

# Gordon E. Moon

Sandia National Laboratories  
Albuquerque, NM 87185  
+1 (505) 284-4029  
gemoon@sandia.gov  
<https://gordonmoon.github.io>

last updated July 2020

## EDUCATION

---

### **The Ohio State University**

*Ph.D. in Computer Science & Engineering*

Thesis: "Parallel Algorithms for Machine Learning"

Advisor: Professor Ponnuswamy Sadayappan

**Columbus, OH**

2013–2019

### **Indiana University**

*M.S. in Computer Science*

**Bloomington, IN**

2011–2013

### **Yonsei University**

*B.S. in Computer Science & Industrial System Engineering*

**Seoul, Korea**

2004–2011

## EXPERIENCE

---

### **Sandia National Laboratories**

*Postdoctoral Researcher*

Research area: Scalable Layer-Parallel Deep Neural Network Training, Co-design of Artificial Intelligence-focused Architectures and Algorithms

**Albuquerque, NM**

October 2019–present

### **The Ohio State University**

*Instructor*

- Computer Programming In Java

- Introduction to Computing Technology

**Columbus, OH**

2014–2018

*Graduate Teaching Assistant*

- Survey of Artificial Intelligence II: Advanced Techniques

- Principles of Programming Languages

2018–2019

### **Indiana University**

*Graduate Teaching Assistant*

- Elements of Artificial Intelligence

**Bloomington, IN**

2012

## RESEARCH INTERESTS

---

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

## PUBLICATIONS

---

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

*To Appear in 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 presentation)

**Gordon E. Moon**, D. Newman-Griffis, J. Kim, A. Sukumaran-Rajam, E. 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**, I. Nisa, A. Sukumaran-Rajam, B. Bandyopadhyay, S. 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**, A. 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 J. 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

## PAPERS UNDER REVIEW

---

**Gordon E. Moon**, H. Kwon, G. Jeong, P. Chatarasi, S. Rajamanickam and T. Krishna, "Exploring the Mapping Space of Dataflow Accelerators for Linear Algebra Kernels,"

Status: Under review at a conference

## PROFESSIONAL SERVICE

---

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

---

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

Miscellaneous: U.S. citizenship