

# Sungrae Cho

PROFESSOR, SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

CHUNG-ANG UNIVERSITY

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<https://sites.google.com/uclab.re.kr/srcho>

*“Make the better life that you want to observe.”*

## Research Interest

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Wireless Network, Mobile Computing, Internet of Things, 5G/6G Wireless Communication Systems, Fog Computing, Block Chain, Artificial Intelligence, Demand and Response for Smart Grid Network, Cognitive Radio Network, Quantum Computing, Nano Networks, Military Networks, Wireless Body Area Network, Wireless Mesh Network, Satellite Networks, Wireless Sensor Network, Machine Learning, and Artificial Intelligence.

## Brief Bio

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Sungrae Cho is a professor with the school of computer sciences and engineering, Chung-Ang University (CAU), Seoul. Prior to joining CAU, he was an assistant professor with the department of computer sciences, Georgia Southern University, Statesboro, GA, USA, from 2003 to 2006, and a senior member of technical staff with the Samsung Advanced Institute of Technology (SAIT), Kiheung, South Korea, in 2003. From 1994 to 1996, he was a research staff member with electronics and telecommunications research institute (ETRI), Daejeon, South Korea. From 2012 to 2013, he held a visiting professorship with the national institute of standards and technology (NIST), Gaithersburg, MD, USA. He received the B.S. and M.S. degrees in electronics engineering from Korea University, Seoul, South Korea, in 1992 and 1994, respectively, and the Ph.D. degree in electrical and computer engineering from the Georgia Institute of Technology, Atlanta, GA, USA, in 2002.

His current research interests include wireless networking, ubiquitous computing, and ICT convergence. He has been a subject editor of IET Electronics Letter since 2018, and was an area editor of Ad Hoc Networks Journal (Elsevier) from 2012 to 2017. He has served numerous international conferences as an organizing committee chair, such as IEEE SECON, ICOIN, ICTC, ICUFN, TridentCom, and the IEEE MASS, and as a program committee member, such as IEEE ICC, GLOBECOM, VTC, MobiApps, SENSORNETS, and WINSYS.

## Education

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### Georgia Institute of Technology

Atlanta, GA, USA

PH.D. IN ELECTRICAL AND COMPUTER ENGINEERING

Jan. 1998 - Dec. 2002

- Thesis: Resource Allocation and Error Control Protocols for Real-Time Communications in Satellite Networks  
Advisor: Prof. Ian F. Akyildiz

### Korea University

Seoul, South Korea

M.S. IN ELECTRONICS ENGINEERING

Mar. 1992 - Feb. 1994

- Thesis: Performance Analysis of Service Switching Point for Advanced Intelligent Network  
Advisor: *Emeritus* Professor Dukjin Kim

