Joongheon Kim

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Highlights

Research Milestones

- **123 Journals** (among them, **86 IEEE Journals**), `https://sites.google.com/view/aimlab-kuee/publications/journals` – **92** Published/Accepted (among them, **67 IEEE**), **5** Under-Revision, and **19** Under-Review Journals
- **5684+ Citations** (H-index: 35+, i10-index 138+), obtained from Google Scholar Profile (as of January 14, 2023)
- **IEEE MMTC Best Journal Paper Award (2021)**, *IEEE Communications Society*
- **IEEE MMTC Outstanding Young Researcher Award (2020)**, *IEEE Communications Society*
- **IEEE Systems Journal Best Paper Award (2020)**, Top 7 among 793 accepted papers in 2019 (0.88%)
- **8 Awards from IEEE Conferences and Contests**, i.e., *IEEE ICTC Best Paper Award (2022)*, *IEEE ICOIN Best Paper Award (2021)*, *IEEE Seoul Section Student Paper Contest Awards (1 in 2020; 1 in 2019)*, and *IEEE VTS Seoul Chapter Awards (1 in 2022; 2 in 2021; 1 in 2019)*
- **6 Tutorials at IEEE Conferences**, i.e., *ICUFN (2022)*, *ICOIN (2022)*, *ICUFN (2021)*, *ICAIIC (2021)*, *ICOIN (2019)*, and *ICC (2018)*
- **66+ Patents** are granted, and among them, **46 Granted Patents** are successfully adopted by 60 GHz Millimeter-Wave IEEE 802.11 Standards, i.e., IEEE 802.11ad and IEEE 802.11ay
- **Research Funds (since March 2016):** 6,339,884 USD ≈ 6,339,884,000 KRW (except University Internal Funds)

Research Supervision and Teaching (As a faculty member since March 2016)

- **2 Tenure-Track Professors (formerly supervised by Prof. Joongheon Kim (Postdoctoral, Ph.D., M.S., Interns))**, i.e., Minseok Choi *(Kyung Hee University, Korea)*, Soyi Jung *(Ajou University, Korea)*
- **8 Best Teaching Awards at Korea University**, i.e., 4 awards are for top 5% *(Granite Tower Best Teaching Award)* and 4 awards are for top 20% *(Best Teaching Award)*

IEEE Society Academic Activities

- **Senior Member of the IEEE (2018–)** and IEEE Membership (2005–) for 18+ years
- **Distinguished Lecturer, IEEE Communications Society (ComSoc)** (class of 2022–2023)   IEEE ComSoc
- **Distinguished Lecturer, IEEE Systems Council** (class of 2022–2024)   IEEE Systems Council
- **Editor (2022–)**, *IEEE Transactions on Machine Learning in Communications and Networking*   IEEE ComSoc
- **Associate Editor (2020–)**, *IEEE Transactions on Vehicular Technology*   IEEE VTS
- **Guest Editor (06/2022)**, *IEEE Communications Standards Magazine* (S.I. on Recent and Future Evolution of Wi-Fi) IEEE ComSoc
- **IEEE Vehicular Technology Society (VTS)**, Seoul Chapter Treasurer for 3 years (2020–2023)   IEEE VTS
- **99+ Technical Program Committee (TPC)** and **26+ Organizing Committee (OC)** Contributions for IEEE Conferences

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*, Fellow of the IEEE)
  – M.S. (05/2014) in Computer Science with specialization in High Performance Computing and Simulations
  – M.S. (05/2012) in Electrical Engineering
- **Korea University**, Seoul, Republic of Korea
  – M.S. (03/2004–02/2006) in Computer Science and Engineering
  – B.S. (03/1999–02/2004) in Computer Science and Engineering

R&D Positions

Full-Time Positions

- **Korea University – College of Engineering**, Seoul, Republic of Korea
  - *Associate Professor (03/2021–Present)*, *Assistant Professor (09/2019–02/2021)*, School of Electrical Engineering
  - *Adjunct Professor (03/2023–Present)*, Department of Communications Engineering (with **Samsung Electronics**)
  - *Adjunct Professor (11/2022–Present)*, Department of Future Science and Technology Business (Graduate School)
  - *Adjunct Professor (03/2021–02/2023)*, Department of Semiconductor Engineering (with **SK Hynix**)
  - ADMINISTRATIVE POSITIONS
    * *Vice Dean (03/2023–Present)*, **School of Electrical Engineering**
    * *Dean (06/2021–05/2023)*, **Center for Teaching and Learning (CTL)**
    * *Deputy Vice President (02/2022–02/2023)*, **Office of Academic Affairs**
- **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), CA, USA
  - *Systems Engineer (09/2013–02/2016)*, mmWave Standards and Advanced Technology (mSAT) Team (with Dr. Ali S. Sadri)

- **University of Southern California (USC) – Viterbi School of Engineering**, Los Angeles, CA, 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 (Advised by Prof. Andreas F. Molisch)
  - *Teaching Assistant (01/2012–05/2013)*, Computer Science and Electrical Engineering Departments (CSCI455x and EE579)
- **InterDigital**, San Diego, CA, USA
  - *Intern (05/2012–08/2012)*, Wireless Systems Evolution Department
  - *Subject Matter Expert in IEEE 802.11ad (01/2012–02/2012)*, 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

Industry, Advisory, and Consulting Positions

- **Samsung Electronics (C-Lab), Seoul National University R&D Center**, Seoul, Republic of Korea
  Advisory Professor (02/2020–08/2020), Nonlinear Regression Deep Learning Algorithm Design and Implementation

Academia (Membership, Editorial Boards, and Services)

- **IEEE**
  - *Senior Member (2018–)*, *Member (2006–2017)*
  - *Distinguished Lecturer (2022–2023)*, **IEEE Communications Society**
  - *Editor (2022–)*, **IEEE Transactions on Machine Learning in Communications and Networking**
  - *Associate Editor (2020–)*, **IEEE Transactions on Vehicular Technology** (Area: Vehicular Electronics and Systems)
  - *Guest Editor (03/2022)*, **IEEE Communications Standards Magazine** (S.I. on Recent and Future Evolution of Wi-Fi)
  - **IEEE Vehicular Technology Society (VTS) Seoul Chapter**
    * *Chapter Treasurer (2022–Present)*, *Chapter Treasurer (2020–2021)*
    * **IEEE VTS APWCS Organizing Committee:** *Finance Chair (2022)*, *Finance Co-Chair (2021)*
- **Elsevier**
  - *Editor (2021–)*, **ICT Express** (Area: AI for ICT Applications)
  - *Guest Editor (10/2022)*, **Computer Networks** (S.I. on ML and AI for the Internet of Things, 5G, and Beyond)
  - *Guest Editor (03/2022)*, **ICT Express** (S.I. on Artificial Intelligence and Machine Learning Approaches to Communication)
  - *Guest Editor (06/2021)*, **ICT Express** (S.I. on Mobile and Edge Computing Systems)

Awards and Honors

Research and Academic Excellence (International)

- **Finalist (Top 25), AAAI Student Abstract and Poster Session – Oral Presentation Contest (2023)** (w/ H. Baek, W.J. Yun)
  "FV-Train: Quantum Convolutional Neural Network Training with a Finite Number of Qubits by Extracting Diverse Features"
- **IEEE ICTC Best Paper Award (2022)** – *IEEE Communications Society* (w/ J.-H. Lee, D.P. Selvam, A.F. Molisch)
  "Reinforcement Learning Empowered Massive IoT Access in LEO-based Non-Terrestrial Networks"
- **Best Special Issue Guest Editor Award (2022)** – *ICT Express (Elsevier), S.I. on Mobile Edge Computing Systems (06/2021)*
- **Distinguished Lecturer (class of 2022–2024)** – *IEEE Systems Council*
- **Distinguished Lecturer (class of 2022–2023)** – *IEEE Communications Society*
- **IEEE VTS Seoul Chapter Award (2022)** – *IEEE Vehicular Technology Society* (w/ H. Lee, W.J. Yun, S. Jung, J.-H. Kim)
  "DDPG-based Deep Reinforcement Learning for Loitering Munition Mobility Control: Algorithm Design and Visualization"
- **Spotlight, Oral Presentation (2022)** – *ICML Workshop on Dynamic Neural Networks (2022)*
  "Slimmable Quantum Federated Learning"
- **IEEE MMTC Best Journal Paper Award (2021)** – *IEEE Communications Society* (w/ M. Choi, A.F. Molisch)
  - M. Choi, A.F. Molisch, and J. Kim, "Joint Distributed Link Scheduling and Power Allocation for Content Delivery in Wireless Caching Networks," *IEEE Transactions on Wireless Communications*, 19(12):7810-7824, December 2020.
- **IEEE VTS Seoul Chapter Award (2021)** – *IEEE Vehicular Technology Society* (w/ Y. Kwak, S. Jung, J.-H. Kim)
  "Quantum Scheduling for Millimeter-Wave Observation Satellite Constellation"
- **IEEE VTS Seoul Chapter Award (2021)** – *IEEE Vehicular Technology Society* (w/ H. Lee, S. Jung)
  "Distributed and Autonomous Aerial Data Collection in Smart City Surveillance Applications"
- **IEEE ICOIN Best Paper Award (2021)** – *IEEE Computer Society* (w/ S. Jung, W.J. Yun, J.-H. Kim)
  "Infrastructure-Assisted Cooperative Multi-UAV Deep Reinforcement Energy Trading Learning for Big-Data Processing"
- **IEEE MMTC Outstanding Young Researcher Award (2020)** – *IEEE Communications Society*
- **Bronze Paper Award (2020)** – *2020 IEEE Seoul Section Student Paper Contest* (w/ S. Park)
  "Reliable Offloading Target Selection using Deep Reinforcement Learning for Large Fire Accident"
- **IEEE Systems Journal Best Paper Award (2020)** – *IEEE Systems Council* (w/ M. Saad, J. Choi, D. Nyang, A. Mohaisen)
  "Towards Characterizing Blockchain-based Cryptocurrencies for Highly-Accurate Predictions," 14(1):321-332, March 2020.
- **Gold Paper Award (2019)** – *2019 IEEE Seoul Section Student Paper Contest* (w/ J. Yoo)
  "Stabilized Super-Resolution Deep Learning Adaptation for UAV-Assisted Mobile Edges: A Lyapunov Optimization Approach"
- **IEEE VTS Seoul Chapter Award (2019)** – *IEEE Vehicular Technology Society* (w/ S. Park, D. Kwon, M. Shin)
  "Joint Offloading and Streaming in Mobile Edges: A Deep Reinforcement Learning Approach"

