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The University of Tennessee
Electrical and Computer Engineering
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Professional Preparation

D.Sc. in Electrical Engineering, Washington University, St. Louis, Missouri, December 1994.

Doctoral dissertation: *Parallel Application Performance on Shared, Heterogeneous Workstations*.

Advisor: Roger D. Chamberlain

Readers: Mark Franklin, Michael A. Province, Daniel Fuhrmann, I. Norman Katz, Ron Indeck

M.S. in Electrical Engineering, Washington University, St. Louis, Missouri, May 1992.

Thesis: *QNET: A Globally-Clocked Discrete-Event Queueing Network Simulator*.

Advisor: Roger D. Chamberlain

Readers: Mark Franklin, Paul Min, Barry E. Spielman

M.S. in Computer Science, Washington University, St. Louis, Missouri, May 1992.

B.S. in Electrical Engineering, Washington University, St. Louis, Missouri, May 1990.

B.S. in Computer Science, Washington University, St. Louis, Missouri, May 1990.

Appointments

August 2000 – present, *Assistant Professor*, The University of Tennessee, Electrical & Computer Engineering, Knoxville, TN.

January 1999 – July 2000, *Chief Technical Officer*, FTL Systems, Inc., Rochester, MN.

January 1999 – present, *Captain*, United States Air Force Reserve (inactive).

March 1996 – January 1999, *Captain/Computer Systems Research Engineer*, United States Air Force, Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, OH.

January 1995 – March 1996, *1 Lt/Avionics Systems Research Engineer*, United States Air Force, Wright Laboratory, Wright-Patterson Air Force Base, Dayton, OH.

August 1991 – May 1992, *Head Grader*, Washington University, Electrical Engineering, St. Louis, MO.

August 1989 – December 1994, *Research Assistant*, Electrical Engineering/Computer and Communications Research Center (CCRC), Washington University, St. Louis, MO.

May 1987 – May 1990, *Unix Systems Administrator*, Engineering Computer Laboratory, Washington University, St. Louis, MO.

May 1987 – August 1987, *Engineering Intern*, U.S. Army Aviations Systems Command, UH-1 Program Office, St. Louis, MO.

Honors and Awards

- John W. Fisher Professorship, College of Engineering, University of Tennessee, August 2001.
- Best Paper Award, IEEE/Acellera VHDL International Users' Forum, October 2000.
- Air Force Commendation Medal (1999).
- US Air Force Research and Development Award, recognized as the best research and development engineer in US Air Force for 1998.
- Wright Laboratory Company Grade Officer of the Quarter, Q2, 1997 (out of 250 CGOs).
- Recipient of Air Force Association's Theodore von Karman Graduate Fellowship, May 1990.
- Eta Kappa Nu (Electrical Engineering honor society), 1989.
- Tau Beta Pi (Engineering honor society), 1989.
- U.S. Air Force Reserve Office Training Corps (ROTC) scholarship, April 1986.
- National Merit Scholarship, April 1986.

Professional Memberships

- Institute for Electrical and Electronics Engineers (IEEE)
IEEE Senior Member, 2000 – present
IEEE Member, 1995 – 2000
IEEE Student Member, 1988 – 1994

Member of the following IEEE societies and committees:

- IEEE Computer Society
- IEEE Circuits and Systems Society
- IEEE Communications Society
- IEEE Systems, Man, and Cybernetics Society
- IEEE Engineering in Medicine and Biology Society
- IEEE Education Society
- IEEE Standards Association (SA)
- IEEE Design Automation Standards Committee (DASC)
- IEEE Design Automation Technical Committee (DATC)
- IEEE Technical Committee on Scalable Computing (TCSC)

- Association for Computing Machinery (ACM)

Member of the following ACM Special Interest Groups (SIGs):

- ACM SIGDA (Design Automation)
- ACM SIGArch (Computer Architecture)
- ACM SIGBED (Embedded Systems)
- ACM SIGSIM (Simulation)

- American Society for Engineering Education (ASEE)
- Accellera/VHDL International Users' Forum
- Society for Computer Simulation (SCS)

Service Activity

Professional Service:

- **Chair** for IEEE East Tennessee Section (2002-2005).
- **Member** of IEEE Computer Society/ACM Computing Curriculum for Computer Engineering Committee (2003-2005).
- **Member** of Advisory Board, Virginia Polytechnic Institute and State University (Virginia Tech) Center for Embedded Systems for Critical Applications (2003-2005).
- **Program Chair** for *IEEE Midwest Symposium on Circuits and Systems* (2008).
- **Digital Track Program Chair** for *IEEE Midwest Symposium on Circuits and Systems* (2005).
- **Workshops Chair** for 10th *IEEE Symposium and Workshops on Engineering of Computer Based Systems* (2003).
- **General Chair** for *IEEE International Workshop on Behavioral Modeling and Simulation* (2002).
- **Panel Chair** for *IEEE International Workshop on Behavioral Modeling and Simulation* (2001).
- **Chair** of Accellera/VHDL International Users' Forum (1999-2001).
- **Chair Emeritus** for *IEEE Hardware Description Language Conference and Exposition* (2000).
- **Program Chair** for *IEEE Hardware Description Language Conference and Exposition* (1999).
- **Program Chair** for Spring *IEEE VHDL International Users' Forum* (1998).
- **Chair** of VHDL International Users' Forum (VIUF) Midwest Chapter (1996-1998).
- **General Chair** for Fall *IEEE VHDL International Users' Forum* (1997).
- **Chair** for *IEEE International Workshop on Behavioral Modeling and Simulation* (1997).
- **Chair** for *CERC/VIUF/IEEE Computer Society Workshop on 21st Century Electronic Systems Design: Breakthroughs in Quality and Productivity* (1997).
- **Program Co-Chair** for *Future of VHDL Workshop* (1997).
- **Program Chair** for Fall *IEEE VHDL International Users' Forum* (1996).
- **Chair** for VHDL International Outstanding Dissertation Award (1997-1999).
- **Steering Committee Member** for *IEEE International Workshop on Behavioral Modeling and Simulation* (1997-2005).
- **Program Committee Member** for *ACM Workshop on Embedded Systems Education* (2005).
- **Program Committee Member** for *IEEE International Conference on Microelectronic Systems Education* (2005).
- **Program Committee Member** for *IEEE International Conference on Electronic Design Processes* (2005).
- **Program Committee Member** for *IEEE Midwest Symposium on Circuits and Systems* (2005-2008).

