DONGEUN LEE

Computer Science & Information Systems, College of Science and Engineering, Texas A&M University - Commerce, Commerce, TX

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EDUCATION

- **Seoul National University (SNU)**, Seoul, Korea

Ph. D. in Electrical Engineering and Computer Science February 2014
Advisor: Prof. Heonshik Shin
Thesis: *Analysis for Scalable Coding of Quality-Adjustable Sensor Data*.

- **Seoul National University (SNU)**, Seoul, Korea

B.S. in Computer Science and Engineering February 2006

RESEARCH INTERESTS

- **Big Data Analytics**
  - -Data Summarization
  - -Streaming Data Analysis
  - -Scalable Algorithms

APPOINTMENTS

- ***Associate Professor*, East Texas A&M University (ETAMU, formerly called TAMUC), Commerce, TX 2022—Present**

- ***Assistant Professor*, East Texas A&M University (ETAMU, formerly called TAMUC), Commerce, TX 2016—2022**

- ***Faculty Research Affiliate*, Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA 2016–2018**
  - -Scientific Data Management Group, Computational Research Division

- ***Computer Systems Engineer*, *Postdoctoral Research Affiliate*, Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA 2015–2016**

- ***Postdoctoral Research Associate*, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea 2014–2016**

- ***Research Intern*, Hokkaido University, Sapporo, Japan Fall 2009, Spring 2010**

- ***Instructor*, BIT Computer Academy, Seoul, Korea 2008–2010**

- ***Software Engineer*, SimsLine Inc., Seoul, Korea 2003–2004**

- ***Software Engineer*, Hyun-seung Inc., Seoul, Korea 2002–2003**

- ***Software Engineer*, Betaland Inc., Seoul, Korea 2001**

TEACHING

-Big Data Computing and Analytics (CSCI 573), ETAMU, 2017—Present.
-Fundamentals of Programming C/C++ (CSCI 515), ETAMU, 2016—Present.
-Programming Fundamentals II (COSC 1337, COSC 1437), ETAMU, 2016—Present.
-Introduction to Computer Science and Programming (COSC 1436), ETAMU, 2021—Present.
-Foundations of Information Security (CSCI 351), ETAMU, 2020.
-Operating Systems (CSCI 530), ETAMU, 2020.

GRANT

- **Co-Principal Investigator, Multilingual Computational Thinking: Teaching Introductory Programming Classes through Low-Level and High-Level Game Programming, NSF 19-601 Improving Undergraduate STEM Education: Education and Human Resources, National Science Foundation (NSF), Sept. 2020—Aug. 2024.**

AWARDS

- **Generative Reconstruction of Statistically Reduced Data Sets, Presidential GAR Initiative, ETAMU, Aug. 2022—Jul. 2024.**

- **Study of Statistical Multivariate Time Series Data Reduction Algorithms, Visiting Faculty Program (VFP), Office of Workforce Development for Teachers and Scientists (WDTS), Department of Energy (DOE) Office of Science, Jun. 2021—Aug. 2021.**

- **Multi-Tasks Learning Based on Hinting, Presidential GAR Initiative, ETAMU, Aug. 2020—May 2021.**

- **Fast Multivariate Time Series Data Reduction with Statistical Perspective, Visiting Faculty Program (VFP), Office of Workforce Development for Teachers and Scientists (WDTS), Department of Energy (DOE) Office of Science, Jun. 2020—Aug. 2020.**

- **DataCom 2015 Best Paper Award**
  -Taehoon Kim, **Dongeun Lee**, Jaesik Choi, Anna Spurlock, Alex Sim, Annika Todd, and Kesheng Wu, "Extracting Baseline Electricity Usage Using Gradient Tree Boosting," *1st Intl. Conf. Big Data Intelligence and Computing (DataCom)*, pp. 734-741, Dec. 2015.

- **IEEE ISCC 2010 Best Paper Award - Student Category**
  -**Dongeun Lee**, Jonghun Lee, Yonghee Lee, Heejung Lee, and Heonshik Shin, "Low-Complexity Aggregation of Collected Images with Correlated Fields of View in Wireless Video Sensor Networks," *IEEE 15th Symp. Computers and Communications (ISCC)*, pp. 765-771, Jun. 2010.