### Korea University

Seoul, South Korea

B.S. IN ELECTRONICS AND COMPUTER ENGINEERING

Mar. 1988 - Feb. 1992

## Employment

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<b>Chung-Ang University</b> DEAN, COLLEGE OF SOFTWARE	<i>Seoul, South Korea</i> Feb. 2020 -- Feb. 2022
<b>Chung-Ang University</b> FULL PROFESSOR, SCHOOL OF COMPUTER SCIENCE AND ENGINEERING	<i>Seoul, South Korea</i> Sep. 2012 -- Present
<b>Chung-Ang University</b> DIRECTOR, 5G/6G COMMUNICATION NETWORK RESEARCH CENTER	<i>Seoul, South Korea</i> Jul. 2022 -- Present
<b>Chung-Ang University</b> LEADER, CAU INSTITUTE FOR INNOVATIVE TALENT OF BIG DATA (CITB)	<i>Seoul, South Korea</i> Sep. 2020 -- Present
<b>Chung-Ang University</b> HEAD OF RESEARCH INSTITUTE, CYBER-PHYSICAL SYSTEM LABORATORY	<i>Seoul, South Korea</i> Sep. 2020 -- Present
<b>Chung-Ang University</b> SCHOOL HEAD, SCHOOL OF COMPUTER SCIENCE AND ENGINEERING	<i>Seoul, South Korea</i> Sep. 2013 -- Jul. 2015
<b>National Institute of Standards and Technology (NIST)</b> GUEST RESEARCHER	<i>Gaithersburg, MD, USA</i> Jul. 2012 -- Jun. 2013
<b>Chung-Ang University</b> ASSOCIATE PROFESSOR, SCHOOL OF COMPUTER SCIENCE AND ENGINEERING	<i>Seoul, South Korea</i> Sep. 2006 -- Aug. 2012
<b>Georgia Southern University</b> ASSISTANT PROFESSOR, DEPT. OF COMPUTER SCIENCE	<i>Statesboro, GA, USA</i> Aug. 2003 -- Jul. 2006
<b>Korea Electronics Technology Institute (KETI)</b> VISITING SCIENTIST	<i>Seongnam, South Korea</i> Jun. 2005 -- Jul. 2005
<b>Samsung Advanced Institute of Technology (SAIT)</b> PRINCIPAL RESEARCHER	<i>Giheung, South Korea</i> Jan. 2003 -- Jul. 2003
<b>Georgia Institute of Technology</b> GRADUATE RESEARCH ASSISTANT	<i>Atlanta, GA, USA</i> Jan. 1998 -- Dec. 2002
<b>Electronics and Telecommunications Research Institute (ETRI)</b> MEMBER OF RESEARCH STAFF	<i>Daejeon, South Korea</i> Feb. 1994-Aug. 1996

## Teaching Experience

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### Instructor for

- Wireless and Mobile Communications (undergraduate), CAU Spring 2022, 2021, 2019, 2018, 2017, 2016, 2015, 2014, 2012, 2011, Fall 2010, 2009, 2008, 2007.
- Computer Programming Design (undergraduate), CAU Spring 2012, 2011, 2010, 2009, 2008, 2007.
- Logic Circuits (undergraduate), CAU Fall 2021, 2020, 2018, 2017, 2016, 2015, 2014, 2013, 2011, 2010, 2009, 2008, 2007, 2006.
- Home Networks and Systems (graduate), CAU Fall 2011.
- Advanced Computer Network (graduate), CAU Spring 2021, 2018, 2015, 2011, Fall 2013.

- Advanced Operating Systems (graduate), CAU Spring 2019, 2017.
- Special Topics on Computer Engineering (graduate), CAU Fall 2016, Spring 2014.
- Advanced Algorithm (graduate), CAU Spring 2020, Fall 2018, 2017.
- Cloud Computing (graduate), CAU Fall 2015.
- Graph Theory (graduate), CAU Fall 2014.
- Digital Communications (graduate), CAU Fall 2010
- Queueing Theory and Applications (graduate), CAU Fall 2020, Spring 2016, 2012, 2010, 2008.
- Ubiquitous Computing (graduate), CAU Fall 2008, 2007.
- Probability and Statistics (undergraduate), CAU Fall 2006.
- Programming Principles I (undergraduate), GSU Spring 2006, 2005, 2004.
- Logic Circuits and Microprocessors (undergraduate), GSU Spring 2006.
- Data Communication and Networking (undergraduate), GSU Spring 2006, 2005, 2004.
- Data Structures (undergraduate), GSU Fall 2005, 2004.
- Wireless Networks (graduate), GSU Spring 2006, 2004.
- Ad Hoc Networking (graduate), GSU Spring 2005.
- Research Projects in CSC (graduate), GSU Fall 2004.
- Broadband Technology (graduate), GSU Fall 2003.