- **Program Committee Member** for *International Symposium on Collaborative Technologies and Systems* (2005).
- **Program Committee Member** for *SCS International Symposium on Performance Evaluation for Computer and Telecommunications Systems* (2003-2005).
- **Program Committee Member** for *High Performance Computing & Simulation (HPC&S) Conference* (2004).
- **Program Committee Member** for *IEEE/ACM Symposium On Integrated Circuits and System Design* (2003-2004).
- **Program Committee Member** for *International Conference on Engineering of Reconfigurable Systems and Algorithm* (2003-2005).
- **Program Committee Member** for *High Performance & Large Scale Computing (HP&LSC) Conference* (2003).
- **Program Committee Member** for *IEEE International Workshop on Behavioral Modeling and Simulation* (1997-2005).
- **Program Committee Member** for Fall *IEEE VHDL International Users' Forum* (1998, 1999, 2000).
- **Program Committee Member** for *IEEE Workshop on Hardware/Software Codesign* (1996).
- **Board member** of Accellera/VHDL International (1999-2001).
- **Primary Delegate** for IEEE East Tennessee Section to 2002 IEEE Sections Congress (October 2002).
- **Session Chair** for Testing Reconfigurable Systems Session, *IEEE Midwest Symposium on Circuits and Systems*, 9 August 2005.
- **Session Chair** for System and Data Modeling Session, *IEEE International Workshop on Behavioral Modeling and Simulation*, 7 October 2003.
- **Session Chair** for Multiprocessor, Parallel and High Performance Computer Systems Session, *SCS International Symposium on Performance Evaluation for Computer and Telecommunications Systems*, 18 July 2002.
- **Session Chair** for Electronics and Instrumentation Session, *IEEE SoutheastCon*, 31 March 2001.
- **Session Chair** for The System View Session, *IEEE VHDL International Users' Forum*, 18 October 2000.
- **Session Chair** for System Level Design Session, *IEEE Hardware Description Language Conference and Exposition*, 8 March 2000.
- **Session Chair** for VHDL-AMS Modeling Environment and Synthesis Session, *IEEE International Workshop on Behavioral Modeling and Simulation*, 5 October 1999.

- **Session Chair** for VHDL-AMS Based Modeling and Simulation Session, *IEEE International Workshop on Behavioral Modeling and Simulation*, 27 October 1998.
- **Session Chair** for Languages and Simulators for Behavioral Modeling Session, *IEEE International Workshop on Behavioral Modeling and Simulation*, 21 October 1997.
- **Session Chair** for System Level Modeling Session, *VHDL International Users' Forum*, 20 October 1997.

Editorial Review

- *IEEE Transactions on Computer-Aided Design* (2000-2003).
- *IEEE Transactions on Neural Networks* (2003).
- *SIMULATION: Transactions of The Society for Modeling and Simulation International* (2002).
- *Journal of Integrated Circuits and Systems* (2003).
- *International Journal of Electronic Business* (2004).
- *International Journal of Environmental Science and Technology* (2004-2005).
- *Integration, the VLSI Journal* (2005).
- *IEE Proceedings on Systems Biology* (2005).
- *ACM Computing Reviews* (2002-2005).
- *IEEE Midwest Symposium on Circuits and Systems* (2005-2008).
- *IEEE International Conference on Microelectronic Systems Education* (2005).
- *IEEE International Workshop on Behavioral Modeling and Simulation* (1997-2005).
- *IEEE Annual Symposium on VLSI* (2005).
- *ACM Workshop on Embedded Systems Education* (2005).
- *International Conference on Engineering of Reconfigurable Systems and Algorithm* (2003-2005).
- *SCS Symposium on Performance Evaluation for Computer and Telecommunications Systems* (2003-2006).
- *International Symposium on Collaborative Technologies and Systems* (2004-2005).
- *Mobile Computing Architectures, Design, and Implementation Conference* (2004).
- *High Performance Computing & Simulation (HPC&S) Conference* (2004).
- *ACM/IEEE Design Automation Conference* (2000-2004).
- *IEEE/ACM Symposium On Integrated Circuits and System Design* (2003-2004).
- *High Performance & Large Scale Computing (HP&LSC) Conference* (2003).
- *IEEE Symposium on Integrated Circuits and Systems Design* (2002).
- *IEEE Hardware Description Language Conference and Exposition* (1999-2001).
- *IEEE VHDL International Users' Forum* (1997-2000).
- *CERC/VIUF/IEEE Computer Society Workshop on 21st Century Electronic Systems Design: Breakthroughs in Quality and Productivity* (1997).
- *IEEE Workshop on Hardware/Software Codesign* (1996).
- Morgan Kaufmann publishers (2000-2005).
- McGraw-Hill publishers (2002-2005).
- Wiley publishers (2004-2005).