- **Next Generation and Standards (NGS) Division Recognition Award (Q1/2005)** – *Intel Corporation*
  For developing a 3-dual sector mmWave backhaul link software stack with mesh, relay, and load balancing capability for modular antenna array (MAA) proof-of-concept (POC)
- **Annenberg Graduate Fellowship Award (2009)** – *University of Southern California*
  Awarded with Ph.D. Admission in Computer Science, Viterbi School of Engineering

Research and Academic Excellence (Korea Regional)

- **Excellence Paper Award (02/2023)** – *2023 KICS Winter Conference* (w/ G.S. Kim, H. Lee, S. Jung, J.-H. Kim)
- **Insung Research Grant Award (01/2023)** – *Korea University*
  For recognizing Korea University professors in research excellence during the first 3 years at Korea University (Top 5%)
- **Excellence Paper Award (02/2022)** – *2022 Summer Workshop on Computer Communications (SWCC)* (w/ H. Lee, S. Jung)
- **Excellence Paper Award (02/2022)** – *2022 KICS Winter Conference* (w/ Y. Kim, Y.K. Lee, S. Jung)
- **Haedong Young Scholar Award (2018)** – *KICS* and *Haedong Foundation*
  For recognizing a researcher under the age of 40 who has made outstanding contributions to communication sciences R&D
- **Haedong Paper Award (06/2021)** – *2021 KICS Summer Conference* (w/ H. Baek, Y.J. Ha, M. Yoo, S. Jung)
- **Excellence Paper Award (06/2021)** – *2021 KICS Summer Conference* (w/ B. Lim, W.J. Yun, Y.-C. Ko)
- **Excellence Paper Award (Undergraduate) (06/2021)** – *2021 KICS Summer Conference* (w/ G. Lee, W.J. Yun, S. Jung)
- **Encouragement Paper Award (11/2020)** – *2020 KICS Fall Conference* (w/ W.J. Yun)
- **Encouragement Paper Award (06/2020)** – *2020 KICS Summer Conference* (w/ W.J. Yun)
- **Encouragement Paper Award (02/2020)** – *2020 KICS Winter Conference* (w/ S. Oh, J. Choi)
- **Encouragement Paper Award (02/2020)** – *2020 KICS Winter Conference* (w/ J. Kim)
- **Outstanding Paper Award (2008)** – *LG Electronics CTO Office, Multimedia Research Laboratory*
  - W. Lee, E. Kim, J. Kim, I. Lee, and C. Lee, "Movement-Aware Vertical Handoff of WLAN and Mobile WiMAX for Seamless Ubiquitous Access," *IEEE Transactions on Consumer Electronics*, 53(4):1268-1275, November 2007.
- **RFID Expert Group President Award (2007)** – *The 3rd RFID/USN Research Paper Contest*
- **ETRI President Award (2006)** – *The 2nd RFID/USN Research Paper Contest*
- **Korea Association of RFID/USN (KARUS) President Award (2005)** – *The 1st RFID/USN Research Paper Contest*
- **Scholarships for Academic Excellence (Fall 1999, Fall 2000)** – *Korea University. Department of Computer Science and Engineering*

Research and Academic Excellence of the Students under Joongheon Kim's Supervision

- **Best Presentation Awards (12/2022)** – *A3 Foresight Program 2022 Workshop, Tokyo, Japan (AI-Based Future IoT Technologies and Services)* (two awards for Soohyun Park and Chanyoung Park)
- **ICT Express Best Reviewer Award (2021)** – *ICT Express (Elsevier)* (for Soohyun Park)
- **ICT Express Best Reviewer Award (2021)** – *ICT Express (Elsevier)* (for Haemin Lee)
- **Best Presentation Award (02/2021)** – *A3 Foresight Program 2021 Workshop, Online (AI-Based Future IoT Technologies and Services)* (for Hankyul Baek)

Teaching and Supervision Excellence

- **Granite Tower Best Teaching Award (Top 5%)** – *Korea University* (Future Mobility Technology, GEQR075) — Spring 2022
- **Best Teaching Award (Top 20%)** – *Korea University* (Probability and Random Process, KECE209) — Spring 2022
- **Granite Tower Best Teaching Award (Top 5%)** – *Korea University* (Computer Language and Lab, EGRN151) — Fall 2021
- **Best Teaching Award (Top 20%)** – *Korea University* (Object Oriented Programming, SEMI104) — Fall 2021
- **Granite Tower Best Teaching Award (Top 5%)** – *Korea University* (Introduction to Computers, SEMI103) — Spring 2021
- **Best Teaching Award (Top 20%)** – *Korea University* (Probability and Random Process, KECE209) — Spring 2021
- **Best Teaching Award (Top 20%)** – *Korea University* (Computer Language and Lab, EGRN151) — Fall 2020
- **Granite Tower Best Teaching Award (Top 5%)** – *Korea University* (Computer Language and Lab, EGRN151) — Fall 2019

Academic and University Services

- **2022 Best Chapter Award, IEEE Vehicular Technology Society Chapter (12/2022)** – *IEEE Seoul Section*
  Awarded as a Treasure with Seung-Hoon Hwang, Byeonghyo Shim, Oh-Soon Shin, Junsu Kim
- **Outstanding Contribution Award (02/2022)** – *KIISE Information Network Society*
- **Outstanding Contribution Award (12/2021)** – *Open Standards and ICT Association (OSIA)*
- **Outstanding Contribution Award (11/2021)** – *KICS*
- **Appreciation Recognition (10/2021)** – *Daegu Gyeongbuk Institute of Science and Technology (DGIST)*
- **Outstanding Contribution Award (11/2019)** – *KICS*
- **Fellow Employee Recognition [#3081146] (12/2014)** – *Intel Corporation*
- **Certificate of Appreciation (09/2010)** – *Department of Computer Science, University of Southern California*

Business Administration

- **The 5th Hyundai/Kia Motors Marketing Forum (02/2004)**, 2nd Prize Winner (Sales Promotion)

R&D Projects (Totally, 6,339,884 USD ≈ 6,339,884,000 KRW)

Industry-Funded Projects

- **Advancement Technology Development for Torpedo Deception Strategies in Submarines**   11/2022–11/2026
  Funded by *LIG Nex1* [Grant: $700,000; Primary-PI]
- **Mapping between Real World and Virtual Reality (VR) for End-Edged Cloud Real-Time VR Servers**   09/2020–09/2024
  Funded by *Samsung Advanced Institute of Technology* [Grant: $286,000; Primary-PI]
- **Quantum Machine Learning-based Objection Detection for Point Cloud and its Acceleration**   12/2022–11/2023
  Funded by *Hyundai Motors Group* [Grant: $110,000; Primary-PI]
- **Routing Algorithms for LEO Satellite Networks**   12/2022–08/2023
  Funded by *Solvit System* [Grant: $27,500; Primary-PI]
- **Optimal Positioning Algorithms for Wide-Area Relaying Networks**   12/2022–08/2023
  Funded by *Solvit System* [Grant: $22,000; Primary-PI]
- **Distributed Learning Algorithms to Build AI Models with Multi-Center Clinical Data**   11/2022–02/2023
  Funded by *Cipherome* [Grant: $12,000; Primary-PI]
- **Cellular/Wi-Fi Handover Technology Development**   02/2022–12/2022
  Funded by *LG Electronics CTO Division – Smart Mobility Lab., Advanced R&BD Center* [Grant: $88,000; Primary-PI]
- **Research Trends in Digital Twin Applications to Autonomous Driving**   03/2022–04/2022
  Funded by *Hyundai NGV* [Grant: $1,000; Primary-PI]
- **Distributed Learning System Design and Implementation for Clinical Applications**   02/2022–03/2022
  Funded by *Cipherome* [Grant: $15,000; Primary-PI]
- **Super-Resolution Performance Optimization in Mobile Platforms**   05/2020–08/2020
  Funded by *Samsung SDS* [Grant: $15,000; Primary-PI]
- **Deep Learning Algorithms for mVOC Concentration Analysis**   03/2020–06/2020
  Funded by *Samsung Electronics (C-Lab)* [Grant: $12,000; Primary-PI]
- **Visual Recognition Software Implementation using Deep Learning Tools**   05/2019–11/2019
  Funded by *Hyundai Motors Company (Hyundai NGV)* [Grant: $59,500; Primary-PI]
- **A Priori Techniques Research for Efficient Multi-Edge Computing**   06/2017–12/2017
  Funded by *Samsung Electronics (Software Center)* [Grant: $80,000; Co-PI]