#### Student Advising

- Kalyani Kanuri, M.S. July 2005. (Boston Bank, USA)
- Wonsuk Choi, M.S. February 2009. (Telecommunications Technology Association (TTA), South Korea)
- Dong Dong, M.S. February 2010. (China National Petroleum Co., China)
- Prof. Laihyuk Park, Ph.D. August 2017. (Assistant Professor, Computer Science and Engineering, Seoul National University of Science and Technology, South Korea)
- Prof. Gunwoo Lee, M.S. February 2012. (Senior Member of Researcher, Korea Institute of Science and Technology Information, South Korea)
- Prof. Woongsoo Na, Ph.D. February 2017. (Assistant Professor, Kongju National University, South Korea)
- Jeongsuk Yu, M.S. February 2014. (Inno Wireless Inc., South Korea)
- Hyungchul Bae, M.S. February 2014. (Hyundai Mobis Co., South Korea)
- Taejin Kim, M.S. August 2014. (IB Leaders Co., South Korea)
- Juho Lee, M.S. February 2015. (Hyundai Mobis Co., South Korea)
- Zeynep Vatandas, M.S. February 2015. (Research Associate, Hamburg Technology University, Germany)
- Joohyub Baek, B.S. August 2015. (LG Electronics, South Korea)
- Jongha Yoon, M.S. February 2016. (Hanwha Systems, South Korea)
- Junho Park, M.S. February 2016. (Inno Wireless Inc., South Korea)
- Nhu-Ngoc Dao, Ph.D. August 2019. (Assistant Professor, Sejong University, South Korea)

- Jae Hyeon Eom, M.S. February 2016. (Inno Wireless Inc., South Korea)
- Seon Min Jang, M.S. February 2016. (Samsung Electronics, South Korea)
- Kyoungjun Park, B.S. February 2017. (KAIST, South Korea)
- Yonghun Kim, M.S. February 2018. (Major, Republic of Korea Army, South Korea)
- Junwook Lee, M.S. February 2018. (Captin, Republic of Korea Army, South Korea)
- Yeonseok Kim, B.S. February 2018. (Qualcomm, Korea, South Korea)
- Duc-Nghia Vu, M.S. August 2018. (Inno Wireless Inc., South Korea)
- Seohyeon Jeong, M.S. February 2019. (Telecommunications Technology Association (TTA), South Korea)
- Cheol Lee, M.S. February 2020. (NAVER, South Korea)
- Namkyu Kim, M.S. February 2021. (KT R&D Center, South Korea)
- Gunhee Jang, M.S. February 2021. (Inno Wireless Inc., South Korea)
- Jeonghwa Lee M. S. August 2022. (Hyundai Heavy Industry, South Korea)
- Thanh-Phung Truong, M. S. February 2022. (in Vietnam)
- Yunseong Lee, Ph.D. expected February 2025.
- Umar Sa'ad, Ph.D. expected February 2025.
- Demeke Shumeye, Ph.D. expected February 2023.
- Arooj Masood, Ph.D. expected February 2023.
- Chunghyun Lee, Ph.D. expected February 2024.
- Anh-Tien Tran, Ph.D. expected August 2024.
- The-Vi Nguyen, Ph.D. expected February 2027.
- Van-Dat Tuong, Ph.D. expected February 2027.
- Taeyun Ha, Ph.D. expected February 2028.
- Donghyun Lee, Ph.D. expected February 2028.
- Yongin Jeon, M.S. expected February 2023.
- Junsuk Oh, M.S. expected February 2023.
- Duc Thien Hua, M.S. expected February 2023.
- Geeranuch Woraphonbenjakul, M.S. expected August 2023.
- Quang Tuan Do, M.S. expected August 2023.
- Pham Thi Thu Hien, M.S. expected February 2024.
- Ho Manh Cuong, M.S. expected February 2024.
- Tran Nam Phuong, M.S. expected February 2024.

## Professional Activities

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### Editorial Board

- Subject Editor, IET Electronics Letter, 2018 – Present.

