

## **DONG IN KIM**

College of Information & Communication Eng.

Sungkyunkwan University (SKKU)

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### **OBJECTIVE**

A challenging career in the telecommunications institute; in general, cellular wireless communications, mobile communications, energy-harvesting wireless communications, and heterogeneous wireless networks; in particular, signal design and detection, multiple access, interference management, resource allocation, cross-layer design and optimization for wireless information and energy networks.

### **EDUCATION**

*Ph.D.*, Electrical Engineering, December 1990,

University of Southern California, Los Angeles, California.

Dissertation Title: *On the Performance of Common Spreading Code CDMA Packet Radio Systems  
With Multiple Capture Capability*

Dissertation Advisor: Professor Robert A. Scholtz

*M.S.*, Electrical Engineering, December 1987,

University of Southern California, Los Angeles, California.

*B.S.*, Electronics Engineering, February 1980,

Seoul National University, Seoul, Korea.

### **HONOR**

***Distinguished Professor***, Sungkyunkwan University (SKKU), 18 August 2022.

***Clarivate Web of Science Highly Cited Researcher (HCR) 2020, 2022***, in recognition of exceptional research performance demonstrated by production of multiple highly cited papers that rank in the top 1% for field and year in Cross-Field, 18 November 2020, 15 November 2022.

***AI 2000 Most Influential Scholar Award 2020, 2021, 2022, 2023*** in recognition of outstanding and vibrant contributions in the field of Internet of Things, 16 Mar 2020, 8 Apr 2021, 25 Jan 2022, 30 Jan 2023.

**IEEE Communications Society Joseph LoCicero Award**, for outstanding service as the Founding Editor-in-Chief of the IEEE Wireless Communications Letters and exemplary service to IEEE Communications Society publications, 10 December 2019.

**Fellow**, The Institute of Electrical and Electronics Engineers (IEEE), for contributions to cross-layer design of wireless communications systems, 1 January 2019.

**Fellow**, The Korean Academy of Science and Technology (KAST), 1 January 2019.

**Member**, The National Academy of Engineering of Korea (NAEK), 1 January 2019.

**Basic Research Excellence Award**, Ministry of Science and ICT of Korea, 5 December 2018.

**HAEDONG Scholar Award**, Haedong Science & Culture Foundation and The Korean Institute of Communications and Information Sciences (KICS), 5 December 2014.

**ERC Excellence Award**, Engineering Research Center (ERC), Ministry of Science, ICT & Future Planning of Korea, Energy Harvesting Wireless Communications, May 2014.

**ITRC Excellence Award**, Information Technology Research Center (ITRC), Ministry of Knowledge Economy of Korea, Cooperative Wireless Communications, June 2008.

**Founding Editor-in-Chief**, IEEE Wireless Communications Letters, Jan 2012 – Dec 2015

**Co-Editor-in-Chief**, IEEE/KICS Journal of Communications and Networks, Jan 2008 – Dec 2011

**SKKU-Fellowship**, Sungkyunkwan University (SKKU), 1 September 2007 and 18 February 2021.

**Professional Engineer of British Columbia, Canada, P. Eng.**, licensed in Jan 2006

**CFI New Opportunities Fund Award**, Canada Foundation for Innovation (CFI), June 2004.

**Academic Achievement Award**, University of Southern California, April 1990.

**Government Doctoral Fellowship**, Ministry of Education of Korea, May 1985.

## **EMPLOYMENT EXPERIENCE**

August 2022 - Present

*Distinguished Professor*, College of Information & Communication Engineering, Sungkyunkwan University (SKKU), Korea.

September 2007 – August 2022

*Professor with SKKU Fellowship*, College of Information & Communication Engineering, Sungkyunkwan University (SKKU), Korea.

Led the Engineering Research Center (ERC) on Energy Harvesting Communications (<http://erc.skku.edu>) as the **Director** appointed by The Ministry of Science, ICT & Future Planning (MSIP), Korea. Worked on flexible spectrum utilization in future cellular systems, energy harvesting wireless communications, and cross-layer design for interference and energy management.

September 2006 - August 2007

*Professor with Tenure*, School of Engineering Science, Simon Fraser University (SFU), Canada.