University/Center-Level Projects

- **Intelligent 6G Wireless Access System Research Center**   04/2021–12/2025
  Funded by *Institute for ICT Promotion (IITP)* [2021-0-00467, Grant: $154,000 (2 yrs); Co-PI]
- **Nano UAV Intelligence Systems Research Lab (NUiSRL) – *ADD Military Special Research Center***   10/2020–08/2023
  Funded by *Agency for Defense Development (ADD)* [UD200027ED, Grant: $130,000; Co-PI], PI: Kwangwoon University (Korea)
- **5G/Unmanned Vehicle Research Center (5G/UV-RC) – *ITRC***   06/2020–12/2022
  Funded by *Institute for ICT Promotion (IITP)* [2020-0-01637, Grant: $55,709; Co-PI], PI: Hanyang University (Korea)
- **Human Resource Development for the Biomedical Unstructured Big Data Analysis – *ITRC***   08/2018–12/2021
  Funded by *Institute for ICT Promotion (IITP)* [2018-0-01833; Co-PI], PI: Seoul National University Hospital (Korea)
- **Intelligent Internet of Energy (IoE) Data Research Center – *ITRC***   02/2020–05/2020
  Funded by *Institute for ICT Promotion (IITP)* [2018-0-01396; Co-PI], PI: Kookmin University (Korea)

Government-Funded Projects

- **AI Bots Collaborative Platform and Self-Organizing Artificial Intelligence Technology Development**   04/2022–12/2026
  Funded by *Institute for ICT Promotion (IITP)* [2022-0-00907, Grant: $950,000; Co-PI]
- **Quantum Hyper-Driving: Quantum-Inspired Hyper-Connected and Hyper-Sensing Autonomous Mobility Technologies**   03/2022–02/2025
  Funded by *National Research Foundation of Korea* [2022R1A2C2004869, Grant: $600,000; Primary-PI]
- **K-Starlink: Dynamic Reconfigurable and Intelligent Space-Terrestrial Networks**   06/2021–05/2024
  Funded by *National Research Foundation of Korea* **(Basic Research Lab)** [2021R1A4A1030775, Grant: $161,000 (2 yrs); Co-PI]
- **Development of Integrated Development Framework that supports Automatic Neural Network Generation and Deployment optimized for Runtime Environment**   04/2021–12/2023
  Funded by *Institute for ICT Promotion (IITP)* [2018-0-00170, Grant: $230,000; Co-PI]
- **Integrated Perception Technology Developments for Public Safety Platforms**   06/2019–05/2023
  Funded by *National Research Foundation of Korea* [2019M3E3A1084054, Grant: $400,000; Co-PI]
- **Development of Quantum Deep Reinforcement Learning Algorithm using QAOA**   10/2019–04/2022
  Funded by *Ministry of Science and ICT* [2019M3E4A1080391, Grant: $503,250; Primary-PI]
- **mmWave Radar and Deep Reinforcement Learning based Optimal Policy Autonomous Driving**   06/2019–02/2022
  Funded by *National Research Foundation of Korea* [2019R1A2C4070663, Grant: $275,000; Primary-PI]
- **Development of Privacy-Reinforcing Distributed Transfer-Iterative Learning Algorithm**   07/2019–12/2021
  Funded by *Ministry of Health and Welfare* [HI19C0842, Grant: $150,000; Co-PI]
- **Virtual Presence in Moving Objects through 5G (PriMO-5G)**   06/2018–06/2021
  Funded by *Institute for ICT Promotion (IITP)* [2018-0-00170, Grant: $246,464; Co-PI]
- **Distributed Secure Platform for Scalable Clinical OMOP CDM Models**   04/2019–12/2020
  Funded by *Ministry of Health and Welfare* [HI19C0572, Grant: $90,000; Co-PI]

- **Network Engineering: Development and Application of Novel Data Science Driven Framework for Efficient Network Design** 06/2017–05/2020
  Funded by *National Research Foundation of Korea* **(Basic Research Lab)** [2017R1A4A1015675, Grant: $150,000; Co-PI]
- **mmWave High-Speed Networking Platform Design for Next-Generation Convergence Services** 06/2016–05/2019
  Funded by *National Research Foundation of Korea* [2016R1C1B1015406, Grant: $150,000; Primary-PI]
  – Selected as **Initial Innovation Lab** [Grant: $60,000]
- **Feasibility Study of 60 GHz IEEE 802.11ad for Virtual Reality (VR) Platforms** 04/2017–12/2017
  Funded by *Institute for ICT Promotion (IITP)* [Grant: $33,333; Primary-PI]

Government-Funded Research Institute Projects

- **Autonomous Intelligent COA Search Methods for Cyber-Attacks** 12/2021–11/2022
  Funded by *Agency for Defense Development (ADD)* [UI210009XD, Grant: $100,000; Primary-PI]
- **Research on Intelligent Agent-based CPS Security and Reliability** 05/2021–11/2021
  Funded by *Telecommunications Technology Association (TTA)* [Grant: $48,000; Primary-PI]
- **Multi-GPU based Automotive HPC Platform Development** 04/2020–10/2020
  (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)
  Funded by *Electronics and Telecommunications Research Institute* [19HS2720 (IITP 2017-0-00068), Grant: $20,000; Primary-PI]
- **Cooperative Deep Reinforcement Learning for Online Game Multi-Agents** 04/2020–08/2020
  (Human-Agent Cooperation Algorithm Design in Multi-Agent Environment)
  Funded by *Electronics and Telecommunications Research Institute* [19YE1400, Grant: $28,000; Primary-PI]
- **Verification Testbed Implementation for Privacy-Preserving Trust Data Generation** 10/2019–11/2019
  Funded by *Electronics and Telecommunications Research Institute* [Grant: $44,000; Co-PI]
- **Measurement and Analysis of Multi-Task GPU Scheduling Delays** 05/2019–10/2019
  (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)
  Funded by *Electronics and Telecommunications Research Institute* [19HS2720 (IITP 2017-0-00068), Grant: $40,000; Primary-PI]
- **Probabilistic Decision Making and Econometric Methods for Micro-Grid** 05/2017–04/2019
  Funded by *Korea Electric Power Corporation (KEPCO) Research Institute* [R17XA05-41, Grant: $143,128; Primary-PI]
- **GPU Scheduling Performance Analysis under Queueing Delay Considerations** 05/2018–10/2018
  (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)
  Funded by *Electronics and Telecommunications Research Institute* [18HS1420 (IITP 2017-0-00068), Grant: $40,000; Primary-PI]
- **Improving Massive Deep Learning Training via Computation and Communication Acceleration** 04/2018–10/2018
  (Development of HPC System for Accelerating Large-Scale Deep Learning)
  Funded by *Electronics and Telecommunications Research Institute* [18HS1710 (IITP 2016-0-00087), Grant: $30,000; Primary-PI]
- **Parsing Techniques for Artificial Neural Network (ANN) Data Processing** 09/2017–11/2017
  (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)
  Funded by *Electronics and Telecommunications Research Institute* [17HS2720 (IITP 2017-0-00068), Grant: $40,000; Primary-PI]

Awards and Fellowship Funds

- **Insung Research Grant Award (2023)** – *Korea University* 03/2023–02/2024
  For recognizing Korea University professors in research excellence during the first 3 years at Korea University (Top 5%)
  Awarded Project Title: **Quantum Machine Learning for Autonomous Mobility Systems**
  Awarded Project Fund: $20,000
- **Annenberg Graduate Fellowship Award (2009)** – *University of Southern California* 08/2009–06/2013
  Awarded with Ph.D. Admission in Computer Science, Viterbi School of Engineering
  Awarded Fund: 4 Year Full Scholarship (Tuition Waiver and $120,000 Stipend ($30,000/year for 4 years))

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

- **Video Aware Wireless Networks (VAWN) Research Program**
  Funded by *Intel Labs*, *Verizon Wireless*, and *Cisco Systems*; Under the guidance of Prof. Andreas F. Molisch (University of Southern California, USA) and Prof. Giuseppe Caire (Technische Universität Berlin, Germany)
- **60 GHz Real-Time Wireless Video Broadcasting**
  Supported by a Gift from *Disney Research Zürich*; Under the guidance of Prof. Andreas F. Molisch (University of Southern California, USA), Prof. Yafei Tian (Beihang Univ, China), and Dr. Stefan Mangold (Disney Research Zürich, Switzerland)

Selected Publications

- **5684+ Citations** (H-index: 35+, i10-index 138+), obtained from Google Scholar Profile (as of January 14, 2023)
- Totally, **123** journals, `https://sites.google.com/view/aimlab-kuee/publications/journals`
  – **86** IEEE publications, among them, **52** publications are in **IEEE Magazines and ComSoc/VTS Journals**

Dissertation, Books, and Book Chapters

- ■ **Ph.D. Dissertation**
  - *Elements of Next-Generation Wireless Video Systems: Millimeter-Wave and Device-to-Device Algorithms*
    Ph.D. Dissertation (Computer Science), University of Southern California (Los Angeles, California, USA, August 2014)