University Service

- **Member** of ECE Graduate Committee (2004-2005).
- **Member** of ECE Cheating Policy Ad Hoc Committee (2005).
- **Member** of Governor's Chairs Computational Science Vetting Committee (2005).
- **Mentor** for UT/NSF Wireless Biosensors Research Experiences for Undergraduates Program (2005).
- **Judge**, Sigma Xi Graduate Student Presentation Competition (2004).
- **Member** of College of Engineering Curriculum Revision Committee (2003-2004).
- **Member** of ECE Building Strategic Planning Committee (2004-2005).
- **Chair** of ECE Building Laboratory Planning Subcommittee (2004-2005).
- **Mentor** for Tennessee Louis Stokes Alliance for Minority Participation Program (2003-2004).
- **Member** of ECE Faculty Fellow Awards Ad Hoc Committee (2003).
- **Member** of Advanced Internet Technologies Advisory Committee, Office of Research & Information Technology (2001-2002).
- **Member** of ECE System Administrator Search Committee (2002-2003, 2005).
- **Member** of College of Engineering Laptop Computer Policy Ad Hoc Committee (2002).
- **Member** of ECE Computer Resources Committee (2001-2003).
- **Chair** of ECE Faculty Search Subcommittee (2003).
- **Member** of ECE Faculty Search Committees (2001-2006).
- **Member** of ECE Curriculum Ad-Hoc Committee (2001-2002).
- **Chair** of CPE Curriculum Subcommittee (2001-2002).
- **Author** of ECE lab upgrade/infrastructure proposals to College of Engineering, Technology Fee Program, Honeywell Corporation, Altera Corporation, Cypress Inc., Metrowerks (Motorola), and IBM (2000-2004).
- **Lecturer** for ECE 395 Seminar on Computer Engineering/Startup Company Experiences (2000-2005).
- **Lecturer** for ECE 400 on Engineering Design Economics and Practical Experiences (2003-2004).
- **Lecturer** for ENGAGE Program on EE/CPE (Spring 2001, Fall 2001, Spring 2002).
- **Member** of University of Tennessee Center for Environmental Biotechnology (2001-2005).
- **Member** of University of Tennessee Center for Information Technology Research (2001-2005).

Public Service

- **External Reviewer** for DoD High Performance Computing Modernization Office (HPCMO) Common High Performance Computing Software Support Initiative (CHSSI) (1997-1998, 2003-2004).
- **Panel Reviewer** for Research Experiences for Undergraduates Proposals, National Science Foundation, Arlington, Virginia, November 29-30, 2005.
- **Judge** for 50th Southern Appalachian Science and Engineering Fair, April 1-4, 2002.
- **Chair** for IEEE Design Automation Standards Committee (DASC) VHDL Analysis and Standards Group (VASG) Subcommittee on Systems Design for VHDL. (1997-2000).
- **Member** of VHDL Issues Screening and Analysis Committee (ISAC) and Language Design Committee (LDC) for *IEEE Standard VHDL Language Reference Manual*. IEEE Std 1076-2000.
- **Member** of Language Design Working Group for *IEEE Standard VHDL-AMS Packages for Multiple Energy Domain Support*. IEEE Std 1076.1.1-2004.
- **Chair** for IEEE DASC Object-Oriented VHDL Working Group Subcommittee on Requirements for Object-Oriented VHDL (1998-2000).
- **Co-Chair** for VHDL International/Electronic Industry Association System Level Design Language (SLDL) Subcommittee on Requirements and Constraints (1997-2000).
- **Standardization chair** for Electronic Industry Association AIRE standard intermediate representation (1996-2000).
- **Chair** of IEEE Design Automation Standards Committee (DASC) Hardware/Software Codesign Study Group (1995-1997).
- **Technical Expert** on United States Technical Advisory Group (USTAG) to IEC TC93 on EDA (1996-1999).
- **Balloter** with IEEE Standards Association for standards related to design automation (1995-2005).

Publications

Texts

- [1] Peter J. Ashenden, **Gregory D. Peterson**, and Darrell Teegarden, *The System Designer's Guide to VHDL-AMS*. Morgan Kaufmann. San Francisco, CA. 2002.

Refereed Journal Articles

- [1] Melissa C. Smith and **Gregory D. Peterson**, "Parallel Application Performance on Shared High Performance Reconfigurable Computing Resources." *Performance Evaluation*. **60**(1-4):107-125, 2005.
- [2] **Gregory D. Peterson**, "Embedded Software for SoC." *ACM Queue*. **2**(4):76. June 2004.
- [3] James M. McCollum, **Gregory D. Peterson**, Chris D. Cox, and Michael L. Simpson, "Accelerating Gene Regulatory Network Modeling Using Grid-Based Simulation." *SIMULATION: Transactions of The Society for Modeling and Simulation International*. **80**(4-5):231-241. May 2004.
- [4] Michael L. Simpson, Chris D. Cox, **Gregory D. Peterson**, and Gary S. Saylor, "Modeling and Engineering Information Transport in Genetic Circuits" *IEEE Proceedings*. **92**(5):848-863. May 2004.
- [5] **Gregory D. Peterson**, "Optimizing Simulation Investment: Applying Performance Evaluation to Verification Technologies." *Modeling and Simulation Journal Online*. **5**(1), Fall 2003.
- [6] Chris D. Cox, **Gregory D. Peterson**, Michael Allen, Joseph M. Lancaster, James M. McCollum, Derek Austin, Ling Yan Gary S. Sayler and Michael L. Simpson, "Analysis of Noise in Quorum Sensing" *Omics: A Journal of Integrative Biology*, 7(3), September 2003.
- [7] **Gregory D. Peterson** and John C. Willis, "High Performance Hardware Description Language Simulation: Modeling Issues and Recommended Practices." *Transactions of the Society for Computer Simulation*, 16(1):6-15, March 1999.
- [8] **Gregory D. Peterson** and Roger D. Chamberlain, "Parallel Application Performance in a Shared Resource Environment." *IEE Distributed Systems Engineering Journal*, August 1996.
- [9] **Gregory D. Peterson** and Roger D. Chamberlain, "Parallel Processing the Easy Way: How to Do It and When It Works." *Intl. Journal of Computers & Their Applications*, August 1995.
- [10] **Gregory D. Peterson** and Roger D. Chamberlain, "Beyond Execution Time: Expanding the Use of Performance Models." *IEEE Parallel & Distributed Technology*, 2(2):37-49, Summer 1994.