Taught courses in digital communications and spread-spectrum communications. Performed research projects on wideband, broadband, and ultra-wideband (UWB) CDMA for high-data-rate wireless multimedia, signal design and diversity techniques for CDMA/UWB, and cross-layer design for CDMA/UWB systems.

September 2002 - August 2006

*Associate Professor with Tenure*, School of Engineering Science, Simon Fraser University (SFU), Canada.

October 1997 - August 2002

*Associate Professor*, Dept. of Electrical and Computer Eng., University of Seoul, Korea.

Taught undergraduate courses in communication engineering and information theory, and graduate courses in mobile communications and error control codes. Performed research projects on design of the hybrid multiple-access scheme for 3rd-generation (3G) cellular systems, multicode DS/CDMA system for high-rate data transmission, and initial code acquisition for inter-cell asynchronous mode. Also, has given many short courses and lectures on the topics of spread-spectrum and wireless communications at several companies.

March 1997 - February 1999

*Department Chair* (elected by faculty), Dept. of Electrical and Computer Eng., University of Seoul, Korea.

Served for two-year term. Reorganized curriculum at the undergraduate and graduate levels to meet the demands of rapidly growing technologies, hired new faculty members, and established the Institute of Information and Technology through which several research projects have been granted.

April 1991 - September 1997

*Assistant Professor*, Dept. of Electrical and Computer Eng., University of Seoul, Korea.

September 1988 - December 1990

*Research Assistant*, Communication Sciences Institute, Dept. of Electrical Engineering-Systems, University of Southern California.

Researched communication and coding theory, packet synchronization, mobile radio techniques, spread-spectrum networks, cellular code-division multiple access (CDMA) and satellite communication systems.

November 1984 - December 1985

*Researcher*, Korea Telecom Research Laboratories, Seoul, Korea.

Developed a telephone network interface processor for collecting traffic data from local telephone offices, and tested the entire system by connecting the processor with the Vax 11/780 computer through leased line.

## **VISITING POSITIONS**

June 2001 - August 2001 (short-term leave)

*Visiting Professor*, Dept. of Electrical and Computer Eng., University of Manitoba, Canada.

Collaborated with Prof. Ekram Hossain on CDMA-based wireless multimedia networks.

September 1999 - August 2000 (one-year sabbatical leave)

*Visiting Professor*, Dept. of Electrical and Computer Eng., University of Victoria, Canada.

Collaborated with Prof. Vijay K. Bhargava on CDMA for wireless multimedia communications.

## **CONSULTING AND TRAINING**

July 1997 - June 1998

*Consultant*, SAMSUNG Electronics Co. Ltd., Institute of Information and Communication.

Has been involved in '3<sup>rd</sup>-generation wideband CDMA (WCDMA)' standardization activities together with researchers at the Institute and provided consulting for them to prepare a preliminary SAMSUNG proposal for the IMT-2000 PHY standard meeting, organized by ARIB in Japan and EDGE in Europe.

March 1993 - December 1998

*Invited Lecturer*, SAMSUNG Electronics Co. Ltd., Advanced Technology Center.

Has developed three new courses on 'Wireless and Mobile Communications' at the Center for practical training purpose: 1) Digital Mobile Communications, 2) Digital Spread Spectrum Communications, 3) Wireless Personal Communications, while teaching from 1993 up to 1998. Teaching evaluations have been performed for my courses taught at the Center, and highly appreciated among the researchers due to which my courses

continued to be offered for six consecutive years. The purpose is to provide the researchers with basic understanding and development skills for ‘CDMA-based Cellular System Test bed’.

## **PROFESSIONAL ACTIVITIES**

### **Strategic Planning Committee**

January 2016 - December 2016

Has served as Strategic Planning Committee member for the IEEE Publication Services and Products Board (PSPB).

### **Steering Committee**

January 2016 - December 2019

Has served as **Steering Committee Chair/Member** for the IEEE Wireless Communications Letters.

### **Journal Editor**

November 2001 – August 2024

*Editor/Editor at Large/Area Editor*, IEEE Transactions on Communications.

Has served as Editor for Spread Spectrum Transmission and Access, and then served as Editor at Large and **Area Editor of Wireless Communications I** for the IEEE Transactions on Communications.

January 2012 - December 2015

***Founding Editor-in-Chief, IEEE Wireless Communications Letters.***

Has served as **Founding Editor-in-Chief** for the IEEE Wireless Communications Letters.

