

Gordon Euhyun Moon (문의현)

CONTACT INFORMATION	<i>E-mail:</i> ehmoon@sogang.ac.kr <i>Webpage:</i> <a href="https://gordonmoon.github.io">https://gordonmoon.github.io</a> <i>Address:</i> Sogang University, Adam Schall Hall, 35, Baekbeom-ro, Mapo-gu, Seoul, South Korea <i>Phone:</i> +82-2-705-8487	
RESEARCH INTERESTS	Deep Learning, High Performance Computing	
EDUCATION	<b>The Ohio State University</b> , Columbus, OH USA Ph.D. in Computer Science and Engineering, 2019 Adviser: Ponnuswamy Sadayappan  <b>Indiana University</b> , Bloomington, IN USA M.S. Computer Science, 2013  <b>Yonsei University</b> , Seoul, South Korea B.S. in Computer Science & Industrial Engineering, 2011	
PROFESSIONAL APPOINTMENTS	<b>Sogang University</b> , Seoul, South Korea <i>Associate Professor - Department of Computer Science and Engineering</i> <i>Assistant Professor - Department of Computer Science and Engineering</i> <i>Adjunct Professor - Department of Economics</i> <i>Adjunct Professor - Department of Artificial Intelligence</i>	2025–present 2022–2025 2024–present 2022–present
	<b>Korea Aerospace University</b> , Goyang, South Korea <i>Assistant Professor - Department of Software</i>	2021–2022
	<b>Sandia National Laboratories</b> , Albuquerque, NM USA <i>Postdoctoral Researcher - Center for Computing Research</i>	2019–2021
RESEARCH GRANTS	<b>National Research Foundation of Korea (NRF)</b> , PI, ₩850,000,000, Optimizing Distributed Deep Learning and Federated Learning for Accelerating Large-Scale Deep Learning Models, 2024–2027 <b>National Research Foundation of Korea (NRF)</b> , Co-PI, ₩1,500,000,000, Developing a High-Performance Computing-Data Platform for Accelerating Large-Scale Machine Learning (PI: Young-jae Kim), 2024–2027 <b>Institute for Information &amp; Communications Technology Planning &amp; Evaluation (IITP)</b> , Co-PI, Information Technology Research Center (ITRC), Developing an Open Platform for Web 3.0 (PI: Sooyong Park), 2023–2030 <b>New Faculty Research Fund</b> , PI, Sogang University, 2022–2025 <b>National Research Foundation of Korea (NRF)</b> , PI, Architecture-aware Parallel Algorithms for Accelerating Training of Deep Neural Networks, 2021–2024	
AWARDS	<b>University Outstanding Teaching Award</b> , Sogang University, 2023–2024 <b>Best Paper Award</b> , KIISE Korea Software Congress (KSC), 2023 <b>Graduate Fellowship</b> , Indiana University, 2011–2012	

## TEACHING

GITF 310: Parallel Computing (Spring 2025)  
CSE 3030: Introduction to Computer Systems (Spring 2025)  
COR 1010: AI Programming (Spring 2025)  
CSE 6473: Advanced GPU Programming (Fall 2024)  
CSE 4200: Recommender Systems (Fall 2024)  
CSE 3030: Introduction to Computer Systems (Spring 2024)  
COR 1010: AI Programming (Spring 2024)  
CSE 6473: Advanced GPU Programming (Fall 2023)  
CSE 4070: Operating Systems (Fall 2023)  
CSE 3030: Introduction to Computer Systems (Spring 2023)  
COR 1010: AI Programming (Spring 2023)  
CSE 2035: Computer Programming II (Fall 2022)  
CSE 4070: Operating Systems (Fall 2022)  
KAU SW 4432: Recommender Systems (Spring 2022)  
KAU SW 4206: AI Programming (Spring 2022)  
KAU SW 4429: Parallel Computing (Fall 2021)  
KAU SW 4205: System Programming (Fall 2021)  
KAU SW 4206: AI Programming (Spring 2021)

