

Prof. Dong-Seong Kim

CEO & CTO NSLab Co., Ltd.

Professor, School of Electronic Engineering, Kumoh National Institute of Technology

+82544786704 — dskim@kumoh.ac.kr — Google Scholar — ORCID — Web of Science — IEEE Senior Member
LinkedIn — Personal Page — Lab Group — Company Website

Name and Academic Rank

Dong-Seong Kim, Professor in Electrical Engineering.

Education

Doctor of Philosophy (Ph.D.) in Electrical and Computer Engineering, Seoul National University, South Korea, 2003.

Bachelor of Science (B.S.) in Electronic Engineering, Han Yang University, Seoul, South Korea, 1994.

Areas of Specialization

- Real-time Networked Control Systems.
- Industrial Blockchain Applications for Cyberphysical Systems.

Work Experience

Professor

Sept. 2004 – Present

School of Electronic Engineering, Kumoh National Institute of Technology (KIT)

- Leading interdisciplinary research in offline industrial blockchain with low gas costs.
- Teaching and pioneering research in real-time networked control systems, IoT, cybersecurity, and industrial applications, evidenced by an H-index of 51 and over 12,500 citations.
- Leading international collaborations to develop cutting-edge solutions for smart factories and IoT innovations.

CEO and CTO

Mar. 2022 – Present

NSLab Co., Ltd.

- Founded and led the company in the development of innovative and sustainable blockchain technologies and services, including *Pure Certificate*, *Pure World*, *Pure Voting*, and *Pure Media*, with a strong focus on offline transactions and low gas costs.

Dean

Apr. 2019 – Mar. 2022

Industrial Academic Cooperation Foundation, KIT

- Oversaw research promotion, technology commercialization, and industry-academia collaboration, facilitating start-up support, and fostering partnerships between the university and industries to drive sustainable industrial development and job creation for students.

Director

Feb. 2015 – Mar. 2019

Convergence Technology Institute, KIT

- Led the establishment of international partnerships, including an MOU with OceanIT, facilitating human resource exchange and joint research in ICT, military-civilian fusion technologies, and smart devices.
- Oversaw the expansion of research in IoT-based disaster mitigation and military-civilian convergence systems, contributing to the growth of global research initiatives and collaborative centers.

Vice President

Jan. 2019 – Present

Korean Institute of Communications and Information Sciences (KICS)

- Spearheaded initiatives in military-civilian IT convergence, fostering research and development in advanced ICT applications for defense and civilian sectors.
- Played a pivotal role in establishing strategic partnerships and collaborative projects to enhance technological innovation and contribute to national security advancement.

Visiting Professor

Dec. 2007 – Feb. 2009

University of California, Davis

- Taught, supervised research projects, and collaborated with faculty on academic initiatives.

Visiting Professor

Mar. 2024 – Feb. 2005

School of Electrical and Computer Engineering, Cornell University

- Taught, supervised research projects, and collaborated with faculty on academic initiatives.

Professional Memberships & Service

- Senior Member, IEEE (Membership No: 41298736)** **2005–Present**
- Memberships in *IEEE Industrial Electronics Society*, *IEEE Computer Society*, and *IEEE Communications Society*, with strong expertise across Electronics, Computing, and Communications.
 - Holds a 26-year IEEE Membership Milestone (1999–2025), underscoring a sustained commitment to advancing technology and professional development.
- ACM (Association for Computing Machinery)** **2005–Present**
- Actively engaged in advancing computing knowledge and professional development within ACM communities, contributing to initiatives in ICT, cybersecurity, and related fields, complementing extensive IEEE involvement.
- Life Member, ACM, AFCEA, IEIE, KICS, KSII** **2004–Present**
- Active member of multiple professional societies, contributing to the advancement of computing and engineering fields through participation in conferences, workshops, and symposia.
- Part-time Project Manager, Defense ICT Group, IITP** **2023.10–2024.09**
- Leading strategic initiatives and projects within the Defense ICT sector, overseeing the coordination of collaborative research and technology development efforts.
- Part-time Project Manager, Defense and Security Group, NRF** **2022–Present**
- Managing projects related to the development of defense and security technologies and contributing to policy development and project execution in the national defense sector.
- Director, International Education Center, KIT** **2022**
- Oversaw international education initiatives, fostering global partnerships, managing programs, and enhancing the university's global visibility and academic collaboration.
- Advisory Committee Member, Naval Ship Technology Research Institute** **2017–Present**
- Providing expert advice and strategic guidance on naval ship technology and collaborating with national defense agencies and research institutions on advancing maritime defense technologies.
- Advisory Committee Member, Ministry of Science and ICT, Korea** **2021.02–2022.10**
- Contributing to policy recommendations and strategic decisions in ICT and national defense integration, offering expertise on technological advancements and defense-related ICT projects.
- Advisory Committee Member, Information Planning Bureau, Ministry of National Defense** **2016.09–2018.09**
- Served as an advisor on information technology integration for national defense systems, providing insights into strategic deployment of ICT for defense and military applications.
- Director (Founder), Military System Research Institute, KIT** **2015, 2021–2022**
- Founded and led research efforts in military systems, focusing on advanced technologies and defense applications, managing teams and fostering collaborations with military agencies and academia.
- Editor in Chief** **2025–Present**
- Journal of Information Assurance and Security.

Peer Review Contributions

- Reviewed 42 manuscripts for IEEE Transactions on Industrial Informatics.
- Reviewed 36 manuscripts for IEEE Access.
- Reviewed 15 manuscripts for IEEE Internet of Things Journal.
- Reviewed 9 manuscripts for Sensors.
- Reviewed 7 manuscripts for International Journal of Communication Systems.
- Reviewed 5 manuscripts for International Journal of Control, Automation, and Systems.
- Reviewed 3 manuscripts for IET Communications.
- Reviewed 3 manuscripts for International Journal of Wireless Information Networks.
- Reviewed 2 manuscripts for Arabian Journal for Science and Engineering.
- Reviewed 2 manuscripts for IEEE Communications Magazine.
- Reviewed 2 manuscripts for IEEE Sensors Journal.
- Reviewed 2 manuscripts for IEEE Transactions on Intelligent Transportation Systems.
- Reviewed 2 manuscripts for IETE Journal of Research.
- Reviewed 1 manuscript for ACM Computing Surveys.
- Reviewed 1 manuscript for Applied Sciences.
- Reviewed 1 manuscript for Artificial Intelligence Review.

- Reviewed 1 manuscript for Energies.
- Reviewed 1 manuscript for Engineering Applications of Artificial Intelligence.
- Reviewed 1 manuscript for IEEE Communications Letters.
- Reviewed 1 manuscript for IEEE Consumer Electronics Magazine.
- Reviewed 1 manuscript for IEEE Intelligent Transportation Systems Magazine.
- Reviewed 1 manuscript for IEEE Internet of Things Magazine.
- Reviewed 1 manuscript for IEEE Transactions on Intelligent Vehicles.
- Reviewed 1 manuscript for IEEE Wireless Communications Letters.
- Reviewed 1 manuscript for Internet Technology Letters.
- Reviewed 1 manuscript for Wireless Personal Communications.

Notable Contributions

- Founded and led NSLab Co., Ltd., establishing a global leader in blockchain technology by developing innovative platforms such as *Pure Certificate*, *Pure Voting*, *Pure World*, and *Pure Media*, emphasizing sustainable offline transactions and low gas costs (2022–Present).
- Donated *PureChain*-based blockchain products and research prototypes, including *Pure Certificate* and *Pure Voting*, to regions in nations such as Nigeria and Indonesia, enabling secure, transparent digital certification and voting systems to enhance governance and trust.
- Invented *Pure Certificate*, a blockchain-based certification system for secure and verifiable digital credentials, widely adopted for its efficiency and reliability in decentralized applications.
- Developed *Pure Voting*, a blockchain-driven voting platform ensuring tamper-proof, transparent elections, significantly impacting democratic processes in resource-constrained regions.
- Pioneered proof-of-authority (PoA) consensus mechanisms for high-reliability blockchain networks, patented in 2024 (PCT/KR2024/010241), enhancing scalability and energy efficiency in distributed systems.
- Innovated blockchain-based organ matching system, patented in 2025 (PCT/KR2025/010088), revolutionizing medical resource allocation with secure, transparent, and equitable organ distribution.
- Advanced blockchain applications in industrial IoT through patented edge computing platforms (Patent 10-2803854, 2025) and dual fieldbus-based networks (Patent 10-2777684, 2025), enabling real-time, secure data distribution in heterogeneous sensor networks.
- Established scholarships to support research in energy-saving blockchain protocols for real-time industrial applications, fostering the next generation of researchers to develop scalable, secure, and low-energy solutions for industrial cyberphysical systems.
- Contributed to global blockchain adoption through mentorship, invited talks, and collaborative research, fostering education and innovation in decentralized technologies across academia and industry.

Refereed Scholarly Publications

BUS-Health: Blockchain and UAV Integrated Smart Medical Supplies 2025

- Golam, Mohtasin and Rahaman, Md Facklasur and Subhan, Md Raihan and Kim, Dong-Seong and Lee, Jae-Min, *Blockchain: Research and Applications*, p. 100341.

Enhancing Blockchain Consensus Mechanisms: A Comprehensive Survey on Machine Learning Applications and Optimizations 2025

- Rizal, Syamsul and Kim, Dong-Seong, *Blockchain: Research and Applications*, p. 100302.

Integrating machine learning with proof-of-authority-and-association for dynamic signer selection in blockchain networks 2025

- Kim, Dong-Seong and Syamsul, Rizal, *ICT Express*, vol. 11, no. 2, pp. 258–263.

FedViTBloc: secure and privacy-enhanced medical image analysis with federated vision transformer and blockchain 2025

- Amaizu, Gabriel Chukwunonso and Sai, Akshita Maradapu Vera Venkata and Bwardwaj, Sanjay and Kim, Dong-Seong and Siddula, Madhuri and Li, Yingshu, *High-Confidence Computing*, p. 100302.

Blockchain-Enhanced Feature Engineered Data Falsification Detection in 6G In-Vehicle Networks 2025

- Nakayiza, Hope Leticia and Ahakonye, Love Allen Chijioke and Kim, Dong-Seong and Lee, Jae-Min, *IEEE Internet of Things Journal*, pp. 30036-30048.