- Area Editor, KSII Transactions on Internet and Information Systems, 2019 – Present.
- Guest Editor, Electronics, Special Issue "Ultra-Intelligent Computing and Communication for B5G and 6G Networks," January 13 – September 30, 2021.
- Guest Editor, Wireless Communications and Mobile Computing, Special Issue "Edge-based Mobile Social Media Computing and Analysis," January 2019 – June 7, 2019.
- Editor-in-Chief (EIC), Journal of Korea Institute of Communication and Information Sciences (J-KICS), 2016 – 2018.
- Editor, Journal of Korea Institute of Communication and Information Sciences (J-KICS), 2008 – Present.
- Editor, Journal of KIISE (Korean Institute of Information Scientists and Engineers), 2009 – Present.
- Vice Editor-in-Chief (EIC), Journal of KIISE (Korean Institute of Information Scientists and Engineers), 2018 – Present.
- Area Editor, Ad Hoc Network Journal (Elsevier), 2012 – 2017.
- Guest Editor, Sensors, Special Issue "Selected Papers from International Conference on Ubiquitous and Future Networks (ICUFN 2016)," September 1, 2016 – January 31, 2017.

#### Organizing/Program Committee

- General Chair, ICOIN 2021.
- General Chair, CTCon 2019.
- General Vice Chair, ICOIN 2020.
- TPC Chair, ICTC 2022.
- TPC Chair, ICOIN 2018.
- TPC Chair, ICUFN 2016.
- Organizing Committee (Co-)Chair of IEEE ICC 2022, IEEE CAMAD 2018, IEEE SECON 2012, IEEE MASS 2009, Tridentcom 2007, ICOIN 2018, 2017, 2016, 2015, 2014, 2012, 2011, 2010, ICUFN 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, ICTC 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011.
- Steering Committee Member, ICUFN 2019. 2018, 2017.
- Technical Program Committee Member, IEEE Globecom'20 AHSN, IEEE VTCSpring 2019, IEEE ICC'19 SPC, IEEE ICC'19 MWN, IEEE ICC'18 SPC, IEEE COMNETSAT 2014, CSIE 2009, WICON 2007, IEEE MADWH2005, MobiApps 2018, 2017, 2015, 2014, APMediaCast 2016, 2015, APWiMoB 2015, 2014, SENSORNETS 2015, 2014, 2013, WINSYS 2019, 2014, 2013, APCC 2016, 2013, ATC 2018, 2015, 2014, 2013, ComManTel 2014, DPNOC 2018, 2015, 2014, ICACCI 2015, ICCE 2018, 2014, ICMSAO 2019, ICoICT 2014, ICEPIT 2014, ICGHIT 2014, ICC2013-QRS Workshop, IWIV 2014, ICOIN 2018, 2017, 2016, 2015, 2014, 2012, 2011, 2010, ICUFN 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, ICTC 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, IJCDs 2018, JCCI 2017, 2016, TELSATECH 2013, UCN 2013.

#### Technical Membership

- Voting Member of IEEE 802.15 Standard Committee, 2003 – Present.
- Life Member of KICS, KIISE, IEIE, IWIT.

### **External Funding (Since 2006)** \_\_\_\_\_

- PI, ITRC – 5G/6G Communication Network Research Center, IITP, 2022.07 –2029.12.

