# Joongheon Kim

**Associate Professor**, Korea University – School of Electrical Engineering, Seoul, Republic of Korea **Distinguished Lecturer (2022–2023)**, *IEEE Communications Society* **Associate Editor (2020–)**, *IEEE Transactions on Vehicular Technology* 

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# **Highlights**

#### Research Milestones

- 58 IEEE Journals, including 25 Communications Society (ComSoc), 8 Computer Society, and 9 Vehicular Technology Society (VTS) journals
- 6 Top-Tier Conference Papers, i.e., IEEE INFOCOM (2022), IEEE ICDCS (2020), IJCAI (2019), IEEE ICDCS (2018), ACM Multimedia (2017), and ACM MobiSys (2010)
- 4390+ Citations in Google Scholar Profile (H-index: 31+, i10-index 101+)
- 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 Contests (2020 and 2019), and IEEE VTS Seoul Chapter Awards (2 in 2021 and 1 in 2019)
- 5 Tutorials at IEEE Conferences, i.e., ICOIN (2022), ICUFN (2021), ICAIIC (2021), ICOIN (2019), and ICC (2018)
- 61+ 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
- 15 Awards from Local (Korean) Conferences and Contests
- Research Funds (since March 2016): 3,557,670 USD  $\approx 3,557,670,000$  KRW (except University Internal Funds)

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

- Supervised 3 Postdoctoral Scholars, now, tenure-track professors at Kyung Hee University (Korea) and Hallym University (Korea); and a postdoctoral scholar at the University of Southern California (United States, jointly advised by Prof. Andreas F. Molisch)
- Supervised 1 Ph.D. and 5 M.S. Students, now, researchers at LG Electronics, Hyundai, Naver, government agency, and startup
- 4 Best Teaching Awards at Korea University, 2 awards are for top 5% (*Granite Tower* (*Seok-Tap*) Best Teaching Award) and 2 awards are for top 20% (*Best Teaching Award*)

# **IEEE Society Academic Activities**

- IEEE Communications Society (ComSoc) Distinguished Lecturer (class of 2022–2023)
- **Senior Member of the IEEE** and IEEE Membership for 16+ years
- Associate Editor, IEEE Transactions on Vehicular Technology
- Guest Editor (03/2022), IEEE Communications Standards Magazine Special Issue on Recent and Future Evolution of Wi-Fi
- IEEE Vehicular Technology Society (VTS), Seoul Chapter Secretary for 3 years (2020–2022)
- 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

09/2019-Present

- Associate Professor (03/2021–Present), School of Electrical Engineering
- Adjunct Professor (03/2023–Present), Department of Communication Engineering (Founded by Samsung Electronics)
- Adjunct Professor (03/2021–02/2023), Department of Semiconductor Engineering (Founded by SK Hynix)
- Assistant Professor (09/2019–02/2021), School of Electrical Engineering
- R&D Appointments
  - \* Vice Director (10/2020-Present), Artificial Intelligence Engineering Research Center (KU-AIER)
- Administrative Appointments
  - \* Dean (06/2021–Present), Center for Teaching and Learning (CTL)
  - \* Deputy Vice President of Academic Affairs (02/2022-Present), Office of Academic Affairs
  - \* Steering Committee (02/2022–Present), Department of Communication Engineering
  - \* Steering Committee (07/2020–06/2022), Institute of Data Science (IDS)
  - \* Steering Committee (06/2021–03/2022), Committee for Academic Affairs and Planning
- Chung-Ang University College of Computer Science and Software, Seoul, Republic of Korea

- Intel Corporation Platform Engineering Group, Silicon Valley (Santa Clara), CA, USA 09/2013–02/2016
  - 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 08/2009–08/2014
  - 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

05/2012-08/2012

- 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

01/2006-08/2009

- Research Engineer (01/2006–08/2009), Multimedia Research Laboratory, Seocho R&D Campus

Industry, Advisory, and Consulting Positions as a Korea University Professor

• 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

# Visiting Positions

- California State University, Long Beach College of Engineering, Long Beach, CA, USA
   Visiting Scholar (01/2020), Department of Electrical Engineering (Host: Prof. Sean Kwon)
- University of California, Irvine Donald Bren School of Information and Computer Sciences, Irvine, CA, USA *Visiting Scholar* (08/2018), Department of Computer Science (Host: Prof. Marco Levorato)

# 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
    - \* General Affair Manager (2022–Present), for Prof. Seung-Hoon Hwang's Executive Board
    - \* General Affair Manager (2020–2021), for Prof. Jae-Hyun Kim's Executive Board
    - \* 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)
- KICS (Korean Institute of Communications and Information Sciences)
  - Life Member (2018-)
  - Vice Executive Director (2021, 2022), International Conference 1 Division (IEEE ICTC) (for Prof. Sungrae Cho's Executive Board)
  - Vice Executive Director (2022), International Conference 3 Division (IEEE APCC) (for Prof. Junsu Kim's Executive Board)
  - Vice Executive Director (2021), Intelligence Technology 2 Division (for Prof. Changhee Joo's Executive Board)
  - Director (2020), Intelligence Technology 2 Division (for Prof. Sungrae Cho's Executive Board)
  - Director (2018, 2019), Intelligence Technology Division (for Prof. Sungrae Cho's Executive Board)
  - Director (2017), ICT Convergence Division (for Prof. Sungrae Cho's Executive Board)
  - Board Member (01/2017-), KICS Technical Committee on Mobile Communications
  - Board Member (01/2017-), KICS Technical Committee on Communication Networking
  - Board Member (01/2019-), KICS Technical Committee on Coding and Information Theory
  - Board Member (01/2019-), KICS Technical Committee on Military Communication
  - Board Member (06/2018-), KICS Technical Committee on Spectrum Sharing
  - Editor, The Journal of Korean Institute of Communications and Information Sciences
  - Guest Editor (09/2019), KICS Information and Communications Magazine (S.I. on AI and Deep Learning)
  - JCCI (Joint Conference on Communication and Information) Organizing Committee: General Affair Chair (2022), Publication Chair (2021), Publication Chair (2018), Publication Chair (2018)
- IEIE (Institute of Electronics and Information Engineers)
  - General Affair Manager (2022), Telecommunication Society (for Prof. Myungsik Yoo's Executive Board)
  - Co-Director (2021)
  - Editor, Journal of the Institute of Electronics and Information Engineers (Area: Telecommunication)
- KIISE (Korean Institute of Information Scientists and Engineers)
  - General Affair Manager (2021), Information Network Society (for Prof. Sanghwan Lee's Executive Board)
  - General Affair Manager in Academia (2020), Information Network Society (for Prof. Sungrae Cho's Executive Board)
  - Member, Information Network Society
  - Editor, Journal of KIISE (Area: Information Network)
- OSIA (Open Standards and ICT Association)
  - Vice President (2021–), General Affair Manager (2020)