- Meta-Governance: Blockchain-Driven Metaverse Platform for Mitigating Misbehavior Using Smart Contract and AI** 2024
- Facklasur Rahaman, Md and Golam, Mohtasin and Raihan Subhan, Md and Tuli, Esmot Ara and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Transactions on Network and Service Management*, pp. 4024-4038.
- PureFed: An Efficient Collaborative and Trustworthy Federated Learning Framework Based on Blockchain Network** 2024
- Adi Paramartha Putra, Made and Bogi Aditya Karna, Nyoman and Naufal Alief, Revin and Zainudin, Ahmad and **Kim, Dong-Seong** and Lee, Jae-Min and Sampedro, Gabriel Avelino, *IEEE Access*, pp. 82413-82426.
- Medical IoT Record Security and Blockchain: Systematic Review of Milieu, Milestones, and Momentum** 2024
- Ajakwe, Simeon Okechukwu and Saviour, Igboanusi Ikechi and Ihekoronye, Vivian Ukamaka and Nwankwo, Odinachi U and Dini, Mohamed Abubakar and Uchechi, Izuazu Urslla and **Kim, Dong-Seong** and Lee, Jae Min, *Big Data and Cognitive Computing*, vol. 8, no. 9, p. 121.
- BOMS: blockchain-enabled organ matching system** 2024
- Igboanusi, Ikechi Saviour and Nnadiokwe, Chigozie Athanasius and Ogbede, Joseph Uche and **Kim, Dong-Seong** and Lensky, Artem, *Scientific Reports*, vol. 14, no. 1, p. 16069.
- Tides of blockchain in IoT cybersecurity** 2024
- Ahakonye, Love Allen Chijioke and Nwakanma, Cosmas Ifeanyi and **Kim, Dong-Seong**, *Sensors*, vol. 24, no. 10, p. 3111.
- Proof-of-authority-based secure and efficient aggregation with differential privacy for federated learning in industrial IoT** 2024
- Putra, Made Adi Paramartha and Alief, Revin Naufal and Rachmawati, Syifa Maliah and Sampedro, Gabriel Avelino and **Kim, Dong-Seong** and Lee, Jae-Min, *Internet of Things*, vol. 25, p. 101107.
- Blockchain-Inspired Collaborative Cyber-Attacks Detection for Securing Metaverse** 2024
- Zainudin, Ahmad and Putra, Made Adi Paramartha and Alief, Revin Naufal and Akter, Rubina and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Internet of Things Journal*, pp. 18221-18236.
- HADES: Hash-Based Audio Copy Detection System for Copyright Protection in Decentralized Music Sharing** 2023
- Ansori, Muhammad Rasyid Redha and Allwinnaldo and Alief, Revin Naufal and Igboanusi, Ikechi Saviour and Lee, Jae Min and **Kim, Dong-Seong**, *IEEE Transactions on Network and Service Management*, pp. 2845-2853.
- Smart auto mining (SAM) for industrial IoT blockchain network** 2022
- Igboanusi, Ikechi Saviour and Allwinnaldo, Allwinnaldo and Alief, Revin Naufal and Ansori, Muhammad Rasyid Redha and Lee, Jae-Min and **Kim, Dong-Seong**, *IET Communications*, vol. 16, no. 18, pp. 2123–2132.
- Energy-Aware Real-Time Routing for Large-Scale Industrial Internet of Things** 2018
- Long, Nguyen Bach and Tran-Dang, Hoa and **Kim, Dong-Seong**, *IEEE Internet of Things Journal*, pp. 2190-2199.
- Throughput-Aware Routing for Industrial Sensor Networks: Application to ISA100.11a** 2014
- Quang, Pham Tran Anh and **Kim, Dong-Seong**, *IEEE Transactions on Industrial Informatics*, pp. 351-363.
- Enhancing Real-Time Delivery of Gradient Routing for Industrial Wireless Sensor Networks** 2012
- Quang, Pham Tran Anh and Kim, Dong-Sung, *IEEE Transactions on Industrial Informatics*, pp. 61-68.
- Real-time scheduling method for networked discrete control systems** 2009
- **Kim, Dong-Sung** and Choi, Dong-Hyuk and Mohapatra, Prasant, *Control Engineering Practice*, vol. 17, no. 5, pp. 564–570.
- Wireless fieldbus for networked control systems using LR-WPAN** 2008
- Choi, Dong-Hyuk and **Kim, Dong-Sung**, *International Journal of Control, Automation, and Systems*, vol. 6, no. 1, pp. 119–125.
- Maximum allowable delay bounds of networked control systems** 2003
- **Kim, Dong-Sung** and Lee, Young Sam and Kwon, Wook Hyun and Park, Hong Seong, *Control Engineering Practice*, vol. 11, no. 11, pp. 1301–1313.
- A scheduling method for network-based control systems** 2002
- Park, Hong Seong and Kim, Yong Ho and **Kim, Dong-Sung** and Kwon, Wook Hyun, *IEEE Transactions on Control Systems Technology*, vol. 10, no. 3, pp. 318–330.

On the Performance of Cooperative Transmission Schemes in Industrial Wireless Sensor Networks	2018
– Tuan, Nguyen Trong and Kim, Dong-Seong and Lee, Jae-Min, <i>IEEE Transactions on Industrial Informatics</i> , pp. 4007-4018.	
An efficient throughput improvement through bandwidth awareness in cognitive radio networks	2014
– Le, Tung Thanh and Kim, Dong-Seong , <i>Journal of Communications and Networks</i> , pp. 146-154.	
Dynamic traffic-aware routing algorithm for multi-sink wireless sensor networks	2014
– Tan, Do Duy and Kim, Dong-Seong , <i>Wireless Networks</i> , vol. 20, no. 6, pp. 1239–1250.	
GRATA: gradient-based traffic-aware routing for wireless sensor networks	2013
– Tan, Do Duy and Quoc Dinh, Nguyen and Kim, Dong-Seong , <i>IET Wireless Sensor Systems</i> , vol. 3, no. 2, pp. 104–111.	
FRATO: Fog Resource Based Adaptive Task Offloading for Delay-Minimizing IoT Service Provisioning	2021
– Tran-Dang, Hoa and Kim, Dong-Seong , <i>IEEE Transactions on Parallel and Distributed Systems</i> , pp. 2491-2508.	
Channel-Aware Energy-Efficient Two-Hop Cooperative Routing Protocol for Underwater Acoustic Sensor Networks	2019
– Tran-Dang, Hoa and Kim, Dong-Seong , <i>IEEE Access</i> , pp. 63181-63194.	
Channel-aware cooperative routing in underwater acoustic sensor networks	2019
– Tran-Dang, Hoa and Kim, Dong-Seong , <i>Journal of Communications and Networks</i> , vol. 21, no. 1, pp. 33–44.	
Robust Model Predictive Control of Converter-Based Microgrids	2025
– Babayomi, Oluleke and Madonski, Rafal and Zhang, Zhenbin and Rodriguez, Jose and Davidson, Innocent and Kim, Dong-Seong , <i>IEEE Transactions on Power Electronics</i> , pp. 1-23.	
Multi-Agent Quantum Reinforcement Learning for Adaptive Transmission in NOMA-Based Irregular Repetition Slotted ALOHA	2025
– Ryu, Won Jae and Lee, Jae-Min and Kim, Dong-Seong , <i>IEEE Open Journal of the Communications Society</i> , pp. 4405-4420.	
MetaWatch: Trends, Challenges, and Future of Network Intrusion Detection in the Metaverse	2025
– Nkoro, Ebuka Chinaechetam and Njoku, Judith Nkechinyere and Nwakanma, Cosmas Ifeanyi and Lee, Jae Min and Kim, Dong-Seong , <i>IEEE Internet of Things Journal</i> , pp. 1-1.	
Design and Implementation of Network Simulator for High-Level Naval Ship System	2025
– Jang, Min-Hui and Kim, Hyeong-Jin and Go, Young-Keun and Choi, Nak-Jung and Lee, Jae-Ho and Yu, Jae-Hak and Lee, Jae-Min and Jun, Tae-Soo and Kim, Dong-Seong , <i>IEEE Access</i> , pp. 90612-90625.	
Leveraging Digital Twin Technology for Battery Management: A Case Study Review	2025
– Njoku, Judith Nkechinyere and Nkoro, Ebuka Chinaechetam and Medina, Robin Matthew and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and Kim, Dong-Seong , <i>IEEE Access</i> , pp. 21382-21412.	
BlackIceNet: Explainable AI-Enhanced Multimodal for Black Ice Detection to Prevent Accidents in Intelligent Vehicles	2025
– Golam, Mohtasin and Md Tayeb, Adnan and Ayesha Khatun, Mst and Facklasur Rahaman, Md and Aouto, Ali and Paul Angelo, Oroceo and Kim, Dong-Seong and Lee, Jae-Min and Kim, Jung-Hyeon, <i>IEEE Internet of Things Journal</i> , pp. 15558-15571.	
DroneGuard: An Explainable and Efficient Machine Learning Framework for Intrusion Detection in Drone Networks	2025
– Ihekoronye, Vivian Ukamaka and Ajakwe, Simeon Okechukwu and Lee, Jae Min and Kim, Dong-Seong , <i>IEEE Internet of Things Journal</i> , pp. 7708-7722.	
Federated Learning-Based Resource Allocation for V2X Communications	2025
– Bhardwaj, Sanjay and Kim, Da-Hye and Kim, Dong-Seong , <i>IEEE Transactions on Intelligent Transportation Systems</i> , pp. 382-396.	
Collaborative edge learning-assisted interactive Avatar generation framework for IoT-driven metaverse	2025
– Zainudin, Ahmad and Putra, Made Adi Paramartha and Kim, Dong-Seong and Lee, Jae-Min, <i>Internet of Things</i> , p. 101639.	
TMNet: Transformer-fused multimodal framework for emotion recognition via EEG and speech	2025

- Alam, Md Mahinur and Dini, Mohamed A and **Kim, Dong-Seong** and Jun, Taesoo, *ICT Express*.

Machine Learning Models for Drone Security: Cognitive Versus Cyber Intelligence for Safety Operations 2025

- Ajakwe, Simeon Okechukwu and Okoloegbo, Christianah Amaka and Lee, Jae Min and **Kim, Dong-Seong**, *Machine Learning for Drone-Enabled IoT Networks: Opportunities, Developments, and Trends*, pp. 121–139.

Cost-Efficient Hybrid Filter-Based Parameter Selection Scheme for Intrusion Detection System in IoT 2025

- Amaizu, Gabriel Chukwunonso and Maradapu Vera Venkata Sai, Akshita and Siddula, Madhuri and **Kim, Dong-Seong**, *Electronics*, vol. 14, no. 4, p. 726.

Explainable and perturbation-resilient model for cyber-threat detection in industrial control systems Networks 2025

- Izuazu, Urslla Uchechi and Nwakanma, Cosmas Ifeanyi and **Kim, Dong-Seong** and Lee, Jae Min, *Discover Internet of Things*, vol. 5, no. 1, p. 9.

Digital Twin-empowered intelligent computation offloading for edge computing in the era of 5G and beyond: A state-of-the-art survey 2025

- Tran-Dang, Hoa and **Kim, Dong-Seong**, *ICT Express*.

Shaping the future of logistics: Data-driven technology approaches and strategic management 2025

- Tran-Dang, Hoa and Kim, Jae-Woo and Lee, Jae-Min and **Kim, Dong-Seong**, *IETE Technical Review*, vol. 42, no. 1, pp. 44–79.

Digital Twin-Assisted Contextual Bandit Learning for Peer Offloading in Fog-Based 2024

- Tran-Dang, Hoa and **Kim, Dong-Seong**, *Intelligence of Things: Technologies and Applications: The Third International Conference on Intelligence of Things (ICIT 2024), Da Nang, Vietnam, September 12-14, 2024, Proceedings, Volume 1*, vol. 229, p. 331.