Contributions to Edited Volumes

- [1] **Gregory D. Peterson**, "Predicting the Performance of SoC Verification Technologies." Chapter in *System on Chip Design Languages*. A. Mignotte, E. Villar, and L. Horobin, editors. Kluwer Academic Publishers, 2002.
- [2] **Gregory D. Peterson**, "A Comparison of Mixed-Signal Modeling Approaches." Chapter in *System on Chip Design Languages*. A. Mignotte, E. Villar, and L. Horobin, editors. Kluwer Academic Publishers, 2002.
- [3] **Gregory D. Peterson**, "Performance Tradeoffs for Emulation, Hardware Acceleration, and Simulation." *System on Chip Methodologies and Design Languages*. P. Ashenden, J. Mermet, and R. Seepold, editors. Kluwer Academic Publishers, 2001.
- [4] Sathyanarayanan Seshadri, Sanjeev Thiyagarajan, John Willis, and **Gregory D. Peterson**, "Automating the Validation of Hardware Description Language Processing Tools." *System on Chip Methodologies and Design Languages*. P. Ashenden, J. Mermet, and R. Seepold, editors. Kluwer Academic Publishers, 2001.
- [5] Carl Hein, Todd Carpenter, Vijay Madiseti, Allan Anderson, Arnold Bard, J.P. Letellier, Robert Klenke, **Gregory D. Peterson**, Mark Pettigrew, Perry Alexander, Geoffrey Frank, Anthony Gadiant, Randy Harr, Paul Kalutkiewicz, "VHDL Modeling Terminology and Taxonomy Version 3.1." (Available at <http://www.atl.lmco.com/rassp/taxon>) May 26, 1999. Reprinted in *VHDL: Electronic Systems Design Methodologies and Interactive Tutorial*. IEEE Press, New York, NY, 2000.
- [6] John C. Willis, Philip A. Wilsey, **Gregory D. Peterson**, John Hines, Alex Zamfirescu, Dale A. Martin, Robert N. Newshutz, "Advanced Intermediate Representation with Extensibility (AIRE)." *VHDL*

International Users' Forum. Durham, NC, October 1996. Reprinted in *VHDL: Electronic Systems Design Methodologies and Interactive Tutorial*. IEEE Press, New York, NY, 2000.

- [7] John C. Willis, Philip A. Wilsey, **Gregory D. Peterson**, John Hines, William H. Dashiell, "Semi-Automated Validation of VHDL & Related Languages." *VHDL International Users' Forum*. Durham, NC, October 1996. Reprinted in *VHDL: Electronic Systems Design Methodologies and Interactive Tutorial*. IEEE Press, New York, NY, 2000.
- [8] **Gregory D. Peterson** and John C. Willis, "A Taxonomy of Parallel VHDL Simulation Techniques." *VHDL International Users' Forum*. Boston, MA, October 1995. Reprinted in *VHDL: Electronic Systems Design Methodologies and Interactive Tutorial*. IEEE Press, New York, NY, 2000.
- [9] **Gregory D. Peterson**, "A String Manipulation Package for VHDL." *VHDL International Users' Forum*. Boston, MA, October 1995. Reprinted in *VHDL: Electronic Systems Design Methodologies and Interactive Tutorial*. IEEE Press, New York, NY, 2000.

Archived, Refereed Reviews

- [1] **Gregory D. Peterson**, "The In-System Configuration Handbook: A Designer's Guide to ISC" *ACM Computing Reviews*. June 2004.
- [2] **Gregory D. Peterson**, "Sourcebook of Parallel Computing" *ACM Computing Reviews*. May 2004.
- [3] **Gregory D. Peterson**, "Parallel Program Performance Prediction Using Deterministic Task Graph Analysis." *ACM Computing Reviews*. March 2004.
- [4] **Gregory D. Peterson**, "Embedded Software for SoC." *ACM Computing Reviews*. March 2004.
- [5] **Gregory D. Peterson**, "Efficient Self-Timed Interfaces for Crossing Clock Domains." *ACM Computing Reviews*. March 2004.
- [6] **Gregory D. Peterson**, "High-Level Macro-Modeling and Estimation Techniques for Switching Activity and Power Consumption." *ACM Computing Reviews*. February 2004.
- [7] **Gregory D. Peterson**, "Remarks on Permutive Cellular Automata." *ACM Computing Reviews*, May 2004.
- [8] **Gregory D. Peterson**, "Multiple-path execution for chip multiprocessors." *ACM Computing Reviews*, April 2004.
- [9] **Gregory D. Peterson**, "Viral evolution under the pressure of an adaptive immune system: optimal mutation rates for viral escape." *ACM Computing Reviews*, February 2004.
- [10] **Gregory D. Peterson**, "Microarrays for an integrative genomics: IT infrastructure strategies to manage change and enable growth." *ACM Computing Reviews*, May 2003.