- **Efficient and Stable Video Transmission over Wireless Video Sensor Network, Korea Student Aid Foundation (KOSAF) Graduate Research Grant, Korea, Sept. 2008—Aug. 2009.**

PUBLICATIONS

- **Refereed Conferences**
  1. **Dongeun Lee**, Omar El Ariss, Kaoning Hu, Kibum Kwon, and Jonathan Tapia, "Fostering Computational Thinking in CS1 through Multilingual Game Development," *ACM 30th Conf. Innovation and Technology in Computer Science Education (ITiCSE)*, pp. 424–430, Jun./Jul. 2025.

2. **Dongeun Lee**, Omar El Ariss, Kaoning Hu, and Kibum Kwon, "Multilingual Game Programming to Enhance Computational Thinking in CS0," *ACM 30th Conf. Innovation and Technology in Computer Science Education (ITiCSE)*, pp. 660–666, Jun./Jul. 2025.
3. Anh Tong, Thanh Nguyen-Tang, **Dongeun Lee**, Duc Nguyen, Toan Tran, David Leo Wright Hall, Cheongwoong Kang, and Jaesik Choi, "Neural ODE Transformers: Analyzing Internal Dynamics and Adaptive Fine-tuning," *13th Intl. Conf. Learning Representations (ICLR)*, pp. 1–15, Apr. 2025.
4. Woojin Cho, Minju Jo, Haksoo Lim, Kookjin Lee, **Dongeun Lee**, Sanghyun Hong, and Noseong Park, "Parameterized Physics-informed Neural Networks for Parameterized PDEs," *41st Intl. Conf. Machine Learning (ICML)*, pp. 8510–8533, Jul. 2024.
5. Woojin Cho, Minju Jo, Haksoo Lim, Kookjin Lee, **Dongeun Lee**, Sanghyun Hong, and Noseong Park, "Extension of Physics-informed Neural Networks to Solving Parameterized PDEs," *1st Workshop on AI4DifferentialEquations in Science (AI4DiffEqtnsInSci) in conjunction with Intl. Conf. Learning Representations (ICLR)*, pp. 1–7, May 2024.
6. Jinsung Jeon, Hyundong Jin, Jonghyun Choi, Sanghyun Hong, **Dongeun Lee**, Kookjin Lee, and Noseong Park, "PAC-FNO: Parallel-Structured All-Component Fourier Neural Operators for Recognizing Low-Quality Images," *12th Intl. Conf. Learning Representations (ICLR)*, pp. 1–12, May 2024.
7. Woojin Cho, Seunghyeon Cho, Hyundong Jin, Jinsung Jeon, Kookjin Lee, Sanghyun Hong, **Dongeun Lee**, Jonghyun Choi, and Noseong Park, "Operator-learning-inspired Modeling of Neural Ordinary Differential Equations," *38th AAAI Conf. Artificial Intelligence (AAAI)*, pp. 11543–11551, Feb. 2024.