Leveraging quantum blockchain for secure multiparty space sharing and authentication on specialized metaverse platform 2024

- Tuli, Esmot Ara and Lee, Jae-Min and **Kim, Dong-Seong**, *Scientific Reports*, vol. 14, no. 1, p. 25776.

Federated learning based modulation classification for multipath channels 2024

- Bhardwaj, Sanjay and Kim, Da-Hye and **Kim, Dong-Seong**, *Parallel Computing*, vol. 120, p. 103083.

Metaverse in advanced manufacturing: Background, applications, limitations, open issues & future directions 2024

- Amaizu, Gabriel Chukwunonso and Njoku, Judith Nkechinyere and Lee, Jae-Min and **Kim, Dong-Seong**, *ICT Express*, vol. 10, no. 2, pp. 233–255.

Low computational cost convolutional neural network for smart grid frequency stability prediction 2024

- Ahakonye, Love Allen Chijioke and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *Internet of Things*, vol. 25, p. 101086.

Detecting cyberthreats in metaverse learning platforms using an explainable DNN 2024

- Nkoro, Ebuka Chinaechetam and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *Internet of Things*, vol. 25, p. 101046.

A review of thermal array sensor-based activity detection in smart spaces using AI 2024

- Nwakanma, Cosmas Ifeanyi and Anyanwu, Goodness Oluchi and Ahakonye, Love Allen Chijioke and Lee, Jae-Min and **Kim, Dong-Seong**, *ICT Express*, vol. 10, no. 2, pp. 256–269.

Zero-trust marine cyberdefense for iot-based communications: An explainable approach 2024

- Nkoro, Ebuka Chinaechetam and Njoku, Judith Nkechinyere and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *Electronics*, vol. 13, no. 2, p. 276.

Explainable data-driven digital twins for predicting battery states in electric vehicles 2024

- Njoku, Judith Nkechinyere and Ifeanyi Nwakanma, Cosmas and **Kim, Dong-Seong**, *IEEE Access*, pp. 83480–83501.

Dragonfly Interaction Algorithm for Optimization of Queuing Delay in Industrial Wireless Networks 2024

- Bhardwaj, Sanjay and Kim, Da-Hye and **Kim, Dong-Seong**, *Journal of Bionic Engineering*, vol. 21, no. 1, pp. 447–485.

Machine learning in uav-assisted smart farming 2024

- Ajakwe, Simeon Okechukwu and Esomonu, Nkechi Faustina and Deji-Oloruntoba, Opeyemi and Ajakwe, Ihunanya Udodiri and Lee, Jae-Min and **Kim, Dong-Seong**, *Applications of machine learning in UAV networks*, pp. 217–245.

- Whale optimization-based PTS scheme for PAPR reduction in UPMC systems** 2024
– Tuli, Esmot Ara and Akter, Rubina and Lee, Jae Min and **Kim, Dong-Seong**, *IET Communications*, vol. 18, no. 2, pp. 187–195.
- Enhancing Security and Accountability in Autonomous Vehicles through Robust Speaker Identification and Blockchain-Based Event Recording** 2023
– Njoku, Judith Nkechinyere and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *Electronics*, vol. 12, no. 24, p. 4998.
- Digital twin-enabled 3D printer fault detection for smart additive manufacturing** 2023
– Rachmawati, Syifa Maliah and Putra, Made Adi Paramartha and Lee, Jae Min and **Kim, Dong-Seong**, *Engineering Applications of Artificial Intelligence*, vol. 124, p. 106430.
- Deep Q-learning based sparse code multiple access for ultra reliable low latency communication in industrial wireless networks** 2023
– Bhardwaj, Sanjay and **Kim, Dong-Seong**, *Telecommunication Systems*, vol. 83, no. 4, pp. 409–421.
- Dynamic Collaborative Task Offloading in Fog Computing Systems** 2023
– Tran-Dang, Hoa and **Kim, Dong-Seong**, *Cooperative and Distributed Intelligent Computation in Fog Computing: Concepts, Architectures, and Frameworks*, pp. 83–100.
- Cooperation for distributed task offloading in fog computing networks** 2023
– Tran-Dang, Hoa and **Kim, Dong-Seong**, *Cooperative and distributed intelligent computation in fog computing: concepts, architectures, and frameworks*, pp. 33–45.
- RBF-SVM kernel-based model for detecting DDoS attacks in SDN integrated vehicular network** 2023
– Anyanwu, Goodness Oluchi and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *Ad Hoc Networks*, vol. 140, p. 103026.
- Novel hyper-tuned ensemble random forest algorithm for the detection of false basic safety messages in internet of vehicles** 2023
– Anyanwu, Goodness Oluchi and Nwakanma, Cosmas Ifeanyi and Lee, Jae Min and **Kim, Dong-Seong**, *ICT Express*, vol. 9, no. 1, pp. 122–129.
- ALIEN: Assisted learning invasive encroachment neutralization for secured drone transportation system** 2023
– Ajakwe, Simeon Okechukwu and Ihekoronye, Vivian Ukamaka and **Kim, Dong-Seong** and Lee, Jae-Min, *Sensors*, vol. 23, no. 3, p. 1233.
- Explainable artificial intelligence (XAI) for intrusion detection and mitigation in intelligent connected vehicles: A review** 2023
– Nwakanma, Cosmas Ifeanyi and Ahakonye, Love Allen Chijioke and Njoku, Judith Nkechinyere and Odirichukwu, Jacinta Chioma and Okolie, Stanley Adiele and Uzundu, Chinebuli and Ndubuisi Nweke, Christiana Chidimma and **Kim, Dong-Seong**, *Applied Sciences*, vol. 13, no. 3, p. 1252.
- Artificial intelligence for the metaverse: A survey** 2023
– Huynh-The, Thien and Pham, Quoc-Viet and Pham, Xuan-Quy and Nguyen, Thanh Thi and Han, Zhu and **Kim, Dong-Seong**, *Engineering Applications of Artificial Intelligence*, vol. 117, p. 105581.
- Prospects and challenges of Metaverse application in data-driven intelligent transportation systems** 2022
– Njoku, Judith Nkechinyere and Nwakanma, Cosmas Ifeanyi and Amaizu, Gabriel Chukwunonso and **Kim, Dong-Seong**, *IET Intelligent Transport Systems*, vol. 17, no. 1, pp. 1–21.
- Exploring Machine Learning-Based Fault Monitoring for Polymer-Based Additive Manufacturing: Challenges and Opportunities** 2022
– Sampedro, Gabriel Avelino R. and Rachmawati, Syifa Maliah and **Kim, Dong-Seong** and Lee, Jae-Min, *Sensors*, vol. 22, no. 23, p. 9446.
- CNN-32DC: An improved radar-based drone recognition system based on Convolutional Neural Network** 2022
– Garcia, Ann Janeth and Aouto, Ali and Lee, Jae-Min and **Kim, Dong-Seong**, *ICT Express*, vol. 8, no. 4, pp. 606–610.
- Smart factory floor safety monitoring using UWB sensor** 2022
– Islam, Faliha Bushra and Lee, Jae-Min and **Kim, Dong-Seong**, *IET Science, Measurement & Technology*, vol. 16, no. 7, pp. 412–425.

- Design of an In-Process Quality Monitoring Strategy for FDM-Type 3D Printer Using Deep Learning** 2022
– Sampedro, Gabriel Avelino R. and Agron, Danielle Jaye S. and Amaizu, Gabriel Chukwunonso and Kim, Dong-Seong and Lee, Jae-Min, *Applied Sciences*, vol. 12, no. 17, p. 8753.
- Performance Enhancement of Optimized Link State Routing Protocol by Parameter Configuration for UANET** 2022
– Tuli, Esmot Ara and Golam, Mohtasin and Kim, Dong-Seong and Lee, Jae-Min, *Drones*, vol. 6, no. 1, p. 22.
- CNN-SSDI: Convolution neural network inspired surveillance system for UAVs detection and identification** 2021
– Akter, Rubina and Doan, Van-Sang and Lee, Jae-Min and Kim, Dong-Seong, *Computer Networks*, vol. 201, p. 108519.
- Edge AI prospect using the NeuroEdge computing system: Introducing a novel neuromorphic technology** 2021
– Nwakanma, Cosmas Ifeanyi and Kim, Jae-Woo and Lee, Jae-Min and Kim, Dong-Seong, *ICT Express*, vol. 7, no. 2, pp. 152–157.
- Detection and Classification of Human Activity for Emergency Response in Smart Factory Shop Floor** 2021
– Nwakanma, Cosmas Ifeanyi and Islam, Fabliha Bushra and Maharani, Mareska Pratiwi and Lee, Jae-Min and Kim, Dong-Seong, *Applied Sciences*, vol. 11, no. 8, p. 3662.
- DOA estimation of multiple non-coherent and coherent signals using element transposition of covariance matrix** 2020
– Doan, Van-Sang and Kim, Dong-Seong, *ICT Express*, vol. 6, no. 2, pp. 67–75.
- Energy Consumption Analysis of Beamforming and Cooperative Schemes for Aircraft Wireless Sensor Networks** 2020
– Kim, Seung-Hwan and Kim, Jae-Woo and Kim, Dong-Seong, *Applied Sciences*, vol. 10, no. 12, p. 4374.
- Dual fieldbus industrial IoT networks using edge server architecture** 2020
– Dirgantoro, Kevin Putra and Nwadiugwu, Williams-Paul and Lee, Jae Min and Kim, Dong-Seong, *Manufacturing Letters*, vol. 24, pp. 108–112.
- Multimedia content recommendation in social networks using mood tags and synonyms** 2019
– Moon, Chang Bae and Lee, Jong Yeol and Kim, Dong-Seong and Kim, Byeong Man, *Multimedia Systems*, vol. 26, no. 2, pp. 139–156.
- The Firmware Design and Implementation Scheme for C Form-Factor Pluggable Optical Transceiver** 2020
– Kim, Jae-Woo and Kim, Dong-Seong and Kim, Seung-Hwan and Shin, Sang-Moon, *Applied Sciences*, vol. 10, no. 6, p. 2143.
- Overhead reduction scheme for SDN-based Data Center Networks** 2019
– Pranata, Alif Akbar and Jun, Tae Soo and Kim, Dong-Seong, *Computer Standards & Interfaces*, vol. 63, pp. 1–15.
- Industrial Sensors and Controls in Communication Networks: From Wired Technologies to Cloud Computing and the Internet of Things** 2019
– Kim, Dong-Seong and Tran-Dang, Hoa, *Computer Communications and Networks*.
- Wireless Sensor Networks for Industrial Applications** 2018
– Kim, Dong-Seong and Tran-Dang, Hoa, *Industrial Sensors and Controls in Communication Networks*, pp. 127–140.
- An Overview on Industrial Control Networks** 2018
– Kim, Dong-Seong and Tran-Dang, Hoa, *Industrial Sensors and Controls in Communication Networks*, pp. 3–16.
- An Overview on Industrial Internet of Things** 2018
– Kim, Dong-Seong and Tran-Dang, Hoa, *Industrial Sensors and Controls in Communication Networks*, pp. 207–216.
- Design and implementation of smart farm wireless network: LoRa and IEEE 802.11 wireless backhaul network** 2018
– Jo, Hong-Keu and Choi, Hak Hui and Kim, Dong-Seong and Lee, Jae-Min, *The Journal of Korean Institute of Communications and Information Sciences*, vol. 43, no. 5, pp. 850–862.
- Detecting complex 3D human motions with body model low-rank representation for real-time smart activity monitoring system** 2018
– Jalal, Ahmad and Kamal, Shaharyar and Kim, Dong-Seong, *KSII Transactions on Internet and Information Systems*, vol. 12, no. 3, pp. 1189–1204.
- Containers monitoring through the Physical Internet: a spatial 3D model based on wireless sensor networks** 2017

