

James (Jimmy) Q. Secretan

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Education

Spring 2009 (Projected)	Ph.D., Computer Engineering	University of Central Florida, GPA: 4.0
Fall 2007	M.S., Computer Engineering (Software Engineering Concentration)	University of Central Florida, GPA: 4.0, GRE: 1480
Spring 2004	B.S., Computer Engineering	University of Central Florida (with Honors), GPA: 3.9

Areas Of Specialization

High Performance Data Mining and Machine Learning; Web-based Technologies; Neural Networks; Genetic Algorithms; Beowulf Cluster Computing; Linux

Publications

Journal Articles

J. Secretan, M. Lawson and L. Boloni, "Efficient Allocation and Composition of Distributed Storage," *Journal of Supercomputing* (To Appear: currently accessible online).

M. Georgiopoulos, R.F. DeMara, A.J. Gonzalez, A.S. Wu, M. Mollaghasemi, E.Gelenbe, M. Kysilka, **J. Secretan**, C.A. Sharma, A.J. Alnsour, "Combined Research and Curriculum Development in Machine Learning," *IEEE Transactions on Education* (Under Review).

J. Secretan, N. Beato, D.B. D'Ambrosio, A. Rodriguez, A. Campbell, K.O. Stanley, "Picbreeder: Collaborative Interactive Evolution of Images," *Leonardo* (Transactions Section), Vol. 41, No.1, pp. 98-99, 2008.

J. Castro, **J. Secretan**, M. Georgiopoulos, R.F. Demara, G. Anagnostopoulos, A. Gonzalez, "Pipelining of Fuzzy ARTMAP without Matchtracking: Correctness, Performance Bound, and Beowulf Evaluation," *Neural Networks*, Vol. 20, No. 1, pp 109-128, January 2007.

J. Castro, M. Georgiopoulos, **J. Secretan**, Demara, R.F., Anagnostopoulos, A. and Gonzalez, A., "Parallelization of Fuzzy ARTMAP to Improve its Convergence Speed: The Network Partitioning Approach and the Data Partitioning Approach,"; *Nonlinear Analysis: Theory, Methods and Applications*, Vol. 63, pp e877-e889. November 2005.

Selected Conference Papers

A. Koufakou, **J. Secretan**, J. Reeder, Kel Cardona, M. Georgiopoulos, G. Anagnostopoulos, "Fast Parallel Outlier Detection for Categorical Datasets Using MapReduce," World Congress on Computational Intelligence (WCCI), Hong Kong, China, June 1-6, 2008.

J. Secretan, N. Beato, D.B. D'Ambrosio, A. Rodriguez, A. Campbell, K.O. Stanley, "Picbreeder: Evolving Pictures Collaboratively Online," Human Factors in Computing Systems (CHI) Conference, Florence, Italy, April 5-10, 2008.

J. Secretan, M. Georgiopoulos, J. Castro, "A Privacy Preserving Probabilistic Neural Network for Horizontally Partitioned Databases," International Joint Conference on Neural Networks, Orlando, FL, August 12-17, 2007

J. Castro, M. Georgiopoulos, **J. Secretan**, "Analyzing the Fuzzy ARTMAP Matchtracking mechanism with co-objective Optimization Theory," International Joint Conference on Neural Networks, Orlando, FL, August 12-17, 2007

J. Secretan, M. Lawson, L. Boloni, "Brokering Algorithms for Composing Low Cost Distributed Storage Resources," Workshop on Scalable Data Management Applications and Systems (SDMAS), in the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'07), Las Vegas, NV, June 25-28, 2007

J. Secretan, E. Turner, D. Turgut, "PREDATOR: A Protocol for Ad-hoc and Brokered Dynamic Spectrum Management," Wireless Communication and Networking Conference, March 11-15, 2007, pp. 2553-2558.

J. Secretan, M. Georgiopoulos, I. Maidhof, P. Shibly, J. Hecker, “Methods for Parallelizing the Probabilistic Neural Network on a Beowulf Cluster Computer,” WCCI, Vancouver, B.C., Canada, July 16-21, 2006, pp. 2378-2385.

J. Secretan, J. Castro, A. Chadha, B. Huber, J. Tapia, M. Georgiopoulos, G. Anagnostopoulos, S. Richie, “Pipelining of ART Architectures (FAM, GAM, EAM) Without Match Tracking,” Artificial Neural Networks In Engineering Proceedings, St. Louis, MO, November 6-9, 2005.

