVID-19 CT, X-Ray, and Cholesterol Data, *IEEE Access*, 9:121046–121059 *(Y. J. Ha, M. Yoo, G. Lee, S. Jung, S. Choi, J. Kim, S. Yoo)*

[TVT'21.08] Infrastructure-Assisted On-Driving Experience Sharing for Millimeter-Wave Connected Vehicles, *IEEE Transactions on Vehicular Technology*, 70(8):7307–7321 *(S. Jung, J. Kim, M. Levorato, C. Cordeiro, J.-H. Kim)*

[TVT'21.06] Orchestrated Scheduling and Multi-Agent Deep Reinforcement Learning for Cloud-Assisted Multi-UAV Charging Systems, *IEEE Transactions on Vehicular Technology*, 70(6):5362–5377 *(S. Jung, W. Yun, M. Shin, J. Kim, J.-H. Kim)*

[Access'21.06] Joint Mobile Charging and Coverage-Time Extension for Unmanned Aerial Vehicles, *IEEE Access*, 9:94053-94063 *(S. Park, M. Choi, W.-Y. Shin, J. Kim)*

[ICTE'21.06] Truthful Electric Vehicle Charging via Neural-Architectural Myerson Auction, *ICT Express*, 7(2):196-199 *(H. Lee, S. Jung, J. Kim)*

[JCN'21.04] Stabilized Adaptive Sampling Control for Reliable Real-Time Learning-based Surveillance Systems, *Journal of Communications and Networks*, 23(2):129–137 *(D. Kim, S. Park, J. Kim, J. Y. Bang, S. Jung)*

[JCN'21.04] Dynamic Video Delivery using Deep Reinforcement Learning for Device-to-Device Underlaid Cache-Enabled Internet-of-Vehicle Networks, *Journal of Communications and Networks*, 23(2):117–128 *(M. Choi, M. Shin, J. Kim)*

[JNCA'21.04] Contra-*: Mechanisms for Countering Spam Attacks on Blockchain's Memory Pools, *Journal of Network and Computer Applications*, 179:102971 *(M. Saad, J. Kim, D. Nyang, D. Mohaisen)*

[ISJ'21.03] Multiscale LSTM-Based Deep Learning for Very-Short-Term Photovoltaic Power Generation Forecasting in Smart City Energy Management, *IEEE Systems Journal*, 15(1):346–354 *(D. Kim, D. Kwon, L. Park, J. Kim, S. Cho)*

[ICTE'21.03] Distributed Deep Reinforcement Learning for Autonomous Aerial eVTOL Mobility in Drone Taxi Applications, *ICT Express*, 7(1):1-4 *(W. Yun, S. Jung, J. Kim, J.-H. Kim)*

[BC'21.03] Empirically Comparing the Performance of Blockchain's Consensus Algorithms, *IET Blockchain*, 1(1):56-64 *(A. Ahmad, A. Alabduljabbar, M. Saad, D. Nyang, J. Kim, D. Mohaisen)*

[IOTJ'20.10] Multiagent DDPG-Based Deep Learning for Smart Ocean Federated Learning IoT Networks, *IEEE Internet of Things Journal*, 7(10):9895–9903 *(D. Kwon, J. Jeon, S. Park, J. Kim, S. Cho)*

[JCN'20.08] Self-Adaptive Power Control with Deep Reinforcement Learning for Millimeter-Wave Internet-of-Vehicles Video Caching, *Journal of Communications and Networks*, 22(4):326–337 *(D. Kwon, J. Kim, D. Mohaisen, W. Lee)*

[Access'20.06] Blind Signal Classification Analysis and Impact on User Pairing and Power Allocation in Nonorthogonal Multiple Access, *IEEE Access*, 8:100916–100929 *(M. Choi J. Kim)*

[TII'20.05] Cooperative Management for PV/ESS-Enabled Electric-Vehicle Charging Stations: A Multiagent Deep Reinforcement Learning Approach, *IEEE Transactions on Industrial Informatics*, 16(5):3493–3503 *(M. Shin, D. Choi, J. Kim)*