- co-PI, Connected Mobility Basic Research Laboratory), NRF, 2022.06.01 – 2025.02.28
- PI, BK Plus Four – CAU Institute of Big Data Talent, NRF, 2020.09 – 2027.08.
- PI, Development of algorithm based on VCG and Blockchain technology of small and medium scale power trading for renewable energy prosumer, KEPCO, 2020.03.01 – 2023.02.28.
- PI, Development of farmland analysis platform using GeoAI, TIPAs, 2019.11.25 – 2021.11.24.
- PI, Research on Core Technologies of Cyber Physical System for Ground, Air, and Space based on CubeSat, NRF, 2019.09.01 – 2023.02.28.
- PI, IoT Static integrated management(management level  $\pm 30V$ ) system Using Ion decay time and ionizer, KIAT, 2019.06.01 – 2020.05.31.
- PI, Development of Power Control Technology of IoT Device using Wi-Fi and Small Cell and Building of Testbed, KEPCO, KEPCO, 2019.01.01 – 2022.12.31.
- PI, A study on core technology of 5G mobile communication using millimeter wave band, IITP, 2018.07.01 – 2022.12.31.
- PI, Development of Reliable Data Transmission Scheme for Deep Space Communications, NRF, 2018.07.01 – 2021.06.30.
- PI, Research on Resource Management of mmWave based Fog Radio Access Network for Big Data/IoT, NRF, 2017.4.01 – 2020.3.30.
- co-PI, Network Engineering: Development and Application of Novel Data Science Driven Framework for Efficient Network Design, NRF, 2017.06.01 – 2020.02.29.
- PI, Development of social network based demand side management optimization for residential buildings, KEPCO, 2016.12.01 – 2019.11.30.
- PI, Performance Analysis and Evaluation of Block Chain Platform, ETRI, 2018.08.01 – 2018.11.30.
- co-PI, Electro-acupuncture using natural current stimulation of Music, KIAT, 2017.07.01 – 2018.06.30.
- PI, Energy Efficient Automatic Control System, COMPA, 2017.05.04 – 2018.05.03.
- co-PI, Feasibility Research on 60GHz IEEE802.11ad for Virtual Reality Platform), IITP, 2017.04.01 – 2017.12.31.
- co-PI, Research and development of u-Office service based on high-speed wireless network, NIPA, 2016.1.1 – 2017.12.31.
- PI, Pioneering Research for Efficient Multi-Edge Computing, Samsung Electronics, 2017.06.01 – 2017.12.29.
- PI, A Study on the Optimization for Edge Cloud and Internet Cloud Interworking, ETRI, 2017.03.01 – 2017.11.30.
- co-PI, Development of LCBS system with minimal blood loss, SMBA, 2015.10.1 – 2017.10.11.
- PI, Development and Optimization of Core Technologies for Directional Antennas based Cognitive Radio Network using Four Dimensional Wireless Resources, NRF, 2016.11.1 – 2017.10.31.
- PI, Development of Fully Distributed Energy Management Platform using Game Theory, KEPRI, 2015.10.1 – 2017.9.30.
- PI, A Study on Sensor Networking Protocol for Emergency Data Collection, ETRI, 2016.6.1 – 2016.12.10.
- co-PI, Development of Ultra High Speed Centrifuges for Global Target Market, SMBA, 2014.7.1 – 2016.5.31.
- co-PI, BK21+ Next Generation Big Data Research Team, NRF, 2013.3.1 – 2020.2.29.

- PI, A Development of Distributed IoT Energy Mangement System using Game Theory, KOFAC, 2015.6.1 – 2015.11.30.
- PI, Research on Geographical Information-based MANET Routing using Seperated Physical Channels, ETRI, 2015.7.1 – 2015.11.30.
- PI, Development and Standardization of IEEE 802.15.8 Peer-Aware Communication Protocols), ATS, 2012.10.1 – 2015.5.31.
- co-PI, Development of Next Generation CO2 Incubator Monitoring and Integrated Admission Management System using Smart Device, KAIARI, 2013.12.1 – 2014.11.30.
- PI, Development of Smart Grid Energy Scheduling Algorithms using Four Elements, KESRI, 2013.12.1 – 2014.11.30.
- PI, Association for Research on Development of Social Digital Signage Platfrom with Interactive Element), TIPA, 2014.7.1 – 2014.11.30.
- PI, A development of intelligent service to take care of second-class citizen using IoT(Internet of Things), KOFAC, 2014.6.1 – 2014.11.30.
- PI, Development of Social Digital Signage Platform based on WiFi-Direct, NIPA, 2013.9.1 – 2014.8.31.
- PI, Development of Smart Phone Application to Take Care of Senior Cetizens who Live Alone, KOFAC, 2013.9.1 – 2014.2.28.
- PI, Development of Energy Management Software and Smart Phone Application on Smart Grid, KOFAC, 2013.6.1 – 2013.12.31.
- PI, Contention based Directional MAC Protocol for 60GHz Wireless LAN, NRF, 2010.09 – 2013.08.
- PI, Test and Measurement of UWB based Ad Hoc Routing for Military Communication), LIG NEX1, 2012.6.1 – 2013.3.31.
- PI, SW Development of Demand/Response based on Composite Context Awareness for Smart Grid, NIPA, 2012.6.1 – 2013.3.31.
- PI, Big Data Contents Delivery Technique for Smart Device using Device-to-Device Communi- cation, NIPA, 2012.5.1 – 2012.12.20.
- PI, A Study on the Service Platform of Demand Side Management based on Composite Context Awareness for Smart Grid Systems, MKE, 2012.09 – 2013.02.
- co-PI, Next Generation Vehicular Mobile Service System based on Embedded Antenna Array, KCC, 2009.03 – 2012.02.
- PI, Event Simulation for Virtual Composite Context, ETRI, 2011.06 – 2012.01.
- PI, Personalized Service Platform for Vehicular Services using Smart Phone, KAIARI, 2010.06 – 2011.05.
- PI, Modeling and Architecture of Composite Context, ETRI, 2010.06 – 2011.01.
- PI, Performance Evaluation of Binary CDMA Protocol, KETI, 2010.06 – 2010.07.
- PI, Cooperative Communication for High Speed Local Area Network, ETRI, 2009.05 – 2009.11.
- PI, A Cognitive Radio based Mesh Routing Algorithm, KRF, 2007.08 – 2009.07.
- PI, A Performance-based Cooperative Device Management Technique, ETRI, 2008.07 – 2009.01.
- co-PI, An Energy-Efficient Wireless Body Area Networks (WBANs), IITA, 2006.09 – 2008.12.
- PI, Design of Cognitive Radio MAC, Samsung, 2007.05.01 – 2008.02.

