Joongheon Kim

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Highlights

Research Milestones

- **61 IEEE Journals** (published and accepted),
  The Complete Journals List: https://sites.google.com/view/aimlab-kuee/publications/journals
- **9 Top-Tier Conference Papers**, i.e., NeurIPS (review), ACM CIKM (review), IEEE ICDCS (2022), IEEE INFOCOM (2022), IEEE ICDCS (2020), IJCAI (2019), IEEE ICDCS (2018), ACM Multimedia (2017), and ACM MobiSys (2010)
- **4789+ Citations** in Google Scholar Profile (H-index: 32+, i10-index 107+)
- **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%)
- **6 Awards from IEEE Conferences and Contests**, i.e., 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 (2 in 2021; 1 in 2019)
- **5 Tutorials at IEEE Conferences**, i.e., *ICOIN (2022)*, *ICUFN (2021)*, *ICAIIC (2021)*, *ICOIN (2019)*, and *ICC (2018)*
- **62+ 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
- **16 Awards** from Local (Korean) Conferences and Contests
- **Research Funds (since March 2016):** 5,468,384 USD ≈ 5,468,384,000 KRW (except University Internal Funds)

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

- **Supervised 3 Postdoctoral Scholars**, tenure-track professors at Kyung Hee University (Korea) and Hallym University (Korea); and a postdoctoral scholar at the University of Southern California (USA, jointly advised by Prof. Andreas F. Molisch)
- **Supervised 1 Ph.D. and 5 M.S. Students**, researchers at LG Electronics, Hyundai, Naver, government agency, and startup
- **6 Best Teaching Awards at Korea University**, 3 awards are for top 5% (***Granite Tower Best Teaching Award***) and 3 awards are for top 20% (***Best Teaching Award***)

IEEE Society Academic Activities

- **Senior Member of the IEEE (2018–)** and IEEE Membership for 17+ 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
- **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
- **21+ Organizing Committee (OC) Contributions** for IEEE Conferences
- **57+ Technical Program Committee (TPC) 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)*, School of Electrical Engineering
  - *Adjunct Professor (03/2023–Present)*, Department of Communication Engineering (with **Samsung Electronics**)
  - *Adjunct Professor (03/2021–02/2023)*, Department of Semiconductor Engineering (with **SK Hynix**)
  - *Assistant Professor (09/2019–02/2021)*, School of Electrical Engineering
  - R&D Positions
    * *Vice Director (10/2020–Present)*, Artificial Intelligence Engineering Research Center (KU-AIER)
- **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**
  - *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 Asia Pacific Wireless Communications Symposium (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 Machine Learning (ML) and Artificial Intelligence (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 (03/2021)*, **ICT Express** (S.I. on Mobile and Edge Computing Systems)

Awards and Honors

Research and Academic Excellence (International)

- **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* (with H. Lee)
  "Deep Reinforcement Learning for Loitering Munition Mobility Control: Algorithm Design and Visualization"
- **Spotlight Presentation (2022)** – *ICML Workshop on Dynamic Neural Networks (2022)*
  - W.J. Yun, J.P. Kim, S. Jung, J. Park, M. Bennis, and J. Kim, "Slimmable Quantum Federated Learning," *ICML Workshop on Dynamic Neural Networks*, Baltimore, MD, USA, July 2022.
- **IEEE MMTC Best Journal Paper Award (2021)** – *IEEE Communications Society* (with 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* (with 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* (with H. Lee, S. Jung)
  "Distributed and Autonomous Aerial Data Collection in Smart City Surveillance Applications"
- **IEEE ICOIN Best Paper Award (2021)** – *IEEE Computer Society* (with S. Jung, W.J. Yun, J.-H. Kim)
  - S. Jung, W.J. Yun, J. Kim, and J.-H. Kim, "Infrastructure-Assisted Cooperative Multi-UAV Deep Reinforcement Energy Trading Learning for Big-Data Processing," *IEEE ICOIN*, Jeju, Korea, January 2021.
- **IEEE MMTC Outstanding Young Researcher Award (2020)** – *IEEE Communications Society*
- **Bronze Paper Award (2020)** – *2020 IEEE Seoul Section Student Paper Contest* (with S. Park)
  "Reliable Offloading Target Selection using Deep Reinforcement Learning for Large Fire Accident"
- **IEEE Systems Journal Best Paper Award (2020)** – *IEEE Systems Council* (with M. Saad, J. Choi, D. Nyang, A. Mohaisen)
  - M. Saad, J. Choi, D. Nyang, J. Kim, and A. Mohaisen, "Towards Characterizing Blockchain-based Cryptocurrencies for Highly-Accurate Predictions," *IEEE Systems Journal*, 14(1):321-332, March 2020.
- **Gold Paper Award (2019)** – *2019 IEEE Seoul Section Student Paper Contest* (with 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* (with 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 – 4 Year Full Scholarship ($30,000/year for 4 years, i.e., $120,000)