- ■ **Books**

- *Fundamentals of 6G Communications and Networking*, Springer, Month Year. *(X. Lin, J. Zhang, Y. Liu, J. Kim)*
- ■ **Book Chapters**
  - Chapter 6. Dynamic Decision-Making for Stabilized Deep Learning Software Platforms, *Advances and Applications in Deep Learning*, IntechOpen, September 2020. (Editor: M.A. Aceves-Fernandez) *(S. Park, D. Kim, J. Kim)*
  - Chapter 9. Device-to-Device Communications, *Towards 5G: Applications, Requirements and Candidate Technologies*, Wiley, January 2017. (Editors: R. Vannithamby, S. Talwar) *(A.F. Molisch, M. Ji, J. Kim, D. Burghal, A.S. Tehrani)*
  - Chapter 19. Millimeter-Wave (mmWave) Medium Access Control: A Survey, *Opportunities in 5G Networks: A Research and Development Perspective*, CRC Press, April 2016. (Editor: F. Hu) *(J. Kim)*
  - Chapter 17. Millimeter-Wave (mmWave) Radio Propagation Characteristics, *Opportunities in 5G Networks: A Research and Development Perspective*, CRC Press, April 2016. (Editor: F. Hu) *(J. Kim)*
  - Chapter 22. Weighted Localized Clustering: A Coverage-Aware Reader Collision Arbitration Protocol in RFID Networks, *Handbook on Mobile and Ubiquitous Computing: Status and Perspective*, CRC Press, October 2012. (Editors: L.T. Yang, E. Syukur, S.W. Loke) *(J. Kim, E. Kim, W. Lee, D. Kim, J. Choi, J. Jung, C.K. Shin)*
  - Coverage-Time Optimized Dynamic Clustering for Two-Tiered WM2Nets, *Wireless Mesh Networking*, McGraw-Hill, August 2008. (Editor: G. Aggelou) *(J. Kim, W. Lee, E. Kim, T.K. Shih)*

Selected Papers

■ *Conferences – Top-Tiers and Awarded/Honored*

[*wip*] *(WIP, Due: 10-Mar-2023)* (Double Blind Review), **ACM MobiCom (2023)**. *(W.J. Yun, H. Baek, J. Kim)*

[*review*] *(Notification: 03-Apr-2023)* (Double Blind Review), **IEEE ICDCS (2023)**. *(H. Baek, W.J. Yun, J. Kim)*

[*review*] *(Notification: 03-Apr-2023)* (Double Blind Review), **IEEE ICDCS (2023)**. *(J.P. Kim, W.J. Yun, S. Park, C. Park, S. Jung, J. Kim)*

[*wip*] *(WIP, Due: 10-Apr-2023)* (Quantum Parsing), **IEEE ICDCS (2023)**. *(S. Park, C. Park, S. Jung, Y.K. Lee, J. Kim)*

[*wip*] *(WIP, Due: 10-Apr-2023)* (MADRL), **IEEE ICDCS (2023)**. *(S. Park, W.J. Yun, J.P. Kim, S. Jung, J. Kim)*

[*wip*] *(WIP, Due: 10-Apr-2023)* (Satellite), **IEEE ICDCS (2023)**. *(H. Lee, J. Kim)*

[*review*] *(Notification: 20-Jan-2023)* Visual Simulation Software Demonstration for Quantum Multi-Drone Reinforcement Learning, **IEEE/ACM ICSE (2023)**. *(C. Park, J.P. Kim, W.J. Yun, S. Jung, J. Kim)*

[*wip*] *(WIP, Due: 08-Feb-2023)* (Quantum), **IEEE/ACM ICSE (2023)**. *(S. Park, C. Park, S. Jung, Y.K. Lee, J. Kim)*

[*wip*] *(WIP, Due: 08-Feb-2023)* (Cipherome), **IEEE/ACM ICSE (2023)**. *(W.J. Yun, S. Kim, J. Kim)*

[*review*] *(Notification: 03-Mar-2023)* Two-Stage Architectural Fine-Tuning Software with Neural Architecture Search using Early-Stopping, **IEEE/ACM ICSE (2023)**. *(Y. Kim, W.J. Yun, Y.K. Lee, S. Jung, J. Kim)*

[AAAI'23] Quantum Multi-Agent Meta Reinforcement Learning, **AAAI (2023)**. *(W.J. Yun, J. Park, J. Kim)*

[AAAI'23] FV-Train: Quantum Convolutional Neural Network Training with a Finite Number of Qubits by Extracting Diverse Features, *AAAI Student Abstract and Poster (2023)*. *(H. Baek, W.J. Yun, J. Kim)* **(Finalist (Top 25), Oral Presentation Contest)**

[CIKM'22] Hierarchical Reinforcement Learning using Gaussian Random Trajectory Generation in Autonomous Furniture Assembly, **ACM CIKM (2022)**. *(W.J. Yun, D. Mohaisen, S. Jung, J.-K. Kim, J. Kim)*

[ICTC'22] Reinforcement Learning Empowered Massive IoT Access in LEO-based Non-Terrestrial Networks, *IEEE ICTC (2022)*. *(J.-H. Lee, D.P. Selvam, A.F. Molisch, J. Kim)* **(Best Paper Award)**

[WiOpt'22] Cooperative Video Quality Adaptation for Delay-Sensitive Dynamic Streaming using Adaptive Super-Resolution, **IEEE WiOpt (2022)**. *(M. Choi, W.J. Yun, J. Kim)*

[APWCS'22] DDPG-based Deep Reinforcement Learning for Loitering Munition Mobility Control: Algorithm Design and Visualization, *IEEE VTS APWCS (2022)*. *(H. Lee, W.J. Yun, S. Jung, J.-H. Kim, J. Kim)* **(IEEE VTS Seoul Chapter Award)**

[ICML'22] Slimmable Quantum Federated Learning, *ICML Workshop on Dynamic Neural Networks (2022)*. *(W.J. Yun, J.P. Kim, S. Jung, J. Park, M. Bennis, J. Kim)* **(Spotlight, Oral Presentation)**

[ICDCS'22] Quantum Multi-Agent Reinforcement Learning via Variational Quantum Circuit Design, **IEEE ICDCS (2022)**. *(W.J. Yun, Y. Kwak, J.P. Kim, H. Cho, S. Jung, J. Park, J. Kim)*

[INFOCOM'22] Joint Superposition Coding and Training for Federated Learning over Multi-Width Neural Networks, **IEEE INFOCOM (2022)**. *(H. Baek, W.J. Yun, Y. Kwak, S. Jung, M. Ji, M. Bennis, J. Park, J. Kim)*

[APWCS'21] Quantum Scheduling for Millimeter-Wave Observation Satellite Constellation, *IEEE VTS APWCS (2021)*. *(J. Kim, Y. Kwak, S. Jung, J.-H. Kim)* **(IEEE VTS Seoul Chapter Award)**

[APWCS'21] Distributed and Autonomous Aerial Data Collection in Smart City Surveillance Applications, *IEEE VTS APWCS (2021)*. *(H. Lee, S. Jung, J. Kim)* **(IEEE VTS Seoul Chapter Award)**

[ICOIN'21] Infrastructure-Assisted Cooperative Multi-UAV Deep Reinforcement Energy Trading Learning for Big-Data Processing, *IEEE ICOIN (2021)*. *(S. Jung, W.J. Yun, J. Kim, J.-H. Kim)* **(Best Paper Award)**

[ICDCS'20] Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications, **IEEE ICDCS (2020)**. *(Ü. Meteriz, N.F. Yildiran, J. Kim, D. Mohaisen)*

[APWCS'19] Joint Offloading and Streaming in Mobile Edges: A Deep Reinforcement Learning Approach, *IEEE VTS APWCS (2019)*. *(S. Park, J. Kim, D. Kwon, M. Shin, J. Kim)* **(IEEE VTS Seoul Chapter Award)**

[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, **IEEE 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 Multimedia (2017)**. *(J. Koo, J. Yi, J. Kim, M.A. Hoque, S. Choi)*

[ITA'14] Joint Scheduling and Stochastic Streaming for Device-to-Device Video Delivery, *IEEE Information Theory and Applications Workshop (2014). (J. Kim, A. Turci, G. Caire, A.F. Molisch)* **(ITA Graduation Day Talk)**

[MobiSys'10] Energy-Efficient Rate-Adaptive GPS-based Positioning for Smartphones, **ACM MobiSys (2010)**. *(J. Paek, J. Kim, R. Govindan)* *(Citations: 620+)*

[ICCCN'05] Effect of Localized Optimal Clustering for Reader Anti-Collision in RFID Networks: Fairness Aspect to the Readers, **IEEE ICCCN (2005)**. *(J. Kim, W. Lee, J. Yu, J. Myung, E. Kim, C. Lee)*

■ *Journals and Magazines*

◄ **Review** ►

[IOTJ.*wip***]** *(WIP, Due: 30-Jan-2023)* Quantum Multi-Agent Policy Gradient for Cooperative Mobile Access in Multi-UAV Systems, *IEEE Internet of Things Journal. (C. Park, W.J. Yun, J.P. Kim, S. Park, T.K. Rodrigues, S. Jung, J. Kim)*

[TVT.*wip***]** *(WIP, Due: 20-Jan-2023)* Spatio-Temporal Cyber-Attack Course-of-Action Learning Strategies in Multi-Edge Infrastructure-Assisted Vehicular Networks, *IEEE Transactions on Vehicular Technology. (S. Park, H. Lee, W.J. Yun, S.B. Son, S. Jung, M.K. Ahn, D. Kim, D. Lee, J. Kim)*

[TVT.*wip***]** *(WIP, Due: 20-Jan-2023)* Markov Decision Policies for Distributed On-Demand Routing using Ground Stations in Time-Varying LEO Satellite Constellation, *IEEE Transactions on Vehicular Technology. (H. Lee, G.S. Kim, H. Lee, S. Park, J. Kim)*

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[ISJ.*review***]** *(Review since 11-Dec-2022)* Orchestrated Mobile Charging for Sustainable and Trustworthy UAV-Assisted Cybertwin Networks, *IEEE Systems Journal. (S. Jung, H. Baek, M. Levorato, J. Kim)*

[TON.*review***]** *(Review since 04-Dec-2022)* Quantum Federated Learning with Entanglement Controlled Circuits and Superposition Coding, *IEEE/ACM Transactions on Networking. (W.J. Yun, J.P. Kim, H. Baek, S. Jung, J. Park, M. Bennis, J. Kim)*

