

William M. Jones, Ph.D.

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US Naval Academy

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- Current** Assistant Professor of Electrical and Computer Engineering at US Naval Academy
- Education**
- | | |
|---|--------------------------------|
| Clemson University <i>Ph.D. in Computer Engineering</i> Emphasis: Parallel computing GPA: 3.87/4.00 Defended: Nov. 11, 2005, Graduated: Dec. 22, 2005 | Clemson SC 2001–2005 |
| <i>M.S. in Computer Engineering</i> Emphasis: Computer system architecture Minor: Mathematics GPA: 3.79/4.00 | 1999–2000 |
| <i>B.S. in Computer Engineering</i> Minor: Modern languages with emphasis in Spanish Ranked: 2 nd out of 23 in major, 56 th out of 1378 in the university. Graduated: Summa Cum Laude with Departmental Honors GPA: 3.90/4.00 | 1995–1999 |
- Previous Research Experience**
- | | |
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| Clemson University – ECE Department <i>Research Assistant:</i> August 1999–December 2001, August 2002–December 2005 Conducted research for Dr. Walt Ligon in the area of Beowulf cluster allocation, scheduling, and resource management simulation and system software. Lead the design and implementation efforts of our custom multi-cluster simulator. Mentored two masters students and one undergraduate. Presented published results at two well known conferences. Demoed our work at Supercomputing 2004 as part of the NASA booth. | Clemson SC |
| Clemson University – Department of Physics and Astronomy <i>Research Associate:</i> January 2002–August 2002 Conducted research for Dr. Michael Hickey in the area of parallel numerical simulations. Ported existing simulation code from Windows Digital Visual FORTRAN to Linux GNU FORTRAN. Parallelized simulation using MPI for use with Beowulf-class supercomputers. | Clemson SC |
- Teaching Experience**
- | | |
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| US Naval Academy – ECE Department <i>Assistant Professor:</i> Taught EE 301 and 302, a non-major core course sequence in DC/AC circuit analysis and communications including phasors, power-factor correction, synchronous machines, AM, FM, spread-spectrum, and LAN networking. Taught EE 242, a digital logic course including synchronous state machine design and implementation as well as an introduction to VHDL and PLD/FPGA programming. Taught EE 488, a senior-level course in computer architecture. | Annapolis MD F '06 - present |
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Clemson University – ECE Department **Clemson SC**
Visiting Instructor: S '06
 Taught ECE 329, an operating systems course that addresses fundamental structures and issues that arise in the analysis and implementation of computer systems.
Graduate Teacher of Record: S '03–S '05, S '06
 Taught ECE 307, a first course in electrical engineering to provide non-Electrical Engineering majors with a knowledge of DC and AC circuit theory, AC power distribution, electrical devices, and an introduction to computer engineering and digital systems.
Teaching Assistant: F '99–F '02
 Taught ECE L371, a C language oriented microcomputer interfacing laboratory, and served as a mentor to other teaching assistants for several semesters.

Tri-County Technical College – Department of Mathematics **Pendleton SC**
Adjunct Faculty: Taught MAT 102, an intermediate algebra course. Summer 2003
Adjunct Faculty: Taught MAT 110, a college algebra course. F '02, S '03

Industry Experience **Square D Company – Engineering Systems** **Nashville TN; Cedar Rapids IA**
Student Engineer: Summers 1998, 1997
 Designed and implemented GUI report generation tool. Assisted in development of training class. Designed and implemented PERL based HTML search tool. Analyzed CADD5 for NT beta and documented potential problems. Developed and documented methods for triple OS boot of workstation. Learned CADD5 CAD interface and basic usage. Implemented scripts for stream-lining PC boot up and back up schema.

Santee Cooper – Management Information Systems **Conway SC**
Student Analyst: Summer 1996
 Implemented and administered Novell NetWare networks. Installed and configured client-side workstations and applications. Provided technical support and troubleshooting.