Research and Academic Excellence (Korea Regional)

- **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
- **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

- **Excellence Paper Award (02/2022)** – *2022 KICS Winter Conference* (with Y. Kim, Y.K. Lee, S. Jung)
- **ICT Express Best Reviewer Award (2021)** – *ICT Express (Elsevier)* (Awarded to Soohyun Park)
- **ICT Express Best Reviewer Award (2021)** – *ICT Express (Elsevier)* (Awarded to Haemin Lee)
- **Haedong Paper Award (06/2021)** – *2021 KICS Summer Conference* (with H. Baek, Y.J. Ha, M. Yoo, S. Jung)
- **Excellence Paper Award (06/2021)** – *2021 KICS Summer Conference* (with B. Lim, W.J. Yun, Y.-C. Ko)
- **Excellence Paper Award (Undergraduate) (06/2021)** – *2021 KICS Summer Conference* (with G. Lee, W.J. Yun, S. Jung)
- **Encouragement Paper Award (11/2020)** – *2020 KICS Fall Conference* (with W.J. Yun)
- **Encouragement Paper Award (06/2020)** – *2020 KICS Summer Conference* (with W.J. Yun)
- **Encouragement Paper Award (02/2020)** – *2020 KICS Winter Conference* (with S. Oh, J. Choi)
- **Encouragement Paper Award (02/2020)** – *2020 KICS Winter Conference* (with J. Kim)

Teaching and Supervision Excellence

- **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

- **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, 5,468,384 USD ≈ 5,468,384,000 KRW)

Industry-Funded Projects

- **Mapping between Real World and Virtual Reality (VR) for End-Edged Cloud Real-Time VR Servers** 09/2020–09/2024
  Funded by *Samsung Electronics – Samsung Advanced Institute of Technology* [Grant: $286,000; 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* [Grant: $12,000; Primary-PI]

- **Visual Recognition Software Implementation using Deep Learning Tools** 05/2019–11/2019
  Funded by *Hyundai NGV* and *Hyundai/Kia Motors Company* [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*** 10/2020–12/2022
  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)* [xxx, 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)* [xxx, 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 (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)** 04/2020–10/2020
  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 (Human-Agent Cooperation Algorithm Design in Multi-Agent Environment)** 04/2020–08/2020
  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 (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)** 05/2019–10/2019
  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]

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

- Citation: 4789+, H-Index: 32+, i10-Index: 107+; obtained from Google Scholar Profile (as of June 18, 2022)
- The Complete Journals List (totally, **106**): `https://sites.google.com/view/aimlab-kuee/publications/journals`

Dissertation, Books, and Book Chapters

■ Ph.D. Dissertation

- J. Kim, *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

- X. Lin, J. Zhang, Y. Liu, and J. Kim, *Fundamentals of 6G Communications and Networking*, Springer (Working in Progress).

