

DONG IN KIM

College of Information & Communication Eng.

Sungkyunkwan University (SKKU)

2066 Seobu-ro, Jangan-gu

Suwon 16419, KOREA

Tel. +82-31-299-4585, Fax. +82-31-299-4673

Home: <http://wireless.skku.edu> E-mail: [dikim@skku.ac.kr](mailto:dikum@skku.ac.kr)

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 '3rd-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 - Present

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

Has served as Editor/Editor at Large, and currently serving as **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

[S20] N. V. Huynh, J. Wang, H. Du, D. T. Hoang, D. Niyato, D. N. Nguyen, D. I. Kim, and K. B. Letaief, “Generative AI for Secure Physical Layer Communications: A Survey,” submitted, *IEEE Trans. Cognitive Commun. & Networking*, Feb. 2024.

[S19] 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,” submitted, *IEEE Wireless Commun.*, Feb. 2024.

[S18] N. H. Sang, N. D. Hai, N. D. D. Anh, N. C. Luong, V.-D. Nguyen, S. Gong, D. Niyato, and D. I. Kim, “Joint Energy Harvesting, Semantic Transmission Selection, Channel Allocation and Power Control for Resource-Constrained IoT Networks,” submitted, *IEEE Internet of Things Journal*, Feb. 2024.

[S17] H. H. Le, N. H. K. Long, N. C. Luong, N. T. Hoa, T. X. Nam, and D. I. Kim, “Edge Computing and Wireless Power Transfer for Integrated Radar and Communication-Equipped IoT Systems,” submitted, *IEEE Wireless Commun. Letters*, Feb. 2024.

[S16] 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,” submitted, *IEEE Wireless Commun.*, Jan. 2024.

[S15] N. M. Tran, M. M. Amri, J. H. Park, D. I. Kim, and K. W. Choi, “Realization of Wireless Power and Information Coexistence through Reconfigurable Intelligent Surface: A Practical Approach with Experimental Validation,” submitted, *IEEE Internet of Things Journal*, Dec. 2023.

[S14] 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 AoI and Reputation in Web 3.0,” submitted, *IEEE Trans. Cognitive Commun. & Networking*, Dec. 2023.

[S13] T. V. Chien, M. D. Cong, N. C. Luong, T. N. Do, D. I. Kim, and S. Chatzinotas, “Joint Computation Offloading and Target Tracking in Integrated Sensing and Communication Enabled UAV Networks,” submitted, *IEEE Commun. Letters*, Dec. 2023.

[S12] B. Lai, J. Wen, J. Kang, H. Du, J. Nie, C. Yi, D. I. Kim, and S. Xie, “Resource-efficient Generative Mobile Edge Networks in 6G Era: Fundamentals, Framework and Case Study,” submitted, *IEEE Wireless*

Commun., Dec. 2023.

[S11] 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,” submitted, *IEEE Trans. Pattern Anal. Mach. Intell.*, Nov. 2023.

[S10] 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 (SAGIN),” submitted, *IEEE Wireless Commun.*, Nov. 2023.

[S9] J. Wang, H. Du, D. Niyato, Z. Xiong, J. Kang, B. Ai, Z. Han, and D. I. Kim, “Generative Artificial Intelligence Assisted Wireless Sensing: Human Flow Detection in Practical Communication Environments,” submitted to the special issue on Positioning and Sensing Over Wireless Networks of *IEEE J. Select. Areas in Commun.*, Oct. 2023.

[S8] C. Psomas, K. Ntougias, N. Shanin, D. Xu, K. Mayer, N. M. Tran, L. Cottatellucci, K. W. Choi, D. I. Kim, R. Schober, and I. Krikidis, “Wireless Information and Energy Transfer in the Era of 6G Communications,” revised, in the special issue on Roadmap for 6G Wireless Networks: Opportunities, Challenges, and Solutions of *Proceedings of the IEEE*, Feb. 2024.

[S7] N. V. Huynh, J. Wang, H. Du, D. T. Hoang, D. Niyato, D. N. Nguyen, D. I. Kim, and K. B. Letaief, “Generative AI for Physical Layer Communications: A Survey,” revised, *IEEE Trans. Cognitive Commun. & Networking*, Feb. 2024.

