

Brian J Gravelle

Curriculum Vitae

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Education

- In Progress Ph.D. Computer Science, *University of Oregon*, Sept. 2015 - present
Research supported by Dr. Boyana Norris
GPA: 3.96
Relevant courses: Distributed Systems, Computer Architecture, Database Systems, Programming Languages
- 2015 B.S. Computer Engineering, *Gonzaga University*, Sept. 2011 - May 2015
GPA: 3.79
Relevant courses: Parallel Computing, Embedded Systems, General Programming Courses, Linear Algebra

Research and Projects

- Sept 2017 - Present Performance analysis of High Energy Physics Software, U. of Oregon
PI: Dr. Boyana Norris
Using TAU and VTune performance analysis tools to determine opportunities for improvement in analysis software for HEP applications
Exploring the performance differences between standard server architectures and Intel KNL systems
- June 2016 - Present Ph.D. Directed Research Project, U. of Oregon
PI: Dr. Boyana Norris
Automatic performance tuning of Kalman filters on disparate architectures
Compared tuning effectiveness for Intel, IBM and ARM systems
Applied the results to object tracking software
- July 2015 - June 2016 Secure Computer Architecture development, U. of Oregon
PI: Dr. Michel A. Kinsky
Researched secure computer architectures
Assisted in the development of a computer architecture simulator

Sept 2015 - May 2015 Senior Design Project, Home Security system, Gonzaga University
Designed and prototyped motion sensors for a home security system
Collaborated with multidisciplinary engineering team to develop affordable home security system

June 2013 - May 2015 Multi-polarization antenna design, Gonzaga University
PI: Dr. Steve Schennum
Designed an antenna to produce arbitrary polarization types
Constructed computer simulations (Ansys HFSS) and physical prototypes

Teaching Experience

Spring 2017 CIS 211 Computer Science II, Graduate Teaching Fellow
Dept. of Computer and Information Science, University of Oregon

Winter 2017 CIS 210 Computer Science I, Graduate Teaching Fellow
Dept. of Computer and Information Science, University of Oregon

Fall 2016 CIS 210 Computer Science I, Graduate Teaching Fellow
Dept. of Computer and Information Science, University of Oregon

Fall 2015 CIS 314 Computer Organization, Graduate Teaching Fellow
Dept. of Computer and Information Science, University of Oregon

Publications

- [1] Steven Schennum, Brian Gravelle, Caitlin Croskrey, James Smock, and Robert Conley. Dual feed omnidirectional antenna for adaptive polarization and mimo transceivers. In *Proceedings of Wireless Innovation Conference on Wireless Communications Technologies and Software Defined Radio*, pages 102–106, 2015.

Posters

- [1] S. Khadka, S. Ergullu-Koehnen, B. Gravelle, and M. Kinsy. Neural network based predictive routing for network-on-chip architectures. In *Work-in-Progress Presentation at 53rd Design Automation Conference (DAC 2016)*, Austin, Texas, Jun. 5-9 2016.
- [2] P. Ren, M. Kinsy, C. Yang, B. Gravelle, S. Khadka, and N. Zheng. Copal: Connectivity preserving algorithm for network-on-chip power-gating. In *Work-in-Progress Presentation at 53rd Design Automation Conference (DAC 2016)*, Austin, Texas, Jun. 5-9 2016.

Awards and Honors

Tau Beta Pi Engineering Honors Society

Alpha Sigma Nu Honor Society

2016 A. Richard Newton Young Student Fellow

2017 Student Volunteer, International Conference for High Performance
Computing, Networking, Storage and Analysis

Last updated December 2017