- Tran-Dang, Hoa and Krommenacker, Nicolas and Charpentier, Patrick, *International journal of production research*, vol. 55, no. 9, pp. 2650–2663.
- Geographical awareness hybrid routing protocol in mobile ad hoc networks** 2017
 - Pham, Thi Minh Thu and Nguyen, Trong-Tien and **Kim, Dong-Seong**, *Wireless Networks*, vol. 23, no. 1, pp. 1–13.
- Design and realization of distributed real-time message management scheme for naval combat system development tool** 2016
 - Im, Jin Yong and **Kim, Dong-Seong** and Song, Kyung Sub and Choi, Yoon Suk, *Journal of Institute of Control, Robotics and Systems*, vol. 22, no. 7, pp. 570–577.
- Performance evaluation of virtualization solution for next generation naval combat systems** 2019
 - Im, Jin Yong and **Kim, Dong-Seong**, *Journal of The Institute of Electronics and Information Engineers*, vol. 56, no. 2, pp. 41–49.
- Faulty Node Detection in Distributed Systems Using BCH Code** 2013
 - Prasetiadi, Agi and **Kim, Dong-Seong**, *IEEE Communications Letters*, pp. 620-623.
- Performance analysis of single Bluetooth piconet in error-prone environments** 2007
 - Shin, Soo Young and Park, Hong Seong and Kim, Dong-Sung and Kwon, Wook Hyun, *Journal of Communications and Networks*, pp. 229-235.
- Adaptive Channel State Routing for Home Network Systems Using Power Line Communications** 2007
 - Heo, Jongman and Lee, Kamrok and Kang, Hyoung Koo and Kim, Dong-sung and Kwon, Wook Hyun, *IEEE Transactions on Consumer Electronics*, pp. 1410-1418.
- Corrections to “Deep Learning-Based Robust Automatic Modulation Classification for Cognitive Radio Networks”** 2021
 - Kim, Seung-Hwan and Kim, Jae-Woo and Nwadiugwu, Williams-Paul and **Kim, Dong-Seong**, *IEEE Access*, pp. 109094-109094.
- Sparsely Connected Low Complexity CNN for Unmanned Vehicles Detection-Sensing RF Signal** 2024
 - Akter, Rubina and Doan, Van-Sang and Zainudin, Ahmad and **Kim, Dong-Seong**, *IEEE Transactions on Vehicular Technology*, pp. 14236-14251.
- Meta-Learning: A Digital Learning Management Framework Using Blockchain for Metaverses** 2024
 - Golam, Mohtasin and Ara Tuli, Esmot and Naufal Alief, Revin and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Access*, pp. 92774-92786.
- Machine Learning Explainability for Intrusion Detection in the Industrial Internet of Things** 2024
 - Ahakonye, Love Allen Chijioke and Nwakanma, Cosmas Ifeanyi and Lee, Jae Min and **Kim, Dong-Seong**, *IEEE Internet of Things Magazine*, pp. 68-74.
- Integration of Quantum Technologies into Metaverse: Applications, Potentials, and Challenges** 2024
 - Tuli, Esmot Ara and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Access*, pp. 29995-30019.
- Joint Partial Offloading and Resource Allocation for Parked Vehicle-Assisted Multi-Access Edge Computing** 2024
 - Pham, Xuan-Qui and Huynh-The, Thien and **Kim, Dong-Seong**, *IEEE Transactions on Emerging Topics in Computing*, pp. 918-923.
- Trees Bootstrap Aggregation for Detection and Characterization of IoT-SCADA Network Traffic** 2024
 - Ahakonye, Love Allen Chijioke and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Transactions on Industrial Informatics*, pp. 5217-5228.
- Bandit Learning-Based Distributed Computation in Fog Computing Networks: A Survey** 2023
 - Tran-Dang, Hoa and Kwon, Ki-Hyup and **Kim, Dong-Seong**, *IEEE Access*, pp. 104763-104774.
- Industrial Internet of Things-Based Fault Mitigation for Smart Additive Manufacturing Using Multi-Flow BiLSTM** 2023
 - Sampedro, Gabriel Avelino and Putra, Made Adi Paramartha and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Access*, pp. 99130-99142.
- Federated Learning Inspired Low-Complexity Intrusion Detection and Classification Technique for SDN-Based Industrial CPS** 2023

- Zainudin, Ahmad and Akter, Rubina and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Transactions on Network and Service Management*, pp. 2442-2459.

Data Prediction-Based Energy-Efficient Architecture for Industrial IoT **2023**

- Putra, Made Adi Paramartha and Hermawan, Ade Pitra and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Sensors Journal*, pp. 15856-15866.

FDPR: A Novel Fog Data Prediction and Recovery Using Efficient DL in IoT Networks **2023**

- Putra, Made Adi Paramartha and Hermawan, Ade Pitra and Nwakanma, Cosmas Ifeanyi and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Internet of Things Journal*, pp. 16895-16906.

Drone Transportation System: Systematic Review of Security Dynamics for Smart Mobility **2023**

- Ajakwe, Simeon Okechukwu and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Internet of Things Journal*, pp. 14462-14482.

Agnostic CH-DT Technique for SCADA Network High-Dimensional Data-Aware Intrusion Detection System **2023**

- Ahakonye, Love Allen Chijioke and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Internet of Things Journal*, pp. 10344-10356.

Falsification Detection System for IoV Using Randomized Search Optimization Ensemble Algorithm **2023**

- Anyanwu, Goodness Oluchi and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Transactions on Intelligent Transportation Systems*, pp. 4158-4172.

Efficient Convolutional Networks for Robust Automatic Modulation Classification in OFDM-Based Wireless Systems **2023**

- Huynh-The, Thien and Nguyen, Toan-Van and Pham, Quoc-Viet and da Costa, Daniel Benevides and Kwon, Gi-Hyeob and **Kim, Dong-Seong**, *IEEE Systems Journal*, pp. 964-975.

Optimization of RBF-SVM Kernel Using Grid Search Algorithm for DDoS Attack Detection in SDN-Based VANET **2023**

- Oluchi Anyanwu, Goodness and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Internet of Things Journal*, pp. 8477-8490.

An Efficient Hybrid-DNN for DDoS Detection and Classification in Software-Defined IIoT Networks **2023**

- Zainudin, Ahmad and Ahakonye, Love Allen Chijioke and Akter, Rubina and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Internet of Things Journal*, pp. 8491-8504.

Distributed Cloud Computing: Architecture, Enabling Technologies, and Open Challenges **2023**

- Pham, Xuan-Qui and Nguyen, Tien-Dung and Huynh-The, Thien and Huh, Eui-Nam and **Kim, Dong-Seong**, *IEEE Consumer Electronics Magazine*, pp. 98-106.

IoMT-Net: Blockchain-Integrated Unauthorized UAV Localization Using Lightweight Convolution Neural Network for Internet of Military Things **2023**

- Akter, Rubina and Golam, Mohtasin and Doan, Van-Sang and Lee, Jae-Min and **Kim, Dong-Seong**, *IEEE Internet of Things Journal*, pp. 6634-6651.

A Survey on Matching Theory for Distributed Computation Offloading in IoT-Fog-Cloud Systems **2022**

- Tran-Dang, Hoa and **Kim, Dong-Seong**, *IEEE Access*, pp. 118353-118369.

Partial Computation Offloading in Parked Vehicle-Assisted Multi-Access Edge Computing: A Game-Theoretic Approach **2022**

- Pham, Xuan-Qui and Huynh-The, Thien and Huh, Eui-Nam and **Kim, Dong-Seong**, *IEEE Transactions on Vehicular Technology*, pp. 10220-10225.

Key Wearable Device Technologies Parameters for Innovative Healthcare Delivery in B5G Network: A Review **2022**

- Ajakwe, Simeon Okechukwu and Nwakanma, Cosmas Ifeanyi and **Kim, Dong-Seong** and Lee, Jae-Min, *IEEE Access*, pp. 49956-49974.

RF-UAVNet: High-Performance Convolutional Network for RF-Based Drone Surveillance Systems **2022**

- Huynh-The, Thien and Pham, Quoc-Viet and Nguyen, Toan-Van and Costa, Daniel Benevides Da and **Kim, Dong-Seong**, *IEEE Access*, pp. 49696-49707.

RanNet: Learning Residual-Attention Structure in CNNs for Automatic Modulation Classification **2022**

- Huynh-The, Thien and Pham, Quoc-Viet and Nguyen, Toan-Van and Nguyen, Thanh Thi and Costa, Daniel Benevides da and **Kim, Dong-Seong**, *IEEE Wireless Communications Letters*, pp. 1243-1247.