8. Jaehoon Lee, Chan Kim, Gyumin Lee, Haksoo Lim, Jeongwhan Choi, Kookjin Lee, **Dongeun Lee**, Sanghyun Hong, and Noseong Park, "HyperNetwork Approximating Future Parameters for Time Series Forecasting under Temporal Drifts," *3rd Workshop on Distribution Shifts (DistShift) in conjunction with Conf. Neural Information Processing Systems (NeurIPS)*, pp. 1–6, Dec. 2023.
9. Anh Tong, Thanh Nguyen-Tang, **Dongeun Lee**, Toan Tran, and Jaesik Choi, "SigFormer: Signature Transformers for Deep Hedging," *ACM 4th Intl. Conf. AI in Finance (ICAIF)*, pp. 124–132, Nov. 2023.
10. Junhee Ryu, **Dongeun Lee**, Kang G. Shin, and Kyungtae Kang, "Fast Application Launch on Personal Computing/Communication Devices," *21st USENIX Conf. File and Storage Technologies (FAST)*, pp. 425–440, Feb. 2023.
11. Minji Kim, **Dongeun Lee**, Kookjin Lee, Doowon Kim, Sangman Lee, and Jinoh Kim, "Deep Sequence Models for Packet Stream Analysis and Early Decisions," *IEEE 47th Conf. Local Computer Networks (LCN)*, pp. 56–63, Sept. 2022.
12. Chiho Kim, Sang-Yoon Chang, Jonghyun Kim, **Dongeun Lee**, and Jinoh Kim, "Zero-Day Malware Detection using Threshold-Free Autoencoding Architecture," *IEEE 9th Intl. Conf. Big Data (IEEE BigData)*, pp. 1279–1284, Dec. 2021.
13. Jeehyun Hwang, Jeongwhan Choi, Hwangyong Choi, Kookjin Lee, **Dongeun Lee**, and Noseong Park, "Climate Modeling with Neural Diffusion Equations," *IEEE 21st Intl. Conf. Data Mining (IEEE ICDM)*, pp. 230–239, Dec. 2021.
14. Duanshun Li, Jing Liu, **Dongeun Lee**, Ali Seyedmazloom, Giridhar Kaushik, Kookjin Lee, and Noseong Park, "A Novel Method to Solve Neural Knapsack Problems," *38th Intl. Conf. Machine Learning (ICML)*, pp. 6414–6424, Jul. 2021.
15. Jinsung Jeon, **Dongeun Lee**, Seunghyun Hwang, Soyoung Kang, Noseong Park, Duanshun Li, Kookjin Lee, and Jing Liu, "Large-Scale Flight Frequency Optimization with Global Convergence in the US Domestic Air Passenger Markets," *SIAM 21st Intl. Conf. Data Mining (SDM)*, pp. 711–719, Apr./May 2021.
16. Kaoning Hu, **Dongeun Lee**, and Tianyang Wang, "Single Image Super-Resolution using Vectorization and Texture Synthesis," *16th Intl. Conf. Computer Vision Theory and Applications (VISAPP)*, pp. 512–519, Feb. 2021.
17. Jungeun Kim, Kookjin Lee, **Dongeun Lee**, Sheo Yon Jhin, and Noseong Park, "DPM: A Novel Training Method for Physics-Informed Neural Networks in Extrapolation," *35th AAAI Conf. Artificial Intelligence (AAAI)*, pp. 8146–8154, Feb. 2021.

