

# Gordon Euhyun Moon

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## EXPERIENCE

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**Korea Aerospace University**  
*Assistant Professor*  
Department of Software

**Goyang, Korea**  
*March 2021–present*

**Sandia National Laboratories**  
*Postdoctoral Researcher*

**Albuquerque, NM**  
*October 2019–January 2021*

## EDUCATION

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**The Ohio State University**  
*Ph.D. in Computer Science & Engineering*  
Thesis: "Parallel Algorithms for Machine Learning"  
Advisor: Professor Ponnuswamy Sadayappan  
Committee: Professor Eric Fosler-Lussier and Professor Srinivasan Parthasarathy

**Columbus, OH**  
*2019*

**Indiana University**  
*M.S. in Computer Science*

**Bloomington, IN**  
*2013*

**Yonsei University**  
*B.S. in Computer Science & Industrial System Engineering*  
Double Baccalaureates:  
Computer Science & Industrial System Engineering

**Seoul, Korea**  
*2011*

## RESEARCH INTERESTS

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Deep Learning, High-Performance Computing, and Deep Learning Accelerators

## PUBLICATIONS

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**Gordon E. Moon**, Hyoukjun Kwon, Geonhwa Jeong, Prasanth Chatarasi, Sivasankaran Rajamanickam and Tushar Krishna, "Evaluating Spatial Accelerator Architectures with Tiled Matrix-Matrix Multiplication,"

*IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Forthcoming, 2021 (accepted on July 2021)

Eric Qin, Geonhwa Jeong, William Won, Sheng-Chun Kao, Hyoukjun Kwon, Sudarshan Srinivasan, Dipankar Das, **Gordon E. Moon**, Sivasankaran Rajamanickam and Tushar Krishna, "Extending Sparse Tensor Accelerators to Support Multiple Compression Formats," *Proceedings of the 35th IEEE International Parallel & Distributed Processing Symposium (IPDPS'21)*, 2021

**Gordon E. Moon**, J. Austin Ellis, Aravind Sukumaran-Rajam, Srinivasan Parthasarathy and P. Sadayappan, "ALO-NMF: Accelerated Locality-Optimized Non-negative Matrix Factorization,"

*Proceedings of the 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'20)*, 2020 (acceptance rate: 216/1279  $\approx$  16.9%, research track, oral and poster presentations)

**Gordon E. Moon**, Denis Newman-Griffis, Jinsung Kim, Aravind Sukumaran-Rajam, Eric Fosler-Lussier and P. Sadayappan, "Parallel Data-Local Training for Optimizing Word2Vec Embeddings for Word and Graph Embeddings,"

*Proceedings of the IEEE/ACM 5th International Workshop on Machine Learning in High Performance Computing Environments (MLHPC'19)*, held in conjunction with International Conference for High Performance Computing, Networking, Storage, and Analysis (SC'19), 2019

**Gordon E. Moon**, Israt Nisa, Aravind Sukumaran-Rajam, Bortik Bandyopadhyay, Srinivasan Parthasarathy and P. Sadayappan, "Parallel Latent Dirichlet Allocation on GPUs,"

*Proceedings of the 2018 International Conference on Computational Science (ICCS'18)*, 2018

**Gordon E. Moon**, Aravind Sukumaran-Rajam, and P. Sadayappan, "Parallel LDA with Over-Decomposition,"

*Proceedings of the 2017 IEEE 24th International Conference on High Performance Computing Workshops (HiPCW'17)*, 2017

**Gordon E. Moon** and Jihun Hamm, "A Large-Scale Study in Predictability of Daily Activities and Places,"

*Proceedings of the 8th EAI International Conference on Mobile Computing, Applications and Services (MobiCASE'16)*, 2016

## PROFESSIONAL SERVICE

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Program Committee Member

- Tenth International Workshop on Accelerating Analytics and Data Management Systems Using Modern Processor and Storage Architectures (ADMS 2019), August 2019

## **CERTIFICATION/SKILLS**

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- Proficient in deep learning frameworks such as PyTorch, TensorFlow, Theano, Caffe, etc.
- Proficient in parallel programming using OpenMP, MPI, CUDA, etc.
- Programming Languages Proficiency: C/C++, Python, Java, MATLAB, R, and MySQL

## **AWARDS/HONORS**

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Fall 2011–Spring 2012: Graduate Fellowship, Indiana University

Spring 2007: Dean's Innovation Award, Ecology-Friendly Devices for Comestibles Waste Treatment and Recycling, Yonsei University

## **VOLUNTEERING SERVICES**

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July 2007–June 2009: Military Services, Transportation Battalion, Sixth Army Corps Headquarters