

# Sean L. McDaniel

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## EDUCATION

**University of Delaware**, Newark, DE

Expected Graduation: December 2014

- B.S. Computer Science,
- 3.6 Major GPA; 3.4 Overall GPA

**Hodgson Vo-tech**, Newark, DE

May 2005

## RESEARCH INTERESTS

High Performance Computing, Big Data, Data Mining and Information Retrieval

## PROFESSIONAL EXPERIENCE

**University of Delaware**, Undergraduate Research Assistant

Spring 2014 – Present

- Developed an HDF5 I/O kernel to study the impact irregular I/O to scientific applications. Code was written in C, and was to extend the work of a colleague in my research lab.
- Supervisor: Michela Taufer (UD)

**Oak Ridge National Laboratory**, Higher Education Research Experience

Summer 2014

- Developed a methodology for decoupling the I/O and communication codes for scientific applications to be used as system stressors in high performance computing. Primary focus was on a framework called Hardware/Hybrid Accelerated Cosmology Codes. (10-week program).
- Supervisor: Hai Ah Nam (ORNL), Oral Sarp (ORNL)

**University of Delaware**, Lab Staff (System Administration)

Fall 2013 – April 2014

- Provided Linux and Mac OS X system administration to the Electrical & Computer Engineering department. Duties included deploying open source packages to university owned computers, developing bash scripts to compete automated tasks, printer maintenance, and web programming.
- Supervisor: Andrew Roosen (UD)

## HONORS AND AWARDS

- Dean's List: Spring 2014, Fall 2013

## POSTERS

- Sean L. McDaniel. **Comparing Decoupled I/O Kernels versus Real Traces in the I/O Analysis of the HACC Scientific Applications on Large-Scale Systems**, *Proceedings of the ACM/IEEE International Conference for High Performance Computing and Communications conference (SC) Association for Computing Machinery Student Research Competition*, November 2014, New Orleans, Louisiana, USA. (Acceptance rate: 52%)
- Sean L. McDaniel. **Comparing Decoupled I/O Kernels versus Real Traces in the I/O Analysis of the HACC Scientific Applications on Large-Scale Systems**, Oak Ridge National Laboratory, August 2014.

## PAPER

- S. Herbein, S. McDaniel, N. Podhorszki, J. Logan, S. Klasky, and M. Taufer. **Performance Characterization of Irregular I/O at the Extreme Scale**. *Parallel Computing (ParCo)*, 2014. (In review)

## ACADEMIC SERVICE

- Phi Theta Kappa, inducted Spring 2009

## PROFESSIONAL SKILLS

- Proficient in C, C++, Java, Python, MPI, JavaScript, C#, and HTML/CSS, HDF5 File System
- Intermediate knowledge in MySQL, PHP, LISP, ASP.Net, MS SQL
- Experience with Linux, Windows XP/7/8, Mac OS X, EMACS, Eclipse, and Adobe Photoshop