wards and Honors	
Research and Academic Excellence (International)	
<ul> <li>IEEE Communications Society (ComSoc) Distinguished Lecturer (class of 2022–2023)</li> <li>IEEE Vehicular Technology Society (VTS) Seoul Chapter Award (with Y. Kwak, S. Jung, JH. Kim)</li> </ul>	12/2021 08/2021
"Quantum Scheduling for Millimeter-Wave Observation Satellite Constellation"  • IEEE Vehicular Technology Society (VTS) Seoul Chapter Award (with H. Lee, S. Jung)  "Distributed and Autonomous Aerial Data Collection in Smart City Surveillance Applications"	08/2021
<ul> <li>Best Paper Award – 2021 IEEE International Conference on Information Networking (ICOIN) (with S. Jung, W.J. Yun, and JI "Infrastructure-Assisted Cooperative Multi-UAV Deep Reinforcement Energy Trading Learning for Big-Data Processing</li> </ul>	
Bronze Paper Award – 2020 IEEE Seoul Section Student Paper Contest (with S. Park)  "Reliable Offloading Target Selection using Deep Reinforcement Learning for Large Fire Accident"	12/2020
• IEEE Systems Journal Best Paper Award – IEEE Systems Council (with M. Saad, J. Choi, D. Nyang, A. Mohaisen) "Towards Characterizing Blockchain-based Cryptocurrencies for Highly-Accurate Predictions"	03/2020
<ul> <li>Gold Paper Award – 2019 IEEE Seoul Section Student Paper Contest (with J. Yoo)</li> <li>"Stabilized Super-Resolution Deep Learning Adaptation for UAV-Assisted Mobile Edges: A Lyapunov Optimization Apple</li> </ul>	12/2019 proach"
• IEEE Vehicular Technology Society (VTS) Seoul Chapter Award (with S. Park, D. Kwon, M. Shin)  "Joint Offloading and Streaming in Mobile Edges: A Deep Reinforcement Learning Approach"	08/2019
• Next Generation and Standards (NGS) Division Recognition Award – Intel Corporation For developing a 3-dual sector mmWave backhaul link software stack with mesh, relay, and load balancing capability for array (MAA) proof-of-concept (POC)	Q1/2015 modular antenna
<ul> <li>Annenberg Graduate Fellowship Award – University of Southern California</li> <li>Awarded with Ph.D. Admission – 4 Year Full Scholarship (\$30,000/year for 4 years, i.e., \$120,000)</li> </ul>	02/2009
Research and Academic Excellence (Korea Regional)	
• Excellence Paper Award – 2021 KICS Summer Conference (with B. Lim, W.J. Yun, YC. Ko) "Deep Learning Based Non-Orthogonal Pilot Design for Massive MIMO"	06/2021
• Excellence Paper Award (Undergraduate) – 2021 KICS Summer Conference (with G. Lee, W.J. Yun, S. Jung) "Deep Reinforcement Learning Visualization and Simulations using Unity-RL in an Autonomous Driving Environment"	
• Haedong Paper Award – Encouragement Paper Award – 2021 KICS Summer Conference (with H. Baek, Y.J. Ha, M. Yoo, S "Neural Architectural Nonlinear Pre-Processing for mmWave Radar-based Human Gesture Perception in On-Driving Sc	enarios"
<ul> <li>Encouragement Paper Award – 2020 KICS Fall Conference (with W.J. Yun)</li> <li>"UAV Trajectory Optimization via Multi-Agent Deep Reinforcement Learning"</li> </ul>	11/2020
• Encouragement Paper Award – 2020 KICS Summer Conference (with W.J. Yun)  "3D Modeling and WebVR Implementation Using Azure Kinect, Open3D, and Three.js"	08/2020
• Encouragement Paper Award – 2020 KICS Winter Conference (with S. Oh, J. Choi) "Quantum Heuristic Solver using QAOA for the Maximum Independent Set Problem"	02/2020
• Encouragement Paper Award – 2020 KICS Winter Conference (with J. Kim)  "Multi-Drone Scheduling for High-Reliable and High-Performance UAV-based Surveillance Networking"	02/2020
• Haedong Young Scholar Award – KICS and Haedong Foundation 12/2018	
For recognizing a researcher under the age of 40 who has made outstanding contributions to communication sciences R&D	
<ul> <li>Outstanding Research Paper Award – LG Electronics CTO Office, Multimedia Research Laboratory</li> <li>RFID Expert Group President Award – The 3rd RFID/USN Research Paper Contest</li> </ul>	01/2008 10/2007
• ETRI President Award – The 2nd RFID/USN Research Paper Contest	11/2006
• Korea Association of RFID/USN (KARUS) President Award – The 1st RFID/USN Research Paper Contest	10/2005
• Scholarships for Academic Excellence – Korea University	all 1999, Fall 2000
Academic and University Service Awards	
<ul> <li>Outstanding Contribution Award – KIISE Information Network Society</li> </ul>	02/2022
Outstanding Contribution Award – KICS	12/2021
Outstanding Contribution Award – Open Standards and ICT Association (OSIA)      The Contribution of t	12/2021
<ul> <li>Appreciation Recognition – Daegu Gyeongbuk Institute of Science and Technology (DGIST)</li> <li>Outstanding Contribution Award – KICS</li> </ul>	10/2021 11/2019
Fellow Employee Recognition [#3081146] – Intel Corporation	12/2014
• <b>Certificate of Appreciation</b> – Department of Computer Science, University of Southern California	09/2010
Research and Academic Excellence for Students (while they are under Joongheon Kim's supervision)	
• 2021 ICT Express Best Reviewer Award – ICT Express (Elsevier) (Awarded to Soohyun Park)	12/2021
Teaching and Supervision Excellence	
Best Teaching Award (Top 20%) – Korea University (Computer Language and Laboratory, EGRN151)	Fall 2021
• Granite Tower (Seok-Tap) 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)     Best Teaching Award (Top 20%) – Korea University (Computer Language and Laboratory ECRN 151)	Spring 2021
<ul> <li>Best Teaching Award (Top 20%) – Korea University (Computer Language and Laboratory, EGRN151)</li> <li>Granite Tower (Seok-Tap) Best Teaching Award (Top 5%) – Korea University (Computer Language and Laboratory, EGI</li> </ul>	Fall 2020 RN151) Fall 2019
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# R&D Projects (Totally, 3,557,670 USD $\approx$ 3,557,670,000 KRW)