18. Mohammad Al Olaimat, **Dongeun Lee**, Youngsoo Kim, Jonghyun Kim, and Jinoh Kim, "A Learning-Based Data Augmentation for Network Anomaly Detection," *29th Intl. Conf. Computer Communications and Networks (ICCCN)*, pp. 1–10, Aug. 2020.
19. J. Kade Gibson, **Dongeun Lee**, Jaesik Choi, and Alex Sim, "Dynamic Online Performance Optimization in Streaming Data Compression," *IEEE 6th Intl. Conf. Big Data (IEEE BigData)*, pp. 534–541, Dec. 2018 (equal contribution).
20. Kesheng Wu, **Dongeun Lee**, Alex Sim, and Jaesik Choi, "Statistical Data Reduction for Streaming Data," *2nd New York Scientific Data Summit (NYSDS)*, pp. 1–6, Aug. 2017.
21. **Dongeun Lee**, Alex Sim, Jaesik Choi, and Kesheng Wu, "Improving Statistical Similarity Based Data Reduction for Non-Stationary Data," *29th Intl. Conf. Scientific and Statistical Database Management (SSDBM)*, pp. 37:1–37:6, Jun. 2017.
22. **Dongeun Lee**, Alex Sim, Jaesik Choi, and Kesheng Wu, "Novel Data Reduction Based on Statistical Similarity," *28th Intl. Conf. Scientific and Statistical Database Management (SSDBM)*, pp. 21:1–21:12, Jul. 2016.
23. **Dongeun Lee**, Rafael Lima, and Jaesik Choi, "Improving Imprecise Compressive Sensing Models," *32nd Conf. Uncertainty in Artificial Intelligence (UAI)*, pp. 397–406, Jun. 2016.
24. Taehoon Kim, **Dongeun Lee**, Jaesik Choi, Anna Spurlock, Alex Sim, Annika Todd, and Kesheng Wu, "Extracting Baseline Electricity Usage Using Gradient Tree Boosting," *1st Intl. Conf. Big Data Intelligence and Computing (DataCom)*, pp. 734–741, Dec. 2015.
25. Junhee Ryu, Haksu Jeong, **Dongeun Lee**, Heonshik Shin, and Kyungtae Kang, "ClusterFetch: A Lightweight Prefetcher that Responds to Intensive Disk Read Patterns," *IEEE 12th Intl. Conf. Embedded Software and Systems (ICESS)*, pp. 1051–1056, Aug. 2015 (corresponding author).
26. **Dongeun Lee** and Jaesik Choi, "Learning Compressive Sensing Models for Big Spatio-Temporal Data," *SIAM 15th Intl. Conf. Data Mining (SDM)*, pp. 667–675, Apr./May 2015.
27. **Dongeun Lee** and Jaesik Choi, "Low Complexity Sensing for Big Spatio-Temporal Data," *IEEE 2nd Intl. Conf. Big Data (IEEE BigData)*, pp. 323–328, Oct. 2014.
28. Ikjune Yoon, Dong Kun Noh, **Dongeun Lee**, Rony Teguh, Toshihisa Honma, and Heonshik Shin, "Reliable Wildfire Monitoring with Sparsely Deployed Wireless Sensor Networks," *IEEE 26th Intl. Conf. Advanced Information Networking and Applications (AINA)*, pp. 460–466, Mar. 2012.
29. **Dongeun Lee**, Heonshik Shin, and Eunjeong Park, "Modeling Recovery Strategies in Service-Oriented Architecture using a Markov Decision Process," *IEEE 13th Intl. Symp. High-Assurance Systems Engineering (HASE)*, pp. 285–290, Nov. 2011.
30. **Dongeun Lee**, Jonghun Lee, Yonghee Lee, Heejung Lee, and Heonshik Shin, "Low-Complexity Aggregation of Collected Images with Correlated Fields of View in Wireless Video Sensor Networks," *IEEE 15th Symp. Computers and Communications (ISCC)*, pp. 765–771, Jun. 2010.
31. Heejung Lee, Yonghee Lee, **Dongeun Lee**, Jonghun Lee, and Heonshik Shin, "Implementing Rate Allocation and Control for Real-Time H.264/SVC Encoding," *IEEE 28th Intl. Conf. Consumer Electronics (ICCE)*, pp. 269–270, Jan. 2010.
32. **Dongeun Lee**, Yonghee Lee, Heejung Lee, Jonghun Lee, and Heonshik Shin, "Determining Efficient Bit Stream Extraction Paths in H.264/AVC Scalable Video Coding," *42nd Asilomar Conf. Signals, Systems, and Computers (Asilomar)*, pp. 2233–2237, Oct. 2008.
33. Heejung Lee, **Dongeun Lee**, Yonghee Lee, and Heonshik Shin, "Luminance Scalable Coding using H.264/AVC SVC Extensions for Mobile Video Applications," *IEEE Intl. Conf. Multimedia and Expo (ICME)*, pp. 1025–1028, Jun. 2008.
34. Donggeon Noh, **Dongeun Lee**, and Heonshik Shin, "Mission-Oriented Selective Routing for Wireless Sensor Network," *2nd Intl. Conf. Communications and Networking in China (CHINACOM)*, pp. 809–813, Aug. 2007.
35. Hyuntaek Kwon, Donggeon Noh, Junu Kim, Joonho Lee, **Dongeun Lee**, and Heonshik Shin, "Low-Latency Routing for Energy-Harvesting Sensor Networks," *4th Intl. Conf. Ubiquitous Intelligence and Computing (UIC)*, pp. 422–433, Jul. 2007.