■ Book Translation (from English to Korean)

- J. Choi, J. Kim, J. No, C. Sohn, D. Ahn, H. Ahn, H. Lee, and H. Jung, *Programming in ANSI C*, Haksan Media, January 2021 (8th Edition, ISBN: 979-1185294315)., Originally written by E. Balagurusamy (Publisher: McGraw Hill, ISBN: 978-9351343202, January 2019)

■ Book Chapters

- S. Park, D. Kim, and J. Kim, "Dynamic Decision-Making for Stabilized Deep Learning Software Platforms," *Advances and Applications in Deep Learning*, IntechOpen, September 2020., (Editor: M.A. Aceves-Fernandez)
- A.F. Molisch, M. Ji, J. Kim, D. Burghal, and A.S. Tehrani, "Device-to-Device Communications," *Towards 5G: Applications, Requirements and Candidate Technologies*, Wiley, January 2017., (Editors: R. Vannithamby, S. Talwar)
- J. Kim, "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, "Millimeter-Wave (mmWave) Radio Propagation Characteristics," *Opportunities in 5G Networks: A Research and Development Perspective*, CRC Press, April 2016., (Editor: F. Hu)
- J. Kim, E. Kim, W. Lee, D. Kim, J. Choi, J. Jung, and C.K. Shin, "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, W. Lee, E. Kim, and T.K. Shih, "Coverage-Time Optimized Dynamic Clustering for Two-Tiered WM2Nets," *Wireless Mesh Networking*, McGraw-Hill, August 2008., (Editor: G. Aggelou)

Top-Tier Conferences and IEEE Journals/Magazines

■ Top-Tier, Awarded, and Highly-Selected (50+ by Google Scholar) Conference/Workshop Papers

[Review'23] W.J. Yun, S. Kim, and J. Kim, **IEEE/ACM ICSE (2023)**
[Review'23] W.J. Yun, J.P. Kim, H. Baek, S. Jung, J. Park, M. Bennis, and J. Kim, **IEEE INFOCOM (2023)**
[Review'22] W.J. Yun, J. Park, and J. Kim, **NeurIPS (2022)**
[Review'22] W.J. Yun, D. Mohaisen, S. Jung, J.-K. Kim, and J. Kim, **ACM CIKM (2022)**
[Review'22] M. Choi, W.J. Yun, and J. Kim, *IEEE WiOpt Workshop on Caching, Computing and Delivery in Wireless Networks (2022)*
[ICML'22] W.J. Yun, J.P. Kim, S. Jung, J. Park, M. Bennis, and J. Kim, "Slimmable Quantum Federated Learning," *ICML Workshop on Dynamic Neural Networks (2022)* ***(Spotlight Presentation)***
[ICDCS'22] W.J. Yun, Y. Kwak, J.P. Kim, H. Cho, S. Jung, J. Park, and J. Kim, "Quantum Multi-Agent Reinforcement Learning via Variational Quantum Circuit Design," **IEEE ICDCS (2022)**
[INFOCOM'22] H. Baek, W.J. Yun, Y. Kwak, S. Jung, M. Ji, M. Bennis, J. Park, and J. Kim, "Joint Superposition Coding and Training for Federated Learning over Multi-Width Neural Networks," **IEEE INFOCOM (2022)** *(Acceptance Rate: 225/1129=19.93%)*

[ICML'21] H. Baek, W.J. Yun, S. Jung, M. Ji, J. Kim, J. Park, and M. Bennis, "Communication and Energy Efficient Slimmable Federated Learning via Superposition Coding and Successive Decoding," *ICML Workshop on Federated Learning for User Privacy and Data Confidentiality (2021)*

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

[ICDCS'20] Ü. Meteriz, N.F. Yildiran, J. Kim, and D. Mohaisen, "Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications," **IEEE ICDCS (2020)** *(Acceptance Rate: 105/584=17.98%)*

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

[IJCAI'19] M. Shin and J. Kim, "Randomized Adversarial Imitation Learning for Autonomous Driving," **IJCAI (2019)** *(Acceptance Rate: 850/4752=17.89%)*