[S6] S. Kadam and D. I. Kim, “Semantic Communication-Empowered Traffic Management using Vehicle Count Prediction,” revised, *IEEE Trans. Intelligent Transportation Systems*, Feb. 2024.

[S5] 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,” revised, *IEEE Network*, Feb. 2024.

[S4] T. H. Nguyen, H. L. N. Thi, H. L. Hoang, J. Tan, N. C. Luong, S. Xiao, D. Niyato, and D. I. Kim, “Coded Distributed Computing for Vehicular Edge Computing with Dual-Function Radar Communication,” revised, *IEEE Trans. Vehic. Technol.*, Jan. 2023.

[S3] H. Liu, W. Huang, D. I. Kim, S. Sun, Y. Zeng, and S. Feng, "Towards Efficient Task Offloading in Vehicular Edge Networks through Distributed Deep Reinforcement Learning," revised, *IEEE Trans. Vehic. Technol.*, Jan. 2024.

[S2] 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," revised, *IEEE Commun. Surveys & Tutorials*, Jan. 2024.

[S1] N. T. T. Van, N. C. Luong, S. Feng, S. Gong, D. Niyato, and D. I. Kim, "SWIPT-Enabled MISO Ad Hoc Network Underlay RSMA-based System with IRS," revised, *IEEE Trans. Wireless Commun.*, Nov. 2023.

Journal Articles

[J284] M. Xu, D. Niyato, J. Kang, Z. Xiong, S. Guo, Y. Fang, and D. I. Kim, "Generative AI-enabled Mobile Tactical Multimedia Networks: Distribution, Generation, and Perceptions," accepted for publication, *IEEE Commun. Magazine - Series Military Communications and Networks*, Feb. 2024.

[J283] Y. Liu, H. Du, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, and A. Jamalipour, "Deep Generative Model and Its Applications in Efficient Wireless Network Management: A Tutorial and Case Study," accepted for publication, *IEEE Wireless Commun.*, Dec. 2023.

[J282] Y. Cheng, D. Niyato, H. Du, C. Miao, and D. I. Kim, "Goal-Oriented Semantic Communication with Message-Sharing NOMA for Metaverse," accepted for publication, *IEEE Wireless Commun.*, Aug. 2023.

[J281] H. Du, Z. Li, D. Niyato, J. Kang, Z. Xiong, S. X. Shen, and D. I. Kim, "Enabling AI-Generated Content (AIGC) Services in Wireless Edge Networks," accepted for publication, *IEEE Wireless Commun.*, Jul. 2023.

[J280] Z. Ni, Z. Zhang, N. C. Luong, D. Niyato, D. I. Kim, and S. Feng, "Joint Client Scheduling and Quantization Optimization in Energy Harvesting-Enabled Federated Learning Networks," *IEEE Trans. Wireless Commun.*, pp. 1-17, published in IEEE Early Access (DOI: 10.1109/TWC.2024.3363706) on Feb. 15, 2024.

[J279] X. Huang, P. Li, H. Du, J. Kang, D. Niyato, D. I. Kim, and Y. Wu, "Federated Learning-Empowered AI-Generated Content in Wireless Networks," *IEEE Network*, pp. 1-10, published in IEEE Early Access (DOI: 10.1109/MNET.2024.3353377) on Jan. 12, 2024.

[J278] M. Xu, H. Du, D. Niyato, J. Kang, Z. Xiong, S. Mao, Z. Han, A. Jamalipour, D. I. Kim, S. X. Shen, V.

C. M. Leung, and H. V. Poor, “Unleashing the Power of Edge-Cloud Generative AI in Mobile Networks: A Survey of AIGC Services,” *IEEE Commun. Surveys & Tutorials*, pp. 1-45, published in IEEE Early Access (DOI: 10.1109/COMST.2024.3353265) on Jan. 12, 2024.

[J277] G. Liu, H. Du, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, and S. X. Shen, “Semantic Communications for Artificial Intelligence Generated Content (AIGC) Toward Effective Content Creation,” *IEEE Network*, pp. 1-9, published in IEEE Early Access (DOI: 10.1109/MNET.2024.3352917) on Jan. 11, 2024.

[J276] I. Lotfi, D. Niyato, S. Sun, D. I. Kim, and S. X. Shen, “Semantic Information Marketing in the Metaverse: A Learning-Based Contract Theory Framework,” in the special issue on Human-Centric Communication and Networking for Metaverse over 5G and Beyond Networks of *IEEE J. Select. Areas in Commun.*, pp. 1-14, published in IEEE Early Access (DOI: 10.1109/JSAC.2023.3345402) on Dec. 21, 2023.