[ETRI'20.04] Simulation and Measurement: Feasibility Study of Tactile Internet Applications for mmWave Virtual Reality, *ETRI Journal*, 42(2):163-174 *(W. Na, N.-N. Dao, J. Kim, E.-S. Ryu, S. Cho)*

[ISJ'20.03] Towards Characterizing Blockchain-based Cryptocurrencies for Highly-Accurate Predictions, *IEEE Systems Journal*, 14(1):321–332 *(M. Saad, J. Choi, D. Nyang, J. Kim, A. Mohaisen)* **(IEEE Systems Journal Best Paper Award)**

[JCN'20.02] Numerical Approximation of Millimeter-Wave Frequency Sharing between Cellular Systems and Fixed Service Systems, *Journal of Communications and Networks*, 22(1):37–45 *(S. Han, J.-W. Choi, J. Kim)*

[JAIHC'20.01] A Novel Network Virtualization based on Data Analytics in Connected Environment, *Journal of Ambient Intelligence and Humanized Computing*, 11(1):75-86 *(K.-H. N. Bui, S. Cho, J. Jung, J. Kim, O-J. Lee, W. Na)*

[IOTJ'19.10] Two-Stage IoT Device Scheduling with Dynamic Programming for Energy Internet Systems, *IEEE Internet of Things Journal*, 6(5):8782–8791 *(L. Park, C. Lee, J. Kim, A. Mohaisen, S. Cho)*

[TVT'19.10] Blind Signal Classification for Non-Orthogonal Multiple Access in Vehicular Networks, *IEEE Transactions on Vehicular Technology*, 68(10):9722–9734 *(M. Choi, D. Yoon, J. Kim)*

[WPC'19.08] Semantic Hashtag Relation Classification Using Co-occurrence Word Information, *Wireless Personal Communications*, 107(3):1355-1365 *(S. Seo, J.-K. Kim, S.-I. Kim, J. Kim, J. Kim)*

[TVT'19.05] Auction-Based Charging Scheduling With Deep Learning Framework for Multi-Drone Networks, *IEEE Transactions on Vehicular Technology*, 68(5):4235–4248 *(M. Shin, J. Kim, M. Levorato)*

[FGCS'19.04] Resource-Aware Relay Selection for Inter-Cell Interference Avoidance in 5G Heterogeneous Network for Internet of Things Systems, *Future Generation Computer Systems*, 93:877-887 *(N.-N. Dao, M. Park, J. Kim, J. Paek, S. Cho)*

[TETT'19.04] Thriving on Chaos: Proactive Detection of Command and Control Domains in Internet of Things-Scale Botnets using DRIFT, *Transactions on Emerging Telecommunications Technologies*, 30(4):e3505 *(J. Spaulding, J. Park, J. Kim, D. Nyang, A. Mohaisen)*

[TIE'19.02] Joint Geometric Unsupervised Learning and Truthful Auction for Local Energy Market, *IEEE Transactions on Industrial Electronics*, 66(2):1499–1508 *(L. Park, S. Jeong, J. Kim, S. Cho)*

[IOTJ'18.12] Internet of Things for Smart Manufacturing System: Trust Issues in Resource Allocation, *IEEE Internet of Things Journal*, 5(6):4418–4427 *(S. Jeong, W. Na, J. Kim, S. Cho)*

[Access'18.05] Soft Memory Box: A Virtual Shared Memory Framework for Fast Deep Neural Network Training in Distributed High Performance Computing, *IEEE Access*, 6:26493–26504 *(S. Ahn, J. Kim, E. Lim, S. Kang)*

[TVT'18.04] Adaptive Detector Selection for Queue-Stable Word Error Rate Minimization in Connected Vehicle Receiver Design, *IEEE Transactions on Vehicular Technology*, 67(4):3635–3639 *(M. Choi, J. Kim, J. Moon)*

[IOTJ'18.02] Energy-Efficient Mobile Charging for Wireless Power Transfer in Internet of Things Networks, *IEEE Internet of Things Journal*, 5(1):79–92 *(W. Na, J. Park, C. Lee, K. Park, J. Kim, S. Cho)*