[ICDCS'18] S. Ahn, J. Kim, E. Lim, W. Choi, A. Mohaisen, and S. Kang, "ShmCaffe: A Distributed Deep Learning Platform with Shared Memory Buffer for HPC Architecture," **IEEE ICDCS (2018)** *(Acceptance Rate: 78/378=20.63%)*

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

[MM'17] J. Koo, J. Yi, J. Kim, M.A. Hoque, and S. Choi, "REQUEST: Seamless Dynamic Adaptive Streaming over HTTP for Multi-Homed Smartphone under Resource Constraints," **ACM Multimedia (2017)** *(Acceptance Rate: 189/684=27.63%)*

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

[ICC'14] J. Kim and A.F. Molisch, "Quality-Aware Millimeter-Wave Device-to-Device Multi-Hop Routing for 5G Cellular Networks," *IEEE ICC (2014)* ***(Citations: 50+)***

[MobiSys'10] J. Paek, J. Kim, and R. Govindan, "Energy-Efficient Rate-Adaptive GPS-based Positioning for Smartphones," **ACM MobiSys (2010)** *(Acceptance Rate: 25/126=19.84%)* ***(Citations: 620+)***

[ICCCN'05] J. Kim, W. Lee, J. Yu, J. Myung, E. Kim, and C. Lee, "Effect of Localized Optimal Clustering for Reader Anti-Collision in RFID Networks: Fairness Aspects to the Readers," *IEEE ICCCN (2005)* ***(Citations: 64+)***

■ IEEE Journals and Magazines, *66 publications*

◄ Revision ►

[TON.review] W.J. Yun, Y. Kwak, H. Baek, S. Jung, M. Ji, M. Bennis, J. Park, and J. Kim, "SlimFL: Federated Learning with Superposition Coding over Slimmable Neural Networks," *IEEE/ACM Transactions on Networking*, (Review, 02-Feb-2022).

[TMC.major] U. Meteriz, N.F. Yildiran, J. Kim, and D. Mohaisen, "Learning Location from Shared Elevation Profiles in Fitness Apps: A Privacy Perspective," *IEEE Transactions on Mobile Computing*, (1st Revision, 21-Jun-2021).

[JCN.major] H. Lee, S. Kwon, S. Jung, and J. Kim, "Neural Myerson Auction for Truthful and Energy-Efficient Autonomous Aerial Data Delivery," *IEEE/KICS Journal of Communications and Networks*, (Review after 1st Revision, 07-May-2022).

[TNNLS.minor] W.J. Yun, M. Shin, D. Mohaisen, K. Lee, and J. Kim, "Hierarchical Deep Reinforcement Learning-based Propofol Infusion Assistant Framework in Anesthesia," *IEEE Transactions on Neural Networks and Learning Systems*, (Review after Minor Revision, 23-Apr-2022).

[TITS.major] W.J. Yun, S. Park, J. Kim, and D. Mohaisen, "Self-Configurable Stabilized Real-Time Detection Learning for Autonomous Driving Applications," *IEEE Transactions on Intelligent Transportation Systems*, (Review after 2nd Revision, 26-Feb-2022).

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[TVT.accept] B. Lim, W.J. Yun, J. Kim, and Y.-C. Ko, "Joint Pilot Design and Channel Estimation using Deep Residual Learning for Multi-Cell Massive MIMO under Hardware Impairments," *IEEE Transactions on Vehicular Technology*, v(n):ppp–ppp, Month Year.

[TII'22.10] W.J. Yun, S. Park, J. Kim, M. Shin, S. Jung, D. Mohaisen, and J.-H. Kim, "Cooperative Multi-Agent Deep Reinforcement Learning for Reliable Surveillance via Autonomous Multi-UAV Control," *IEEE Transactions on Industrial Informatics*, 18(10):ppp–ppp, October 2022.

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

[JCN'22.06] W.J. Yun, M. Shin, S. Jung, S. Kwon, and J. Kim, "Parallelized and Randomized Adversarial Imitation Learning for Safety-Critical Self-Driving Vehicles," *IEEE/KICS Journal of Communications and Networks*, 24(3):ppp–ppp, June 2022.