R&D Projects (Totally, 3,557,670 USD $pprox$ 3,557,670,000 KRW)	
University/Center-Level Projects	
• Intelligent 6G Wireless Access System Research Center Funded by Institute for ICT Promotion (IITP) [2021-0-00467, Grant: \$70,000 (1 yr); Co-PI]	04/2021-12/2025
• Nano UAV Intelligence Systems Research Lab (NUiSRL) – ADD Military Special Research Center Funded by Agency for Defense Development (ADD) [UD200027ED, Grant: \$130,000; Co-PI], PI: Kwangwoon University (	
• 5G/Unmanned Vehicle Research Center (5G/UV-RC) – <i>University ITRC Project</i> Funded by <i>Institute for ICT Promotion (IITP)</i> [2020-0-01637, Grant: \$15,995; Co-PI], PI: Hanyang University (Korea)	06/2020–12/2022
• Human Resource Development for the Biomedical Unstructured Big Data Analysis – <i>University ITRC Project</i> Funded by <i>Institute for ICT Promotion (IITP)</i> [2018-0-01833; Co-PI], PI: Seoul National University Hospital (Korea)	08/2018–12/2021
• Intelligent Internet of Energy (IoE) Data Research Center – <i>University ITRC Project</i> Funded by <i>Institute for ICT Promotion (IITP)</i> [2018-0-01396; Co-PI], PI: Kookmin University (Korea)	02/2020-05/2020
Government-Funded Projects	
<ul> <li>K-Starlink: Dynamic Reconfigurable and Intelligent Space-Terrestrial Networks         Funded by National Research Foundation of Korea (Basic Research Lab) [2021R1A4A1030775, Grant: \$78,000 (1 yr); Co-P         </li> <li>Integrated Perception Technology Developments for Public Safety Platforms</li> </ul>	06/2021–05/2024 I] 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: \$258,500; 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 <i>Institute for ICT Promotion (IITP)</i> [2018-0-00170, Grant: \$503,250; 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]	0-, -0-2, -0-0
<ul> <li>Network Engineering: Development and Application of Novel Data Science Driven</li> <li>Framework for Efficient Network Design</li> </ul>	06/2017-05/2020
Funded by National Research Foundation of Korea (Basic Research Lab) [2017R1A4A1015675, Grant: \$150,000; Co-PI]	
<ul> <li>mmWave High-Speed Networking Platform Design for Next-Generation Convergence Services         Funded by National Research Foundation of Korea [2016R1C1B1015406, Grant: \$150,000; Primary-PI]     </li> <li>Selected as Initial Innovation Lab [Grant: \$60,000]</li> </ul>	06/2016-05/2019
• Feasibility Study of 60 GHz IEEE 802.11ad for Virtual Reality (VR) Platforms Funded by Institute for ICT Promotion (IITP) [Grant: \$33,333; Primary-PI]	04/2017-12/2017
Industry-Funded Projects	
<ul> <li>Mapping between Real World and Virtual Reality (VR) for End-Edged Cloud Real-Time VR Servers         Funded by Samsung Electronics – Samsung Advanced Institute of Technology [Grant: \$286,000; Primary-PI]     </li> </ul>	09/2020-09/2024
• LTE/WiFi Vertical Handover Design and Implementation Funded by LG Electronics CTO Division – Smart Mobility Lab., Advanced R&BD Center [Grant: \$xx,000; Primary-PI]	02/2022-09/2022
• Super-Resolution Performance Optimization in Mobile Platforms Funded by Samsung SDS [Grant: \$15,000; Primary-PI]	05/2020–08/2020
<ul> <li>Deep Learning Algorithms for mVOC Concentration Analysis</li> <li>Funded by Samsung Electronics [Grant: \$12,000; Primary-PI]</li> </ul>	03/2020-06/2020
<ul> <li>Visual Recognition Software Implementation using Deep Learning Tools</li> <li>Funded by Hyundai NGV and Hyundai/Kia Motors Company [Grant: \$59,500; Primary-PI]</li> </ul>	05/2019–11/2019
• A Priori Techniques Research for Efficient Multi-Edge Computing Funded by Samsung Electronics Software Center [Grant: \$80,000; Co-PI]	06/2017-12/2017
Government-Funded Research Institute Projects	
Development of Integrated Development Framework that supports Automatic Neural Network Generation and Deployment optimized for Runtime Environment    Development   D	04/2021-12/2023
	m/2021-mm/2022
Funded by Agency for Defense Development (ADD) [xxx, Grant: \$100,000; Primary-PI]  • Research on Intelligent Agent-based CPS Security and Reliability  Funded by Telecommunications Technology Association (TTA) [Grant: \$48,000; Primary-PI]	05/2021-11/2021
<ul> <li>Multi-GPU based Automotive HPC Platform Development (A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)</li> </ul>	04/2020-10/2020
Funded by Electronics and Telecommunications Research Institute [19HS2720 (IITP 2017-0-00068), Grant: \$20,000; Primary  • Cooperative Deep Reinforcement Learning for Online Game Multi-Agents (Human-Agent Cooperation Algorithm Design in Multi-Agent Environment)	-PI] 04/2020-08/2020
Funded by Electronics and Telecommunications Research Institute [19YE1400, Grant: \$28,000; Primary-PI]	
<ul> <li>Verification Testbed Implementation for Privacy-Preserving Trust Data Generation</li> <li>Funded by Electronics and Telecommunications Research Institute [Grant: \$44,000; Co-PI]</li> </ul>	10/2019–11/2019
• 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
 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
(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]

Funded by Electronics and Telecommunications Research Institute [17HS2720 (IITP 2017-0-00068), Grant: \$40,000; Primary-PI]

• Parsing Techniques for Artificial Neural Network (ANN) Data Processing

(A Development of Driving Decision Engine for Autonomous Driving using Driving Experience Information)

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: 4390+, H-Index: 31+, i10-Index: 101+; obtained from Google Scholar Profile (as of February 6, 2022)

# 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

• 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, <u>J. Kim</u>, 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

- <u>J. Kim</u>, et. al., "Convergence of 6G and Wi-Fi Networks," Fundamentals of 6G Communications and Networking, Springer., (Editors: X. Lin, J. Zhang, Y. Liu, J. Kim)
- <u>J. Kim</u>, et. al., "UAV Networking," Fundamentals of 6G Communications and Networking, Springer., (Editors: X. Lin, J. Zhang, Y. Liu, J. Kim)
- J. Kim, et. al., "AI-Native Network Architecture," Fundamentals of 6G Communications and Networking, Springer., (Editors: X. Lin, J. Zhang, Y. Liu, J. Kim)
- <u>J. Kim</u>, et. al., "Semantic Communications and Networking," Fundamentals of 6G Communications and Networking, Springer., (Editors: X. Lin, J. Zhang, Y. Liu, J. Kim)
- <u>J. Kim</u>, et. al., "Network Disaggregation," Fundamentals of 6G Communications and Networking, Springer., (Editors: X. Lin, J. Zhang, Y. Liu, J. Kim)
- 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 Conference Proceedings

[IJCAI'22] W.J. Yun, M. Shin, D. Mohaisen, S. Jung, J.-K. Kim, and J. Kim, "(Under Double Blind Review)," International Joint Conference on Artificial Intelligence and European Conference on Artificial Intelligence (IJCAI-ECAI), Vienna, Austria, July 2022.

[MMSys'22] M. Yoo, H. Baek, S. Jung, A.F. Molisch, and <u>J. Kim</u>, "(Under Review)," **ACM Multimedia Systems Conference (MM-Sys)**, Athlone, Ireland, June 2022.