## SELECTED PUBLICATIONS

EQUILIBRIA: Co-Optimizing Energy and Latency in Online ML-based Stream Processing Systems  
Sejeong Oh, Soyang Baek, **Gordon E. Moon** and Sungyong Park  
Proceedings of the 25th IEEE International Symposium on Cluster, Cloud and Internet Computing (CCGrid 2025)

ML-based Dynamic Operator-Level Query Mapping for Stream Processing Systems in Heterogeneous Computing Environments  
Sejeong Oh, **Gordon E. Moon** and Sungyong Park  
Proceedings of the IEEE International Conference on Cluster Computing (CLUSTER 2024)

Accelerated Block-Sparsity-Aware Matrix Reordering for Leveraging Tensor Cores in Sparse Matrix–Multivector Multiplication  
Eunji Lee, Yoonsang Han and **Gordon E. Moon**  
Proceedings of the 30th International European Conference on Parallel and Distributed Computing (Euro-Par 2024)

Layer-Wise Sparse Training of Transformer via Convolutional Flood Filling  
Bokyeong Yoon, Yoonsang Han and **Gordon E. Moon**  
Proceedings of the 28th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2024)

Chronica: A Data-Imbalance-Aware Scheduler for Distributed Deep Learning  
Sanha Maeng, **Gordon E. Moon** and Sungyong Park  
Proceedings of the 23rd IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGrid 2023)

Parallel Training of GRU Networks with a Multi-Grid Solver for Long Sequences  
**Gordon E. Moon** and Eric C. Cyr  
Proceedings of the 10th International Conference on Learning Representations (ICLR 2022)

Extending Sparse Tensor Accelerators to Support Multiple Compression Formats  
Eric Qin, Geonhwa Jeong, William Won, Sheng-Chun Kao, Hyoukjun Kwon, Sudarshan Srinivasan, Dipankar Das, **Gordon E. Moon**, Sivasankaran Rajamanickam and Tushar Krishna  
Proceedings of the 35th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2021)

ALO-NMF: Accelerated Locality-Optimized Non-negative Matrix Factorization  
**Gordon E. Moon**, J. Austin Ellis, Aravind Sukumaran-Rajam, Srinivasan Parthasarathy and P. Sadayappan  
 Proceedings of the 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2020)

PROFESSIONAL SERVICE	Head, Global AI Education Center, Sogang University, 2024–present Chair, Major in Software Engineering & Computer Systems, Graduate School of AI-SW, Sogang University, 2023–present Program Committee Member, Korea Information Processing Society (ASK 2025) Program Committee Member, The 40 <sup>th</sup> IEEE International Conference on Computer Design (ICCD 2022) Program Committee Member, Tenth International Workshop on Accelerating Analytics and Data Management Systems Using Modern Processor and Storage Architectures (ADMS 2019) Korean Military Duty Service, Sixth Army Corps Headquarters, 2007–2009
INVITED TALKS	HPC Society Conference, KIISE, July 2024 HPC Society Conference, KIISE, July 2022 KCC 2022, KIISE, June 2022 Computer System Society Conference 2022, The Korean Institute of Information Scientists and Engineers (KIISE), February 2022 NVIDIA GTC’21, November 2021 AMS Fall Western Virtual Sectional Meeting, October 2021 SIAM Conference on Computational Science and Engineering, March 2021 Sandia National Laboratories, August 2019
PH.D. STUDENTS	Yoonsang Han Ah-Hyun Lee
M.S. STUDENTS	Juhyeon Lee Bokki Min Sangwon Bae Kisun Seo
ALUMNI	Yoonsang Han (M.S., Sogang University, 2025, Joined Sogang University for Ph.D. in Computer Science and Engineering) Eunji Lee (M.S., Sogang University, 2025, First employment: Rebellions) Cheolhee Kim (M.S., Sogang University, 2024) Bokyeong Yoon (M.S., Sogang University, 2024, Joined The Ohio State University for Ph.D. in Computer Science and Engineering under the supervision of Professor Martin Kong)
MISCELLANEOUS	U.S. and Korea dual citizenship