January 2002 - December 2011

*Editor/Area Editor*, IEEE Transactions on Wireless Communications.

Has served as Editor and **Founding Area Editor** (since 2008) of **Cross-layer Design and Optimization** for the IEEE Transactions on Wireless Communications.

February 2001 - December 2001

*Editor*, IEEE Journal on Selected Areas in Communications (JSAC) - Wireless Communications Series.

Has served as Editor for the IEEE JSAC - Wireless Communications Series.

January 2008 - December 2011

*Co-Editor-in-Chief*, IEEE/KICS Journal of Communications and Networks (JCN).

Has served as **Co-Editor-in-Chief** for the IEEE/KICS JCN.

January 1999 - December 2005

*Editor/Division Editor*, IEEE/KICS Journal of Communications and Networks (JCN).

Has served as Editor and **Division Editor** of Wireless Communications for the IEEE/KICS JCN.

July 2017 - September 2018

*Guest Editor*, IEEE Journal on Selected Areas in Communications (JSAC).

Has served as Guest Editor for Special Issue I and II on “Wireless Transmission of Information and Power” for the IEEE JSAC.

March 2016 - February 2017

*Guest Editor*, IEEE Communications Magazine.

Has served as Guest Editor for Special Issue on “Practical Perspectives on IoT in 5G Networks: From Theory to Industrial Challenges and Business Opportunities” for the IEEE Communications Magazine.

March 2015 - February 2016

*Guest Editor*, IEEE Wireless Communications.

Has served as Guest Editor for Special Issue on “Wireless Powered Communications Networks: Architectures, Protocol Designs, and Standardization” for the IEEE Wireless Communications.

June 2011 - May 2012

*Guest Editor*, IEEE Journal of Selected Topics in Signal Processing (JSTSP).

Has served as Guest Editor for Special Issue on “Signal Processing in Heterogeneous Networks for Future Broadband Wireless Systems” for the IEEE JSTSP.

### **Conference General (Executive) Chair**

IEEE Communications Society, IEEE ICC '22, Seoul, Korea, May 2022.

### **Conference Technical Program Track Chair/Co-Chair**

IEEE Vehicular Technology Society, IEEE VTC '19 Fall, Honolulu, Hawaii, September 2019.

IEEE Vehicular Technology Society, IEEE VTC '18 Spring, Porto, Portugal, June 2018.

### **Conference Publication Co-Chair**

IEEE Communications Society, IEEE GLOBECOM '16, Washington DC, December 2016.

IEEE Communications Society, IEEE ICC '13, Budapest, Hungary, June 2013.

### **Conference Tutorials Co-Chair**

IEEE Vehicular Technology Society, IEEE VTC '13 Spring, Dresden, Germany, June 2013.

### **Conference Session Chair**

IEEE Vehicular Technology Society, IEEE VTC '19 Fall, Honolulu, Hawaii, September 2019.

IEEE Communications Society, IEEE WCNC '12, Paris, France, April 2012.

IEEE Communications Society, IEEE GLOBECOM '09, Honolulu, Hawaii, November 2009.

IEEE Communications Society, IEEE ICC '06, Istanbul, Turkey, June 2006.

IEEE Vehicular Technology Society, IEEE VTC '02 Fall, Vancouver, Canada, September 2002.

IEEE Communications Society, IEEE WCNC '02, Orlando, Florida, March 2002.

IEEE Communications Society, IEEE ICUPC '98, Florence, Italy, October 1998.

IEEE Communications Society, IEEE GLOBECOM '95, Singapore, December 1995.

### **Conference Technical Program Committees**

IEEE Communications Society, IEEE GLOBECOM '17, Singapore, December 2017.

IEEE Communications Society, IEEE ICC '17, Paris, France, May, 2017.

IEEE Communications Society, IEEE GLOBECOM '11, Houston, Texas, December 2011.

IEEE Communications Society, IEEE ICC '11, Kyoto, Japan, June, 2011.

IEEE Communications Society, IEEE GLOBECOM '10, Miami, Florida, December 2010.

IEEE Communications Society, IEEE ICC '10, Capetown, South Africa, May, 2010.

IEEE Communications Society, IEEE GLOBECOM '09, Honolulu, Hawaii, November 2009.