- [MMSys'22] H. Baek, J.-Y. Kim, S. Y.K. Lee, Jung, and <u>J. Kim</u>, "(Under Review)," **ACM Multimedia Systems Conference (MMSys)**, Athlone, Ireland, June 2022.
- [INFOCOM'22] H. Baek, W.J. Yun, Y. Kwak, S. Jung, M. Ji, M. Bennis, J. Park, and <u>J. Kim</u>, "Joint Superposition Coding and Training for Federated Learning over Multi-Width Neural Networks," **IEEE International Conference on Computer Communications (INFOCOM)**, Virtual, May 2022. (*Acceptance Rate:* 225/1129=19.93%)
  - [ICDCS'20] Ü. Meteriz, N.F. Yildiran, J. Kim, and D. Mohaisen, "Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications," **IEEE International Conference on Distributed Computing Systems (ICDCS)**, Virtual, November/December 2020. (*Acceptance Rate:* 105/584=17.98%)
    - [IJCAI'19] M. Shin and J. Kim, "Randomized Adversarial Imitation Learning for Autonomous Driving," International Joint Conference on Artificial Intelligence (IJCAI), Macau, China, August 2019. (Acceptance Rate: 850/4752=17.89%)
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  - [TMC.major] M. Choi, W.J. Yun, and J. Kim, "Delay-Sensitive and Power-Efficient Quality Control of Dynamic Video Streaming using Adaptive Super-Resolution," *IEEE Transactions on Mobile Computing*, (Review after 1st Revision, 22-Dec-2021).
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- [INFOCOM'21] G. Lee, W.J. Yun, S. Jung, J. Kim, and J.-H. Kim, "Visualization of Deep Reinforcement Autonomous Aerial Mobility Learning Simulations," *IEEE INFOCOM'21 (Demo)*.
  - [ICPR'20] J.Y. Shim, J. Kim, and J.-K. Kim, "S2I-Bird: Sound-to-Image Generation of Bird Species using Generative Adversarial Networks," IEEE ICPR'20.
  - [QTML'20] J. Choi, S. Oh, S. Park, and J. Kim, "A Quantum Approach to the Minimum Dominating Set Problem," QTML'20.
  - [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'20 (Workshop on Federated Learning for User Privacy and Data Confidentiality).
  - [ICC'20] M. Choi, A.F. Molisch, and <u>J. Kim</u>, "User Scheduling and Power Allocation for Content Delivery in Caching Helper Networks," *IEEE ICC*'20.
  - [WCNC'20] M. Choi, A.F. Molisch, D.-J. Han, <u>J. Kim</u>, and J. Moon, "Cache Allocations for Consecutive Requests of Categorized Contents: Service Provider's Perspective," *IEEE WCNC'20*.

