Michael M. Pozulp

mpozulp@gmail.com mike.pozulp.com

Education and Activities

The College of William & Mary Williamsburg, VA Aug 2011 – May 2015

- B.S., Computer Science, GPA: 3.75
- Phi Mu Epsilon Math Honors Fraternity

Relevant Experience

Lawrence Livermore National Lab Livermore, CA Jul 2015 – Present

Position: Computer Scientist

- Owner, Opacity Physics Library, used by multi-physics codes for rad physics
- Developer, Mercury, MPI + OpenMP monte carlo rad transport, additions include
  - Scalable Checkpoint Restart (SCR) library, yielding 1000x speedup of checkpoints/restarts using node-local storage, like RAM disks and SSDs
  - Silo I/O improvements to reduce checkpoint size from O(4000n) to O(8n)

W&M High Performance Computing Williamsburg, VA Feb 2012 – May 2015

Position: Undergraduate Assistant to High Performance Computing

- Used MPI to write a novel parallel I/O performance benchmark
- Performed STREAM memory benchmarking, code timing, and cycle counting
- HPC application support, including GIS data vis. and performance refactoring
- Assembly/maintenance of diverse CPU + GPU distributed-memory compute clusters, totaling 900+ cores and 21 TFLOP/s theoretical peak performance

NASA Ames Research Center Moffett Field, CA May 2013 – Aug 2013

Position: Supercomputing Research Intern

- Investigation of performance scaling in four generations of Intel Xeon processors running the NASA Parallel Benchmarks on top-20 supercomputer Pleiades
- Novel research of MPI communication traffic across Pleiades interconnect

Presentations

- Mohror, K. and Pozulp, M. 2016. Performance Portability for Burst Buffers with the Scalable Checkpoint/Restart Library (SCR). *DoE CoE PPM, April 19-21, 2016 in Glendale, Arizona.*
- Pozulp, M. 2014. Creating a Framework for Systematic Benchmarking of High Performance Computing Systems. *Student Poster Session*, *SC14.*

Honors and Awards

- NASA Ames Poster Contest, 1st Place Aug 2013
- Stanford CS148 Raytracing Project, 2nd Place Dec 2015
- Virginia Space Grant Consortium Grant Recipient ($6750) Jun 2013
- W&M Small Hall Makerspace Grant Recipient ($700) May 2014
- ACM Student Research Competition Travel Award ($500) Sep 2014

Skills and Proficiencies

- C/C++, Java, Python, R, shell
- Object-oriented programming, systems programming, software engineering, simulation, scientific data visualization, graphics, technical writing and speaking