IEEE Vehicular Technology Society, IEEE VTC '09 Fall, Anchorage, Alaska, September 2009.

IEEE Communications Society, IEEE ICC '09, Dresden, Germany, June 2009.

IEEE Communications Society, IEEE GLOBECOM '08, New Orleans, Louisiana, November 2008.

IEEE Communications Society, IEEE GLOBECOM '07, Washington D.C., November 2007.

IEEE Communications Society, IEEE ICC '06, Istanbul, Turkey, June 2006.

IEEE Communications Society, IEEE ICC '05, Seoul, Korea, May 2005.

IEEE Vehicular Technology Society, IEEE VTC '04 Spring, Milan, Italy, April 2004.

IEEE Vehicular Technology Society, IEEE VTC '03 Fall, Orlando, Florida, September 2003.

IEEE Vehicular Technology Society, IEEE VTC '03 Spring, Jeju Island, Korea, April 2003.

IEEE Vehicular Technology Society, IEEE VTC '02 Fall, Vancouver, Canada, September 2002.

### **Asia Pacific Board (APB)**

IEEE Communications Society, APB, Meetings and Conferences Committee (MCC), *Vice Chair*, 2001 - 2003.

## Professional Memberships

IEEE Fellow (Student Member 1989 - 1990, Member 1991 - 2001, Senior Member 2002 - 2018) 2019 - Present.  
Professional Engineer of British Columbia, Canada, **P.Eng.**, licensed in January 2006.

## RESEARCH GRANTS

(SKKU)

[20] Dong In Kim, Realization of Large-Scale IoT Connection via Intelligent U-WIET with Smart Passive Relay, NRF grant funded by the Korean government (MSIT) (2021R1A2C2007638), \$900,000 March 2021 - February 2026.

[19] Dong In Kim (PI), et. al., Energy Harvesting Communications Research Center (EHC-RC), NRF, MSIP (Ministry of Science, ICT & Future Planning), Korea, **\$10,000,000** May 2014 - February 2021.

[18] Dong In Kim, Multi-Time-Scale Optimization for Cloud-Based Next Generation Wireless Communication Networks with Cache Placement, NRF grant funded by the Korean government (MSIP) (NRF-2017R1A2B2003953), \$450,000 March 2017 - February 2020.

[17] Dong In Kim, mmWave/Drone-aided Future Cellular Communications, LG Electronics Co., \$30,000 March 2017 - December 2017.

[16] Dong In Kim, Scale-Free Heterogeneous Networks with Limited Feedback, Resource and Interference, National Research Foundation of Korea (NRF) grant funded by the Korean government (MSIP) (NRF-2013R1A2A2A01067195), \$300,000 December 2013 - November 2016.

[15] Dong In Kim, Coordinated Transmission/Reception Using Multiple Distributed Caches, LG Electronics Co., \$90,000 March 2014 - December 2016.

[14] Dong In Kim (PI), et. al., Wireless Transmission Technology for BS/MS Cooperation, IITA, MKE (Ministry of Knowledge Economy), Korea, **\$5,500,000** June 2008 - December 2013.

[13] Dong In Kim, Cooperative Communication for Relaying with Multiple Antennas, LG Electronics Co., \$300,000 January 2009 - December 2013.

[12] Dong In Kim, Dynamic Coordinated Multipoint Transmission/Reception, Samsung Electronics Co., \$50,000 October 2009 - August 2010.



[11] Dong In Kim, Adaptive SC/MRC in Cooperative Communications with Multiple Relays, LG Electronics Co., \$30,000 June 2008 - December 2008.

[10] Dong In Kim, Hybrid of Spectrum Overlay and Underlay in Cognitive Radios, Samsung Electronics Co., \$50,000 February 2008 - November 2008.

[9] Dong In Kim, Multiuser Cognitive Radio (CR) Networks, *SKKU Startup Funds*, \$100,000 September 2007 - August 2008.

(SFU)

[8] Dong In Kim, Ultra Wideband Spread-Spectrum System Laboratory, *CFI Infrastructure Operating Fund*, \$60,000 April 2006 - March 2011.

[7] Dong In Kim, Dynamic Link Adaptation in Heterogeneous Wireless Networks, *NSERC Discovery Grant*, \$155,000 (Annual **\$31,000**) April 2004 - March 2009 (5 years).