[CSM'22.06] E. Au, L. Wilhelmsson, T. Baykas, and J. Kim, "Recent and Future Evolution of Wi-Fi (Editorial)," *IEEE Communications Standards Magazine*, v(n):ppp–ppp, June 2022.

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

[TVT'22.05] K. Kim, J.-H. Lee, S. Jung, J. Kim, and J.-H. Kim, "Stabilized Detection Accuracy Maximization using Adaptive SAR Image Processing in LEO Networks," *IEEE Transactions on Vehicular Technology*, 71(5):5661–5665, May 2022.

[ISJ'22.03] E. Boo, J. Kim, and J. Ko, "LiteZKP: Lightening Zero-Knowledge Proof-based Blockchains for IoT and Edge Platforms," *IEEE Systems Journal*, 16(1):112–123, March 2022.

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◄ 2021 ►

[ISJ'21.09] S. Jung, J. Kim, and J.-H. Kim, "Intelligent Active Queue Management for Stabilized QoS Guarantees in 5G Mobile Networks," *IEEE Systems Journal*, 15(3):4293–4302, September 2021.

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◄ 2020 ►

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[TWC'19.12] M. Choi, A. No, M. Ji, and J. Kim, "Markov Decision Policies for Dynamic Video Delivery in Wireless Caching Networks," *IEEE Transactions on Wireless Communications*, 18(12):5705–5718, December 2019.

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◀ 2007–2015 ▶

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Patents (Granted), *totally 62*

- **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)
- **17 Korean Patents:** (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 and Research Supervision

Teaching Experience

■ **Korea University – Graduate Courses, *Faculty Member***

- *IT R&D Policies 1 (ECE723):* Fall 2020
- *Design and Analysis of Wireless Communication Systems (ECE721):* Spring 2021
- *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 1 (ITH524), Graduate School of Engineering and Technology:* Spring 2021

■ **Korea University – Undergraduate Courses, *Faculty Member***

- *Introduction to Artificial Intelligence (IWC420):* 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 2022, Spring 2021 *(Best Teaching Award, Top 20%)*, Spring 2020
- *Digital System (KECE207):* Spring 2020
- *Computer Language and Laboratory (EGRN151):* 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 2022

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

- *Optimal Design Theory and Applications (Graduate Course):* Spring 2019, Spring 2018, Spring 2017
- *Topics in Computer Science and Engineering (Graduate Course):* Fall 2018, Fall 2017, Fall 2016
- *Numerical Analysis (Undergraduate Course):* Spring 2019
- *Compiler Design (Undergraduate Course):* Spring 2019, Spring 2018, Spring 2017
- *Principles of Programming Languages (Undergraduate Course):* Fall 2018, Fall 2017, Fall 2016
- *Algorithm Analysis (Undergraduate Course):* Fall 2016
- *Operating Systems (Undergraduate Course):* Spring 2017, Spring 2016
- *Calculus (Undergraduate Course):* Spring 2017, Spring 2016
- *Mobile Application Development (Undergraduate Course):* 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 **University of Southern California** (co-advised by Prof. Andreas F. Molisch)
  (Ph.D. Advisor: Prof. Jaekyun Moon at Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea)
  Currently, *Assistant Professor* at **Kyung Hee University**, Suwon, Korea
- **Dr. Soyi Jung** (03/2021–08/2021), jointly with **University of California at Irvine** (co-advised by Prof. Marco Levorato)
  (Ph.D. Advisor: Prof. Jae-Hyun Kim at Ajou University, Suwon, Korea)
  Currently, *Assistant Professor* at **Hallym University**, Chuncheon, Korea
- **Dr. Ju-Hyung Lee** (08/2021–), jointly with **University of Southern California** (co-advised by Prof. Andreas F. Molisch)
  (Ph.D. Advisor: Prof. Young-Chai Ko at Korea University, Seoul, Korea)