[TVT.*review***]** *(Review since 27-Nov-2022)* Two-Stage Self-Adaptive Task Outsourcing Decision Making for Edge-Assisted Multi-UAV Networks, *IEEE Transactions on Vehicular Technology. (S. Jung, C. Park, M. Levorato, J.-H. Kim, J. Kim)*

[ISJ.*review***]** *(Review since 22-Nov-2022)* Real-Time High-Quality Visualization Systems for Volumetric Contents Rendering: A Lyapunov Optimization Framework, *IEEE Systems Journal. (H. Baek, R. Lee, Y.K. Lee, S. Jung, J. Kim)*

[TSMC.*review***]** *(Review since 14-Nov-2022)* Projection Valued Measure-based Quantum Machine Learning for Multi-Class Classification, *IEEE Transactions on Systems, Man, and Cybernetics: Systems. (W.J. Yun, H. Baek, J. Kim)*

[SPL.*review***]** *(Awaiting AE Decision since 11-Jan-2023; Review since 12-Nov-2022)* Quantum Split Neural Network Learning using Cross-Channel Pooling, *IEEE Signal Processing Letters. (W.J. Yun, H. Baek, J. Kim)*

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[TVT.*review***]** *(Review since 02-Oct-2022)* Cooperative Multi-Agent Deep Reinforcement Learning for Reliable and Energy-Efficient Mobile Access via Multi-UAV Control, *IEEE Transactions on Vehicular Technology. (C. Park, H. Lee, W.J. Yun, S. Jung, C. Cordeiro, J. Kim)*

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[JCN].*review***]** *(Review since 01-Sep-2022)* Age-of-Information Aware Contents Caching and Distribution for Connected Vehicles, *IEEE/KICS Journal of Communications and Networks. (S. Park, C. Park, S. Jung, M. Choi, J. Kim)*

[MTAP.*review***]** *(Review since 26-Jul-2022)* Audio-to-Visual Cross-Modal Generation of Birds, *Multimedia Tools and Applications (Springer). (J.Y. Shim, J. Kim, J.-K. Kim)*

◄ **Revision** ►

[ComNet.*review***]** *(1nd Revision Review since 31-Dec-2022; Decision on 03-Dec-2022; Review since 30-Oct-2022)* Self-Adaptive End-to-End Resource Management for Real-Time Monitoring in Cyber-Physical Systems, *Computer Networks (Elsevier). (H.-C. Jo, H.-W. Jin, J. Kim)*

[MTAP.*review***]** *(1st Revision Review since 01-Dec-2022; Decision on 02-Nov-2022; Review since 27-Sep-2022)* Stabilized Performance Maximization for GAN-based Real-Time Authentication Image Generation over Internet, *Multimedia Tools and Applications (Springer). (J.Y. Shim, S. Jung, J. Kim, J.-K. Kim)*

[TWC.*review***]** *(2nd Revision since 29-Nov-2022; 1st Revision Review since 06-Aug-2022; Review from 15-Feb-2022)* Joint User Clustering, Beamforming, and Power Allocation for mmWave-NOMA with Imperfect SIC, *IEEE Transactions on Wireless Communications. (B. Lim, W.J. Yun, J. Kim, Y.-C. Ko)*

[CIBM.*review***]** *(1st Revision Completed on 26-Nov-2022; Decision on 22-Sep-2022; Reviews Completed on 07-Sep-2022; Review since 12-Aug-2022)* Deep Reinforcement Learning-based Propofol Infusion with a 3,000-subject Dataset in Anesthesia, *Computers in Biology and Medicine (Elsevier). (W.J. Yun, M. Shin, S. Jung, J. Ko, H.-C. Lee, J. Kim)*

[ComNet.*review*] *(With Editor since 30-Oct-2022; 1st Revision Review since 29-Sep-2022; 1st Decision on 23-Aug-2022; Review from 02-Mar-2022)* Truthful and Performance-Optimal Computation Outsourcing for Aerial Surveillance Platforms via Learning-based Auction, *Computer Networks (Elsevier)*. *(S. Jung, J.-H. Kim, D. Mohaisen, J. Kim)*

◄ **Accept** ►

[TNNLS.*accept*] Hierarchical Deep Reinforcement Learning-based Propofol Infusion Assistant Framework in Anesthesia, ***IEEE Transactions on Neural Networks and Learning Systems***, (Online Published). *(W.J. Yun, M. Shin, D. Mohaisen, K. Lee, J. Kim)*

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[IOTJ.*accept*] Quantum Multi-Agent Actor-Critic Neural Networks for Internet-Connected Multi-Robot Coordination in Smart Factory Management, ***IEEE Internet of Things Journal***, (Online Published). *(W.J. Yun, J.P. Kim, S. Jung, J.-H. Kim, J. Kim)*

[ICTE.*accept*] Quantum Distributed Deep Learning Architectures: Models, Discussions, and Applications, *ICT Express (Elsevier)*, (Online Published). *(Y. Kwak, W.J. Yun, J.P. Kim, H. Cho, J. Park, M. Choi, S. Jung, J. Kim)*

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◄ **2022** ►

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[JCN'22.12] Parallelized and Randomized Adversarial Imitation Learning for Safety-Critical Self-Driving Vehicles, ***IEEE/KICS Journal of Communications and Networks***, 24(6):710-721, December 2022. *(W.J. Yun, M. Shin, S. Jung, S. Kwon, J. Kim)*

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[ISJ'22.06] Securing Heterogeneous IoT with Intelligent DDoS Attack Behavior Learning, ***IEEE Systems Journal***, 16(2):1974–1983, June 2022. *(N.-N. Dao, T. Phan, U. Sa'ad, J. Kim, T. Bauschert, D.-T. Do, S. Cho)*

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[TMC'22.05] Supremo: Cloud-Assisted Low-Latency Super-Resolution in Mobile Devices, ***IEEE Transactions on Mobile Computing***, 21(5):1847–1860, May 2022. *(J. Yi, S. Kim, J. Kim, S. Choi)*

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[ISJ'22.03] LiteZKP: Lightening Zero-Knowledge Proof-based Blockchains for IoT and Edge Platforms, ***IEEE Systems Journal***, 16(1):112–123, March 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, February 2022. *(W.J. Yun, D. Kwon, M. Choi, J. Kim, G. Caire, A.F. Molisch)*

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2021. *(H. Lee, S. Jung, J. Kim)*

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[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, April 2021. *(M. Choi, A.F. Molisch, D.-J. Han, D. Kim, J. Kim, J. Moon)*

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[JCN'21.04] Dynamic Video Delivery using Deep Reinforcement Learning for Device-to-Device Underlaid Cache-Enabled Internet-of-Vehicle Networks, *IEEE/KICS Journal of Communications and Networks*, 23(2):117–128, April 2021. *(M. Choi, M. Shin, J. Kim)*

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[ISJ'20.03] Towards Characterizing Blockchain-based Cryptocurrencies for Highly-Accurate Predictions, *IEEE Systems Journal*, 14(1):321–332, March 2020. *(M. Saad, J. Choi, D. Nyang, J. Kim, A. Mohaisen)* **(Citations: 110+)** **(IEEE Systems Journal Best Paper Award)**, *Top 7 among 793 accepted papers in 2019 (Top 0.88%)*

[JCN'20.02] Numerical Approximation of Millimeter-Wave Frequency Sharing between Cellular Systems and Fixed Service Systems, *IEEE/KICS Journal of Communications and Networks*, 22(1):37–45, February 2020. *(S. Han, J.-W. Choi, J. Kim)*

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◄ 2019 ►

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S. Cho)

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[CM'19.03] New Challenges of Wireless Power Transfer and Secured Billing for Internet of Electric Vehicles, *IEEE Communications Magazine*, 57(3):118–124, March 2019. *(L. Park, S. Jeong, D.S. Lakew, J. Kim, S. Cho)*

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◄ 2018 ►

[IOTJ'18.12] Internet of Things for Smart Manufacturing System: Trust Issues in Resource Allocation, *IEEE Internet of Things Journal*, 5(6):4418–4427, December 2018. *(S. Jeong, W. Na, J. Kim, S. Cho)*

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[IJDSN'17.08] Distributed and Reliable Decision-Making for Cloud-Enabled Mobile Service Platforms, *International Journal of Distributed Sensor Networks*, 13(8):1–9, August 2017. *(J. Kim, A. Mohaisen)*

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[CL'14.07] A Low-Complexity Algorithm for Neighbor Discovery in Wireless Networks, *IEEE Communications Letters*, 18(7):1119–1122, July 2014. *(S.-N. Hong, J. Kim)*

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■ *Conferences – GLOBECOM/ICC/VTC and Workshops/Demos/Posters in Top-Tiers*

[INFOCOM.*review*] *(Notification: 10-Feb-2023)* Coordinated Multi-Agent Reinforcement Learning for Unmanned Aerial Vehicle Swarms in Autonomous Mobile Access Applications, *INFOCOM Poster (2023)*. *(C. Park, H. Lee, W.J. Yun, S. Jung, J. Kim)*

[AAAI'23] 3D Scalable Quantum Convolutional Neural Networks for Point Cloud Data Processing in Classification Applications, *AAAI Workshop on AI to Accelerate Science and Engineering (2023)*. *(H. Baek, W.J. Yun, J. Kim)*

[ICDCS'22] AoI-Aware Markov Decision Policies for Caching, *ICDCS Ph.D. Student Symposium (2022)*. *(S. Park, S. Jung, M. Choi, J. Kim)*

[ICDCS'22] Quality-Aware Real-Time Augmented Reality Visualization under Delay Constraints, *ICDCS Poster (2022)*. *(R. Lee, S. Park, S. Jung, J. Kim)*