[J275] S. Kadam and D. I. Kim, “Knowledge-Aware Semantic Communication System Design and Data Allocation,” *IEEE Trans. Vehic. Technol.*, pp. 1-15, published in IEEE Early Access (DOI: 10.1109/TVT.2023.3333350) on Nov. 16, 2023.

[J274] Y. Cheng, D. Niyato, H. Du, J. Kang, Z. Xiong, C. Miao, and D. I. Kim, “Resource Allocation and Common Message Selection for Task-Oriented Semantic Information Transmission with RSMA,” *IEEE Trans. Wireless Commun.*, pp. 1-14, published in IEEE Early Access (DOI: 10.1109/TWC.2023.3327127) on Oct. 31, 2023.

[J273] C. Y. Jung, J.-M. Kang, and D. I. Kim, “A Channel Estimation Method Using Denoising Autoencoder for Large-Scale Asymmetric Backscatter Systems,” *ICT Express*, pp. 1-6, available online on Sep. 19, 2023 (<https://doi.org/10.1016/j.ict.2023.09.002>).

[J272] N. C. Luong, T. L. Van, S. Feng, H. Du, D. Niyato, and D. I. Kim, “Edge Computing for Metaverse: Incentive Mechanism versus Semantic Communication,” *IEEE Trans. Mobile Computing.*, pp. 1-17, published in IEEE Early Access (DOI: 10.1109/TMC.2023.3317092) on Sep. 19, 2023.

[J271] S. Lee, J. Seon, Y. G. Sun, S. H. Kim, C. Kyeong, D. I. Kim, and J. Y. Kim, “Novel Architecture of Energy Management Systems Based on Deep Reinforcement Learning in Microgrid,” *IEEE Trans. Smart Grid*, pp. 1-12, published in IEEE Early Access (DOI: 10.1109/TSG.2023.3317096) on Sep. 19, 2023.

- [J270] J. Seon, S. Lee, Y. G. Sun, S. H. Kim, D. I. Kim, and J. Y. Kim, "GraphSAGE with Contrastive Encoder for Efficient Fault Diagnosis in Industrial IoT Systems," *ICT Express*, pp. 1-7, available online on Aug. 3, 2023 (<https://doi.org/10.1016/j.ict.2023.07.012>).
- [J269] H. Du, R. Zhang, D. Niyato, J. Kang, Z. Xiong, D. I. Kim, S. X. Shen, and H. V. Poor, "Exploring Collaborative Distributed Diffusion-Based AI-Generated Content (AIGC) in Wireless Networks," *IEEE Network*, pp. 1-8, published in IEEE Early Access (DOI: 10.1109/MNET.006.2300223) on Jul. 3, 2023.
- [J268] I. Lotfi, H. Du, D. Niyato, S. Sun, and D. I. Kim, "On the Robustness of Channel Allocation in Joint Radar and Communication Systems: An Auction Approach," *IEEE Trans. Mobile Computing*, pp. 1-18, published in IEEE Early Access (DOI: 10.1109/TMC.2023.3276934) on May 17, 2023.
- [J267] H. Du, J. Wang, D. Niyato, J. Kang, Z. Xiong, S. X. Shen, and D. I. Kim, "Exploring Attention-Aware Network Resource Allocation for Customized Metaverse Services," *IEEE Network*, pp. 1-8, published in IEEE Early Access (DOI: 10.1109/MNET.128.2200338) on Dec. 26, 2022.
- [J266] Z. Q. Liew, M. Xu, W. Y. B. Lim, Z. Xiong, D. Niyato, and D. I. Kim, "Mechanism Design for Semantic Communication in UAV-Assisted Metaverse: A Combinatorial Auction Approach," *IEEE Trans. Vehic. Technol.*, vol. 73, pp. 2236-2251, Feb. 2024.
- [J265] J. Zheng, J. Zhang, H. Du, D. Niyato, D. I. Kim, and B. Ai, "Rate-Splitting for CF Massive MIMO Systems with Channel Aging," *IEEE Trans. Vehic. Technol.*, vol. 73, pp. 1485-1490, Jan. 2024.
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