■ **Ph.D. Course Students and Alumni**

- **Soohyun Park** (03/2019–02/2024 (expected))
- **Haemin Lee** (09/2020–02/2025 (expected))
- **Won Joon Yun** (03/2021–08/2024 (expected))
- **Hyunsoo Lee** (03/2021–)
- **Hankyul Baek** (03/2021–)
- **Seok Bin Son** (03/2022–)
- **Chanyoung Park** (09/2022–)
- **Jae Pyoung Kim** (03/2023–)

■ **Ph.D. Course Students and Alumni (Tight Collaboration for Ph.D. Dissertation)**

- **Minseok Choi** (Advisor: Prof. Jaekyun Moon at KAIST), *Professor* at **Kyung Hee University**, Suwon, Korea
- **Laihyuk Park** (Advisor: Prof. Sungrae Cho at CAU), *Professor* at **Seoul National University of Science and Technology**, Seoul, Korea

- **Shinyoung Ahn** (Advisor: Prof. Sungwon Kang at KAIST), *Researcher* at **ETRI**, Daejeon, Korea
- **Jonghoe Koo** (Advisor: Prof. Sunghyun Choi at SNU), *Researcher* at **Samsung Research**, Seoul, Korea
- **Seungyo Ryu** (Advisor: Prof. Dongseung Kim at Korea University), *Researcher* at **LG Electronics**, Changwon, Korea
- **Soyi Jung** (Advisor: Prof. Jae-Hyun Kim at Ajou University), *Professor* at **Hallym University**, Chuncheon, Korea
- **Joo Yong Shim** (Advisor: Prof. Jong-Kook Kim at Korea University)

■ **M.S. Course Students and Alumni**
- **Kyeongseon Kim** (09/2017–08/2019), *Researcher* at **LG Electronics AI Research**, Seoul, Korea
- **Dohyun Kwon** (03/2018–02/2020), *Researcher* at **Hyundai Motors Group**, Uiwang, Korea
- **Dohyun Kim** (03/2018–02/2020), *Researcher* at **Naver Corporation**, Seongnam, Korea
- **MyungJae Shin** (03/2018–02/2020), *Engineer* at **mofl** (startup), Daejeon, Korea
- **Jaeho Choi** (03/2019–02/2021), *Researcher (Military Service Exception)* at **Korea Meteorological Administration**, Seoul, Korea
- **Youngkee Kim** (03/2021–02/2023), *Researcher* at **Korea Electronics Technology Institute (KETI)**, Seongnam, Korea
- **Minjae Yoo** (03/2021–02/2023)

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

Professional Activities

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 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)

■ **Invited Talks at World-Wide Universities and Research Institutes**
- *Spatio-Temporal Slit Learning for Privacy-Preserving OCR Applications*
  Huawei Research Center (Text-Aware Image Understanding Workshop) (Online, 11/2021)
- *AI/ML Technologies in Beyond 5G/6G*
  Ericsson-LG (R&D Hackathon / AI Learning Challenge – Keynote Speech) (Seoul, Korea, 05/2021)
- *XOR Mixup: Privacy-Preserving Data Augmentation for One-Shot Federated Learning*
  Huawei Research Center (Deep Learning/Machine Learning for Computer Vision) (Online, 09/2020)
- *Deep Reinforcement Learning Research and Its Applications to Networks*
  Huawei Research Center (Fundamental and Applied Problems of Machine Learning) (Nizhny Novgorod, Russia, 12/2019)
- *Enabling Delay-Sensitive Robust Distributed Blockchain Mining via Econometric Methods*
  City University of Hong Kong (Hong Kong, 11/2018), Hosted by Prof. Cong Wang
- *Frequency Sharing Study between 5G Micro-Cellular Systems and Fixed Service Systems in Millimeter-Wave Bands*
  Intel Communications and Devices Group (iCDG) [Cellular Modem TechTalk] (Santa Clara, CA, USA, 01/2016)
- *Status of Millimeter-Wave and Device-to-Device Research*
  Nokia Research Center at Berkeley (Berkeley, CA, USA, 08/2014)
- *Advanced Device-to-Device Video Streaming: Theory and Implementation*
  Qualcomm Research Center (San Diego, CA, USA, 02/2014)