- [GLOBECOM'19] D. Kwon and J. Kim, "Multi-Agent Deep Reinforcement Learning for Cooperative Connected Vehicles," IEEE GLOBECOM'19.
  - [ICCV'19] D. Kim and J. Kim, "Deep Multi-modal Unsupervised Pen Pressure Stylization," IEEE ICCV'19 (Demo).
  - [QTML'19] J. Choi and J. Kim, "A Quantum Approach to Max-Weight Independent Set Problem," QTML'19.
  - [5GWF'19] K.W. Sung, E. Mutafungwa, R. Jantti, M. Choi, J. Jeon, D. Kim, J. Kim, J. Cost-Requena, A. Nordlow, S. Sharma, G. Destino, Y. Deng, T. Mahmoodi, M. Ullmann, A. Nahler, Y. Kyung, S. Kim, S. Seo, and S.-L. Kim, "PriMO-5G: Making Firefighting Smarter with Immersive Videos through 5G," *IEEE 5GWF'19*.
  - [APWCS'19] S. Park, J. Kim, D. Kwon, M. Shin, and <u>J. Kim</u>, "Joint Offloading and Streaming in Mobile Edges: A Deep Reinforcement Learning Approach," *IEEE APWCS'19*. (*IEEE Vehicular Technology Society (VTS) Seoul Chapter Award*)
  - [IJCNN'19] D. Kim, J. Kim, J. Kwon, and T.-H. Kim, "Depth-Controllable Very Deep Super-Resolution Network," IEEE IJCNN'19.
  - [IJCNN'19] M. Shin and J. Kim, "Adversarial Imitation Learning via Random Search," IEEE IJCNN'19.
  - [DSN'19] J. Jeon, J. Kim, <u>J. Kim</u>, K. Kim, A. Mohaisen, and J.-K. Kim, "Privacy-Preserving Deep Learning Computation for Geo-Distributed Medical Big-Data Platforms," *IEEE/IFIP DSN'19* (Supplemental Volume).
  - [MobiSys'19] D. Kwon, S. Park, and J. Kim, "Poster: Multi-Agent Deep Reinforcement Learning for Connected Vehicles," ACM MobiSys'19 (Poster).
  - [MobiSys'19] J. Kim and J. Kim, "Demo: Light-Weight Programming Language for Blockchain," ACM MobiSys'19 (Demo).
    - [ICML'19] M. Shin and J. Kim, "Adversarial Imitation Learning via Random Search in Lane Change Decision-Making," ICML'19 (Workshop on Artificial Intelligence for Autonomous Driving).
    - [ICC'19] M. Choi. D. Kim, D.-J. Han, J. Kim, and J. Moon, "Probabilistic Caching Policy for Categorized Contents and Consecutive User Demands," IEEE ICC'19.
    - [ICBC'19] M. Saad, L. Njilla, C.A. Kamhoua, <u>J. Kim</u>, D. Nyang, and A. Mohaisen, "Mempool Optimization for Defending Against DDoS Attacks in PoW-based Blockchain Systems," *IEEE ICBC'19*. (19.61%)
    - [CCS'18] S. Yoo, H. Kim, and J. Kim, "Secure Compute-VM: Secure Big Data Processing with SGX and Compute Accelerators," ACM CCS'18 (Workshop on System Software for Trusted Execution).
    - [SMC'18] D. Kim, J. Kwon, and <u>J. Kim</u>, "Low-Complexity Online Model Selection with Lyapunov Control for Reward Maximization in Stabilized Real-Time Deep Learning Platforms," *IEEE SMC'18*.
  - [MobiSys'18] M. Shin, J. Kim, A. Mohaisen, J. Park, and K.H. Lee, "Neural Network Syntax Analyzer for Embedded Standardized Deep Learning," ACM MobiSys'18 (Workshop on Embedded and Mobile Deep Learning).
  - [SECON'18] H. Lee, M. Shin, K.S. Kim, Y. Kang, and J. Kim, "Recipient-Oriented Transaction for Preventing Double Spending Attacks in Private Blockchain," *IEEE SECON'18 (Abstract)*.
  - [AsiaCCS'18] S. Kim and J. Kim, "POSTER: Mining with Proof-of-Probability in Blockchain," ACM AsiaCCS'18 (Exteded Abstract).
    - [ICSE'18] S. Ahn, J. Kim, and S. Kang, "Poster: A Novel Shared Memory Framework for Distributed Deep Learning in High-Performance Computing Architecture," *IEEE ICSE'18 (Companion Volume)*.
  - [ICASSP'18] K.S. Kim, D. Kwon, Y. Kim, J. Kim, and <u>J. Kim</u>, "Self-Adaptive Machine Learning Operating Systems for Security Applications," *IEEE ICASSP'18*.
    - [SOSP'17] D. Kim, J.Y. Bang, and <u>J. Kim</u>, "A Reliable, Self-Adaptive Face Identification Framework via Lyapunov Optimization," ACM SOSP'17 (Workshop on A.I. Systems).
    - [PAC'17] J. Kim, Y.J. Mo, W. Lee, and D. Nyang, "Dynamic Security-Level Maximization for Stabilized Parallel Deep Learning Architectures in Surveillance Applications," *IEEE PAC'17*.
- [SIGCOMM'16] S.H. Jeong, A.R. Kang, J. Kim, H.K. Kim, and A. Mohaisen, "A Longitudinal Analysis of .i2p Leakage in the Public DNS Infrastructure," ACM SIGCOMM'16 (Abstract).
- [INFOCOM'16] J. Kim, "Buffer-Stable Adaptive Per-Module Power Allocation for Energy-Efficient Millimeter-Wave Modular Antenna Array (MAA) Platforms," IEEE INFOCOM'16 (Abstract).
  - [EuCAP'16] R. Weiler, W. Keusgen, A. Maltsev, T. Kuhne, A. Pudeyev, L. Xian, J. Kim, and M. Peter, "Millimeter-Wave Outdoor Access Shadowing Mitigation using Beamforming Arrays," *IEEE EuCAP'16*.
- [GLOBECOM'15] J. Kim, L. Xian, R. Arefi, and A.S. Sadri, "60 GHz Frequency Sharing Study between Fixed Service Systems and Small-Cell Systems with Modular Antenna Arrays," *IEEE GLOBECOM'15 (Workshop on Millimeter-Wave Backhaul and Access)*.
  - [SOSP'15] S. Yoo, Y. Shim, S. Lee, S.-A. Lee, and <u>J. Kim</u>, "A Case for Bad big.LITTLE Switching: How to Scale Power-Performance in SI-HMP," *ACM SOSP'15 (Workshop on Power-Aware Computing and Systems (HotPower))*.
  - [IMS'15] J. Kim, L. Xian, A. Maltsev, R. Arefi, and A.S. Sadri, "Study of Coexistence between 5G Small-Cell Systems and Systems of the Fixed Service at 39 GHz Band," IEEE IMS'15.
- [GLOBECOM'14] J. Kim, L. Xian, A. Maltsev, R. Arefi, and A.S. Sadri, "Required Frequency Rejection in 39 GHz Millimeter-Wave Small Cell Systems," IEEE GLOBECOM'14 (Industry Program).
  - [ICC'14] J. Kim and A.F. Molisch, "Quality-Aware Millimeter-Wave Device-to-Device Multi-Hop Routing for 5G Cellular Networks," IEEE ICC'14.
  - [ITA'14] J. Kim, A. Turci, G. Caire, and A.F. Molisch, "Joint Scheduling and Stochastic Streaming for Device-to-Device Video Delivery," IEEE ITA'14 (Graduation Day Talk).
  - [MobiCom'13] J. Kim, F. Meng, P. Chen, H.E. Egilmez, D. Bethanabhotla, A.F. Molisch, M.J. Neely, G. Caire, and A. Ortega, "Demo: Adaptive Video Streaming for Device-to-Device Mobile Platforms," ACM MobiCom'13 (Demo).
    - [ICC'13] J. Kim, Y. Tian, S. Mangold, and A.F. Molisch, "Quality-Aware Coding and Relaying for 60 GHz Real-Time Wireless Video Broadcasting," IEEE ICC'13.
    - [RWS'13] J. Kim and A.F. Molisch, "Enabling Gigabit Services for IEEE 802.11ad-Capable High-Speed Train Networks," IEEE RWS'13.
    - [PIMRC'11] J. Kim, Y. Tian, A.F. Molisch, and S. Mangold, "Joint Optimization of HD Video Coding Rates and Unicast Flow Control for IEEE 802.11ad Relaying," IEEE PIMRC'11.
    - [CCNC'10] S. Tiraspolsky, B. Jeon, J. Kim, A. Rubtsov, A. Flaksman, and V. Ermolayev, "mmWave SVD-based Beamformed MIMO Communication Systems," *IEEE CCNC'10*.
    - [CCNC'09] J. Kim and B. Jeon, "Optimal Beaconing for 60 GHz Millimeter Wave," IEEE CCNC'09.
    - [CCNC'09] J. Kim and B. Jeon, "Demonstration of Display Sharing over Multi-Gbps Wireless Video and Audio Network," IEEE CCNC'09.
- [COMSWARE'08] J. Kim and W. Lee, "Cooperative Relaying Strategies for Multi-Hop Wireless Sensor Networks," IEEE COMSWARE'08.
  - [CIT'06] D. Shin, W. Lee, B.-N. Park, J. Kim, C. Shin, and C. Shin, "A Power Balanced Multipath Routing Protocol in Wireless Ad-Hoc Sensor Networks," *IEEE CIT'06*.
    - [VTC'06] J. Kim, J. Choi, and W. Lee, "Energy-Aware Distributed Topology Control for Coverage-Time Optimization in Clustering-Based

- Heterogeneous Sensor Networks," IEEE VTC'06-Spring.
- [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 Aspect to the Readers," IEEE ICCCN'05. (32.17%)
  - [VTC'05] J. Kim, S. Kim, D. Kim, W. Lee, and E. Kim, "Low-Energy Localized Clustering: An Adaptive Cluster Radius Configuration Scheme for Topology Control in Wireless Sensor Networks," *IEEE VTC'05-Spring*.