[6] Dong In Kim, UWB Application Systems Technology, *International Joint Research Grant*, Inha University, Korea, \$180,000 (Annual \$45,000) September 2003 - August 2007 (4 years).

[5] Dong In Kim, Ultra Wideband Spread-Spectrum System Laboratory, *CFI New Opportunities Fund*, \$200,000 April 2004 - December 2006.

[4] Dong In Kim, Ultra Wideband Spread-Spectrum System Laboratory, *BCKDF (CFI Matching Funds)*, \$200,000 April 2004 - December 2006.

[3] Dong In Kim, High-Speed Wideband CDMA for Wireless Multimedia Services, *SFU Startup Funds*, \$100,000 September 2002 - March 2006.

[2] Dong In Kim, High-order Modulation for High Speed Multi-code CDMA Systems, *SFU PRG Research Grant*, \$10,000 October 2002 - October 2004.

(University of Seoul)

[1] Dong In Kim, *Brain Korea (BK) 21 Project*, Wireless Communications Research Group.

Has taken the leader of the BK 21 Project on 'CDMA-based Smart Antenna Systems', funded by the Ministry of Education, Korea. The fund amounts to about **\$700,000** for three years, Sep. 1999 - Aug. 2002.

## PUBLICATIONS

### Submitted Journal Articles

[S25] W. Yang, Z. Xiong, S. Guo, S. Mao, D. I. Kim, and M. Debbah, “Efficient Multi-user Offloading of Personalized Diffusion Models: A DRL-Convex Hybrid Solution,” submitted, *IEEE Trans. Mobile Computing*, Nov. 2024.

[S24] J. Wang, C. Zhao, Y. Liu, Z. Xiong, D. Niyato, M. B. Mashhadi, S. Sun, Z. Han, P. Zhang, R. Tafazolli, M. Debbah, K. B. Letaief, R. Schober, S. X. Shen, Y. C. Eldar, D. I. Kim, H. V. Poor, and H. Du, “Integrating Generative AI with Signal Processing for Wireless Communications: Advances and Challenges,” submitted, *Nature Communications*, Nov. 2024.

[S23] Y. Guo, J. Fan, R. Zhang, J. Zhang, D. W. K. Ng, D. Niyato, and D. I. Kim, “Secrecy Energy Efficiency Maximization in IRS-Assisted VLC MISO Networks with RSMA: A DS-PPO approach,” submitted, *IEEE Trans. Wireless Commun.*, Nov. 2024.

[S22] C. Zhao, J. Wang, R. Zhang, D. Niyato, D. I. Kim, and H. Du, “Maximum-Likelihood Estimation Based on Diffusion Model For Wireless Communications,” submitted, *IEEE Trans. Neural Networks and Learning Systems*, Nov. 2024.

[S21] G. Sun, M. Yuan, Z. Sun, J. Wang, H. Du, D. Niyato, Z. Han, and D. I. Kim, “Online Collaborative Resource Allocation and Task Offloading for Multi-access Edge Computing,” submitted, *IEEE Trans. Mobile Computing*, Nov. 2024.

[S20] Y.-J. Liu, H. Du, G. Feng, B. Cao, D. Niyato, D. I. Kim, A. Jamalipour, K. B. Letaief, and R. Tafazolli, “A Vision of Integrating Generative Artificial Intelligence and 6G Mobile Networks,” submitted, *Nature Reviews Electrical Engineering*, Nov. 2024.

[S19] Y. Liu, G. Liu, H. Du, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, and S. X. Shen, “Hierarchical Micro-Segmentations for Zero-Trust Services via Large Language Model (LLM)-enhanced Graph Diffusion,” submitted, *IEEE/ACM Trans. Networking*, Oct. 2024.

[S18] H. Han, Y. Lu, Z. Song, R. Zhang, W. Chen, B. Ai, D. Niyato, and D. I. Kim, “SWIPTNet: A Unified Deep Learning Framework for SWIPT based on GNN and Transfer Learning,” submitted, *IEEE Trans. Mobile Computing*, Sep. 2024.