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[VTC'22-Spring] Random Access Protocol Learning in LEO Satellite Networks via Reinforcement Learning, *VTC (2022-Spring)*. *(J.-H. Lee, H. Seo, J. Park, M. Bennis, J. Kim, Y.-C. Ko)*

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[DSN'21] Spatio-Temporal Split Learning, *DSN Supplemental Volume (2021)*. *(S. Park, S. Jung, M. Choi, J. Kim)*

[INFOCOM'21] Visualization of Deep Reinforcement Autonomous Aerial Mobility Learning Simulations, *INFOCOM Demo (2021)*. *(G. Lee, W.J. Yun, S. Jung, J. Kim, J.-H. Kim)*

[ICML'20] XOR Mixup: Privacy-Preserving Data Augmentation for One-Shot Federated Learning, *ICML Workshop on Federated Learning for User Privacy and Data Confidentiality (2020)*. *(M. Shin, C. Hwang, J. Kim, J. Park, M. Bennis, S.-L. Kim)*

[ICC'20] User Scheduling and Power Allocation for Content Delivery in Caching Helper Networks, *ICC (2020)*. *(M. Choi, A.F. Molisch, J. Kim)*

[GLOBECOM'19] Multi-Agent Deep Reinforcement Learning for Cooperative Connected Vehicles, *GLOBECOM (2019)*. *(D. Kwon, J. Kim)*

[ICCV'19] Deep Multi-modal Unsupervised Pen Pressure Stylization, *ICCV Demo (2019)*. *(D. Kim, J. Kim)*

[DSN'19] Privacy-Preserving Deep Learning Computation for Geo-Distributed Medical Big-Data Platforms, *DSN Supplemental Volume (2019)*. *(J. Jeon, J. Kim, J. Kim, K. Kim, A. Mohaisen, J.-K. Kim)*

[MobiSys'19] Multi-Agent Deep Reinforcement Learning for Connected Vehicles, *MobiSys Poster (2019)*. *(D. Kwon, S. Park, J. Kim)*

[MobiSys'19] Light-Weight Programming Language for Blockchain, *MobiSys Demo (2019)*. *(J. Kim, J. Kim)*

[ICML'19] Adversarial Imitation Learning via Random Search in Lane Change Decision-Making, *ICML Workshop on AI for Autonomous Driving (2019)*. *(M. Shin, J. Kim)*

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[CCS'18] Secure Compute-VM: Secure Big Data Processing with SGX and Compute Accelerators, *CCS Workshop on System Software for Trusted*

Execution (2018). (S. Yoo, H. Kim, J. Kim)

[MobiSys'18] Neural Network Syntax Analyzer for Embedded Standardized Deep Learning, *MobiSys Workshop on Embedded and Mobile Deep Learning (2018). (M. Shin, J. Kim, A. Mohaisen, J.Park, K.H. Lee)*

[SECON'18] Recipient-Oriented Transaction for Preventing Double Spending Attacks in Private Blockchain, *SECON Poster (2018). (H. Lee, M. Shin, K.S. Kim, Y. Kang, J. Kim)*

[AsiaCCS'18] Mining with Proof-of-Probability in Blockchain, *AsiaCCS Poster (2018). (S. Kim, J. Kim)*

[ICSE'18] A Novel Shared Memory Framework for Distributed Deep Learning in High-Performance Computing Architecture, *ICSE Companion Volume (2018). (S. Ahn, J. Kim, S. Kang)*

[SOSP'17] A Reliable, Self-Adaptive Face Identification Framework via Lyapunov Optimization, *SOSP Workshop on AI Systems (2017). (D. Kim, J. Kim, J.Y. Bang)*

[SIGCOMM'16] A Longitudinal Analysis of .i2p Leakage in the Public DNS Infrastructure, *SIGCOMM Poster (2016). (S.H. Jeong, A.R. Kang, J. Kim, H.K. Kim, A. Mohaisen)*

[INFOCOM'16] Buffer-Stable Adaptive Per-Module Power Allocation for Energy-Efficient Millimeter-Wave Modular Antenna Array (MAA) Platforms, *INFOCOM Poster (2016). (J. Kim)*

[GLOBECOM'15] 60 GHz Frequency Sharing Study between Fixed Service Systems and Small-Cell Systems with Modular Antenna Arrays, *GLOBECOM Workshop on Millimeter-Wave Backhaul and Access (2015). (J. Kim, L. Xian, R. Arefi, A.S.Sadri)*

[SOSP'15] A Case for Bad big.LITTLE Switching: How to Scale Power-Performance in SI-HMP, *SOSP Workshop on Power-Aware Computing and Systems (2015). (S. Yoo, Y. Shim, S. Lee, S.-A. Lee, J. Kim)*

[GLOBECOM'14] Required Frequency Rejection in 39 GHz Millimeter-Wave Small Cell Systems, *GLOBECOM Industry Program (2014). (J. Kim, L. Xian, A. Maltsev, R. Arefi, A.S.Sadri)*

[ICC'14] Quality-Aware Millimeter-Wave Device-to-Device Multi-Hop Routing for 5G Cellular Networks, *ICC (2014). (J. Kim, A.F. Molisch)*

[MobiCom'13] Adaptive Video Streaming for Device-to-Device Mobile Platforms, *MobiCom Demo (2013). (J. Kim, F. Meng, P. Chen, H.E. Egilmez, D. Bethanabhotla, A.F. Molisch, M.J. Neely, G. Caire, A. Ortega)*

[ICC'13] Quality-Aware Coding and Relaying for 60 GHz Real-Time Wireless Video Broadcasting, *ICC (2013). (J. Kim, Y. Tian, S. Mangold, A.F. Molisch)*

[VTC'06-Spring] Energy-Aware Distributed Topology Control for Coverage-Time Optimization in Clustering-Based Heterogeneous Sensor Networks, *VTC (2006-Spring). (J. Kim, J. Choi, W. Lee)*

[VTC'05-Spring] Low-Energy Localized Clustering: An Adaptive Cluster Radius Configuration Scheme for Topology Control in Wireless Sensor Networks, *VTC (2005-Spring). (J. Kim, S. Kim, D. Kim, W. Lee, E. Kim)*

Patents (Granted), *totally, 66*

- **21 US Patents:** (US 10637154), (US 9973364), (US 9887755), (US 9786985), (US 9167562), (US 8842640), (US 8761063), (US 8738068), (US 8619741), (US 8605634), (US 8599731), (US 8565200), (US 8547889), (US 8503317), (US 8493949), (US 8493948), (US 8483171), (US 8422372), (US 8416782), (US 8411644), (US 8379612)

- **21 Korean Patents:** (KR 102472809), (KR 102444449), (KR 102442891), (KR 102433897), (KR 102370599), (KR 102340895), (KR 102293287), (KR 102244380), (KR 102240442), (KR 102240425), (KR 102234007), (KR 102178895), (KR 102167344), (KR 102052835), (KR 102015429), (KR 101663613), (KR 101619964), (KR 101606951), (KR 101567829), (KR 101558017), (KR 100779165)

- **7 European Patents:** (EP 3255730), (EP 2441203), (EP 2422578), (EP 2343836), (EP 2282601), (EP 2262342), (EP 2260669)

- **11 Chinese Patents:** (CN 107634349), (CN 102461318), (CN 102461050), (CN 102388658), (CN 102349340), (CN 102342162), (CN 102318430), (CN 102318425), (CN 102204115), (CN 102132602), (CN 102057739)

- **6 Japanese Patents:** (JP 5584209), (JP 5584205), (JP 5580308), (JP 5508403), (JP 5368573), (JP 5364785)

Teaching Experience, Research Supervision, and Professional Activities

Teaching Experience

■ **Korea University – Graduate Courses,** *Faculty Member*
- **Sensor Networks (ECExxx):** Spring 2023
- **IT R&D Policies 1 (ECE723):** Fall 2020
- **Design and Analysis of Wireless Communication Systems (ECE721):** Spring 2021
- **Advanced Network Theory (ECE657):** Fall 2022
- **Smart Mobile Platform (ECE654):** Fall 2021, Fall 2020, Fall 2019
- **Advanced Topics in Socialware IT (ECE545):** Spring 2022
- **Wireless and Mobile Networks (ECE522):** Spring 2020
- **Wireless Network 2 (ITH525)** Fall 2022
- **Wireless Network 1 (ITH524)** Spring 2021

■ **Korea University – Undergraduate Courses,** *Faculty Member*
- **Introduction to Artificial Intelligence (IWC420):** Winter 2022 (12/2022–01/2023), Winter 2021 (12/2021–01/2022)
- **Data Communications (KECE316):** Fall 2020
- **Digital System Design and Laboratory (KECE210):** Fall 2020
- **Probability and Random Process (KECE209):** Spring 2023, Spring 2022 *(Best Teaching Award, Top 20%)*, Spring 2021 *(Best Teaching Award, Top 20%)*, Spring 2020
- **Digital System (KECE207):** Spring 2020
- **Computer Language and Laboratory (EGRN151):** Fall 2022, Fall 2021 *(Granite Tower Best Teaching Award, Top 5%)*, Fall 2020 *(Best Teaching Award, Top 20%)*, Fall 2019 *(Granite Tower Best Teaching Award, Top 5%)*
- **Object-Oriented Programming (SEMI104):** Fall 2021 *(Best Teaching Award, Top 20%)*
- **Introduction to Computers (SEMI103):** Spring 2021 *(Granite Tower Best Teaching Award, Top 5%)*
- **Future Mobility Technology (GEQR075):** Spring 2023, Spring 2022 *(Granite Tower Best Teaching Award, Top 5%)*