J. Secretan, J. Castro, M. Georgiopoulos, J. Tapia, A. Chadha, B. Huber, G. Anagnostopoulos, S. Richie, “Parallelizing the Fuzzy ARTMAP Algorithm on a Beowulf Cluster,” International Joint Conference on Neural Networks Proceedings, Montreal, Quebec, Canada, July 31-August 4, 2005.

J. Secretan and G. Schiavone, “Genetic Algorithm and Neural Network Hybrids for Controlling Mobile Robots,” 26th Inter-Service/Industry Training, Simulation, and Education Conference Proceedings, Orlando, FL, December 6-9, 2004.

J. Castro, **J. Secretan**, M. Georgiopoulos, R.F. Demara, G. Anagnostopoulos, A. Gonzalez, “Pipelining of Fuzzy ARTMAP (FAM) Without Match Tracking,” Artificial Neural Networks In Engineering (ANNIE) Proceedings, St. Louis, MO, November 7-10, 2004.

J. Castro, M. Georgiopoulos, **J. Secretan**, R.F. Demara, G. Anagnostopoulos and A. Gonzalez, “Parallelization of Fuzzy ARTMAP to Improve its Convergence Speed: The Network Partitioning Approach and the Data Partitioning Approach,” *World Congress of Nonlinear Analysis (WCNA) Proceedings*, Orlando, FL, June 30-July 7, 2004.

G. Schiavone, M. Dolezal, J. Tracy, **J. Secretan** and L. Mangold, “Beowulf Supercomputing for Mobile Applications,” 25th Inter-Service/Industry Training, Simulation, and Education Conference Proceedings, Orlando, FL, December 1-4, 2003.

Honors and Awards

2005	NSF Graduate Research Fellowship
2004	Trustees Doctoral Fellowship
2003	Top 100 Who’s Who at UCF

2003	Honors in the Major Scholarship
2002	IST Student Researcher of the Year
2002	Founders Day Award for the College of Engineering and Computer Science at UCF
2000-2004	Bright Futures Scholarship
2000-2004	National Merit Scholarship

Research Experience

2004-2007: **Graduate Research Assistant at the University of Central Florida.** Worked on dissertation entitled “A High Performance, Reliable and Privacy Preserving Grid for Large Scale Data Mining Algorithms.” Designed parallel and distributed machine learning algorithms and architectures. Worked on privacy preserving distributed data mining algorithms, grid technologies and distributed storage technologies. Administered several Linux servers and small clusters.

2006-2008: **Developed concept and design for Picbreeder.org**, an experimental web application that allows users to collaboratively evolve images. Developed the site’s server-side technologies (web services and databases).

2001-2004: **Research Assistant at the Institute for Simulation and Training.** Designed and constructed several different miniature/embedded Beowulf cluster computers. Aided in the construction, installation and benchmarking of a 108-node cluster (SCEROLA) and two sister clusters each with 96 nodes (OPCODE I/II). Supervised the construction of the 40-node campus IEEE cluster.

2002-2004: **Honors In The Major Thesis entitled “A Hybrid of Neural Networks and Genetic Algorithms for Controlling Mobile Robots.”** Integrated a genetic algorithm based robotic control application with a neural network. Integrated a 3-d terrain navigation and visualization tool into the simulation.

Mentorship

2005-2008: Provided project ideas for 98 students over several semesters of undergraduate and graduate level software engineering classes. Served as a mock “customer” and provided guidance on software design and development.

Professional Experience

February 2008 to Present: Software Engineer at Distributed Simulation Technologies. Helped develop and productize simulation and office support software, using C++ and Java.

Skills

Extensive Linux skills, including those pertinent to a research environment (i.e. parallel computing toolkits like MPI and SGE) and those pertinent to development (make, Subversion, gdb, etc.). Linux system administration, including Apache, Tomcat, Axis, DNS, NFS and NIS. Proficient in C/C++, Java, PHP and HTML. Familiar with Matlab, Perl, Bash Scripts, ASP/VB.NET.

Organization/Clubs

Member, Eta Kappa Nu, the Computer Engineering Honor Society, 2001-Present.

Member, IEEE, 2001-Present.

Member, UCF Honors College, 2000-2004.

Activities

Volunteer religious education instructor, for 6th-12th graders at Holy Cross Catholic Church, 2000-2007.