- MIMO-OFDM Modulation Classification Using Three-Dimensional Convolutional Network** 2022
 – Huynh-The, Thien and Nguyen, Toan-Van and Pham, Quoc-Viet and da Costa, Daniel Benevides and Kim, Dong-Seong, *IEEE Transactions on Vehicular Technology*, pp. 6738-6743.
- MS-DLD: Multi-Sensors Based Daily Locomotion Detection via Kinematic-Static Energy and Body-Specific HMMs** 2022
 – Ghadi, Yazeed Yasin and Javeed, Madiha and Alarfaj, Mohammed and Shloul, Tamara Al and Alsuhibany, Suliman A. and Jalal, Ahmad and Kamal, Shaharyar and Kim, Dong-Seong, *IEEE Access*, pp. 23964-23979.
- Learning-Based Resource Management for Low-Power and Lossy IoT Networks** 2022
 – Musaddiq, Arslan and Ali, Rashid and Kim, Sung Won and Kim, Dong-Seong, *IEEE Internet of Things Journal*, pp. 16006-16016.
- Reconfigurable Physical Resource Block Using Novel – Beamforming Filter Circuit for LTE-Based Cell-Edge Terminals** 2022
 – Nwadiugwu, Williams-Paul and Kim, Dong-Seong, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, pp. 5131-5135.
- Basis Pursuit With Sparsity Averaging for Compressive Sampling of Iris Images** 2022
 – Rahim, Tariq and Magdalena, Rita and Pratama, I Putu Agus Eka and Novamizanti, Ledy and Ramatryana, I Nyoman Apraz and Shin, Soo Young and Kim, Dong Seong, *IEEE Access*, pp. 13728-13737.
- A Hybrid Deep Learning Model for Automatic Modulation Classification** 2022
 – Kim, Seung-Hwan and Moon, Chang-Bae and Kim, Jae-Woo and Kim, Dong-Seong, *IEEE Wireless Communications Letters*, pp. 313-317.
- Compressed Time-Frequency Channel Beamforming Using Empirical MIMO-UWB RFs for Indoor Jobshop** 2022
 – Nwadiugwu, Williams-Paul and Kim, Dong-Seong, *IEEE Sensors Journal*, pp. 5457-5469.
- A Long Short-Term Memory-Based Solar Irradiance Prediction Scheme Using Meteorological Data** 2022
 – Golam, Mohtasin and Akter, Rubina and Lee, Jae-Min and Kim, Dong-Seong, *IEEE Geoscience and Remote Sensing Letters*, pp. 1-5.
- Underwater Acoustic Target Classification Based on Dense Convolutional Neural Network** 2022
 – Doan, Van-Sang and Huynh-The, Thien and Kim, Dong-Seong, *IEEE Geoscience and Remote Sensing Letters*, pp. 1-5.
- The Physical Internet in the Era of Digital Transformation: Perspectives and Open Issues** 2021
 – Tran-Dang, Hoa and Kim, Dong-Seong, *IEEE Access*, pp. 164613-164631.
- An LSTM-Based Approach for Understanding Human Interactions Using Hybrid Feature Descriptors Over Depth Sensors** 2021
 – Waheed, Manahil and Jalal, Ahmad and Alarfaj, Mohammed and Ghadi, Yazeed Yasin and Shloul, Tamara Al and Kamal, Shaharyar and Kim, Dong-Seong, *IEEE Access*, pp. 167434-167446.
- Efficient Classification of Enciphered SCADA Network Traffic in Smart Factory Using Decision Tree Algorithm** 2021
 – Ahakonye, Love Allen Chijioke and Nwakanma, Cosmas Ifeanyi and Lee, Jae-Min and Kim, Dong-Seong, *IEEE Access*, pp. 154892-154901.
- Automatic Modulation Classification: A Deep Architecture Survey** 2021
 – Huynh-The, Thien and Pham, Quoc-Viet and Nguyen, Toan-Van and Nguyen, Thanh Thi and Ruby, Rukhsana and Zeng, Ming and Kim, Dong-Seong, *IEEE Access*, pp. 142950-142971.
- Precise-Point-Positioning Estimations for Recreational Drones Using Optimized Cubature-Extended Kalman Filtering** 2021
 – Nwadiugwu, Williams-Paul and Kim, Seung-Hwan and Kim, Dong-Seong, *IEEE Access*, pp. 134369-134383.
- RFDOA-Net: An Efficient ConvNet for RF-Based DOA Estimation in UAV Surveillance Systems** 2021
 – Akter, Rubina and Doan, Van-Sang and Huynh-The, Thien and Kim, Dong-Seong, *IEEE Transactions on Vehicular Technology*, pp. 12209-12214.
- Total Variant Based Average Sparsity Model With Reweighted Analysis for Compressive Sensing of Computed Tomography** 2021
 – Rahim, Tariq and Novamizanti, Ledy and Ramatryana, I Nyoman Apraz and Shin, Soo Young and Kim, Dong Seong, *IEEE Access*, pp. 119158-119170.

Accurate Deep CNN-Based Waveform Recognition for Intelligent Radar Systems	2021
– Huynh-The, Thien and Hua, Cam-Hao and Doan, Van-Sang and Pham, Quoc-Viet and Kim, Dong-Seong, <i>IEEE Communications Letters</i> , pp. 2938-2942.	
Deep Learning-Based Robust Automatic Modulation Classification for Cognitive Radio Networks	2021
– Kim, Seung-Hwan and Kim, Jae-Woo and Nwadiugwu, Williams-Paul and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 92386-92393.	
Accurate LPI Radar Waveform Recognition With CWD-TFA for Deep Convolutional Network	2021
– Huynh-The, Thien and Doan, Van-Sang and Hua, Cam-Hao and Pham, Quoc-Viet and Nguyen, Toan-Van and Kim, Dong-Seong, <i>IEEE Wireless Communications Letters</i> , pp. 1638-1642.	
Novel MIMO-UWB-Based AG-UG-AG Routing With Microbit Sensors for WUSN	2021
– Nwadiugwu, Williams-Paul and Kim, Dong-Seong, <i>IEEE Sensors Letters</i> , pp. 1-4.	
Physical Activity Recognition With Statistical-Deep Fusion Model Using Multiple Sensory Data for Smart Health	2021
– Huynh-The, Thien and Hua, Cam-Hao and Tu, Nguyen Anh and Kim, Dong-Seong, <i>IEEE Internet of Things Journal</i> , pp. 1533-1543.	
Sparsely Connected CNN for Efficient Automatic Modulation Recognition	2020
– Tunze, Godwin Brown and Huynh-The, Thien and Lee, Jae-Min and Kim, Dong-Seong, <i>IEEE Transactions on Vehicular Technology</i> , pp. 15557-15568.	
Lightweight Deep Learning Model for Automatic Modulation Classification in Cognitive Radio Networks	2020
– Kim, Seung-Hwan and Kim, Jae-Woo and Doan, Van-Sang and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 197532-197541.	
Toward the Internet of Things for Physical Internet: Perspectives and Challenges	2020
– Tran-Dang, Hoa and Krommenacker, Nicolas and Charpentier, Patrick and Kim, Dong-Seong, <i>IEEE Internet of Things Journal</i> , pp. 4711-4736.	
CNN-Based Automatic Modulation Classification for Beyond 5G Communications	2020
– Hermawan, Ade Pitra and Ginanjar, Rizki Rivai and Kim, Dong-Seong and Lee, Jae-Min, <i>IEEE Communications Letters</i> , pp. 1038-1041.	
MCNet: An Efficient CNN Architecture for Robust Automatic Modulation Classification	2020
– Huynh-The, Thien and Hua, Cam-Hao and Pham, Quoc-Viet and Kim, Dong-Seong, <i>IEEE Communications Letters</i> , pp. 811-815.	
Novel MA-VFBC Based Deployment of Obstacle-Avoiding Scattered Sensors for Region-of-Interest Incidence Monitoring	2020
– Nwadiugwu, Williams-Paul and Lee, Jae-Min and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 3065-3075.	
Ultrawideband Network Channel Models for Next-Generation Wireless Avionic System	2020
– Nwadiugwu, Williams-Paul and Kim, Dong-Seong, <i>IEEE Transactions on Aerospace and Electronic Systems</i> , pp. 113-129.	
Encoding Pose Features to Images With Data Augmentation for 3-D Action Recognition	2020
– Huynh-The, Thien and Hua, Cam-Hao and Kim, Dong-Seong, <i>IEEE Transactions on Industrial Informatics</i> , pp. 3100-3111.	
Long-Range Wireless Tethering Selfie Camera System Using Wireless Sensor Networks	2019
– Ngo, Trung-Thanh and Abdulkhakimov, Asatilla and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 108742-108749.	
Locally Statistical Dual-Mode Background Subtraction Approach	2019
– Huynh-The, Thien and Hua, Cam-Hao and Tu, Nguyen Anh and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 9769-9782.	
A Novel VANETs-Based Traffic Light Scheduling Scheme for Greener Planet and Safer Road Intersections	2019
– Ngo, Trung-Thanh and Huynh-The, Thien and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 22175-22185.	
An Information Framework for Internet of Things Services in Physical Internet	2018
– Tran-Dang, Hoa and Kim, Dong-Seong, <i>IEEE Access</i> , pp. 43967-43977.	

Selected IEEE Conference Publications

- Proof-of-Authority-and-Association Consensus Algorithm for IoT Blockchain Networks** 2025
– Kim, Dong-Seong, Igboanusi, Ikechi Saviour, Chijioke Ahakonye, Love Allen, Anyanwu, Goodness Oluchi, *ICCE*, pp. 1-6.
- PureNFT: A Blockchain-Based Ticketing System with Lightweight AI for Scalping Prevention** 2025
– Haryadi, Gifar Arif, Zainudin, Ahmad, Lee, Jae-Min, Kim, Dong-Seong, *ICCE*, pp. 1-6.
- Enhancing IIoT Security Using Hybrid CNN-BiLSTM Models with Blockchain Integration** 2025
– Mukisa, Kalibbala Jonathan, Chijioke Ahakonye, Love Allen, Kim, Dong-Seong, Lee, Jae Min, *ICAIIIC*, pp. 0459-0464.
- BLM-Chain: AI-Driven Blockchain for UAV Threat Resistance in IoBT** 2024
– Golam, Mohtasin, Alam, Md Mahinur, Kim, Dong-Seong, Lee, Jae-Min, *ICTC*, pp. 1609-1613.
- Innovative Blockchain-Enhanced Clinical Trial Management and Stakeholders Interoperability** 2024
– Nnadiokwe, Chigozie Athanasius, Igboanusi, Ikechi Saviour, Nwankwo, Odinachi Udemezuo, Kim, Dong-Seong, *ICTC*, pp. 1252-1257.
- A Blockchain-Based System for Efficient, Traceable, and Transparent Maritime Logistics** 2024
– Subhan, Md Raihan, Golam, Mohtasin, Rahaman, Md Facklasur, Alam, Md Mahinur, Kim, Dong-Seong, Jun, Taesoo, *ICTC*, pp. 1315-1319.
- IoT-Blockchain Frameworks in Environmental Pollution Monitoring and Data Management** 2024
– Ajakwe, Ihunanya Udodiri, Ajakwe, Simeon Okechukwu, Lee, Jae Min, Kim, Dong-Seong, *ICTC*, pp. 2147-2151.
- Blockchain Technology in Protein Folding: Enhancing Data Sharing and Collaboration** 2024
– Kanu, Victor Ikenna, Ajakwe, Simeon Okechukwu, Lee, Jae Min, Kim, Dong-Seong, *ICTC*, pp. 1913-1918.
- Lightweight Federated Learning and Blockchain System for Industrial IoT Big Data Security** 2024
– Amadi, Chimeremma Sandra, Ajakwe, Simeon Okechukwu, Igboanusi, Ikechi Saviour, Kim, Dong-Seong, Jun, Taesoo, *ICTC*, pp. 2009-2014.
- Blockchain-aided Collaborative Threat Detection for Securing Digital Twin-based IIoT Networks** 2024
– Zainudin, Ahmad, Paramartha Putra, Made Adi, Alief, Revin Naufal, Kim, Dong-Seong, Lee, Jae-Min, *ICC 2024 - IEEE International Conference on Communications*, pp. 4656-4661.
- Blockchain-based Federated Learning for Bearing Fault Detection in the Industrial Internet of Things** 2023
– Putra, Made Adi Paramartha, Zainudin, Ahmad, Alief, Revin Naufal, Sampedro, Gabriel Avelino, Kim, Dong-Seong, Lee, Jae-Min, *ICTC*, pp. 1069-1074.
- A Novel Deep Learning-Assisted Truck Driver Drowsiness Record using Blockchain Technology** 2023
– Nwankwo, Odinachi Udemezuo, Kim, Dong Seong, Lee, Jae-Min, *ICTC*, pp. 1082-1086.
- Blockchain-aided Decentralized Collaborative Automatic Modulation Classification for Next-Generation Wireless Networks** 2023
– Zainudin, Ahmad, Alief, Revin Naufal, Adi Paramartha Putra, Made, Akter, Rubina, Lee, Jae-Min, Kim, Dong-Seong, *ICTC*, pp. 1058-1063.
- Blockchain-Based Decentralized Trust Aggregation for Federated Cyber-Attacks Classification in SDN-Enabled Maritime Transportation Systems** 2023
– Zainudin, Ahmad, Alief, Revin Naufal, Putra, Made Adi Paramartha, Akter, Rubina, Kim, Dong-Seong, Lee, Jae-Min, *ICC Workshops*, pp. 182-187.
- BANDA: A Novel Blockchain-Assisted Network for Drone Authentication** 2023
– Ajakwe, Simeon Okechukwu, Saviour, Igboanusi Ikechi, Kim, Jung-Hyeon, Kim, Dong-Seong, Lee, Jae Min, *ICUFN*, pp. 120-125.
- FLB2: Layer 2 Blockchain Implementation Scheme on Federated Learning Technique** 2023
– Alief, Revin Naufal, Paramartha Putra, Made Adi, Gohil, Augustin, Lee, Jae-Min, Kim, Dong-Seong, *ICAIIIC*, pp. 846-850.
- Blockchain Inspired Intruder UAV Localization Using Lightweight CNN for Internet of Battlefield Things** 2022
– Golam, Mohtasin, Akter, Rubina, Naufal, Revin, Doan, Van-Sang, Lee, Jae-Min, Kim, Dong-Seong, *MILCOM*, pp. 342-349.