■ **Chung-Ang University – College of Computer Science and Software,** *Faculty Member*

- **Optimal Design Theory and Applications (Graduate):** Spring 2019, Spring 2018, Spring 2017
- **Topics in Computer Science and Engineering (Graduate):** Fall 2018, Fall 2017, Fall 2016
- **Numerical Analysis (Undergraduate):** Spring 2019
- **Compiler Design (Undergraduate):** Spring 2019, Spring 2018, Spring 2017
- **Principles of Programming Languages (Undergraduate):** Fall 2018, Fall 2017, Fall 2016
- **Algorithm Analysis (Undergraduate):** Fall 2016
- **Operating Systems (Undergraduate):** Spring 2017, Spring 2016
- **Calculus (Undergraduate):** Spring 2017, Spring 2016
- **Mobile Application Development (Undergraduate):** Fall 2018, Fall 2017

■ **University of Southern California – Viterbi School of Engineering,** *Teaching Assistant*
- **Wireless and Mobile Networks Design and Lab** [EE579] (Spring 2013), Lectured by **Professor Murali Annavaram**
  Graduate Course dedicated to Android Mobile Platform Research and Programming
- **Programming Systems Design** [CSci455x] (Spring 2012, Fall 2012)
  Undergraduate Course dedicated to Object-Oriented Programming (Java and C++) and Advanced Data Structures

Research Collaboration and Supervision

■ **Postdoctoral Scholars**
- **Dr. Minseok Choi** (09/2018–02/2019, *Jointly with **USC** (co-advised by Prof. Andreas F. Molisch)*), *Professor* at **Kyung Hee University**, Korea
- **Dr. Soyi Jung** (03/2021–08/2021, *Jointly with **UC-Irvine** (co-advised by Prof. Marco Levorato)*), *Professor* at **Ajou University**, Korea

■ **Ph.D. Course Students and Alumni**
- **Soohyun Park** (*active*, 03/2019–08/2023 (expected)), *Postdoctoral Scholar* at **Korea University**, Korea
- **Haemin Lee** (*active*, 09/2020–02/2024 (expected)), *Postdoctoral Scholar* at **Yonsei University**, Korea
- **Won Joon Yun** (*active*, 03/2021–08/2024 (expected))
- **Hankyul Baek** (*active*, 03/2021–08/2024 (expected)), *Postdoctoral Scholar* at **Korea University**, Korea
- **Hyunsoo Lee** (*active*, 03/2021–)
- **Chanyoung Park** (*active*, 09/2022–)
- **Gyu Seon Kim** (*active*, 03/2023–)

■ **M.S. Course Students and Alumni**
- <u>*Academia:*</u> **Jae Pyoung Kim** (*active*, 03/2023–Present)
- <u>*Industry:*</u> **Kyeongseon Kim** (09/2017–08/2019, Upstage), **Dohyun Kwon** (03/2018–02/2020, Hyundai Motors Group), **Dohyun Kim** (03/2018–02/2020, Naver Corporation), **MyungJae Shin** (03/2018–02/2020, mofl *(Startup)*), **Jaeho Choi** (03/2019–02/2021, Korea Meteorological Administration *(Military Service Exception)*), **Youngkee Kim** (*active*, 03/2021–02/2023, Korea Electronics Technology Institute (KETI)), **Minjae Yoo** (*inactive*, 03/2021–Present), **Seok Bin Son** (*active*, 03/2022–Present)

■ **B.S. Course Students and Alumni,** *Undergraduate Interns*
- <u>*Academia:*</u> **Soohyun Park** (Ph.D. Student at Korea University), **Won Joon Yun** (Ph.D. Student at Korea University), **Jae Pyoung Kim** (M.S. Student at Korea University), **Hyunhee Cho** (*active*), **Hyomin Ahn** (M.S. Student at the University of California at Los Angeles (UCLA)), **Rhoan Lee** (*active*), **Chanyoung Park** (Ph.D. Student at Korea University), **Gyu Seon Kim** (Ph.D. Student at Korea University), **Dohyun Lim** (*active*), **Kyunglyul Baek** (*active*)
- <u>*Industry:*</u> **Nawon Kim** (SK Hynix), **Seongmin Kim** (KEB Hana Bank), **Si Yun Kim** (LG U+), **Yejin Kim** (CJ OliveNetworks), **Yeong Jong Mo** (Samsung Electronics), **Miji Park** (LG CNS), **Inhui Yeo** (LG Innotek), **Sangjin Lee** (SK Hynix), **Cheol Lee** (Naver, *after the M.S. degree from Chung-Ang University*), **Sunjun Hwang** (Samsung Electronics, *after the M.S. degree from Seoul National University*)

■ **Ph.D. Course Students and Alumni (Tight Collaboration for Ph.D. Dissertation)**
- **Dr. Seungyo Ryu** (Primary Advisor: Prof. Dongseung Kim at Korea University), *Researcher* at **LG Electronics**, Korea

■ **Intel Corporation (Santa Clara, California, USA),** *Graduate Interns*
- **Dr. Minseok Choi**, Ph.D. in EE from KAIST (02/2016–07/2016), now with **Kyung Hee University**, Korea
- **Dr. Hidekazu Shimodaira**, Ph.D. in EEE from Tokyo Institute of Technology (07/2015–12/2015), now with **NTT DOCOMO**, Japan

■ **USC Viterbi School of Engineering (Los Angeles, California, USA),** *Graduate Students*
- **Feiyu Meng**, M.S. in EE from USC (Summer 2013, Fall 2013), now with **Apple**, Silicon Valley, CA, USA
- **Vivek Sankaravadivel**, M.S. in EE from USC (Spring 2011, Fall 2011), now with **Uber**, Silicon Valley, CA, USA

Talks and Presentations (Selected)

■ **IEEE Distinguished Lectures**
- *Federated Learning for Medical and Mobile Platforms: Motivation, Challenges, and Potential Solutions*
  California State University, Long Beach (Long Beach, CA, USA, 01/2020), Hosted by Prof. Sean Kwon and Prof. Henry Yeh
  IEEE Systems Council – IEEE Coastal Los Angeles Section Chapter

■ **IEEE Conference Tutorials and Special Session Talks**
- **IEEE ICUFN 2022 Tutorial** (Barcelona, Spain, 07/2022), *A Paradigm Shift in Future Networks with Quantum Deep Learning*
- **IEEE ICOIN 2022 Tutorial** (Online, 01/2022), *Advanced Deep Learning Methods for Autonomous Mobility*
- **IEEE ICUFN 2021 Tutorial** (Jeju, Korea, 08/2021), *Distributed and Split Deep Learning: Theory and Applications*
- **IEEE ICAIIC 2021 Tutorial** (Online, 04/2021), *Multi-Agent Deep Reinforcement Learning for Connected and Autonomous Vehicles*
- **IEEE ICTC 2019 Special Session Talk** (Jeju, Korea, 10/2019), *Advanced Deep Learning Methods and Their Applications to Distributed and Network Platforms*
- **IEEE ICOIN 2019 Tutorial** (Kuala Lumpur, Malaysia, 01/2019), *Distributed Platform Research for Emerging Deep Learning Applications*
- **IEEE ICC 2018 Tutorial** (Kansas City, MO, USA, 05/2018), *Securing the Internet of Things: A Machine Learning Approach (Making Machine Learning Practical)*, Joint Presentation wih Prof. Aziz Mohaisen (University of Central Florida, Orlando, FL, USA)

■ **Korean (Local) Conference Tutorials and Special Session Talks**
- **2022 KIPS Fall Conference Tutorial** (Chuncheon, 11/2022), *Quantum Deep Learning Basics*

- **2022 Korea A.I. Conference Tutorial** (Jeju, 09/2022), *Trends in Deep Reinforcement Learning*
- **2022 KICS Summer Conference Tutorial** (Jeju, 06/2022), *Quantum Multi-Agent Deep Reinforcement Learning*
- **2022 KIEES Winner Conference Tutorial** (Online, 02/2022), *Deep Learning Theory and Implementation*
- **2021 Korea A.I. Conference Tutorial** (Jeju, 09/2021), *Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications*
- **2021 JCCI Mobile Machine Learning Special Session** (Online, 04/2021), *Multi-Agent Deep Reinforcement Learning for Autonomous Vehicles*
- **2020 Korea A.I. Conference Tutorial** (Jeju, 12/2020), *Randomized Adversarial Imitation Learning for Autonomous Driving*
- **2020 KICS Fall Conference Tutorial** (Seoul, 11/2020), *Trends in Multi-Agent Deep Reinforcement Learning for Distributed Computing*
- **2020 KICS Summer Conference Tutorial** (Jeju, 08/2020), *Deep Learning Computation for Economic Theory and Its Applications*
- **2020 KICS Winter Conference Tutorial** (Kangwon, 02/2020), *Deep Learning Applications to Computer Networking*
- **2020 KICS Winter Conference Tutorial** (Kangwon, 02/2020), *Deep Neural Network Basics*
- **2019 KICS Fall Conference Special Session Talk** (Seoul, 11/2019), *AI Methods for Network and Mobility Platform*
- **2019 IEEK Hyundai Motors Special Session** (Jeju, 06/2019), *Explainable AI (XAI) and Imitation Learning for Automotive Applications*
- **2019 KIPS Spring Conference Tutorial** (Seoul, 05/2019), *Deep Learning Basics and Representative Models*
- **2019 KICS Winter Conference Tutorial** (Kangwon, 01/2019), *Deep Learning Methods for Advanced Network*
- **2017 KICS Summer Conference Tutorial** (Jeju, 06/2017), *GPU Computing Platforms and Software for Deep Learning*
- **2017 KCC Summer Conference Special Session** (Jeju, 06/2017), *Dynamic Control and Software for Next-Generation Distributed Platforms*
- **2017 KICS Winter Conference Tutorial** (Kangwon, 01/2017), *Machine Learning Techniques for Mobile Computing*

