Neil McGlohon

CONTACT INFORMATION

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EDUCATION

Ph.D., Computer Science ***≈May 2021***
Rensselaer Polytechnic Institute, Troy, New York USA
Advisor: Christopher Carothers
In Progress

M.S., Computer Science **May 2016**
Rensselaer Polytechnic Institute, Troy, New York USA
Advisor: Stacy Patterson

Bachelor of Science in Physics **May 2014**
University of Oklahoma, Norman, Oklahoma USA
Minor: Computer Science

PUBLICATIONS

N. McGlohon, N. Wolfe, M. Mubarak, C. D. Carothers. *Fit Fly: A Case Study on Interconnect Innovation Through Parallel Simulation.* ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (PADS), Chicago, USA. June 2019.

Y. Kang, X. Wang, N. McGlohon, M. Mubarak, S. Chunduri, Z. Lan. *Modeling and Analysis of Application Interference on Dragonfly+.* ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (PADS), Chicago, USA. June 2019.

M. Mubarak, N. McGlohon, M. Musleh, E. Borch, R. B. Ross, R. Huggahalli, S. Chunduri, S. Parker, C. D. Carothers, K. Kumaran. *Evaluating Quality of Service Traffic Classes on the Megafly Network.* ISC High Performance (ISC), Frankfurt, Germany. June 2019.

M. Plagge, C. D. Carothers, E. Gonsiorowski, N. McGlohon. *NeMo: A Massively Parallel Discrete-Event Simulation Model for Neuromorphic Architectures.* ACM Transactions on Modeling and Computer Simulation (TOMACS), September 2018.

M. Plagge, N. McGlohon, C. Ross, C. D. Carothers. *Simulation and Visualization of Custom Neuromorphic Hardware using NeMo.* Neuromorphic Computing Symposium on Architectures, Models, and Applications, Oak Ridge National Laboratory, USA. July 2017.

N. McGlohon, S. Patterson. *Distributed Semi-Stochastic Optimization with Quantization Refinement.* American Control Conference, Boston, USA. July 2016.

S. Patterson, N. McGlohon, K. Dyagilev. *Optimal k-Leader Selection for Coherence and Convergence Rate in One-Dimensional Networks.* IEEE Transactions on Control of Network Systems. January 2016.

S. Patterson, N. McGlohon, K. Dyagilev. *Efficient, Optimal k-Leader Selection for Coherent, One-Dimensional Formations.* European Control Conference, Linz, Austria. July 2015.

TALKS

N. Jain, N. McGlohon. *CODES-Tracer Tutorial: Enabling HPC Design Space Exploration via Discrete-Event Simulation.* HOT-Interconnects, San Jose, USA. August 2019.

N. McGlohon, M. Mubarak. *Introducing the Dragonfly Plus Interconnection Model to CODES.* Summer of CODES Workshop, Argonne National Laboratory, Lemont, USA. July 2018.

PEER REVIEWING EXPERIENCE

ACM SIGSIM Conference on Principles of Advanced Discrete Simulation 2019 (PADS'19)

IEEE Transactions on Parallel and Distributed Systems (TPDS)

Employment Experience

Cisco Meraki, San Francisco, California USA

Software Engineering Intern **May - August 2017**

Research and development of a lockless, thread-safe HashTable using Read-Copy-Update (RCU) techniques. Submitted to open-source repository for the Software Defined Router: Click.

Academic Experience

Rensselaer Polytechnic Institute, Troy, New York USA

Graduate Research Assistant **August 2014 - Present**

M.S. and ongoing Ph.D. research, graduate level coursework and projects. Primary area of research: High-Performance/Parallel Computing. Other areas of interest: parallel and distributed systems, cloud computing, machine learning, neuromorphic computing and simulation.
Maintainer of CODES interconnection network simulator and contributor to ROSS parallel discrete event simulation (PDES) framework.

Teaching Assistant: Computer Science I **August - December 2014**

Acted as support to professor during course. Worked in group of eight teaching assistants. Duties included facilitating two lab discussion sections a week, hosting office hours, grading homework and exams, and monitoring/responding to question on the course online forum.

University of Oklahoma, Norman, Oklahoma USA

Undergraduate Research Assistant **May 2012 - May 2014**

Continued REU research, performing a closer inspection of electrical transport properties of antimony measured at cryogenic temperatures. Worked on developing and refining a method for measuring differential conductance of a material – allowing for a greater understanding of the interface between a topological insulator and a superconductor. Advisor: Dr. Sheena Murphy.

National Science Foundation REU **May - August 2012, 2013**

Participated in condensed matter research and analysis under an NSF Materials Research Science and Engineering Center (MRSEC) grant from advisor: Dr. Sheena Murphy.