[TII'17.12] Residential Demand Response for Renewable Energy Resources in Smart Grid Systems, *IEEE Transactions on Industrial Informatics*, 13(6):3165–3173 *(L. Park, Y. Jang, S. Cho, J. Kim)*

[IOTJ'17.10] Feasibility Study of 60 GHz Millimeter-Wave Technologies for Hyperconnected Fog Computing Applications, *IEEE Internet of Things Journal*, 4(5):1165–1173 *(J. Kim, W. Lee)*

[Access'17.09] A Software-based Monitoring Framework for Time-Space Partitioned Avionics Systems, *IEEE Access*, 5:19132–19143 *(C. Shin, C. Lim, J. Kim, H. Roh, W. Lee)*

[RTIP'17.09] QoS Optimal Real-Time Video Streaming in Distributed Wireless Image-Sensing Platforms, *Journal of Real-Time Image Processing*, 13(3):547-556 *(J. Kim, E. Ryu)*

[Access'17.08] Energy-Efficient Stabilized Automatic Control for Multicore Baseband in Millimeter-Wave Systems, *IEEE Access*, 5:16584–16591 *(J. Kim, J.-J. Lee, J.-K. Kim, W. Lee)*

[Access'17.06] Adaptive Resource Balancing for Serviceability Maximization in Fog Radio Access Networks, *IEEE Access*, 5:14548–14559 *(N.-N. Dao, J. Lee, D.-N. Vu, J. Paek, J. Kim, S. Cho, K. Chung, C. Keum)*

[TVT'16.12] Performance of Video Streaming in Infrastructure-to-Vehicle Telematic Platforms With 60-GHz Radiation and IEEE 802.11ad Baseband, *IEEE Transactions on Vehicular Technology*, 65(12):10111–10115 *(J. Kim, S. Kwon, G. Choi)*

[Access'16.12] Numerical Simulation Study for Frequency Sharing between Micro-Cellular Systems and Fixed Service Systems in Millimeter-Wave Bands, *IEEE Access*, 4:9847–9859 *(J. Kim, L. Xian, A. S. Sadri)*

[RTIP'16.08] Stochastic Stable Buffer Control for Quality-Adaptive HEVC Video Transmission in Enterprise WLAN Architectures, *Journal of Real-Time Image Processing*, 12(2):465-471 *(J. Kim, E. Ryu)*

[TII'15.12] Energy-Efficient Dynamic Packet Downloading for Medical IoT Platforms, *IEEE Transactions on Industrial Informatics*, 11(6):1653–1659 *(J. Kim)*

[TSMC'15.11] Stochastic Decision Making for Adaptive Crowdsourcing in Medical Big-Data Platforms, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 45(11):1471–1476 *(J. Kim, W. Lee)*

[MTAP'15.10] Interference Impacts on 60 GHz Real-Time Online Video Streaming in Wireless Smart TV Platforms, *Multimedia Tools and Applications*, 74(19):8613-8629 *(J. Kim, S.-N. Hong)*

[IJEC'15.07] Error Concealment Mode Signaling for Robust Mobile Video Transmission, *International Journal of Electronics and Communications*, 69(7):1070-1073 *(E. Ryu, J. Kim)*

[TS'15.05] Dynamic Two-Stage Beam Training for Energy-Efficient Millimeter-Wave 5G Cellular Systems, *Telecommunication Systems*, 59(1):111-122 *(J. Kim, S.-N. Hong)*

[CEE'15.04] Adaptive Buffer Control for Distributed Autonomous Robust Routing in Mobile Surveillance Robots, *Computers and Electrical Engineering*, 43:306-316 *(J. Kim, S.-N. Hong)*

[JCN'14.10] Fast Millimeter-Wave Beam Training with Receive Beamforming, *Journal of Communications and Networks*, 16(5):512–522 *(J. Kim, A. F. Molisch)*

[EL'14.10] Quality of Video Streaming in 38 GHz Millimetre-Wave Heterogeneous Cellular Networks, *IET Electronics Letters*, 50(21):1526-1528 *(J. Kim, E. Ryu)*

[CL'14.09] Joint Coding and Stochastic Data Transmission for Uplink Cloud Radio Access Networks, *IEEE Communications Letters*, 18(9):1619–1622 *(S.-N. Hong, J. Kim)*