- PI, An Energy-Efficient Data Delivery Protocol for WSNs, ETRI, 2007.06 — 2007.12.
- PI, A Scale-free Low-Power Routing Algorithm, KETI, 2007.04 — 2007.11.
- PI, A Research on The Efficient Mesh Routing Algorithm in Wireless Sensor Networks (WSNs), ETRI, 2006.09 — 2007.01.

## Book and Book Chapters

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1. N.-N. Dao, N.-T. Dinh, Q.-V. Pham, T. V. Phan, S. Cho, and T. Braun, "Vulnerabilities in Fog/Edge Computing from Architectural Perspectives," in *Fog/Edge Computing For Security, Privacy, and Applications*, J. Wu and W. Chang, Eds., Cham: Springer, 2021, pp. 193-212.
2. N.-N. Dao, Q. D. Tran, N.-T. Dinh, S. Cho, T. Braun, "Edge computing architectures," in *Edge Computing: Models, technologies and applications, Survey and Tutorial*, Vol. 33, J. Taheri, Ed. London: The Institution of Engineering and Technology, 2020, pp.27-44.
3. S. Cho, *et. al*, *Computational Thinking and Problem Solving*, Life and Power Press, 2016.
4. S. Cho, *et. al* *Introduction to Java Programming*, Hongrung Publication Company, 2011.