36. Donggeon Noh, Junu Kim, Joonho Lee, **Dongeun Lee**, Hyuntaek Kwon, and Heonshik Shin, "Priority-Based Routing for Solar-Powered Wireless Sensor Networks," *2nd Intl. Symp. Wireless Pervasive Computing (ISWPC)*, pp. 53–58, Feb. 2007.

- **Journals**

37. Junhee Ryu, **Dongeun Lee**, Kang G. Shin, and Kyungtae Kang, "Paralfetch: Fast Application Launch on Personal Computing/Communication Devices," *IEEE Transactions on Parallel and Distributed Systems*, vol. 36, no. 4, pp. 616–632, Apr. 2025.
38. Chiho Kim, Sang-Yoon Chang, Jonghyun Kim, **Dongeun Lee**, and Jinoh Kim, "Automated, Reliable Zero-Day Malware Detection Based on Autoencoding Architecture," *IEEE Transactions on Network and Service Management*, vol. 20, no. 3, pp. 3900–3914, Sept. 2023.
39. Hwangyong Choi, Jeongwhan Choi, Jeehyun Hwang, Kookjin Lee, **Dongeun Lee**, and Noseong Park, "Climate Modeling with Neural Advection-Diffusion Equation," *Knowledge and Information Systems*, vol. 65, no. 6, pp. 2403–2427, Jun. 2023.
40. Chiho Kim, Sang-Yoon Chang, **Dongeun Lee**, Jonghyun Kim, and Jinoh Kim, "Reliable Detection of Location Spoofing and Variation Attacks," *IEEE Access*, vol. 11, pp. 10813–10825, 2023.
41. Kookjin Lee, Howard C. Elman, Catherine E. Powell, and **Dongeun Lee**, "Enhanced Alternating Energy Minimization Methods for Stochastic Galerkin Matrix Equations," *BIT Numerical Mathematics*, vol. 62, no. 3, pp. 965–994, Sept. 2022.
42. Chanyoung Park, Yoonsoo Jo, **Dongeun Lee**, and Kyungtae Kang, "Change Your Cluster to Cold: Gradually Applicable and Serviceable Cold Storage Design," *IEEE Access*, vol. 7, pp. 110216–110226, 2019 (corresponding author).
43. Jiwoong Won, Oseok Kwon, Junhee Ryu, **Dongeun Lee**, and Kyungtae Kang, "iFetcher: User-Level Prefetching Framework with File-System Event Monitoring for Linux," *IEEE Access*, vol. 6, pp. 46213–46226, 2018.
44. Junhee Ryu, **Dongeun Lee**, Kang G. Shin, and Kyungtae Kang, "ClusterFetch: A Lightweight Prefetcher for Intensive Disk Reads," *IEEE Transactions on Computers*, vol. 67, no. 2, pp. 284–290, Feb. 2018 (corresponding author).
45. Jaemyoun Lee, Haegeon Jeong, Won-Joo Lee, Hyo-Joong Suh, **Dongeun Lee**, and Kyungtae Kang, "Advanced Primary-Backup Platform with Container-Based Automatic Deployment for Fault-Tolerant Systems," *Wireless Personal Communications*, vol. 98, no. 4, pp. 3177–3194, Feb. 2018.
46. Taehoon Kim, Jaesik Choi, **Dongeun Lee**, Alex Sim, Anna Spurlock, Annika Todd, and Kesheng Wu, "Predicting Baseline for Analysis of Electricity Pricing," *International Journal of Big Data Intelligence*, vol. 5, nos. 1/2, pp. 3–20, 2018.
47. Junhee Ryu, **Dongeun Lee**, Changhee Han, Heonshik Shin, and Kyungtae Kang, "File-System-Level Storage Tiering for Faster Application Launches with No Mapping Overhead," *IEEE Access*, vol. 4, pp. 3688–3696, 2016 (corresponding author).
48. **Dongeun Lee**, Jaesik Choi, and Heonshik Shin, "A Scalable and Flexible Repository for Big Sensor Data," *IEEE Sensors Journal*, vol. 15, no. 12, pp. 7284–7294, Dec. 2015.
49. **Dongeun Lee**, Junhee Ryu, and Heonshik Shin, "Scalable Management of Storage for Massive Quality-Adjustable Sensor Data," *Computing*, vol. 97, no. 8, pp. 769–793, Aug. 2015.
50. **Dongeun Lee**, Jaesik Choi, and Heonshik Shin, "Low-Complexity Compressive Sensing with Downsampling," *IEICE Electronics Express*, vol. 11, no. 3, pp. 20130947, Feb. 2014.
51. Heejung Lee, Yonghee Lee, Jonghun Lee, **Dongeun Lee**, and Heonshik Shin, "Design of a Mobile Video Streaming System using Adaptive Spatial Resolution Control," *IEEE Transactions on Consumer Electronics*, vol. 55, no. 3, pp. 1682–1689, Aug. 2009.
52. Donggeon Noh, **Dongeun Lee**, and Heonshik Shin, "QoS-Aware Geographic Routing for Solar-Powered Wireless Sensor Networks," *IEICE Transactions on Communications*, vol. 90, no. 12, pp. 3373–3382, Dec. 2007.