[CL'14.07] A Low-Complexity Algorithm for Neighbor Discovery in Wireless Networks, *IEEE Communications Letters*, 18(7):1119–1122 *(S.-N. Hong, J. Kim)*

[CL'14.03] Fast and Low-Power Link Setup for IEEE 802.15.3c Multi-Gigabit/s Wireless Sensor Networks, *IEEE Communications Letters*, 18(3):455–458 *(J. Kim, A. Mohaisen, J.-K. Kim)*

[TBC'13.09] Joint Scalable Coding and Routing for 60 GHz Real-Time Live HD Video Streaming Applications, *IEEE Transactions on Broadcasting*, 59(3):500–512 *(J. Kim, Y. Tian, S. Mangold, A. F. Molisch)*

[EL'13.02] Distributed Stochastic Buffering for Enterprise WLAN Architectures, *IET Electronics Letters*, 49(4):302–304 *(J. Kim, E. Ryu)*

[TCE'07.11] Movement-Aware Vertical Handoff of WLAN and Mobile WiMAX for Seamless Ubiquitous Access, *IEEE Transactions on Consumer Electronics*, 53(4):1268–1275 *(W. Lee, E. Kim, J. Kim, I. Lee, C. Lee)*

[TCE'07.05] Coverage-Time Optimized Dynamic Clustering of Networked Sensors for Pervasive Home Networking, *IEEE Transactions on Consumer Electronics*, 53(2):433–441 *(J. Kim, W. Lee, E. Kim, D.-W. Kim, H. Kim)*

[CL'07.01] Optimized Transmission Power Control of Interrogators for Collision Arbitration in UHF RFID Systems, *IEEE Communications Letters*, 11(1):22–24 *(J. Kim, W. Lee, E. Kim, D. Kim, K. Suh)*

Academic Activities and Research Supervision

Research Supervision

■ Ph.D. Alumni

- **Dr. Soohyun Park** (03/2019–08/2023 (PhD), 09/2023–02/2024 (Postdoc)), Sookmyung Women's University (Professor)
- **Dr. Hankyul Baek** (03/2021–02/2024 (PhD), 03/2024–03/2025 (Postdoc)), ETRI AI Safety Institute (Researcher)
- **Dr. Hyunsoo Lee** (03/2021–02/2026 (PhD)), Korea University (Postdoctoral Scholar)
- **Dr. Gyu Seon Kim** (03/2023–02/2026 (PhD)), Korea University (Postdoctoral Scholar)

■ M.S. Alumni

- **Kyeongseon Kim** (09/2017–08/2019), POSTECH (Ph.D. Student in Electrical Engineering)
- **Dohyun Kwon** (03/2018–02/2020), Hyundai Motors Group (Researcher)
- **Dohyun Kim** (03/2018–02/2020), Naver Webtoon (Researcher)
- **MyungJae Shin** (03/2018–02/2020), Naver (Researcher)
- **Jaeho Choi** (03/2019–02/2021), Korea Meteorological Administration (Researcher, Military Service Exception)
- **Yoo Jeong (Anna) Ha** (03/2021–02/2023), The University of Chicago (Ph.D. Student in Computer Science)
- **Jaehyun Chung** (09/2023–08/2025), Korea University (Ph.D. Student in Electrical and Computer Engineering)
- **Chaemoon Im** (03/2024–02/2026), Korea University Net-Zero CAFE Research Center (Researcher)
- **Yeryeong Cho** (03/2024–02/2026), Korea University Net-Zero CAFE Research Center (Researcher)

■ **Postdoctoral Scholars**
- **Dr. Minseok Choi** (09/2018–02/2019, jointly with Prof. Andreas F. Molisch (USC)), Kyung Hee University (Professor)
- **Dr. Soyi Jung** (03/2021–08/2021, jointly with Prof. Marco Levorato (UC-Irvine)), Ajou University (Professor)
- **Dr. Ju-Hyung Lee** (03/2022–02/2023, jointly with Prof. Andreas F. Molisch (USC)), Nokia USA (Researcher)

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)
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References
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