- [S17] R. Zhang, H. Du, D. Niyato, J. Kang, Z. Xiong, P. Zhang, and D. I. Kim, “Optimizing Generative AI Networking: A Dual Perspective with Multi-Agent Systems and Mixture of Experts,” submitted, *IEEE Vehic. Technol. Magazine*, Aug. 2024.
- [S16] X. Zheng, G. Sun, J. Li, J. Wang, D. Niyato, D. I. Kim, and P. Zhang, “Exploring Multi-Agent Dynamics for Generative AI and Large Language Models in Mobile Edge Networks,” submitted, *IEEE Wireless Commun.*, Aug. 2024.
- [S15] J. Wang, H. Du, Y. Liu, G. Sun, D. Niyato, S. Mao, D. I. Kim, and S. X. Shen, “Generative AI based Secure Wireless Sensing for ISAC Networks,” submitted, *IEEE Trans. Information Forensics & Security*, Aug. 2024.
- [S14] J. Wang, Y. Liu, H. Du, D. Niyato, J. Kang, H. Zhou, and D. I. Kim, “Empowering Wireless Networks with Artificial Intelligence Generated Graph,” submitted, *IEEE Network*, May 2024.
- [S13] M. Xu, D. Niyato, J. Kang, Z. Xiong, A. Jamalipour, Y. Fang, D. I. Kim, and S. X. Shen, “Integration of Mixture of Experts and Multimodal Generative AI in Internet of Vehicles: A Survey,” submitted, *IEEE Trans. Cognitive Commun. & Networking*, Apr. 2024.
- [S12] G. Liu, H. Du, D. Niyato, J. Kang, Z. Xiong, A. Jamalipour, S. Mao, and D. I. Kim, “Fusion of Mixture of Experts and Generative Artificial Intelligence in Mobile Edge Metaverse,” submitted, *IEEE Network*, Mar. 2024.
- [S11] G. Liu, N. V. Huynh, H. Du, D. T. Hoang, D. Niyato, K. Zhu, J. Kang, Z. Xiong, A. Jamalipour, and D. I. Kim, “Generative AI for Unmanned Vehicle Swarms: Challenges, Applications and Opportunities,” submitted, *Proceedings of the IEEE*, Feb. 2024.
- [S10] Y. Liu, H. Du, D. Niyato, J. Kang, Z. Xiong, Y. Wen, and D. I. Kim, “Generative AI in Data Center Networking: Fundamentals, Perspectives, and Case Study,” revised, *IEEE Network*, Nov. 2024.
- [S9] N. C. Luong, N. H. Sang, N. D. Hai, N. D. D. Anh, N. Q. Khanh, , X. Li, D. Niyato, and D. I. Kim, “Incentive Mechanisms for Joint Relay Communication and Image Transmission in UAV-Assisted Metaverse Systems,” revised, *IEEE Trans. Wireless Commun.*, Nov. 2024.
- [S8] G. Liu, H. Du, J. Wang, D. Niyato, and D. I. Kim, “Contract-Inspired Contest Theory for Controllable Image Generation in Mobile Edge Metaverse,” revised, *IEEE Trans. Mobile Computing*, Nov. 2024.

[S7] J. H. Park, S. H. Kim, M. M. Amri, N. M. Tran, D. I. Kim, and K. W. Choi, "Uplink MIMO Communications with RIS-Integrated Base Station: Modeling and Experiments," revised, *IEEE Internet of Things Journal*, Nov. 2024.

[S6] N. T. T. Van, N. L. Tuan, N. C. Luong, T. H. Nguyen, S. Feng, S. Gong, D. Niyato, and D. I. Kim, "Network Access Selection for URLLC and eMBB Applications in Sub-6GHz-mmWave-THz Networks: Game Theory Versus Multi-Agent Reinforcement Learning," revised, *IEEE Trans. Commun.*, Nov. 2024.

[S5] M. M. Amri, A. A. Aziz, N. M. Tran, D. I. Kim, and K. W. Choi, "Reconfigurable Intelligent Surface Direct Data Modulation with Adaptive Beam Steering Backscatter Communication," revised, *IEEE Internet of Things Journal*, Oct. 2024.

[S4] H. Li, M. Xiao, K. Wang, D. I. Kim, and M. Debbah, "Large Language Model Based Multi-Objective Optimization for Integrated Sensing and Communications in UAV Networks," revised, *IEEE Wireless Commun. Letters*, Oct. 2024.