Magazine Articles

- [1] **Gregory D. Peterson**, "Reconfigurable Computing Might Be the Next Big Thing." *EDN System Design* 8(8):S18-S21, 12 April 2001.

Papers in Refereed Conference Proceedings

- [1] B. P. Thurmon, J. M. McCollum, **G. D. Peterson**, C. D. Cox, N. F. Samatova, G. S. Sayler and M. L. Simpson, "Accelerating Exact Stochastic Simulation using Reconfigurable Computing." *International Conference on Engineering of Reconfigurable Systems and Algorithms*. Las Vegas, July 2005.
- [2] Saumil Merchant, **Gregory D. Peterson**, and Don Bouldin, "Improving Embedded Systems Education: Laboratory Enhancements Using Programmable Systems on Chip." *International Conference on Microelectronic Systems Education*. Anaheim, June 2005.
- [3] Wei Jiang, Seong G. Kong, and **Gregory D. Peterson**, "ECG Signal Classification with Evolvable Block-based Neural Networks." *International Joint Conference on Neural Networks*. Montreal, June 2005.
- [4] James M. McCollum, **Gregory D. Peterson**, Michael L. Simpson, and Chris D. Cox, "Accelerating Exact Stochastic Simulation of Coupled Chemical Reactions." *Synthetic Biology 1.0: The First International Meeting on Synthetic Biology*, Massachusetts Institute of Technology, June 10-12, 2004.

- [5] James M. McCollum, **Gregory D. Peterson**, Michael L. Simpson, and Chris D. Cox, "Accelerating Exact Stochastic Simulation of Coupled Chemical Reactions." *Mathematical Models in Signaling Systems*, National Academy of Science, Vanderbilt University, June 16-18, 2004.
- [6] Hongtau Du, Hairong Qi, and **Gregory D. Peterson**, "Parallel ICA and its hardware implementation in hyperspectral image analysis." *2004 SPIE Defense and Security Symposium*.
- [7] Hongtau Du, Hairong Qi, and **Gregory D. Peterson**, "Modeling Mobile-Agent-Based Collaborative Processing in Sensor Networks Using Generalized Stochastic Petri Nets" *2003 IEEE Systems, Man and Cybernetics*. October 2003.
- [8] James M. McCollum, Joseph M. Lancaster, and **Gregory D. Peterson** "Using Reconfigurable Computing to Accelerate Simulation Applications," *International Conference on Engineering of Reconfigurable Systems and Algorithms*. June 2003.
- [9] Don Bouldin and **Gregory D. Peterson**, "Implementing Applications Using Reconfigurable Electronic Systems." *Government Microcircuit Applications and Critical Technology Conference*, Tampa, FL, 31 March – 3 April 2003.
- [10] **Gregory D. Peterson** and Steven L. Drager, "Accelerating Defense Applications Using High Performance Reconfigurable Computing." *Government Microcircuit Applications and Critical Technology Conference*, Tampa, FL, 31 March – 3 April 2003.
- [11] James M. McCollum, Joseph M. Lancaster, Donald W. Bouldin, and **Gregory D. Peterson** "Hardware Acceleration of Pseudo-Random Number Generation for Simulation Applications," *IEEE Southeastern Symposium on System Theory*. March 2003.
- [12] **Gregory D. Peterson** and Gabe Moretti, "The Case for Verification Languages." *Design Verification Conference (DVCon 2003)*. San Jose, February 2003.
- [13] **Gregory D. Peterson**, "Optimizing Collaborative Engineering Verification Environments." In *Symposium on Collaborative Technologies and Systems*, part of the *2003 SCS Western Multiconferences*, Orlando, January 2003.
- [14] Jeanne M. Lehrter, Faisal N. Abu-Khzam, Donald W. Bouldin, Michael A. Langston, and **Gregory D. Peterson**, "On Special-Purpose Hardware Clusters for High-Performance Computational Grids." In *Proceedings of the 14th IASTED International Conference on Parallel and Distributed Computing and Systems*, November 2002.
- [15] **Gregory D. Peterson** and Joseph M. Lancaster, "Stochastic Simulation of Biological Processes Using VHDL-AMS." In *Proceedings of the 6th IEEE International Workshop on Behavioral Modeling and Simulation*, October 2002.
- [16] Melissa C. Smith and **Gregory D. Peterson**, "Analytical Modeling for High Performance Reconfigurable Computers." In *Proceedings of the SCS International Symposium on Performance Evaluation of Computer and Telecommunications Systems*, July 2002.
- [17] **Gregory D. Peterson** and Joseph M. Lancaster, "Modeling Of Biological Cellular Processes With VHDL-AMS." In *Proceedings of 2001 IEEE International Workshop on Behavioral Modeling and Simulation*. October 2001.
- [18] **Gregory D. Peterson** and Philip A. Wilsey, "Requirements for object-oriented systems modeling with STEAMS." In *Proceedings of 2001 IEEE International Workshop on Behavioral Modeling and Simulation*. October 2001.
- [19] Melissa C. Smith, Steven L. Drager, Lt. Louis Pochet, **Gregory D. Peterson**, "High Performance Reconfigurable Computing Systems." In *Proceedings of 2001 IEEE Midwest Symposium on Circuits and Systems*. August 2001.
- [20] **Gregory D. Peterson** and Melissa C. Smith, "High Performance Reconfigurable Computer Systems." Invited paper in Scuola Superiore G. Reiss Romoli *International Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet*, 6-12 August 2001, Rome, Italy.
- [21] **Gregory D. Peterson**, "Programming High Performance Reconfigurable Computers" In *SPIE's International Symposium on The Convergence of Information Technologies and Communications*. Denver, CO, August 2001.
- [22] **Gregory D. Peterson**, "Designing the Design Process: Applying Performance Evaluation to Verification Technologies." *IEEE SoutheastCon*. Clemson, SC, March 2001.