- **Abstracts**
  53. **Dongeun Lee**, Kaoning Hu, Omar El Ariss, and Kibum Kwon, "Multiple Programming Languages for Improving Computational Thinking in CS1," *ACM 54th Technical Symp. Computer Science Education (SIGCSE)*, p. 1377, Mar. 2023.
  54. Chanyoung Park, Yoonsue Joe, Myounghwan Yoo, **Dongeun Lee**, and Kyungtae Kang, "Poster: Prototype of Configurable Redfish Query Proxy Module," *IEEE 28th Intl. Conf. Network Protocols (ICNP)*, pp. 1–2, Oct. 2020.
  55. **Dongeun Lee**, Alex Sim, Jaesik Choi, and Kesheng Wu, "Expanding Statistical Similarity Based Data Reduction to Capture Diverse Patterns," *27th Data Compression Conf. (DCC)*, p. 445, Apr. 2017.
  56. Haksu Jeong, Junhee Ryu, **Dongeun Lee**, Jaemyoun Lee, Heonshik Shin, and Kyungtae Kang, "ClusterFetch: A Lightweight Prefetcher for General Workloads," *ACM/SPEC 6th Intl. Conf. Performance Engineering (ICPE)*, pp. 99–100, Jan./Feb. 2015.
  57. Changhee Han, Junhee Ryu, **Dongeun Lee**, Jaemyoun Lee, Kyungtae Kang, and Heonshik Shin, "File-System-Level Flash Caching for Improving Application Launch Time on Logical Hybrid Disks," *IEEE 33rd Intl. Performance Computing and Communications Conf. (IPCCC)*, pp. 1–2, Dec. 2014.

- **Technical Report**
  58. **Dongeun Lee**, Alex Sim, Jaesik Choi, and Kesheng Wu, "IDEALEM: Statistical Similarity Based Data Reduction," arXiv:1911.06980 [cs.DB], 2019.

- **Book Chapter**
  59. **Dongeun Lee**, "Big Sensor Data Acquisition and Archiving with Compression," in *Big Data and Visual Analytics*, Sang C. Suh and Thomas Anthony, Eds. Springer International Publishing, pp. 115–143, 2017.

- **Thesis**
  60. **Dongeun Lee**, *Analysis for Scalable Coding of Quality-Adjustable Sensor Data*, Ph. D. Thesis, Department of Electrical Engineering and Computer Science, Seoul National University, 2014.

PAST RESEARCH PROJECTS

- **Open Framework for High-Performance Streaming Analytics, LBNL** **2015–2016**
- **Behavior Analysis on Residential Electricity Usage Data, LBNL** **2015**
- **Failure Prediction and Diagnosis Algorithm for RMS (Remote Monitoring System), UNIST** **2015**
- **Breakpoint-Based Prefetching Techniques to Improve the Responsiveness of Mobile Applications, Hanyang University** **2014–2016**
- **Development of Next Generation File System for Urban Computing, SNU** **2009–2012**
- **An Adaptive Service Composition Technique for Reliable Service-Oriented Architecture, SNU** **2009–2011**
- **A Study on Scalable Video Server for Heterogeneous Network Environment, SNU** **2007–2008**
- **Development of Ubiquitous Storage Dust, SNU** **2006**

PATENT

-Junhee Ryu, **Dongeun Lee**, and Kwangjin Ko, "Prefetching Method for Flash Memory Device and Recording Medium in Which Method is Recorded," Korean Patent No. 1020140061018, Korea, May 2014.

SOFTWARE PACKAGE RELEASE AND DEMO

-Implementation of Dynamic Extensible Adaptive Locally Exchangeable Measures (IDEALEM), *ACM/IEEE 29th Intl. Conf. High Performance Computing, Networking, Storage, and Analysis (SC)*, Demo, Nov. 2016.
-Implementation of Dynamic Extensible Adaptive Locally Exchangeable Measures (IDEALEM), LBNL S/W Disclosure No. 2016-045, under the modified BSD license, USA, Feb. 2016.