Lightweight Blockchain Assisted Unauthorized UAV Access Prevention in the Internet of Military Things	2022
– Golam, Mohtasin, Akter, Rubina, Tuli, Esmot Ara, Kim, Dong-Seong , Lee, Jae-Min, <i>ICTC</i> , pp. 890-894.	
Ethereum Based Storage Aware Mining for Permissioned Blockchain Network	2022
– Saviour Igboanusi, Ikechi, Allwinnaldo, Naufal Alief, Revin, Rasyid Redha Ansori, Muhammad, Lee, Jae-Min, Kim, Dong-Seong , <i>ICUFN</i> , pp. 161-166.	
A Survey on Low Latency Blockchain Architectures for Industrial Networks	2021
– Igboanusi, Ikechi Saviour, Lee, Jae-Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 664-668.	
A UAV-assisted Blockchain Based Secure Device-to-Device Communication in Internet of Military Things	2020
– Golam, Mohtasin, Lee, Jae-Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 1896-1898.	
Generative Adversarial Networks Based on Edge Computing With Blockchain Architecture for Security System	2020
– Dirgantoro, Kevin Putra, Lee, Jae Min, Kim, Dong-Seong , <i>ICAIC</i> , pp. 039-042.	
Federated Learning-Based Optimization for RIS-Enhanced 6G-V2X Communications	2024
– Bhardwaj, Sanjay, Kim, Dong-Seong , <i>ICTC</i> , pp. 1882-1887.	
Applying MOSA Approach to PXI-based ATS	2024
– Kwon, Young-June, Shin, Hee-Jae, Lee, Neul-Som, Lee, Min-Seon, Lee, Seung-Min, Jun, Tae-Soo, Kim, Dong-Seong , Lee, Jae-Min, Gwon, Hyeok-Jin, Choi, Kyung-Jin, Byeon, Hyeon-Gyu, <i>2024 IEEE AUTOTESTCON</i> , pp. 1-4.	
ASR-FED: Agnostic Straggler Resilient Federated Algorithm for Drone Networks Security	2024
– Ihekoronye, Vivian Ukamaka, Izuazu, Urslla Uchechi, Nwakanma, Cosmas Ifeanyi, Lee, Jae Min, Kim, Dong-Seong , <i>INFOCOM WKSHPS</i> , pp. 1-6.	
Toward Fast and Accurate Sensor Data Prediction Using iDC-MLP Algorithm for Industrial IoT	2024
– Putra, Made Adi Paramartha, Sampedro, Gabriel Avelino, Zainudin, Ahmad, Kim, Dong-Seong , Lee, Jae-Min, <i>ICC Workshops</i> , pp. 679-684.	
B-DT: A Bagged-Decision Tree Detection and Characterization of the IoT-SCADA Network Communication Traffic	2023
– Ahakonye, Love Allen Chijioke, Nwakanma, Cosmas Ifeanyi, Lee, Jae Min, Kim, Dong-Seong , <i>ICC Workshops</i> , pp. 506-511.	
Strategic Unmanned Aerial Vehicle (UAV) Routing: An Energy-Efficient Approach	2023
– Sampedro, Gabriel Avelino, Dañas, Franklin, Abisado, Mideth, Kim, Dong-Seong , Lee, Jae-Min, <i>INFOCOM WKSHPS</i> , pp. 1-5.	
CogNet: Cognitive Super Resolution Network for Persistent End-to-End Mobility Communication in MIMO Systems	2023
– Ajakwe, Simeon Okechukwu, Kim, Dong-Seong , Lee, Jae Min, <i>IconSCEPT</i> , pp. 1-4.	
Federated Learning-Enabled Digital Twin for Smart Additive Manufacturing Industry	2023
– Paramartha Putra, Made Adi, Rachmawati, Syifa Maliah, Alief, Revin Naufal, Chijioke Ahakonye, Love Allen, Gohil, Augustin, Kim, Dong-Seong , Lee, Jae-Min, <i>ICAIC</i> , pp. 806-811.	
BLM-DTO: Bandit Learning and Matching based Distributed Task Offloading in Fog Networks	2023
– Tran-Dang, Hoa, Kim, Dong-Seong , <i>ICEIC</i> , pp. 1-4.	
A Review on Matching-based Models for Distributed Computation Offloading in Fog-enabled IoT Systems	2023
– Tran-Dang, Hoa, Kim, Dong-Seong , <i>ICOIN</i> , pp. 758-763.	
Effective Industrial Internet of Things Vulnerability Detection Using Machine Learning	2022
– Nwakanma, Cosmas Ifeanyi, Ahakonye, Love Allen Chijioke, Njoku, Judith Nkechinyere, Eze, Joy, Kim, Dong-Seong , <i>ITED</i> , pp. 1-8.	
Hierarchical Intrusion Detection System for Secured Military Drone Network: A Perspicacious Approach	2022
– Ihekoronye, Vivian Ukamaka, Ajakwe, Simeon Okechukwu, Kim, Dong-Seong , Lee, Jae Min, <i>MILCOM</i> , pp. 336-341.	
Cyber Edge Intelligent Intrusion Detection Framework For UAV Network Based on Random Forest Algorithm	2022
– Ihekoronye, Vivian Ukamaka, Ajakwe, Simeon Okechukwu, Kim, Dong-Seong , Lee, Jae Min, <i>ICTC</i> , pp. 1242-1247.	
FedDDoS: An Efficient Federated Learning-based DDoS Attacks Classification in SDN-Enabled IIoT Networks	2022

- Zainudin, Ahmad, Akter, Rubina, **Kim, Dong-Seong**, Lee, Jae-Min, *ICTC*, pp. 1279-1283.
- “Creativia” Metaverse Platform for Exhibition Experience** 2022
 - Nwakanma, Cosmas Ifeanyi, Njoku, Judith Nkechinyere, Jo, Jae-Young, Lim, Chang-Hwan, **Kim, Dong-Seong**, *ICTC*, pp. 1789-1793.
- Octopus-Inspired Robot for Underwater Exploration in Military Internet of Battle Operations and Surveillance** 2022
 - Dini, Mohamed Abubakar, Ajakwe, Simeon Okechukwu, **Kim, Dong-Seong**, Lee, Jae Min, Jun, Taesoo, *ICTC*, pp. 1900-1904.
- Pure Voting (PV): An Offline Voting Algorithm** 2022
 - Igboanusi, Ikechi Saviour, Alief, Revin Naufal, Ansori, Muhammad Rasyid Redha, Allwinnaldo, Allwinnaldo, Lee, Jae-Min, **Kim, Dong-Seong**, *APCC*, pp. 586-587.
- Federated Learning-Based Computation Offloading for Low-Bandwidth Edge Internet of Things** 2022
 - Tuli, Esmot Ara, Lee, Jae Min, **Kim, Dong-Seong**, *APCC*, pp. 377-379.
- The Role of 5G Wireless Communication System in the Metaverse** 2022
 - Njoku, Judith Nkechinyere, Ifeanyi Nwakanma, Cosmas, **Kim, Dong-Seong**, *APCC*, pp. 290-294.
- Towards Lightweight Intrusion Identification in SDN-based Industrial Cyber-Physical Systems** 2022
 - Zainudin, Ahmad, Akter, Rubina, **Kim, Dong-Seong**, Lee, Jae-Min, *APCC*, pp. 610-614.
- Tractable Minacious Drones Aerial Recognition and Safe-Channel Neutralization Scheme for Mission Critical Operations** 2022
 - Okechukwu Ajakwe, Simeon, Ukamaka Ihekoronye, Vivian, **Kim, Dong-Seong**, Lee, Jae-Min, *ETFA*, pp. 1-8.
- RaComNet: High-Performance Deep Network for Waveform Recognition in Coexistence Radar-Communication Systems** 2022
 - Huynh-The, Thien, Pham, Quoc-Viet, Nguyen, Toan-Van, da Costa, Daniel Benevides, **Kim, Dong-Seong**, *ICC 2022 - IEEE International Conference on Communications*, pp. 1-6.
- An Explainable Multi-Task Learning Approach for RF-based UAV Surveillance Systems** 2022
 - Akter, Rubina, Doan, Van-Sang, Zainudin, Ahmad, **Kim, Dong-Seong**, *ICUFN*, pp. 145-149.
- Aerial Supervision of Drones and Other Flying Objects Using Convolutional Neural Networks** 2022
 - Ihekoronye, Vivian Ukamaka, Ajakwe, Simeon Okechukwu, **Kim, Dong-Seong**, Lee, Jae Min, *ICAIIIC*, pp. 069-074.
- Composite Multi-Directional LSTM for Accurate Prediction of Energy Consumption** 2022
 - Putra, Made Adi Paramartha, **Kim, Dong-Seong**, Lee, Jae-Min, *ICOIN*, pp. 266-269.
- Improved Partial Transmit Sequence Based PAPR Reduction of UPMC Systems** 2022
 - Tuli, Esmot Ara, Lee, Jae Min, **Kim, Dong-Seong**, *ICOIN*, pp. 391-395.
- Adaptive Drone Identification and Neutralization Scheme for Real-Time Military Tactical Operations** 2022
 - Ajakwe, Simeon Okechukwu, Ihekoronye, Vivian Ukamaka, Akter, Rubina, **Kim, Dong-Seong**, Lee, Jae Min, *ICOIN*, pp. 380-384.
- Densely-Accumulated Convolutional Network for Accurate LPI Radar Waveform Recognition** 2021
 - Huynh-The, Thien, Pham, Quoc-Viet, Nguyen, Toan-Van, Doan, Van-Sang, Nguyen, Nhan Thanh, da Costa, Daniel Benevides, **Kim, Dong-Seong**, *GLOBECOM*, pp. 1-6.
- DB-BiLSTM: Euclidean Distance-Based Sensor Data Prediction for IoT Applications** 2021
 - Putra, Made Adi Paramartha, **Kim, Dong-Seong**, Lee, Jae-Min, *ICTC*, pp. 814-817.
- Performance Enhancement of UPMC Systems using Kaiser Window Filter** 2021
 - Tuli, Esmot Ara, **Kim, Dong-Seong**, Lee, Jae Min, *ICTC*, pp. 386-388.
- Deep Learning-based Automatic Modulation Classification for Wireless OFDM Communications** 2021
 - Huynh-The, Thien, Pham, Quoc-Viet, Nguyen, Toan-Van, Pham, Xuan-Qui, **Kim, Dong-Seong**, *ICTC*, pp. 47-49.
- Real-Time Position Falsification Attack Detection System for Internet of Vehicles** 2021
 - Anyanwu, Goodness Oluchi, Nwakanma, Cosmas Ifeanyi, Lee, Jae-Min, **Kim, Dong-Seong**, *ETFA*, pp. 1-4.