#### **■** ICTC, ICOIN, ICUFN, ICAIIC Contributions

- [ICOIN'22] H. Lee, Y. Kim, H. Cho, S. Jung, and J. Kim, "The Credibility Cryptocurrency Valuation: Statistical Learning Analysis for Influencer Tweets," *IEEE ICOIN'22*.
- [ICOIN'22] H. Lee, H. Lee, S. Jung, and J. Kim, "Stable Marriage Matching for Traffic-Aware Space-Air-Ground Integrated Networks: A Gale-Shapley Algorithmic Approach," *IEEE ICOIN'22*.
- [ICTC'21] Y. Kwak, W.J. Yun, S. Jung, J.-K. Kim, and <u>J. Kim</u>, "Introduction to Quantum Reinforcement Learning: Theory and PennyLane-based Implementation," *IEEE ICTC'21*.
- [ICTC'21] W.J. Yun, Y.J. Ha, S. Jung, and J. Kim, "Autonomous Aerial Mobility Learning for Drone-Taxi Flight Control," IEEE ICTC'21.
- [ICTC'21] Y. Kim, W.J. Yun, and J. Kim, "Trends in Neural Architecture Search: Towards the Acceleration of Search," IEEE ICTC'21.
- [ICUFN'21] Y. Kwak, W.J. Yun, S. Jung, and J. Kim, "Quantum Neural Networks: Concepts, Applications, and Challenges," IEEE ICUFN'21.
- [ICUFN'21] H. Lee and J. Kim, "Trends in Blockchain and Federated Learning for Data Sharing in Distributed Platforms," IEEE ICUFN'21.
- [ICUFN'21] S. Park and J. Kim, "Trends in LEO Satellite Handover Algorithms," IEEE ICUFN'21.
- [ICUFN'21] Y.J. Ha, M. Yoo, S. Park, S. Jung, and J. Kim, "Secure Aerial Surveillance using Split Learning," IEEE ICUFN'21.
- [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'21*. (*Best Paper Award*)
- [ICOIN'21] S. Oh, J. Choi, J.-K. Kim, and J. Kim, "Quantum Convolutional Neural Network for Resource-Efficient Image Classification: A Quantum Random Access Memory (QRAM) Approach," *IEEE ICOIN'21*.
- [ICOIN'21] J. Choi, S. Oh, and J. Kim, "A Tutorial on Quantum Graph Recurrent Neural Network (QGRNN)," IEEE ICOIN'21.
- [ICOIN'21] J. Choi, S. Oh, S. Park, J.-K. Kim, and J. Kim, "Proper Cost Hamiltonian Design for Combinatorial Optimization Problems: A Boolean Function Approach," *IEEE ICOIN'21*.
- [ICOIN'21] D. Kim and <u>Î. Kim</u>, "Non-Local Self-Attention Mechanism for Real-Time Context Embedding Deep Shadow Removal Network," IEEE ICOIN'21.
- [ICOIN'21] J. Kim, M. Shin, D. Kim, S. Park, Y. Kang, J. Kim, H. Lee, W.J. Yun, J. Choi, S. Park, S. Oh, and J. Yoo, "Performance Comparison of SRCNN, VDSR, and SRDenseNet Deep Learning Models in Embedded Autonomous Driving Platforms," IEEE ICOIN'21.
- [ICOIN'21] J.Y. Shim, J. Kim, and J.-K. Kim, "On the Tradeoff Between Computation-Time and Learning-Accuracy in GAN-Based Super-Resolution Deep Learning," IEEE ICOIN'21.
- [ICOIN'21] H. Ahn, J. Kim, and J. Kim, "Auction-based Truthful Distributed Resource Allocation for Smart Grid Systems," IEEE ICOIN'21.
- [ICOIN'21] H. Lee, S. Park, J. Kim, and J. Kim, "Auction-Based Deep Learning Computation Offloading for Truthful Edge Computing: A Myerson Auction Approach," *IEEE ICOIN'21*.
- [ICOIN'21] J. Kim and J. Kim, "Access Management using Vickrey-Clarke-Groves Auction in Terrestrial-Drone Networks," IEEE ICOIN'21.
- [ICOIN'21] M. Shin and J. Kim, "Joint Behavioral Cloning and Reinforcement Learning Method for Propofol and Remifentanil Infusion in Anesthesia," IEEE ICOIN'21.
- [ICOIN'21] A. Ahmad, M. Saad, <u>J. Kim</u>, D. Nyang, and D. Mohaisen, "Performance Evaluation of Consensus Protocols in Blockchain-based Audit Systems," *IEEE ICOIN'21*.
- [ICOIN'21] T.-Y. Youn, J. Kim, and S.C. Seo, "Efficient Data Delivery in Content-Centric Network with Stronger Privacy of Publisher," IEEE ICOIN'21.
- [ICOIN'21] M. Shin, D. Mohaisen, and J. Kim, "Bitcoin Price Forecasting via Ensemble-based LSTM Deep Learning Networks," IEEE ICOIN'21.
- [ICOIN'21] H.W. Kwon, J. Nam, J. Kim, and Y.K. Lee, "Generative Adversarial Attacks on Fingerprint Recognition Systems," IEEE ICOIN'21.
- [ICTC'20] J. Yoo, J. Park, A. Wang, D. Mohaisen, and <u>J. Kim</u>, "On the Performance of Generative Adversarial Network (GAN) Variants: A Clinical Data Study," *IEEE ICTC'20*.
- [ICTC'20] W.J. Yun and J. Kim, "3D Modeling and WebVR Implementation using Azure Kinect, Open3D, and Three.js," IEEE ICTC'20.
- [ICTC'20] S. Oh, J. Choi, and J. Kim, "A Tutorial on Quantum Convolutional Neural Networks (QCNN)," IEEE ICTC'20.
- [ICTC'20] M. Choi and J. Kim, "Video Placements and Dynamic Streaming Services in Wireless Caching Networks," IEEE ICTC'20.
- [ICTC'20] J. Kim, T.D. Ngo, P.S. Oh, S.S.-C. Kwon, C. Han, and J. Kim, "Economic Theoretic LEO Satellite Coverage Control: An Auction-based Framework," *IEEE ICTC'20*.
- [ICTC'20] S. Park, J. Park, D. Mohaisen, and J. Kim, "Reinforced Edge Selection using Deep Learning for Robust Surveillance in Unmanned Aerial Vehicles," *IEEE ICTC'20*.
- [ICTC'20] J. Choi and J. Kim, "Kirchhoff's Circuit Law Applications to Graph Simplification in Search Problems," IEEE ICTC'20.
- [ICAIIC'20] V.H. Nguyen, V. Bui, J. Kim, and Y.M. Jang, "Power Demand Forecasting Using Long Short-Term Memory Neural Network for Smart Grid," IEEE ICAIIC'20.
- [ICAIIC'20] V. Bui, V.H. Nguyen, D. Kim, J. Kim, and Y.M. Jang, "RNN-based Deep Learning for One-Hour Ahead Load Forecasting," IEEE ICAIIC'20.
- [ICOIN'20] J. Choi, S. Oh, and J. Kim, "The Useful Quantum Computing Techniques for Artificial Intelligence Engineers," IEEE ICOIN'20.
- [ICOIN'20] D. Kim, D. Kwon, S. Park, and J. Kim, "Learning-Based Dot-Grid Alignment for Projection Distortion Correction," IEEE ICOIN'20.
- [ICOIN'20] J. Jeon and J. Kim, "Privacy-Sensitive Parallel Split Learning," IEEE ICOIN'20.
- [ICOIN'20] S. Park, Y. Kang, Y. Tian, and J. Kim, "Fast and Reliable Offloading via Deep Reinforcement Learning for Mobile Edge Video Computing," IEEE ICOIN'20.
- [ICTC'19] J. Choi and J. Kim, "A Tutorial on Quantum Approximate Optimization Algorithm (QAOA): Fundamentals and Applications," IEEE ICTC'19.
- [ICTC'19] J. Jeon, J. Kim, J. Huh, H. Kim, and S. Cho, "Overview of Distributed Federated Learning: Research Issues, Challenges, and Biomedical Applications," *IEEE ICTC'19*.
- [ICAIIC'19] J. Jeon, D. Kim, and J. Kim, "Cyclic Parameter Sharing for Privacy-Preserving Distributed Deep Learning Platforms," IEEE ICAIIC'19.
- [ICAIIC'19] K.S. Kim, D. Kim, and J. Kim, "Hardness on Style Transfer Deep Learning for Rococo Painting Masterpieces," IEEE ICAIIC'19.
- [ICOIN'19] D. Kwon and J. Kim, "Optimal Trajectory Learning for UAV-BS Video Provisioning System: A Deep Reinforcement Learning Approach," IEEE ICOIN'19.