INVITED TALKS

-*When Old Meets New: Revisiting Deep Learning through the Lens of Conventional Tools*, North Texas Chapter, Korean-American Scientists and Engineers Association (KSEA), Nov. 2024.
-*Big Data Summarization with Statistical Perspective*, Department of Computer Science and Engineering, Hanyang University, Nov. 2022.
-*Streaming Data Reduction for IoT*, Division of Media, Culture, and Design Technology, Hanyang University, Nov. 2022.
-*Study of Statistical Multivariate Time Series Data Reduction Algorithms*, Computational Research Division, Lawrence Berkeley National Laboratory (LBNL), Oct. 2021.
-*Fast Multivariate Time Series Data Reduction with Statistical Perspective*, Computational Research Division, Lawrence Berkeley National Laboratory (LBNL), Aug. 2020.
-*Challenges in Statistical Similarity Based Data Reduction*, Department of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST), Aug. 2019.
-*Challenges in Statistical Similarity Based Data Reduction*, Department of Computer Science, East Texas A&M University (ETAMU), Nov. 2018.
-*Novel Data Reduction Based on Statistical Similarity*, Computational Research Division, Lawrence Berkeley National Laboratory (LBNL), May 2016.
-*Big Sensor Data Acquisition and Archiving*, Computational Research Division, Lawrence Berkeley National Laboratory (LBNL), Nov. 2015.
-*Efficient Big Data Signal Acquisition by Compressive Sensing and Random Sampling*, Department of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST), Mar. 2015.
-*An Introduction to Compressive Sensing and Big Data Applications*, Department of Computer Science and Engineering, Hanyang University, Nov. 2014.
-*An Introduction to Compressive Sensing and Big Data Applications*, Department of Computer Science, Korea Advanced Institute of Science and Technology (KAIST), Aug. 2014.
-*An Introduction to Compressive Sensing*, School of Electronic Engineering, Soongsil University, Jan. 2014.

PROFESSIONAL ACTIVITIES

-TPC, ACM Technical Symposium on Computer Science Education (SIGCSE) - Associate Program Chair for Posters Track, 2023.
-TPC, Conference on Neural Information Processing Systems (NeurIPS), 2025.
-TPC, AAAI Conference on Artificial Intelligence (AAAI), 2024—Present, 2021.
-TPC, International Joint Conference on Artificial Intelligence (IJCAI), 2022—Present, 2020.
-TPC, Conference on Uncertainty in Artificial Intelligence (UAI), 2025, 2024.
-TPC, International Conference on Artificial Intelligence and Statistics (AISTATS), 2023.
-TPC, IEEE International Conference on Communications (IEEE ICC) - Big Data Track, Selected Areas in Communications Symposium, 2023; Cloud Communications and Networks Track, Selected Areas in Communications Symposium, 2018.

-TPC, IEEE Global Communications Conference (GLOBECOM) - Big Data Track, Selected Areas in Communications Symposium, 2017—2022.
-TPC, International Workshop on Analytics, Telemetry, and Cybersecurity for HPCC (WATCH) in conjunction with ACM Conference on Computer and Communications Security (ACM CCS), 2025; International Workshop on Systems and Network Telemetry and Analysis (SNTA) in conjunction with ACM International Symposium on High-Performance Parallel and Distributed Computing (ACM HPDC), 2019—2024.
-Guest Editor, Transactions on Emerging Telecommunications Technologies - SI on Real-Time Internet of Things (IoT) and Cyber-Physical Systems (CPS), 2018.
-Reviewer, DOE Office of Science Advanced Scientific Computing Research (ASCR) Applied Mathematics, 2023.
-Reviewer, AMS Mathematical Reviews, 2016—Present.
-Reviewer, International Conference on Machine Learning (ICML), 2024.
-Reviewer, Neural Networks Journal, 2025, 2024.
-Reviewer, IEEE Internet of Things Journal, 2024, 2023.
-Reviewer, International Conference on Scientific and Statistical Database Management (SSDBM), 2023, 2020.
-Reviewer, IEEE Transactions on Signal and Information Processing over Networks, 2022.
-Reviewer, IEEE Transactions on Computers, 2020.
-Reviewer, IEEE Internet of Things Journal, 2018.
-Reviewer, IEEE Systems Journal, 2015–2016.
-Reviewer, Conference on Uncertainty in Artificial Intelligence (UAI), 2016.
-Reviewer, AAAI Conference on Artificial Intelligence (AAAI), 2015.
-Reviewer, Conference on Neural Information Processing Systems (NeurIPS), 2015.
-Reviewer, IEEE Journal on Selected Areas in Communications, 2014.
-Judge, ACM Student Research Competition at SIGCSE 2023.