Continuing Education **Clemson University Office of Teaching Effectiveness and Innovation** **Date Taken**
 Workshop: Learning Gains in Large Classes: Best Practices 01-07-2005
 Blackboard Introductions: Getting Started 01-06-2005
 Workshop: Course Design and Development Made Easy and Logical 08-06-2004
 Workshop: How to Get Your Students to Do the Readings 07-28-2004
 Workshop: Teaching and Managing Large Classes 07-14-2004

Professional Service Program Committee Member for SRMPDS at ICPADS 2007
 Program Committee Member for GreenCom at Cluster 2007
 Reviewer for the Journal of Parallel and Distributed Computing 2006 -
 Committee Co-Chair for IEEE SoutheastCon 2001 (Software Competition)

Departmental Service Computer Engineering Curriculum Committee Member 2006 - present
 ECE Department Recruitment Committee Member 2006 - present
 Senior Design Project Mentor 2006-2007 (Voice Transformation Device)
 Senior Design Project Mentor 2007-2008 (Improvised Explosive Device Detector)

Publications (9) William M. Jones, John Daly, Nathan DeBardeleben, “Application Resilience: Progress in Spite of Failure”, **Workshop on Resiliency in High-Performance Computing, held in conjunction with the 8th IEEE International Symposium on Cluster Computing and the Grid**, Lyon, France Summer, 2008. (*currently under review*)

- (8) William M. Jones, “[Using Checkpointing to Recover from Poor Multi-site Parallel Job Scheduling Decisions.](#)”, **The 5th International Workshop on Middleware for Grid Computing (MGC 2007)**, held in conjunction with the **ACM/IFIP/USENIX 8th International Middleware Conference 2007**, Newport Beach, California, November 2007.
- (7) William M. Jones, “[The Impact of Error in User-Provided Bandwidth Estimates on Multi-site Parallel Job Scheduling Performance.](#)”, **19th IASTED International Conference on Parallel and Distributed Computing and Systems**, Cambridge, Massachusetts, November 19, 2007.
- (6) William M. Jones, Walter B. Ligon III, “[Ensuring Fairness Among Participating Clusters During Multi-site Parallel Job Scheduling.](#)”, **International Conference on Parallel and Distributed Computing, Second International Workshop on Scheduling and Resource Management for Parallel and Distributed Systems**, Minneapolis, Minnesota, July 12, 2006, pp. 109-114.
- (5) William M. Jones, Walter B. Ligon III, Nishant Shrivastava, “[The Impact of Information Availability and Workload Characteristics on the Performance of Job Co-allocation in Multi-clusters](#)”, **International Conference on Parallel and Distributed Computing**, Minneapolis, Minnesota, July 12, 2006, pp. 123-134.
- (4) William M. Jones, Louis W. Pang, Daniel Stanzione, Walter B. Ligon III, “[Characterization of Bandwidth-aware Meta-schedulers for Co-allocating Jobs Across Multiple Clusters](#)”, **Journal of Supercomputing**, *Special Issue on the Evaluation of Grid and Cluster Computing Systems*, Springer Science and Business Media B.V, Vol. 34, No. 2, November 2005, pp. 135 - 163.
- (3) William M. Jones, Louis W. Pang, Daniel Stanzione, Walter B. Ligon III, “[Bandwidth-aware Co-allocating Meta-schedulers for Mini-grid Architectures](#)”, **International Conference on Cluster Computing (Cluster)**, September 2004, pp. 45 - 54.
- (2) William M. Jones, Louis W. Pang, Daniel Stanzione, Walter B. Ligon III, “[Job Communication Characterization and its Impact on Meta-scheduling Co-allocated Jobs in a Mini-grid](#)”, **International Parallel and Distributed Processing Symposium (IPDPS): Workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems**, April 2004.
- (1) Nathan A. DeBardeleben, Adam Hoover, William M. Jones, Walter B. Ligon III, “[Parallelization Techniques for Spatial-Temporal Occupancy Maps from Multiple Video Streams](#)”, **International Parallel and Distributed Processing Symposium (IPDPS): Workshop on Parallel and Distributed Computing in Image Processing, Video Processing, and Multimedia**, pp. 202–209, May 2000.

Invited Talks

- Taught “Memory Debugging Using Valgrind, Electric Fence, and gdb”, Summer Undergraduate Research Program, Clemson University, Summer 2004, Summer 2003.
- “Parallel Programming”, EE482 Seminar, ECE Department, US Naval Academy, Spring 2007.

References

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