- [23] **Gregory D. Peterson**, "A Comparison of Mixed-Signal Modeling Approaches." *IEEE/Accellera International Hardware Description Language Conference (HDLCon)*. San Jose, CA, March 2001.
- [24] **Gregory D. Peterson**, W. Perry Alexander, and J. Douglas Birdwell, "Designing and Validating the Joint Battlespace Infosphere." *SPIE's 15th Annual International Symposium on Aerospace/Defense Sensing, Simulation, and Controls*. Orlando, FL, April 2001.
- [25] **Gregory D. Peterson**, "Evaluating Simulation Acceleration Techniques." *SPIE's 15th Annual International Symposium on Aerospace/Defense Sensing, Simulation, and Controls*. Orlando, FL, April 2001.
- [26] **Gregory D. Peterson**, "Predicting the Performance of SoC Verification Technologies." *IEEE/Accellera VHDL International User's Forum*. Orlando, FL, October 2000.
- [27] **Gregory D. Peterson**, "Performance Tradeoffs for Emulation, Hardware Acceleration, and Simulation." *IEEE Hardware Description Language Conference (HDLCon)*. San Jose, CA, March 2000.
- [28] **Gregory D. Peterson** and John C. Willis, "Reasons Why Digital Designers Should Care About VHDL-AMS." *IEEE Hardware Description Language Conference (HDLCon)*. San Jose, CA, March 2000.
- [29] Sathyanarayanan Seshadri, Sanjeev Thiyagarajan, John Willis, and **Gregory D. Peterson**, "Automating the Validation of Hardware Description Language Processing Tools." *IEEE Hardware Description Language Conference (HDLCon)*. San Jose, CA, March 2000.
- [30] **Gregory D. Peterson**, "Requirements for Object-Oriented Extensions to VHDL." *ECSI/IFIP/VI 2nd International Forum on Design Languages*. Ecole Normale Supérieure de Lyon, France. Aug. 30 - Sept. 3, 1999.
- [31] **Gregory D. Peterson** and Mike Mills, "Hardware/Software Co-design: VHDL and Ada 95 Code Migration and Integrated Analysis." *ACM SIGAda Annual International Conference*. Washington, D.C., November 1998.
- [32] **Gregory D. Peterson** and Mike Mills, "Mission Success: Meeting the Systems Acquisition Challenge with Electronic Systems Design Automation." *IEEE 50th National Aerospace and Electronics Conference*. Dayton, OH, 13-17 July 1998.
- [33] John C. Willis, **Gregory D. Peterson**, and Steven L. Gregor, "The Advanced Intermediate Representation with Extensibility/Common Environment (AIRE/CE)." *IEEE 50th National Aerospace and Electronics Conference*. Dayton, OH, 13-17 July 1998.
- [34] Stephen Bailey, Wolfgang Ecker, and **Gregory D. Peterson**, "VHDL Future for Standardization." *International Forum on Design Languages*, Lausanne, Switzerland, September 1998.
- [35] **Gregory D. Peterson**, "Language-Based Electronic Systems Design Automation." *IEEE International Workshop on VLSI*, Orlando, FL, April 1998.
- [36] **Gregory D. Peterson**, John Hines, "Advanced Avionics System Development: Achieving Systems Superiority through Design Automation." *1998 IEEE Aerospace Conference*. Snowmass, CO 21-28 March 1998.
- [37] Robert L. Ewing, John W. Hines, **Gregory D. Peterson**, Maya Rubeiz, "VHDL-AMS Design for Flight Control Systems." *1998 IEEE Aerospace Conference*. Snowmass, CO 21-28 March 1998.
- [38] **Gregory D. Peterson**, "Defense Needs for a System Level Design Language." *System Level Design Workshop*. Il Ciocco, Italy. July 1997.
- [39] **Gregory D. Peterson**, "Hardware/Software Co-Design with VHDL." *Future of VHDL Workshop*. Paris, France. July 1997.
- [40] **Gregory D. Peterson**, "Evolving Standards and Methodologies for Electronic Systems Design." *49th National Aerospace and Electronics Conference*. Dayton, OH 14-18 July 1997.
- [41] Mike Mills, **Gregory D. Peterson**, "Requirements and Concepts for Hardware/Software Codesign." *VHDL International Users' Forum*. Santa Clara, CA, April 1997.
- [42] **Gregory D. Peterson**, Sanjay Sawant, John C. Willis, "Faster: The Quest for Simulation Speed." Invited Embedded Tutorial. *VHDL International Users' Forum*. Santa Clara, CA, April 1997.
- [43] B.C. Read III, D. Barker, R.G. Bishop, L.M. Concha, J.M. Emmert, R.L. Ewing, G.L. Fecher, P. Jarusiewicz Jr., **G.D. Peterson**, M. Rubeiz, A.M. Sayson, "Developing the Next Generation Cockpit Display System." *48th National Aerospace & Electronics Conference*. Dayton, OH 20-23 May 1996.