- [ICTC'18] D. Kwon and J. Kim, "Opportunistic Medium Access for Hyper-Dense Beamformed IEEE 802.11ax Wireless Networks," IEEE ICTC'18.
- [ICTC'18] D. Kim, S.-W. Hwang, and J. Kim, "Very Short-Term Photovoltaic Power Generation Forecasting with Convolutional Neural Networks," IEEE ICTC'18.
- [ICUFN'18] J. Kim and K.S. Kim, "Detecting Selfish Backoff Attack in IEEE 802.15.4 CSMA/CA using Logistic Classification," IEEE ICUFN'18.
- [ICOIN'18] J. Spaulding, J. Park, <u>J. Kim</u>, and A. Mohaisen, "Proactive Detection of Algorithmically Generated Malicious Domains," *IEEE ICOIN'18*.
- [ICOIN'18] D. Kwon and J. Kim, "Distributed Dynamic Power-Aware Buffering for Multi-Gbps Video Streaming in IEEE 802.11ad Fast Session Transfer," IEEE ICOIN'18.
- [ICOIN'18] S. Hwang, K.S. Kim, Y. Kim, J. Kim, M. Park, S. Park, and <u>J. Kim</u>, "High-Dimensional Statistical Supervised Learning for Extracting Information in Steganography," *IEEE ICOIN'18*.
- [ICOIN'18] B. Seo, M. Shin, Y.J. Mo, and J. <u>Kim</u>, "Top-Down Parsing for Neural Network Exchange Format (NNEF) in TensorFlow-based Deep Learning Computation," *IEEE ICOIN'18*.
- [ICUFN'17] Y.J. Mo, J. Kim, J.-K. Kim, A. Mohaisen, and W. Lee, "Performance of Deep Learning Computation with TensorFlow Software Library in GPU-Capable Multi-Core Computing Platforms," IEEE ICUFN'17.
  - [ICTC'15] J. Kim and E.S. Ryu, "Feasibility Study of Stochastic Streaming with 4K UHD Video Traces," IEEE ICTC'15.
  - [ICTC'15] E.-S. Ryu, Y. Ryu, H.-J. Roh, <u>J. Kim</u>, and B.-G. Lee, "Towards Robust UHD Video Streaming Systems using Scalable High Efficiency Video Coding," *IEEE ICTC'15*.

# Patents (Granted), totally 61

- 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)
- 16 Korean Patents: (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 (Department of Electrical and Computer Engineering), 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
- Wireless and Mobile Networks (ECE522): Spring 2020
- Wireless Network 1 (ITH524), Graduate School of Engineering and Technology: Spring 2021

# Korea University – Undergraduate Courses (College of Engineering (EGRN), School of Electrical Engineering (KECE), and Department of Semiconductor Engineering (SEMI)), Faculty Member

- 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 (Best Teaching Award, Top 20%), Fall 2020 (Best Teaching Award, Top 20%), Fall 2019 (Granite Tower (Seok-Top) Best Teaching Award, Top 5%)
- Object-Oriented Programming (SEMI104): Fall 2021
- Introduction to Computers (SEMI103): Spring 2021 (Granite Tower (Seok-Top) Best Teaching Award, Top 5%)

# Korea University - General Education and International Winter Campus (IWC), Faculty Member

- Future Mobility Technology (GEQR075): Spring 2022
- Introduction to Artificial Intelligence (IWC420): Winter 2021 (12/2021–01/2022)

# Chung-Ang University - Graduate Courses (College of Computer Science and Software), Faculty Member

- Optimal Design Theory and Applications: Spring 2019, Spring 2018, Spring 2017
- Topics in Computer Science and Engineering: Fall 2018, Fall 2017, Fall 2016

#### Chung-Ang University – Undergraduate Courses (College of Computer Science and Software), Faculty Member

- Numerical Analysis: Spring 2019
- Compiler Design: Spring 2019, Spring 2018, Spring 2017
- Principles of Programming Languages: Fall 2018, Fall 2017, Fall 2016
- Algorithm Analysis: Fall 2016
- Operating Systems: Spring 2017, Spring 2016
- *Calculus:* Spring 2017, Spring 2016
- Mobile Application Development: 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 (03/2019–08/2023 (expected))
- Haemin Lee (09/2020–08/2024 (expected))
- Won Joon Yun (03/2021–08/2024 (expected))
- Hankyul Baek (03/2021-)
- Yoo Jeong (Anna) Ha (03/2021–)
- Yunseok Kwak (03/2021–)
- Hyunsoo Lee (03/2021–)

# Ph.D. Course Students and Alumni (Co-Supervision and Tight Collaboration for Dissertations)

- Minseok Choi (Advisor: Prof. Jaekyun Moon at KAIST), Professor at Kyung Hee University, Korea
- Laihyuk Park (Advisor: Prof. Sungrae Cho at CAU), Professor at Seoul National University of Science and Technology, Korea
- Shinyoung Ahn (Advisor: Prof. Sungwon Kang at KAIST), Researcher at Electronics and Telecomm. Research Institute (ETRI), Korea
- Jonghoe Koo (Advisor: Prof. Sunghyun Choi at SNU), Researcher at Samsung Research, Korea
- Seungyo Ryu (Advisor: Prof. Dongseung Kim at Korea Univ.), Researcher at LG Electronics, Korea
- Soyi Jung (Advisor: Prof. Jae-Hyun Kim at Ajou Univ.), Professor at Hallym University, Korea
- Joo Yong Shim (Advisor: Prof. Jong-Kook Kim at Korea Univ.)