■ **Invited Talks at Korean Research Institutes**
- *A.I. Technology Trends and Applications*; **Korea Meteorological Administration** (Online, 09/2021)
- *Deep Reinforcement Learning: Trends and Applications*; **SK Telecom (SKT)** (Seoul, Korea, 06/2021)
- *Trends in AI R&D for Edge/Mobile Platforms*; **SK Hynix** (Icheon, Korea, 09/2020)
- *Lyapunov Optimization and AI Applications to Mobility Platforms*; **Naver Labs - Robotics Lab** (Pankyo, Korea, 06/2020)
- *Distributed AI: Trends and Issues*; **ETRI** (Daejeon, Korea, 05/2020)
- *Federated Learning and Imitation Learning*; **ETRI** (Kwangju, Korea, 02/2020)
- *Federated and Imitation Learning*; **KT AI Tech Center** (Seoul, Korea, 12/2019)
- *Adversarial Imitation Learning and Federated Learning*; **ETRI** (Daejeon, Korea, 12/2019)
- *Distributed Learning and Deep Reinforcement Learning*; **ETRI** (Daejeon, Korea, 12/2019)
- *mmWave Radar and Sensors: Theory and Applications*; **LG Electronics** (Seoul, Korea, 11/2019)
- *Advanced Topics in Machine/Deep Learning*; **Posco ICT** (Pankyo, Korea, 11/2019)
- *mmWave Communications and Radar: Theory and Applications*; **ETRI** (Daejeon, Korea, 11/2019)
- *Network Performance Enhancement via Deep Reinforcement Learning*; **LG U+** (Seoul, Korea, 10/2019)
- *AI Seminar: Foundations and Business Cases*; **SK Broadband** (Seoul, Korea, 10/2019)

- *Deep Learning Methods for Advanced Networks*; **Korea Electronics Technology Institute (KETI)** (Pankyo, Korea, 02/2019)
- *Making Deep Neural Network Practical in Resource Constrained Computing Systems*; **ETRI** (Daejeon, Korea, 02/2018)
- *Dynamic Optimization for Reliable and Robust Deep Learning Systems*; **ETRI** (Daejeon, Korea, 02/2018)
- *Adaptive Lyapunov Control for Stabilized Learning Platforms*; **ETRI** (Daejeon, Korea, 07/2017)
- *GPU Computing Platforms and Software for Deep Learning*; **ETRI** (Daejeon, Korea, 07/2017)
- *Trends in Energy IT in Big-Data Era*; **Korea Electric Power Corporation (KEPCO) Research Institute** (Daejeon, Korea, 05/2017)
- *Stochastic Control of 60 GHz Links for Distributed Virtual Reality Network Platforms*; **ETRI** (Daejeon, Korea, 11/2016)
- *5G Wireless Platforms: Standards and Hardware/Software Prototyping*; **ETRI** (Daejeon, Korea, 10/2016)
- *Millimeter-Wave Radio Propagation, Beam Management, Systems, and Embedded Prototyping*; **ETRI** (Daejeon, Korea, 08/2016)
- *Intel's 5G Research with Millimeter-Wave Modular Antenna Arrays*; **ETRI** (Daejeon, Korea, 10/2014)
- *Issues and Solutions for Millimeter-Wave Network Technologies*; **Samsung Electronics - Memory Business** (Hwasung, Korea, 01/2013)

■ Exhibition/Demonstration at Conferences and Public R&D Events

- *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)
- *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 MAA Client Access & Backhaul Platform*; **IEEE GLOBECOM 2015 (Industry Demonstration ID-14)** (San Diego, CA, 12/2015)
- *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)
- *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)

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`