## Publication in Refereed International Journals (Since 2008)

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1. N.-N. Dao, T.-H. Do, S. Cho, and S. Dustdar, "Information Revealed by Vision: A Review on the Next-Generation OCC Standard for AIoV," to appear in *IEEE IT Professional*, 2022.
2. N.-N. Dao, D.-N. Vu, W. Na, T.-M. Hoang, D.-T. Do, and S. Cho, "Adaptive Bitrate Streaming in Multi-user Downlink NOMA Edge Caching Systems with Imperfect SIC," to appear in *Computer Network*, 2022.
3. D. Lee, C. Lee, G. Jang, W. Na, and S. Cho, "Energy-Efficient Directional Charging Strategy for Wireless Rechargeable Sensor Networks," to appear in *IEEE Internet of Things Journal*, 2022.
4. D. S. Lakew, A.-T. Tran, N.-N. Dao, and S. Cho, "Intelligent Offloading and Resource Allocation in Heterogeneous Aerial Access IoT Networks," to appear in *IEEE Internet of Things Journal*, 2022.
5. T.-V. Nguyen, T. P. Truong, T. M. T. Nguyen, W. Noh, and S. Cho, "Achievable Rate Analysis of Two-Hop Interference Channel with Coordinated IRS Relay," to appear in *IEEE Transactions on Wireless Communications*, 2022.
6. D. S. Lakew, V. D. Tuong, N.-N. Dao, and S. Cho, "Adaptive Partial Offloading and Resource Harmonization in Wireless Edge Computing-Assisted IoE Networks," to appear in *IEEE Transactions on Network Science and Engineering*, 2022.
7. N.-N. Dao, A.-T. Tran, H.-T. Ngo, T.-T. Tran, B.N.Q. Vo, and S. Cho, "A Contemporary Survey on Live Video Streaming from a Computation-Driven Perspective," to appear in *ACM Computing Surveys*, 2022.
8. V. D. Tuong, W. Noh, and S. Cho, "Delay Minimization for NOMA-enabled Mobile Edge Computing in Industrial Internet of Thing," to appear in *IEEE Transactions on Industrial Informatics*, 2022.
9. N.-N. Dao, T. V. Phan, U. Sa'ad, J. Kim, T. Bauschert, D.-T. Do, and S. Cho, "Securing Heterogeneous IoT with Intelligent DDoS Attack Behavior Learning," to appear in *IEEE Systems Journal*, 2022.
10. D. S. Lakew, W. Na, N.-N. Dao, and S. Cho, "Aerial Energy Orchestration for Heterogeneous UAV Assisted Wireless Communications," to appear in *IEEE Systems Journal*, 2022.
11. D.-N. Vu, N.-N. Dao, W. Na, and S. Cho, "Dynamic Resource Orchestration for Service Capability Maximization in Fog-Enabled Connected Vehicle Networks," to appear in *IEEE Transactions on Cloud Computing*, 2022.