# M.S. Course Students and Alumni

- **Kyeongseon Kim** (09/2017–08/2019), *Researcher* at **LG Electronics**, Korea
- Dohyun Kwon (03/2018–02/2020), Researcher at Hyundai Motors Group, Korea
- Dohyun Kim (03/2018–02/2020), Researcher at Naver Corporation, Korea
- MyungJae Shin (03/2018–02/2020), Engineer at mofl (startup), Korea
- Jaeho Choi (03/2019–02/2021), Researcher (Military Service Exception) at Korea Meteorological Administration, Korea
- Youngkee Kim (03/2021–02/2023), Researcher at Korea Electronics Technology Institute (KETI), 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)

# **Tutorials and Special Session Talks in IEEE Conferences**

Advanced Deep Learning Methods for Autonomous Mobility

IEEE ICOIN 2022 Tutorial – IEEE Computer Society (Online, 01/2022)

• Distributed and Split Deep Learning: Theory and Applications

IEEE ICUFN 2021 Tutorial – IEEE Communications Society (Jeju, Korea, 08/2021)

• Multi-Agent Deep Reinforcement Learning for Connected and Autonomous Vehicles

IEEE ICAIIC 2021 Tutorial – IEEE Communications Society (Online, 04/2021)

Advanced Deep Learning Methods and Their Applications to Distributed and Network Platforms
 IEEE ICTC 2019 Special Session Talk – IEEE Communications Society (Jeju, Korea, 10/2019)

• Distributed Platform Research for Emerging Deep Learning Applications

IEEE ICOIN 2019 Tutorial – IEEE Computer Society (Kuala Lumpur, Malaysia, 01/2019)

Securing the Internet of Things: A Machine Learning Approach (Making Machine Learning Practical)
 IEEE ICC 2018 Tutorial – IEEE Communications Society (Kansas City, MO, USA, 05/2018)
 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)
- Federated Learning for Medical and Mobile Platforms
- California State University Long Beach (Long Beach, CA, USA, 01/2020), Hosted by Prof. Sean Kwon and Prof. Henry Yeh
- 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)

# Tutorials and Special Session Talks at Korean Research Societies

- Multi-Agent Deep Reinforcement Learning for Autonomous Vehicles; 2021 JCCI Mobile Machine Learning Special Session (Online, 04/2021)
- Trends in Multi-Agent Deep Reinforcement Learning for Distributed Computing; 2020 KICS Fall Conference Tutorial (Seoul, Korea, 11/2020)
- Deep Learning Computation for Economic Theory and Its Applications; 2020 KICS Summer Conference Tutorial (Yong Pyong, Korea, 08/2020)
- Deep Learning Applications to Computer Networking; 2020 KICS Winter Conference Tutorial (Yong Pyong, Korea, 02/2020)
- Deep Neural Network Basics; 2020 KICS Winter Conference Tutorial (Yong Pyong, Korea, 02/2020)
- Artificial Intelligence Methods for Networks; 2019 KICS Fall Conference Special Session Talk (Seoul, Korea, 11/2019)
- Explainable AI (XAI) and Imitation Learning for Automotive Applications; 2019 IEEK Hyundai Motors Special Session (Jeju, Korea, 06/2019)
- Deep Learning Basics and Representative Models; 2019 KIPS Spring Conference Tutorial (Seoul, Korea, 05/2019)
- Deep Learning Methods for Advanced Network; 2019 KICS Winter Conference Tutorial (Yong Pyong, Korea, 01/2019)
- GPU Computing Platforms and Software for Deep Learning; 2017 KICS Summer Conference Tutorial (Jeju, Korea, 06/2017)
- Dynamic Control and Software for Next-Generation Distributed Platforms; 2017 KCC Special Session on New Research (Jeju, Korea, 06/2017)
- Machine Learning Techniques for Mobile Computing; 2017 KICS Winter Conference Tutorial (Jungsun, Korea, 01/2017)

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

- 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)

#### Conference Activities and Services

# **Organizing Committee (OC) Activities**

• IEEE GLOBECOM (IEEE Communications Society): 2015 (Organizer, Workshop on Millimeter-Wave Backhaul and Access (mmWave))

- IEEE ICC (IEEE Communications Society): 2022 (Patronage Chair)
- IEEE ICTC (IEEE Communications Society): 2022 (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 (IEEE Communications Society): 2021 (Workshop Chair), 2021 (Workshop Organizing Chair, Artificial Intelligence Emerging Applications (AIEA) Workshop)
- IEEE ICAIIC (IEEE Communications Society): 2019 (Publication Chair)
- IEEE VTS APWCS (IEEE Vehicular Technology Soceity): 2022 (Finance Chair), 2021 (Finance Co-Chair), 2017 (Publication Vice Chair)
- IEEE ICOIN (IEEE Computer Society): 2021 (Workshop Organizing Chair, Workshop on Artificial Intelligence and Mobility (AIM)), 2020 (Workshop Organizing Chair, Workshop on Artificial Intelligence and Mobility (AIM))
- IEEE ICASSP (IEEE Signal Processing Society): 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) Activities**

- IEEE GLOBECOM (IEEE Communications Society): 2021, 2020, 2015 (Chair, Workshop on Millimeter-Wave Backhaul and Access (mmWave))
- IEEE ICC (IEEE Communications Society): 2022, 2021
- **IEEE CCNC** (*IEEE Communications Society*): 2022 (Track Chair)
- IEEE ICTC (IEEE Communications Society): 2021, 2021 (Workshop on Intelligent 6G Communication Systems), 2020, 2019, 2018
- IEEE WCNC (IEEE Communications Society): 2022, 2021, 2020, 2020 (Workshop on Aerial Communications in 5G and Beyond Networks (AERCOMM))
- IEEE COMNETSAT (IEEE Communications Society): 2021
- IEEE ICCC (IEEE Communications Society): 2021, 2019
- IEEE IGESSC (IEEE Communications Society): 2021, 2020, 2019, 2018
- IEEE ICAIIC (IEEE Communications Society): 2022 (Co-Chair), 2021 (Co-Chair), 2020 (Co-Chair), 2019 (Co-Chair)
- IEEE ICUFN (IEEE Communications Society): 2022, 2021, 2020, 2019, 2018, 2016
- IEEE WCSP (IEEE Communications Society): 2018
- IEEE VTC (IEEE Vehicular Technology Society): 2019-Spring, 2016-Spring, 2015-Spring, 2014-Fall
- IEEE VTS APWCS (IEEE Vehicular Technology Society): 2018
- IEEE ICOIN (IEEE Computer Society): 2022, 2021 (Vice Co-Chair), 2020 (Vice Co-Chair), 2020 (Workshop on Artificial Intelligence and Mobility (AIM)), 2019 (Vice Co-Chair), 2018 (Vice Co-Chair)
- IEEE ICDCS (IEEE Computer Society): 2019
- IEEE MASS (IEEE Computer Society): 2021, 2012 (Workshop on Internet of Things Technology and Architectures (IoTech))
- IEEE NAS (IEEE Computer Society): 2019 (Co-Chair)
- IEEE IPDPS (IEEE Computer Society): 2022 (Heterogeneity in Computing Workshop (HCW))
- IEEE Blockchain (IEEE Computer Society): 2020, 2019
- ACM MobiHoc: 2019
- **ACM AsiaCCS:** 2018 (Workshop on Security in Cloud Computing (SCC))
- IEEE ITC-CSCC: 2021
- EuCAP: 2021, 2019, 2015

# 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