Enhancing IEEE 802.15.4 Access Mechanism with Machine Learning	2021
– Musaddiq, Arslan, Rahim, Tariq, Kim, Dong-Seong , <i>ICUFN</i> , pp. 210-212.	
Task Priority-based Resource Allocation Algorithm for Task Offloading in Fog-enabled IoT Systems	2021
– Tran-Dang, Hoa, Kim, Dong-Seong , <i>ICOIN</i> , pp. 674-679.	
Analysis and Prediction of Hourly Energy Consumption Based on Long Short-Term Memory Neural Network	2021
– Akter, Rubina, Lee, Jae-Min, Kim, Dong-Seong , <i>ICOIN</i> , pp. 732-734.	
Multimedia Contents Retrieval based on 12-Mood Vector	2021
– Moon, Chang Bae, Lee, Jong Yeol, Kim, Dong-Seong , Kim, Byeong Man, <i>ICOIN</i> , pp. 842-844.	
Intelligent Face Recognition on the Edge Computing using Neuromorphic Technology	2021
– Kim, Jae-Woo, Nwakanma, Cosmas Ifeanyi, Kim, Dong-Seong , Lee, Jae-Min, <i>ICOIN</i> , pp. 514-516.	
Chain-Net: Learning Deep Model for Modulation Classification Under Synthetic Channel Impairment	2020
– Huynh-The, Thien, Doan, Van-Sang, Hua, Cam-Hao, Pham, Quoc-Viet, Kim, Dong-Seong , <i>GLOBECOM 2020 - 2020 IEEE Global Communications Conference</i> , pp. 1-6.	
Deep Learning for Constellation-based Modulation Classification under Multipath Fading Channels	2020
– Huynh-The, Thien, Hua, Cam-Hao, Doan, Van-Sang, Pham, Quoc-Viet, Nguyen, Toan-Van, Kim, Dong-Seong , <i>ICTC</i> , pp. 300-304.	
IoT-Based HVAC Monitoring System for Smart Factory	2020
– Islam, Fabliha Bushra, Ifeanyi Nwakanma, Cosmas, Kim, Dong-Seong , Lee, Jae-Min, <i>ICTC</i> , pp. 701-704.	
Edge Computing-Based Anomaly Detection for Multi-Source Monitoring in Industrial Wireless Sensor Networks	2020
– Anantha, Alifia Putri, Tobianto Daely, Philip, Lee, Jae Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 1890-1892.	
Exploiting a low-cost CNN with skip connection for robust automatic modulation classification	2020
– Huynh-The, Thien, Hua, Cam-Hao, Kim, Jae-Woo, Kim, Seung-Hwan, Kim, Dong-Seong , <i>WCNC</i> , pp. 1-6.	
Communication Handover for Multi-Dimensional UAVs in ROI using MIMO-Ultrawideband	2020
– Nwadiugwu, Williams-Paul, Williams, Esther, Lee, Jae-Min, Kim, Dong-Seong , <i>ICAIIIC</i> , pp. 47-50.	
UAV-assisted Real-time Data Processing using Deep Q-Network for Industrial Internet of Things	2020
– Krisna Astuti Sakir, Riesa, Rusyadi Ramli, Muhammad, Lee, Jae-Min, Kim, Dong-Seong , <i>ICAIIIC</i> , pp. 208-211.	
Learning Geometric Features with Dual-stream CNN for 3D Action Recognition	2020
– Huynh-The, Thien, Hua, Cam-Hao, Tu, Nguyen Anh, Kim, Dong-Seong , <i>ICASSP</i> , pp. 2353-2357.	
3D Action Recognition Exploiting Hierarchical Deep Feature Fusion Model	2020
– Huynh-The, Thien, Hua, Cam-Hao, Tu, Nguyen Anh, Kim, Jae-Woo, Kim, Seung-Hwan, Kim, Dong-Seong , <i>IMCOM</i> , pp. 1-3.	
VLC-UWB Hybrid (VUH) Network for Indoor Industrial Robots at Military Warehouses / Distribution Centers	2019
– Igboanusi, Ikechi Saviour, Nwakanma, Cosmas Ifeanyi, Lee, Jae Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 762-766.	
Achieving Reliable URLLC-based Network in Industrial and Military Embedded Systems	2019
– Nwadiugwu, Williams-Paul, Nwakanma, Cosmas Ifeanyi, Lee, Jae-Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 642-645.	
Fog Radio Access Networks in Internet of Battlefield Things (IoBT) and Load Balancing Technology	2019
– Hossain, Md. Sajjad, Ramli, Muhammad Rusyadi, Lee, Jae Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 750-754.	
Pose-Based Identification Using Deep Learning for Military Surveillance Systems	2019
– Aouto, Ali, Huynh-The, Thien, Lee, Jae-Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 626-629.	
Energy-aware Routing Scheme for Large-scale Industrial Internet of Things (IIoT)	2019
– Gabriel, Amaizu, Nwadiugwu, Williams-Paul, Lee, Jae-Min, Kim, Dong-Seong , <i>ICTC</i> , pp. 608-611.	
Identification Method of Military Mobile Device Using for C3I	2019
– Kwon, Gi Hyeob, Moon, Chang Bae, Lee, Jae Min, Kim, Dong Seong, <i>ICTC</i> , pp. 767-769.	
Secure Ground Control Station-based Routing Protocol for UAV Networks	2019

- Agron, Danielle Jaye Segui, Ramli, Muhammad Rusyadi, Lee, Jae-Min, **Kim, Dong-Seong**, *ICTC*, pp. 794-798.
- Bio-inspired Service Provisioning Scheme for Fog-based Industrial Internet of Things** 2019
 - Ramli, Muhammad Rusyadi, Daely, Philip Tobianto, Lee, Jae-Min, **Kim, Dong-Seong**, *ETFA*, pp. 1661-1664.
- Performance analysis of Cooperative Schemes for Wireless Sensor Network of Aircraft** 2019
 - Kim, Seung-Hwan, Kim, Jae-Woo, **Kim, Dong-Seong**, *ICUFN*, pp. 642-645.
- Implement of 100-Gbps optical transceiver firmware for optical communication systems** 2019
 - Kim, Jae-Woo, Kim, Seung-Hwan, **Kim, Dong-Seong**, *ICUFN*, pp. 581-583.
- On exploiting wireless sensor networks for enhancing the logistics operation efficiency in the Physical Internet** 2018
 - Dang Hoa, Tran, **Kim, Dong-Seong**, *SigTelCom*, pp. 236-240.
- Enhanced SDP-dynamic bloom filters for a DDS node discovery in real-time distributed systems** 2017
 - Nwadiugwu, Williams Paul, Cha, Joong-Hyuck, **Kim, Dong-Seong**, *ETFA*, pp. 1-4.
- Efficient cooperative relaying selection scheme based on TDMA for military tactical multi-hop wireless networks** 2015
 - Nguyen Bach Long, **Kim, Dong-Seong**, *MILCOM 2015 - 2015 IEEE Military Communications Conference*, pp. 1679-1684.
- Accumulative-Load Aware Routing in Software-Defined Networks** 2015
 - Nguyen, Trong-Tien, **Kim, Dong-Seong**, *INDIN*, pp. 516-520.
- Joint channel and power allocation for underwater cognitive acoustic networks** 2014
 - Le, Anh-Minh, **Kim, Dong-Seong**, *ATC 2014*, pp. 745-749.
- Exploiting real-time switched ethernet for enhanced network recovery scheme in naval combat system** 2014
 - Wei, Yang, **Kim, Dong-Seong**, *ICTC*, pp. 595-600.
- A Real-time data distribution scheme of MOMAT for the naval combat system** 2013
 - Bakir, Maksumov, Nugroho, Dwi Agung, Yang Wei, **Kim, Dong-Seong**, *ICTC*, pp. 268-273.
- Dynamic rate adaptation for industrial WLAN** 2013
 - Nugroho, Dwi Agung, Khaefi, Muhammad Rizal, **Kim, Dong-Seong**, *ICTC*, pp. 575-580.
- A self-stabilized firefly synchronization method for the ISA100.11a network** 2013
 - Yang Wei, **Kim, Dong-Seong**, *ICTC*, pp. 881-886.
- Discovery protocol for data distribution service in naval warships using extended counting bloom filters** 2013
 - Putra, Handityo Aulia, Nugroho, Dwi Agung, **Kim, Dong-Seong**, Choi, Yoon-Suk, *ETFA*, pp. 1-8.
- Distributed cooperative transmission for underwater acoustic sensor networks** 2013
 - Do Duy Tan, Tung Thanh Le, **Kim, Dong-Seong**, *WCNCW*, pp. 205-210.
- Message scheduling approach on dedicated time slot of ISA100.11a** 2012
 - Dewanta, Favian, Rezha, Fadillah Purnama, Kim, Dong-Sung, *ICTC*, pp. 466-471.
- Joining method of mobile nodes using hysteresis features in personal area networks** 2011
 - Lee, Jae-Hyung, Kim, Dong-Sung, *CCNC*, pp. 810-811.
- An Efficient Network Configuration Method of Mobile Nodes on Energy-Balanced Sensor Networks** 2010
 - Lee, Jae-Hyung, Lee, Eung-Soo, Kim, Dong-Sung, *2010 IEEE/ACM Int'l Conference on Green Computing and Communications & Int'l Conference on Cyber, Physical and Social Computing*, pp. 380-385.
- A Survey and Analysis of Wireless Fieldbus for Industrial Environments** 2006
 - Matkurbanov, Pulat, Lee, Seungki, Kim, Dong-sung, *2006 SICE-ICASE International Joint Conference*, pp. 5555-5561.