■ **Industry Presentations (Selected)**
- *International:* **Huawei Research Center (Text-Aware Image Understanding Workshop)** (Online, 11/2021), **Ericsson-LG (R&D Hackathon / AI Learning Challenge – Keynote Speech)** (Seoul, Korea, 05/2021), **Huawei Research Center (Deep Learning/Machine Learning for Computer Vision)** (Online, 09/2020), **Huawei Research Center (Fundamental and Applied Problems of Machine Learning)** (Nizhny Novgorod, Russia, 12/2019), **City University of Hong Kong** (Hong Kong, 11/2018), **Intel Communications and Devices Group (iCDG) [Cellular Modem TechTalk]** (Santa Clara, CA, USA, 01/2016), **Nokia Research Center at Berkeley** (Berkeley, CA, USA, 08/2014), **Qualcomm Research Center** (San Diego, CA, USA, 02/2014)
- *Korea:* **Solvit System** (Seoul), **Korea Institute of Machinery & Materials** (Daejeon), **Korea Meteorological Administration** (Seoul), **Hyundai NGV** (Seoul), **SK Telecom (SKT)** (Seoul), **Agency for Defense Development (ADD)** (Seoul), **SK Hynix** (Icheon), **Naver Labs - Robotics Lab** (Pankyo), **ETRI** (Daejeon), **KT AI Tech Center** (Seoul), **LG Electronics** (Seoul), **Posco ICT** (Pankyo), **LG U+** (Seoul), **SK Broadband** (Seoul), **Korea Electronics Technology Institute (KETI)** (Pankyo), **Korea Electric Power Corporation (KEPCO) Research Institute** (Daejeon), **Samsung Electronics** (Hwasung)

■ **Prototyping at Industry Exhibitios**
- *Mobile Edge mmWave Backhaul and Access*; **Mobile World Congress (MWC) 2016** (Barcelona, Spain, 02/2016)
- *mmWave MAA Client Access & Backhaul Platform*; **Intel 360 degree 2016** (Anaheim, CA, 02/2016)
- *mmWave Modular Antenna Array Client Access & Backhaul Platform*; **Intel Asia Innovation Summit 2015** (Taipei, Taiwan, 10/2015)
- *Enabling 5G Densification*; **Intel Developer Forum (IDF) 2015** (San Francisco, CA, USA, 08/2015)
- *Enabling 5G Densification*; **Intel Design and Test Technology Conference (DTTC) 2015** (Portland, OR, USA, 08/2015)
- *Enabling 5G Densification*; **Mobile World Congress (MWC) 2015** (Barcelona, Spain, 03/2015)

■ **Demonstration at Academic Conferences**
- *Quantum Multi-Agent Reinforcement Learning via Variational Quantum Circuit Design*; **IEEE ICDCS 2022** (Bologna, Italy, 07/2022)
- *Visualization of Deep Reinforcement Autonomous Aerial Mobility Learning Simulations*; **IEEE INFOCOM 2021** (Online, 05/2021)
- *Deep Multi-modal Unsupervised Pen Pressure Stylization*; **IEEE/CVF ICCV 2019** (Seoul, Korea, 11/2019)
- *Light-Weight Programming Language for Blockchain*; **ACM MobiSys 2019** (Seoul, Korea, 06/2019)
- *mmWave MAA Client Access & Backhaul Platform*; **IEEE GLOBECOM 2015 (Industry Demonstration ID-14)** (San Diego, CA, 12/2015)
- *mmWave Modular Antenna Array for Next-Generation Wireless Networks*; **IEEE GLOBECOM 2014 (Expo)** (Austin, TX, USA, 12/2014)
- *Adaptive Video Streaming for Device-to-Device Mobile Platforms*; **ACM MobiCom 2013** (Miami, FL, USA, 10/2013)

Conference Activities and Services

■ **Organizing Committee (OC) Activities**
- **IEEE WiOpt:** 2022 (Organizer, *Caching, Computing and Delivery in Wireless Networks Workshop (CCDWN)*)
- **IEEE GLOBECOM:** 2015 (Organizer, *Workshop on Millimeter-Wave Backhaul and Access (mmWave)*)
- **IEEE ICC:** 2022 (Patronage Chair)
- **IEEE ICTC:** 2022 (TPC Vice Chair for Administration, a.k.a., Secretary), 2021 (Workshop Organizer, *Workshop on KU-AIER (Korea University, A.I. Engineering Research)*), 2021 (Secretary), 2020 (Secretary), 2020 (Special Session Organizing Chair, *Special Session on KU-AIER (Korea University, A.I. Engineering Research)*), 2019 (Secretary), 2018 (Secretary)
- **IEEE ICUFN:** 2022 (Workshop Chair), 2021 (Workshop Chair), 2021 (Workshop Organizing Chair, *Artificial Intelligence Emerging Applications (AIEA) Workshop*)
- **IEEE ICAIIC:** 2019 (Publication Chair)
- **IEEE VTS APWCS:** 2022 (Finance Chair), 2021 (Finance Co-Chair), 2017 (Publication Vice Chair)
- **IEEE ICOIN:** 2023 (Workshop Co-Chair), 2023 (Workshop Organizing Chair, *Workshop on Artificial Intelligence and Mobility*), 2022 (Workshop Organizing Chair, *Workshop on Artificial Intelligence and Mobility*), 2021 (Workshop Organizing Chair, *Workshop on Artificial Intelligence and Mobility*), 2020 (Workshop Organizing Chair, *Workshop on Artificial Intelligence and Mobility*)
- **IEEE ICASSP:** 2018 (Special Session Organizing Chair, *Special Session on Cybersecurity and Privacy*)
- **IEEE APCC:** 2022 (Local Arrangement Chair)
- **IEEE ICEIC:** 2021 (Local Arrangement Chair)
- **ACM CoNEXT:** 2019 (Poster Session Chair)

■ **Technical Program Committee (TPC) Chair-Level Activities**
- **CCNC:** 2022 (Track Chair for T7 (*Security, Privacy and Content Protection*))
- **ICTC:** 2022 (TPC Vice Chair for Administration)
- **ICAIIC:** 2023 (TPC Co-Chair), 2022 (TPC Co-Chair), 2021 (TPC Co-Chair), 2020 (TPC Co-Chair), 2019 (TPC Co-Chair)
- **ICOIN:** 2021 (TPC Vice Chair), 2020 (TPC Vice Chair), 2019 (TPC Vice Chair), 2018 (TPC Vice Chair)

- **NAS:** 2019 (Track Co-Chair for Network Track)
- **GLOBECOM:** 2015 (TPC Chair for the *Workshop on Millimeter-Wave Backhaul and Access*)

■ **Technical Program Committee (TPC) Non-Chair-Level Activities**
- **2023:** ICC (Wireless Communications Symposium), ICC (Integrated Sensing and Communication Track), ICC (Reconfigurable Intelligent Surfaces and Smart Environments Track), WCNC, ICOIN, IE
- **2022:** GLOBECOM (Selected Areas in Communications – Machine Learning for Communications), MASS, ICC (Wireless Communications Symposium), WCNC, VTC-Fall, COMNETSAT, ICAIIC, ICTC, ICUFN, ICOIN, IPDPS (*Heterogeneity in Computing Workshop*), ICCC, WCSP, CyberneticsCom, ICEIC, MSN (Track 3: Security, Privacy, Trust, and Blockchain), ICNGC
- **2021:** GLOBECOM (Selected Areas in Communications – Machine Learning for Communications), GLOBECOM (IoTSN), ICC (Wireless Communications Symposium), ICCCN, MSN, COMNETSAT, ICTC, ICTC (*Workshop on Intelligent 6G Communication Systems*), ICTC (*Workshop on KU-AIER (Korea University, A.I. Engineering Research)*), WCNC, ICCC, IGESSC, ICAIIC, ICUFN, ICOIN, MASS, EuCAP, ICEIC, ICNGC, ITC-CSCC
- **2020:** GLOBECOM (Ad-hoc and Sensor Networks Symposium), ICTC, WCNC, WCNC (*Workshop on Aerial Communications in 5G and Beyond Networks*), IGESSC, ICUFN, ICOIN, Blockchain, ICCC, COMNETSAT
- **2019:** ICTC, ICCC, IGESSC, ICUFN, VTC-Spring, ICDCS (Distributed Green Computing & Energy Management), NAS (Network Track), Blockchain, MobiHoc, EuCAP, IE, WISA, SecureComm, ICPADS (Security & Dependable Computing)
- **2018:** ICTC, IGESSC, ICUFN, WCSP, APWCS, ICOIN, AsiaCCS (*Workshop on Security in Cloud Computing*), SigTelCom, ATC, IE
- **2017:** ICUFN, ICTC, IE
- **2016:** ICUFN, VTC-Spring
- **2015:** VTC-Spring, EuCAP
- **2014:** VTC-Fall
- **2012:** MASS (*Workshop on Internet of Things Technology and Architectures*)

References

- **Prof. Andreas F. Molisch** *(Fellow of the IEEE)*, *Ph.D. Research and Dissertation Advisor*
  – Solomon Golomb – Andrew and Erna Viterbi Chair at the University of Southern California (Los Angeles, California, USA)
  – Professor of Electrical and Computer Engineering at the University of Southern California (Los Angeles, California, USA)
  – URL: https://wides.usc.edu/founder.html