[S3] L. B. Luat, N. C. Luong, and D. I. Kim, "Integrated Radar and Communication in Ultra-Reliable and Low-Latency Communications-Enabled UAV Networks," revised, *IEEE Trans. Vehic. Technol.*, Oct. 2024.

[S2] B. Ma, J. Ye, S. Feng, C. Li, D. Niyato, and D. I. Kim, "UAV-Enabled Relaying and Edge Computing: Hybrid Network Optimization," revised, *IEEE Trans. Vehic. Technol.*, Sep. 2024.

[S1] H. Du, R. Zhang, D. Niyato, J. Kang, Z. Xiong, S. Cui, S. X. Shen, and D. I. Kim, "User-Centric Interactive AI for Distributed Diffusion Model-based AI-Generated Content," revised, *IEEE Trans. Pattern Anal. Mach. Intell.*, Aug. 2024.

## Journal Articles

[J309] C. Zhao, H. Du, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, S. X. Shen, and K. B. Letaief, "Enhancing Physical Layer Communication Security through Generative AI with Mixture of Experts," accepted for publication, *IEEE Wireless Commun.*, Nov. 2024.

[J308] B. D. Son, N. N. Khanh, T. V. Chien, and D. I. Kim, "Adversarial Attacks Against Double RIS-Assisted MIMO Systems-based Autoencoder in Finite-Scattering Environments," *IEEE Wireless Commun. Letters*, pp. 1-5, published in IEEE Early Access (DOI: 10.1109/LWC.2024.3487550) on Nov. 4, 2024.

[J307] J. Wang, H. Du, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, and K. B. Letaief, "Toward Scalable Generative AI via Mixture of Experts in Mobile Edge Networks," *IEEE Wireless Commun.*, pp. 1-8, published in IEEE Early Access (DOI: 10.1109/MWC.003.2400046) on Oct. 7, 2024.

[J306] N. H. Sang, N. D. Hai, N. D. D. Anh, N. C. Luong, V.-D. Nguyen, S. Gong, D. Niyato, and D. I. Kim, "Wireless Power Transfer Meets Semantic Communication for Resource-Constrained IoT Networks: A Joint Transmission Mode Selection and Resource Management Approach," *IEEE Internet of Things Journal*, 1-14, published in IEEE Early Access (DOI: 10.1109/JIOT.2024.3464646) on Sep. 20, 2024.

[J305] R. Zhang, H. Du, Y. Liu, D. Niyato, J. Kang, Z. Xiong, A. Jamalipour, and D. I. Kim, "Generative AI Agents with Large Language Model for Satellite Networks via a Mixture of Experts Transmission," in the special issue on Integrated Ground-Air-Space Wireless Networks for 6G Mobile of *IEEE J. Select. Areas in Commun.*, 1-16, published in IEEE Early Access (DOI: 10.1109/JSAC.2024.3459037) on Sep. 12, 2024.

[J304] R. Zhang, H. Du, D. Niyato, J. Kang, Z. Xiong, A. Jamalipour, P. Zhang, and D. I. Kim "Generative AI for Space-Air-Ground Integrated Networks," *IEEE Wireless Commun.*, pp. 1-11, published in IEEE Early Access (DOI: 10.1109/MWC.016.2300547) on Sep. 9, 2024.

[J303] M. Xu, D. Niyato, J. Kang, Z. Xiong, S. Mao, Z. Han, D. I. Kim, and K. B. Letaief, "When Large Language Model Agents Meet 6G Networks: Perception, Grounding, and Alignment," *IEEE Wireless Commun.*, pp. 1-9, published in IEEE Early Access (DOI: 0.1109/MWC.005.2400019) on Aug. 26, 2024.

[J302] C. Zhao, H. Du, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, S. X. Shen, and K. B. Letaief, "Generative AI for Secure Physical Layer Communications: A Survey," *IEEE Trans. Cognitive Commun. & Networking*, pp. 1-24, published in IEEE Early Access (DOI: 10.1109/TCCN.2024.34) on Aug. 5, 2024.