12. N.-N. Dao, D.-N. Vu, A.-T. Tran, V. P. Trung, S. Dustdar, and S. Cho, "On System Stability in Multitier Roadside Computing Toward an Intelligent Transportation," *IEEE Transactions on Network Science and Engineering*, vol. 9, no. 3, pp. 1128-1138, 1 May-June 2022.
13. T. P. Truong, N.-N. Dao, and S. Cho, "HAMEC-RSMA: Enhanced Aerial Computing Systems with Rate Splitting Multiple Access," *IEEE Access*, vol. 10, pp. 52398-52409, May 2022.
14. W. Na, N.-N. Dao, and S. Cho, "Reinforcement-Learning-Based Spatial Resource Identification for IoT D2D Communications," *IEEE Systems Journal*, vol. 16, no. 1, pp. 1068-1079, March 2022.
15. T.-V. Nguyen, N.-N. Dao, V. D. Tuong, W. Noh, and S. Cho, "User-Aware and Flexible Proactive Caching using LSTM and Ensemble Learning in IoT-MEC Networks," *IEEE Internet of Things Journal*, vol. 9, no. 5, pp. 3251-3269, March 2022.
16. N.-N. Dao, D. T. Ngo, N.-T. Dinh, T. V. Phan, N. D. Vo, S. Cho, and T. Braun, "Hit Ratio and Content Quality Tradeoff for Adaptive Bitrate Streaming in Edge Caching Systems," *IEEE Systems Journal*, vol. 15, no. 4, pp. 5094-5097, December 2021.
17. V. D. Tuong, N.-N. Dao, W. Noh, and S. Cho, "Deep-Reinforcement-Learning-Based Hierarchical Time-Division-Duplexing Control for Dense Wireless and Mobile Networks," *IEEE Transactions on Wireless Communications*, vol. 20, no. 11, pp. 7135-7150, November 2021.
18. V. D. Tuong, T. P. Truong, T.-V. Nguyen, W. Noh, and S. Cho, "Partial Computation Offloading in NOMA-Assisted Mobile Edge Computing Systems Using Deep Reinforcement Learning," *IEEE Internet of Things Journal*, vol. 8, no. 17, pp. 13196-13208, September 2021.
19. C. Lee, W. Na, G. Jang, C. Lee, and S. Cho, "Energy-Efficient and Delay-Minimizing Charging Method with a Multiple Directional Mobile Charger," *IEEE Internet of Things Journal*, vol. 8, no. 10, pp. 8291-8303, May 2021.
20. D. Kim, D. Kwon, L. Park, J. Kim, and S. Cho, "Multi-Scale LSTM-based Deep Learning for Very-Short-Term Photovoltaic Power Generation Forecasting in Smart City Energy Management," *IEEE Systems Journal*, vol. 15, no. 1, pp. 346-354, March 2021.
21. N.-N. Dao, W. Na, A.-T. Tran, D. N. Nguyen, and S. Cho, "Energy-Efficient Spectrum Sensing for IoT Devices," *IEEE Systems Journal*, vol. 15, no.1, pp. 1077-1085, March 2021.
22. Q.-D. Pham, N.-N. Dao, T. Nguyen-Thanh, S. Cho, and H. C. Pham, "Detachable Web-Based Learning Framework to Overcome Immature ICT Infrastructure Toward Smart Education," *IEEE Access*, vol. 9, pp. 34951-34961, February 2021.
23. C. Lee, G. Jang, N.-N. Dao, D. S. Lakew, C. Lee, and S. Cho, "Competitive Game Theoretic Clustering-Based Multiple UAV-Assisted NB-IoT Systems," *Electronics*, vol. 10, no. 356, February 2021.
24. G. Jang, N. Kim, T. Ha, C. Lee, and S. Cho, "Base Station Switching and Sleep Mode Optimization with LSTM-based User Prediction," *IEEE Access*, vol. 8, pp. 222711-222723, December 2020.
25. A. Masood, D. S. Lakew, and S. Cho, "Security and Privacy Challenges in Connected Vehicular Cloud Computing," *IEEE Communication Survey and Tutorial*, vol. 22, no. 4, pp. 2725-2764, November 2020.
26. D. Kwon, J. Jeon, S. Park, J. Kim, and S. Cho, "Multi-Agent DDPG-based Deep Learning for Smart Ocean Federated Learning IoT Networks," *IEEE Internet of Things Journal*, vol. 7, pp. 9895-9903, October 2020.
27. Y. Lee, S. Jeong, A. Masood, L. Park, N.-N. Dao, and S. Cho, "Trustful Resource Management for Service Allocation in Fog-Enabled Intelligent Transportation Systems," *IEEE Access*, vol. 8, pp. 147313-147322, August 2020.

28. J. Jeon, S. Park, M. Choi, J. Kim, Y.-B. Kwon, and S. Cho, "Optimal User Selection for High-Performance and Stabilized Federated Learning Platforms," *Electronics*, vol. 9, no. 1359, August 2020.
29. A.-T. Tran, N.-N. Dao, and S. Cho, "Bitrate Adaptation for Video Streaming Services in Edge Caching Systems," *IEEE Access*, vol. 8, pp. 135844-135852, July 2020.
30. N. Kim, W. Na, and S. Cho, "Dual-Channel-Based Mobile Ad Hoc Network Routing Technique For Indoor Disaster Environment," *IEEE Access*, July 2020.
31. L. Park, Y. Yoon, S. Cho, and S. Choi, "Prosumer Energy Management Considering Contract with Consumers under Progressive Pricing Policy," *IEEE Access*, June 2020.
32. N.-N. Dao, T.-T. Nguyen, M.-Q. Luong, T. Nguyen-Thanh, W. Na, and S. Cho, "Self-Calibrated Edge Computation for Unmodeled Time-Sensitive IoT Offloading Traffic," *IEEE Access*, June 2020.
33. W. Na, N.-N. Dao, J. Kim, E.-S. Ryu, and S. Cho, "Simulation and Measurement: Feasibility Study of Tactile Internet Applications for mmWave Virtual Reality (VR)," *ETRI Journal*, vol. 42, no. 2, April 2020.
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