- [44] John Hines, Lou Concha, **Gregory D. Peterson**, “Supporting the Re-Engineering of Legacy Systems.” *Defense Manufacturing Sources & Material Shortages Conference*. Montgomery, Texas 7-9 May 1996.
- [45] Jeff Groat, Bill Hancock, Mike Johnson, John Shackleton, Henk Spaanenburg, Todd Steeves, Richard G. Bishop, **Gregory D. Peterson**, Britton C. Read III, “Graphics Processing Simulation and Tradeoff Study for Cockpit Applications.” *Aerospace/Defense Sensing and Controls*. Orlando, FL 8-12 April 1996.
- [46] **Gregory D. Peterson**, “Role of Executable Specifications in Codesign.” *4th International Workshop on Hardware/Software Co-Design*. Pittsburgh, PA, March 18-20, 1996.
- [47] **Gregory D. Peterson** and Roger D. Chamberlain, “Stealing Cycles: Can We Get Along?” *28th Hawaii International Conference on System Sciences*. Waialeu, Maui, HI, January 1995.
- [48] Roger D. Chamberlain, Mark A. Franklin, **Gregory D. Peterson**, and Michael A. Province, “Genetic Epidemiology, Parallel Algorithms, and Workstation Networks.” *28th Hawaii International Conference on System Sciences*. Waialeu, Maui, HI, January 1995.
- [49] Bradley L. Noble, **Gregory D. Peterson**, and Roger D. Chamberlain, “Performance of Synchronous Parallel Discrete-Event Simulation.” *28th Hawaii International Conference on System Sciences*. Waialeu, Maui, HI, January 1995.
- [50] **Gregory D. Peterson** and Roger D. Chamberlain, “Sharing Networked Workstations: A Performance Model.” *6th IEEE Symposium on Parallel and Distributed Processing*. pages 308-315, Dallas, TX, October 1994.
- [51] **Gregory D. Peterson** and Roger D. Chamberlain, “Predicting the Performance of Applications on Networked Workstations.” *PVM Users' Group Meeting*, May 1994. Oak Ridge. TN.
- [52] Bradley L. Noble, **Gregory D. Peterson**, and Roger D. Chamberlain, “Performance of a Synchronous Parallel Simulator.” *PVM Users' Group Meeting*, May 1994. Oak Ridge, TN.
- [53] **Gregory D. Peterson** and Roger D. Chamberlain, “Exploiting Lookahead in Synchronous Parallel Simulation.” *Winter Simulation Conference*. pages 706--712, Los Angeles, CA, December 1993.
- [54] **Gregory D. Peterson** and Roger D. Chamberlain, “Performance of a Globally-Clocked Parallel Simulator.” *International Conference on Parallel Processing*. St. Charles, IL, August 1993.

Papers in Non-Refereed Conference Proceedings

- [1] J. M. McCollum, **G. D. Peterson**, C. D. Cox, M. L. Simpson, and N. F. Samatova, “Accelerating Exact Stochastic Simulation using Parallel Supercomputing,” Poster Presentation, *Computational Methods in Systems Biology*, Edinburgh, Scotland, April 2005.
- [2] J. M. McCollum, **G. D. Peterson**, C. D. Cox, M. L. Simpson, and N. F. Samatova, “A Parallel Implementation of Gillespie’s Exact Stochastic Simulation Algorithm,” Poster Presentation, *Third International Symposium on Computational and Cellular Biology*, Lenox, MA, March 2005.
- [3] J. M. McCollum, **G. D. Peterson**, C. D. Cox, M. L. Simpson, and N. F. Samatova, “BioSpreadsheet: A Biological Model Design, Simulation, and Analysis Tool,” Software Demonstration, Third International Symposium on Computational and Cellular Biology, Lenox, MA, March 2005.
- [4] **G. D. Peterson**, “Research Experiences for Undergraduates in Wireless Biosensors” Poster Presentation, *National Science Foundation Engineering and Computer Education Conference*, Washington, D.C., February 2005.
- [5] C. D. Cox, J. M. McCollum, B. Boggess, M. Allen, L. Yan, **G. D. Peterson**, M. L. Simpson, H. Sauro, C. Wellock, V. Chickarmane, D. A. Adalsteinsson, and T. Elston, “Quorum Sensing Use Case,” Web-cast Presentation, *DARPA BioSPICE Users Group*, December 2004.
- [6] M. L. Simpson, C. D. Cox, **G. D. Peterson**, G. S. Sayler, M. Allen, J. M. McCollum, D. Austin, and L. Yan, “Analysis, Modeling, Simulation, and Visualization of the *Vibrio fischeri* Quorum Sensing System,” Platform Presentation, *DARPA Bio-COMP PI Meeting*, Washington, DC, October 2004.
- [7] C. D. Cox, J. M. McCollum, B. Boggess, M. Allen, L. Yan, **G. D. Peterson**, M. L. Simpson, H. Sauro, C. Wellock, V. Chickarmane, D.A. Adalsteinsson, and T. Elston, “Quorum Sensing Use Case,” Platform Presentation, *DARPA Bio-COMP PI meeting*, Washington, DC, October 2004.

