

William M. Jones, Ph.D.

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105 Coastal Science Center
Coastal Carolina University

Current Asst. Prof. of Computer Science at Coastal Carolina University (2008 - present)

Employment History Asst. Prof. of Electrical and Computer Eng. at US Naval Academy (2006-2008)
Vist. Inst. of Electrical and Computer Eng. at Clemson University (2006)
GTR of Electrical and Computer Eng. at Clemson University (2003 - 2005)
Adjunct Faculty of Mathematics at Tri-County Technical College (2002-2003)
Res. Associate for Dept. of Physics and Astronomy at Clemson University (2002)
Res. Assistant in Electrical and Computer Eng. at Clemson University (1999 - 2002)

Education

Clemson University

Ph.D. in Computer Engineering

Emphasis: Parallel computing

GPA: 3.87/4.00

Defended: Nov. 11, 2005, Graduated: Dec. 22, 2005

M.S. in Computer Engineering

Emphasis: Computer system architecture

Minor: Mathematics

GPA: 3.79/4.00

B.S. in Computer Engineering

Minor: Modern languages with emphasis in Spanish

Ranked: 2nd out of 23 in major, 56th out of 1378 in the university.

Graduated: Summa Cum Laude with Departmental Honors

GPA: 3.90/4.00

Clemson SC

2001–2005

1999–2000

1995–1999

Research

Coastal Carolina University – CS Department

Assistant Professor:

Conducting resilience studies in the context of parallel and distributed systems, particularly in computational grids. Additionally, investigating the deployment of field-programmable gate arrays across several computer science courses (*SOTL-related research; in planning/progress*).

Conway SC

June 2008–present

Clemson University – ECE Department

Research Assistant: 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

Research Associate:

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

January 2002–August 2002

Teaching Experience	Coastal Carolina University – CS Department	Conway SC
	<i>Assistant Professor:</i>	Summer '08 - present
	Taught CSCI 150, a second course in Java programming that includes treatment of OO-design and an introduction to elementary data structures and algorithms. Taught CSCI 425, a database systems course that includes an analysis of functional dependencies, normal forms, relational-algebra, as well as hands-on development of complete database driven applications and systems. Taught CSCI 207, an advanced introduction to programming in C and C++ in the Linux environment. Taught CSCI 399, an introduction to parallel computing, including a strong component of performance metrics, domain decomposition, and programming using MPI. Taught CSCI 110, a service course that includes a treatment of enterprise business applications.	
	US Naval Academy – ECE Department	Annapolis MD
	<i>Assistant Professor:</i>	F '06 - S '08
	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.	
	Clemson University – ECE Department	Clemson SC
	<i>Visiting Instructor:</i>	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. <i>Graduate Teacher of Record:</i>	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. <i>Teaching Assistant:</i>	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
	<i>Adjunct Faculty:</i> Taught MAT 102, an intermediate algebra course.	Summer 2003
	<i>Adjunct Faculty:</i> Taught MAT 110, a college algebra course.	F '02, S '03
Industry Experience	Square D Company – Engineering Systems	Nashville TN; Cedar Rapids IA
	<i>Student Engineer:</i>	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
	<i>Student Analyst:</i>	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	Registered Reviewer for the J. of Parallel and Distributed Computing	2006 - present	
	Registered Reviewer for the Cluster Computing Journal	2009 - present	
	Prog. Comm. for SRMPDS at IACC Intl. Conf. on Parallel Processing	2009	
	Prog. Comm. for Intl. Conf. on Electro/Information Technology	2008	
	Prog. Comm. for SRMPDS at IACC Intl. Conf. on Parallel Processing	2008	
	Reviewer for EuroPar (Scheduling and Load Balancing - Topic 3)	2008	
	Prog. Comm. for SRMPDS at IEEE Intl. Conf. on Parallel and Dist'd. Systems	2007	
	Prog. Comm. for GreenCom at IEEE Cluster	2007	
	Committee Co-Chair for IEEE SoutheastCon (Software Competition)	2001	
University Service	Coastal Carolina University, Computer Science Department	Conway SC	
	University Judicial Board Member	2009	
	Departmental ABET Assessment Committee	2008 - present	
	Departmental Theoretical Track Curriculum Committee	2008 - present	
	Project Mentor (Machine Language Simulator)	2008 - 2009	
	United State Naval Academy, Elec. and Comp. Eng. Dept	Annapolis MD	
	Computer Engineering Curriculum Committee Member	2006 - 2008	
	ECE Department Recruitment Committee Member	2006 - 2008	
	Senior Design Project Mentor (Voice Transformation Device)	2006 - 2007	
	Senior Design Project Mentor (Improvised Explosive Device Detector)	2007 - 2008	
	Invited Talks	“Integrating Field Programmable Gate Arrays Across a Computer Science Curriculum”, Computer Security Conference, Myrtle Beach, SC, March 27, 2009.	
		“Engineering Brief: Pancake Cookers”, Coastal/Clemson 3+2 Pre-Engineering Program Presentation, CS Department, Coastal Carolina University, November 18, 2008.	
		“An Introduction to VHDL: Using Altera’s Quartus II IDE”, Numbers & Bytes Meeting, CS Department, Coastal Carolina University, October 20, 2008.	
		“Nuclear Stockpile Stewardship, Trials and Tribulations: A Computing Perspective”, Computer Security Conference, Myrtle Beach, SC, April 18, 2008.	
“Parallel Programming”, EE482 Seminar, ECE Department, US Naval Academy, Spring 2007.			
Taught “Memory Debugging Using Valgrind, Electric Fence, and gdb”, Summer Undergraduate Research Program, Clemson University, Summer 2004, Summer 2003.			
Publications	(11) John Stamey and William M. Jones, “EZML – Easy Machine Language Simulator”, an SOTL-associated conference, (in preparation) .		
	(10) William M. Jones, “Network-aware Selective Job Checkpoint and Migration to Enhance Co-allocation In Multi-cluster Systems”, Journal of Concurrency and Computation: Practice and Experience , Special Issue: Advanced Strategies in Grid Environments, September 10, 2009, v. 21, n. 13, pp. 1672-1691.		

- (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 May, 2008, pp. 789-794.
- (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.

References

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