

## Patrick Thomas Carpenter

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### EDUCATION

- Auburn University, Auburn, AL May 2012  
Master of Science in Computer Science and Software Engineering  
Option in Information Assurance, GPA 4.00
- Auburn University, Auburn, AL May 2010  
Bachelor of Science in Computer Science and Physics  
Concentration in Mathematics, GPA 3.98

### EXPERIENCE

- Parallel Architecture and Systems Laboratory, Auburn University, Auburn, AL Jan. 2011  
Graduate Research Assistant  
Performed development and research activities involving CUDA for GPGPU. – Present
- Computer Science and Software Engineering, Auburn University, Auburn, AL Aug. 2010  
Graduate Teaching Assistant  
Fall 2010: Software Modeling and Design, Formal Languages  
Spring 2011: Software Modeling and Design, Computer Networks  
Fall 2011: Advanced Parallel and Distributed Computing (CUDA Teaching Center) – Present
- Los Alamos National Laboratory, Los Alamos, NM May 2010  
Graduate Student Intern, BS+0  
Extended through-the-web HPC cluster monitoring software using Zenoss framework. – Aug. 2010
- AubieSat Auburn Student Satellite Program, Auburn University, Auburn, AL May 2009  
Command and Data Handling (Software) Team Lead  
Led development of a real-time embedded control system for a student-built satellite – May 2010
- Physics Department, Auburn University, Auburn, AL Feb. 2007  
Undergraduate Research Assistant  
Designed and performed numerical experiments for computational physics research. – Dec. 2008

### PUBLICATIONS

- B. Wang, P. Carpenter, et al., "Dynamic Task Scheduling and Aggregation for Scalable Ecosystem Modeling" The Journal of Computational Science (under review) (2012). 2012
- B. Gu, P. Carpenter, W. Yu. "Load Balancing on Clusters through Data Distribution based on the Number of Cores" EKRI Journal (under review) (2011). 2011
- G.B. Andresen, et al. "Autoresonant excitation of antiproton plasmas" Phys. Rev. Lett. 106, 025002 (2011). 2011
- P. T. Carpenter (2010). Performance in scientific computing with a performance characterization of the Parallel Ocean Program on Ranger. Auburn University, AL. 2010
- J.L. Hurt, P.T. Carpenter, C.L. Taylor, and F. Robicheaux, "Positron and electron collisions with anti- protons in strong magnetic fields" J. Phys. B 41, 165206 (2008). 2008

### HONORS, ACTIVITIES & SKILLS

- University Honors Scholar (completed both junior and senior honors programs) May 2010
- Outstanding Student in Computer Science Apr. 2010
- Presentation at National Conference on Undergraduate Research 2010 Apr. 2010
- Auburn Undergraduate Research Fellowship Program award recipient May 2010
- Supercomputing 2009 Conference Student Volunteer Nov. 2009
- Interests include parallel, distributed and scientific computing, computer architecture and discrete mathematics.