[J301] L. Lv, D. Xu, R. Q. Hu, Y. Ye, L. Yang, X. Lei, X. Wang, D. I. Kim, and A. Nallanathan, "Safeguarding Next Generation Multiple Access Using Physical Layer Security Techniques: A Tutorial," (**invited**) in the special issue on Next Generation Multiple Access of *Proceedings of the IEEE*, pp. 1-46, published in IEEE Early Access (DOI: 10.1109/JPROC.2024.3420127) on Jul. 22, 2024.

[J300] J. Seon, S. Lee, Y. G. Sun, S. H. Kim, D. I. Kim, and J. Y. Kim, "Least Information Spectral GAN with Time-Series Data Augmentation for Industrial IoT," *IEEE Trans. Emerg. Topics Comput. Intell.*, pp. 1-15, published in IEEE Early Access (DOI: 10.1109/TETCI.2024.3406719) on Jun. 4, 2024.

- [J299] J. Liao, J. Wen, J. Kang, C. Yi, Y. Zhang, Y. Jiao, D. Niyato, D. I. Kim, and S. Xie, "Graph Attention Network-based Block Propagation with Optimal AoB and Reputation in Web 3.0," *IEEE Trans. Cognitive Commun. & Networking*, pp. 1-15, published in IEEE Early Access (DOI: 10.1109/TCCN.2024.3407067) on May 30, 2024.
- [J298] H. Du, R. Zhang, Y. Liu, J. Wang, Y. Lin, Z. Li, D. Niyato, J. Kang, Z. Xiong, S. Cui, B. Ai, H. Zhou, and D. I. Kim, "Enhancing Deep Reinforcement Learning: A Tutorial on Generative Diffusion Models in Network Optimization," *IEEE Commun. Surveys & Tutorials*, vol. 26, no. 4, pp. 2611-2646, Fourth Quarter 2024.
- [J297] H. Du, D. Niyato, J. Kang, Z. Xiong, P. Zang, S. Cui, S. X. Shen, S. Mao, Z. Han, A. Jamalipour, H. V. Poor, and D. I. Kim, "The Age of Generative AI and AI-Generated Everything," *IEEE Network*, vol. 38, no.6, pp. 501-512, Nov. 2024.
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### **Keynote/Invited Talks**

[I14] D. I. Kim, "[Towards Realization of Long-Range Wireless-Powered Sensor Networks](#)," *IEEE GLOBECOM 2018 Workshop on Wireless Energy Harvesting Communication Networks*, Abu Dhabi, UAE, Dec. 2018.

[I13] D. I. Kim, "[Short-Range/Medium-Range/Long-Range WPT Efficiency Tests with Dual Mode SWIPT](#)," *IEEE ICC 2018 Workshop on Energy Harvesting Wireless Communications*, Kansas City, MO, USA, May 2018.

[I12] D. I. Kim, "A Massive Antenna Array Testbed for Wireless Power Transfer with Energy Beamforming," *23rd Asia-Pacific Conference on Communications (APCC) 2017*, Perth, Australia, Dec. 2017.

[I11] D. I. Kim, "[A Unified Design of Wireless Information and Power Transmission \(WIPT\)](#)," *IEEE GLOBECOM 2017 Workshop on Wireless Energy Harvesting Communication Networks*, Singapore, Dec. 2017.

[I10] D. I. Kim and K. W. Choi, "[RF Energy Powered Charging Station for Smartphones](#)," *IEEE ICC 2017 Workshop on Emerging Energy Harvesting Solutions for 5G Networks (5G-NRG)*, Paris, France, May 2017.

[I9] D. I. Kim, "Wireless-Powered Communication Networks: Architectures, Protocols, and Applications," *Advanced Technologies for Communications (ATC 2016)*, Hanoi, Vietnam, Oct. 2016.

[I8] D. I. Kim, "Wireless Powered Communication Networks: Architectures, Protocols, and Applications," *Second Asia-Pacific Workshop on Wireless Networking and Communications (APWNC 2015)*, Changchun, Jilin Province, China, Sep. 2015.

[I7] D. I. Kim, "[Flexible Spectrum Utilization in Future Cellular Systems with Small Cells and Device-to-Device Communications](#)," *IEEE ICC 2014 Workshop on Small Cell and 5G Networks (SmallNets)*, Sydney, Australia, Jun. 2014.

[I6] D. I. Kim, "Large-Scale Small Cells via Hierarchical Cooperation: The Evolution Path beyond 4G,"

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