Fault Recovery Technique for Relay UAV-Based Mesh Network in Battlefield Environments	2025
– Inventors: Lee, Jae-Min; Kim, Dong-Seong; Kim, Si-Wan; Jang, Min-Hui Filing Date: February 3, 2021 Patent Number: 10-2789610, Registered: March 27, 2025	
Dragonfly-Based Swarm System Model for Node Identification and Low-Latency Communication in URLLC	2024
– Inventors: Lee, Jae-Min; Kim, Dong-Seong; Sanjay; Lee, Jae-Hyun Filing Date: June 17, 2021 Patent Number: 10-2721507, Registered: October 21, 2024	
Hardware Prototype Manufacturing Platform and Operation Method Using Internet Environment	2024
– Inventors: Kim, Dong-Seong; Kim, Jae-Woo; Lee, Jae-Min; Kim, Seung-Hwan; Ryu, Won-Jae Filing Date: July 29, 2021 Patent Number: 10-2732977, Registered: November 18, 2024	
Edge Computing Platform Based on Data Distribution Service in Industrial IoT Environments	2025
– Inventors: Kim, Dong-Seong; Lee, Jae-Min; Cha, Jung-Hyuk Filing Date: August 6, 2021 Patent Number: 10-2803854, Registered: April 29, 2025	
Data Distribution Service for Heterogeneous Sensor Networks Using UAVs	2024
– Inventors: Lee, Jae-Min; Kim, Dong-Seong; Kim, Hyung-Jin Filing Date: January 28, 2022 Patent Number: 10-2736500, Registered: November 26, 2024	
Dual Fieldbus-Based Industrial IoT Network Using Edge Server Architecture	2025
– Inventors: Kim, Dong-Seong; Lee, Jae-Min; Kevin Putra Dirgantoro; Cha, Jung-Hyuk Filing Date: April 7, 2022 Patent Number: 10-2777684, Registered: March 4, 2025	
Automated Mining Technique for Blockchain Wireless Communication Networks	2024
– Inventors: Kim, Dong-Seong; Lee, Jae-Min; Saviour Filing Date: April 29, 2022 Patent Number: 10-2740994, Registered: December 5, 2024	
Deep Learning-Based Automatic Modulation Classification Technique	2024
– Inventors: Kim, Dong-Seong; Kim, Seung-Hwan; Moon, Chang-Bae; Kim, Jae-Woo; Kwon, Gi-Hyup Filing Date: June 17, 2022 Patent Number: 10-2670053, Registered: May 23, 2024	
Composite DNN-Based DDoS Attack Detection Technique in B5G Network Environments	2025
– Inventors: Kim, Dong-Seong; Lee, Jae-Min; Gabriel Amaizu; Cha, Jung-Hyuk Filing Date: December 2, 2022 Patent Number: 10-2777643, Registered: March 4, 2025	
Hash-Based Music Plagiarism Detection System for Copyright Protection	2025
– Inventors: Kim, Dong-Seong; Lee, Jae-Min; Rashid Filing Date: June 19, 2023 Patent Number: 10-2753194, Registered: January 7, 2025	
Proof-of-Authority Method for High-Reliability Blockchain Networks	2024
– Inventors: Kim, Dong-Seong Filing Date: July 17, 2024 Application Number: PCT/KR2024/010241	
Blockchain-Based Organ Matching System	2025
– Inventors: Kim, Dong-Seong Filing Date: July 10, 2025 Application Number: PCT/KR2025/010088	

Honors and Awards

Grand Prize of Haedong Excellent Paper Award	2024
– Awarded for “Blockchain-based Novel Collaborative Threat Detection in Industrial Cyber-Physical Systems.” (KICS 2024)	
Best Paper Award	2024
– Awarded for “Federated Learning-Based Joint Radar-Communication mmWave Beamtracking for V2X Communications.” (KICS 2025)	
Outstanding Paper Award	2024
– Awarded for “Short-Packet Based Power Allocation Using Quantum Neural Network in Downlink NOMA Systems for Military Communication.” (International Conference on M3 IT Convergence 2024)	
Best Workshop Paper Award	2024
– Awarded for “Impact of Adaptive Client Selection on Federated Learning for IoMT Ecosystem.” (ICTC 2024)	
Best Paper Award	2024
– Awarded for “DefectGen: Few-Shot Defect Image Generation Using Stable Diffusion for Steel Surface Analysis.”	
Best Paper Award	2024
– Awarded for “Real-time Object Detection on a Custom Built Edge Device Using Tensorflow Lite.”	
Excellence Award in Academic Development and Quality Research Results	2022
– Awarded by the Ministry of Education Academic Research Support Project.	
Best Research Award	2023
– Awarded for “Minister of Science and Technology Award for Excellent Research” at ITRC Workshop.	
Best Research Award	2021
– Awarded for Industry-Academia Cooperation Category from Kumoh Institute of Technology.	
Grand Best Journal Paper Award	2019
– Awarded by the Korea Institute of Military Science and Technology for “Design and Performance Analysis of Asymmetric Multi-Access Techniques for Response Time and Throughput Improvement of Tactical Wireless Network.”	
Best Paper Award	2017
– Awarded at the 6th International Conference on Advances in Computing, Control and Networking (ACCN2017) for “Comparative Study of Wireless Network Technology for Avionic Sensor-Actuator Networks.”	
Best Paper Award	2015
– Awarded at CEIC 2015: 17th Electronic Information and Communication Conference / IEEE Daejeon Section.	
Best Paper Award	2015
– Awarded at the 2015 International Conference on Information Technology and Engineering Application.	
Contribution Award	2015
– Awarded by Gumi City Hall, South Korea.	
Best Paper Award	2013
– Awarded at the Fall Conference of the Korea Institute of Signal Processing and Systems (KISPS).	
Best Paper Award	2012
– Awarded at the 14th Conference on Electronics & Information Communications.	
Best Paper Award	2012
– Awarded at the 14th Electronic Information and Communication Conference (CEIC2012).	
Best Paper Award	2011
– Awarded at the 14th Electronic Information and Communication Conference (CEIC2011) for “CAN bus Message scheduling method for Distributed control system for intelligent ship system.”	
Best Paper Award	2004

– Awarded at the 30th Annual Conference of IEEE Industrial Electronics Society (IECON2004) for “Design and Implementation of Home Network Systems using Power Line Communication.”	
Personal Contribution Award	2011
– Awarded for outstanding record of citations from IJCAS.	
Lifetime Achievement Award	2018
– Awarded the 2018 Albert Nelson Marquis Lifetime Achievement Award.	
Best ITRC Center Award	2018
– Awarded by the Ministry of Science and ICT (Director Prof. Dong Seong Kim).	
Best Industry-Academic Cooperation Evaluation	2018
– Awarded by the Ministry of Science and ICT.	
Excellence Award	2016
– Awarded for outstanding paper in the study competition from the Korean Society of Communication.	
Excellence Award	2016
– Awarded in Promotion Evaluation Division from the Director of the Information and Communication Technology Promotion Center.	
Best Paper Award	2016
– Awarded from the 14th Embedded Software Competition, Samsung Electronics CEO Awards.	
Best ITRC Center Award	2016
– Awarded by IITP/Ministry of Science, ICT and Future Planning.	
IEEE Senior Member Elevation	2016
– Elevated to IEEE Senior Member and Lead Guest Editor of Special Issues in IJDSN.	
Contribution Award	2015
– Awarded for Military ICT Convergence Area by Governor of Kyungbuk.	
Grand Research Award	2013
– Awarded at Kumoh National Institute of Technology.	
Excellence Award	2009
– Awarded from Kumoh National Institute of Technology.	
Young Professor Fellowship	2007
– Awarded by the Korea Research Foundation.	
Abroad Postdoctoral Fellowship	2003
– Awarded by the Korea Science and Engineering Foundation.	

Keynote Speeches & Invited Talks

Key Note Speaker “Industrial Blockchain Application: Pure Chain and Pure Edge”	August 5, 2025
– IES Symposium 2025, Surabaya, Indonesia.	
Special Talks for “Prospect and Analysis for Military ICT Convergence”	December 14, 2023
– Kangwon National University.	
Special Talks for “Prospect and Analysis for Military ICT Convergence”	December 14, 2023
– Kangwon National University.	
Special Talks for “Web3.0, Blockchain and Generative AI for Defense ICT Convergence”	November 14, 2023
– The Naval Academy (Navy AI Days).	
Chair of Forum for “Future Insight of Military ICT”	November 9, 2023
– IITP R&D Week (Defense ICT Division).	
Special Talks for “Web3.0 and Blockchain for Defense & AI Technology”	October 31, 2023

– Navy Logistics Command and Naval Ship Technology Laboratory.	
Special Talks for “Analysis and Direction for the Development of Defense ICT”	September 2023
– Defense Informationization Conference.	
Special Talks for “Pure Chain and Its Applications”	June 2023
– YouTube Broadcasting.	
Special Talks for “Meta Bus and NFT for Industrial Application”	2023
– Mobile Communications Society.	
Special Talks for “Blockchain and Meta Bus for Industry”	2022
– ETRI and Korea Communications Society Daejeon Branch.	
Special Talks for “Surviving from Lab to Startup”	February 2022
– Startup Special Session, KICS Winter.	
Special Talks for “IoT Technology for Military Logistics”	2019
– Defense Technology Quality Research Institute.	
Special Talks for “Defense and Logistics IoT Technology”	February 2019
– Jinhae Naval Logistics Command, Naval Ship Technology Research Institute.	
Special Talks for “IoT Technology in Military Logistics and Total Lifecycle Management”	2019
– Productivity Center.	
Special Talks for “Sustainable Operation Combat Development for the 4th Industrial Revolution and Military Power Generation”	2018
– DX Korea 2018.	
Special Talks for “M-IoT Technology and Its Application”	2018
– Invited by University of Ulsan.	
Special Talks for “Industrial IoT and Its Applications”	2018
– ETRI Seminar.	
Special Talks for “Industrial IoT and Application”	2017
– Jumbuk Steel CEO Seminar.	
Special Talks for “Defense and 4th Industrial Innovation”	2017
– Defense ICT Equipment Exhibition.	
Special Talks for “Military IoT Technology and Trends”	2017
– Invited by Andong University.	
Special Talks for “IoT Technology with Future Life”	2016
– Invited by Chungshim International High School.	
Special Talks for “Military IoT Technology”	2016
– Invited by POSTEC, Pohang University of Science and Technology.	
Special Talks for “Avionic Networks and Application”	2015
– Invited by ETRI.	

Recent Grants & Funding

- **Grand ICT Research Center (Civil-Military Convergence)**
Program: Information and Communication Broadcasting Innovative Talent Development Project
Funding Agency: Institute of Information & Communications Technology Planning & Evaluation (IITP) / Ministry of Science and ICT (MSIT)
Period: Jul 2020 – Dec 2027
- **ICT Convergence Specialized Research Center**
Program: University Convergence Research Center Support Project
Funding Agency: National Research Foundation of Korea (NRF) / Ministry of Education (MOE)
Period: Jun 2018 – Feb 2027
- **DDS-based High-Reliability and Real-Time Platform Technology for Large-Scale Distributed Networks of Industrial IoT**
Program: Regional University Distinguished Scientist Program
Funding Agency: National Research Foundation of Korea (NRF) / Ministry of Education (MOE)
Period: Jun 2022 – May 2025