- [8] J. M. McCollum, **G. D. Peterson**, C. D. Cox, and M. L. Simpson, "Accelerating Exact Stochastic Simulation of Coupled Chemical Reactions," Platform Presentation, *Mathematical Methods in Signaling Systems*, Nashville, TN, June 2004.
- [9] **Gregory D. Peterson**, "Biological Applications of High Performance Reconfigurable Computing," Poster at UT/ORNL Bioinformatics Summit, Fall Creek Falls, TN. March 2004.
- [10] M. L. Simpson, C. D. Cox, **G. D. Peterson**, G. S. Sayler, D. Koch, M. Allen, J. Lancaster, J. M. McCollum, D. Austin, L. Yan, and M. Dutton, "Simulation and Analysis Tools for Stochastic Processes with Applications to the *Vibrio fischeri* Quorum Sensing System," Poster Presentation, *DARPA Bio-COMP PI meeting*, Washington, DC Feb 3-5, 2004 .
- [11] M. L. Simpson, C. D. Cox, **G. D. Peterson**, G. S. Sayler, M. Allen, J. M. McCollum, D. Austin, and L. Yan, "Analysis, Modeling, Simulation, and Visualization of the *Vibrio fischeri* Quorum Sensing System," Platform Presentation, *DARPA Bio-COMP PI meeting*, Washington, DC, Feb 3-5, 2004.
- [12] M. L. Simpson, C. D. Cox, **G.D. Peterson**, G.S. Sayler, D. Koch, M. Allen, J. Lancaster, J. M. McCollum, D. Austin, L. Yan, and M. Dutton, "Analysis, Modeling, Simulation, and Visualization of the *Vibrio fischeri* Quorum Sensing System," Platform Presentation, *DARPA Bio-COMP PI meeting*, Ft. Lauderdale, FL, May 2003.
- [13] C.D. Cox, **G.D. Peterson**, M.L. Simpson, J. M. McCollum, J. Lancaster, M. Allen, G.S. Sayler, "Modeling Quorum Sensing Using Exact Stochastic Simulation," Platform Presentation, *DARPA Bio-COMP PI meeting*, San Diego, CA, December 9-11, 2002.
- [14] **Gregory D. Peterson**, Perry Alexander, and J. Douglas Birdwell, "Developing C4ISR Systems for Robust Information Operations." TCPP, SPAWAR, San Diego, May 2001.
- [15] Marc Pitarys and **Gregory D. Peterson**, "Affordable C2 Hardware and Software." *1999 Command and Control Research and Technology Symposium*. Naval War College, Rhode Island. 29 June - 1 July 1999.
- [16] **Gregory D. Peterson** and Marc Pitarys, "Affordable Hardware and Software Development for Space Based Radar." *Space Based Radar Workshop*. Georgia Institute of Technology. Atlanta, Georgia. 4-6 November 1998.
- [17] **Gregory D. Peterson**, "Real-Time Java: What is Needed to Meet DoD Requirements?" *NIST Workshop for Real-time Java^(TM) Implementation Issues*, June 1998.
- [18] John C. Willis and **Gregory D. Peterson**, "Auriga: HPC Compiler & Simulation Technology Boosts Capacity and Performance." *DoD High Performance Computing Modernization Program 1998 User Group Meeting*, June 1998.
- [19] John C. Willis, Phil Wilsey, **Gregory D. Peterson**, "Advanced Intermediate Representation with Extensibility." Tutorial at the *Spring 1998 IEEE VHDL International Users' Forum*. March 1998.
- [20] **Gregory D. Peterson**, "RASSP and Hardware/Software Codesign." *VHDL Workshop*. Wallby Sateri, Sweden, May 1997.

Standards development

- [1] *IEEE Standard VHDL-AMS Packages for Multiple Energy Domain Support*. IEEE Std 1076.1.1-2004. Member of language design working group. IEEE, New York, New York. 2004.
- [2] *VSIA System Level Design Model Taxonomy*, Standard system design modeling taxonomy based on RASSP modeling taxonomy "VHDL Modeling Terminology and Taxonomy Version 3.1." (Available at <http://www.atl.lmco.com/rassp/taxon>), Virtual Socket Interface Alliance (VSIA, <http://www.vsia.org>), July 2001.
- [3] *IEEE Standard VHDL Language Reference Manual*. IEEE Std 1076-2000. Member of language design committee. IEEE, New York, New York. 2000.
- [4] *IEEE Standard VHDL Analog and Mixed-Signal Extensions*. IEEE Std 1076.1-1999. Managed language reference manual development project. IEEE, New York, New York. 1999.

Technical Research Reports

- [1] **Gregory D. Peterson**, "Hyperspectral Imaging Applications on High Performance Reconfigurable Computers." UT ECE Technical Report. (Final Project Report for AFRL). December 2003.
- [2] Chris D. Cox, J. Michael McCollum, **Gregory D. Peterson**, Timothy Elston, David Adalsteinsson "Application of BioSPICE Model Definition Language To Stochastic Models." UT/UNC Technical Report/submission to DARPA BioSPICE program, 12 December 2003.
- [3] **Gregory D. Peterson**, "Destruction of Electronic Magnetic Storage Media." UT ECE Technical Report. (Final Project Report for ORNL). August 2002.
- [4] **Gregory D. Peterson**, "Programming High Performance Reconfigurable Computers." UT ECE Technical Report. (Final Project Report for AFRL). August 2002.
- [5] **Gregory D. Peterson**, *Parallel Application Performance on Shared, Heterogeneous Workstations*. Doctoral dissertation, Washington University, St. Louis, MO, December 1994.
- [6] **Gregory D. Peterson** and Roger D. Chamberlain, "Performance Modeling of Distributed Synchronous Iterative Algorithms." Technical Report WUCCRC-94-03, Computer and Communications Research Center, Washington University, St. Louis, MO, February 1994.
- [7] **Gregory D. Peterson**, "An Investigation of Parallel Nonlinear Optimization Using Gemini/Almini." Technical Report WUCCRC-93-18, Computer and Communications Research Center, Washington University, St. Louis, MO, September 1993.
- [8] **Gregory D. Peterson**, *Qnet: A Globally-Clocked Discrete-Event Queueing Network Simulator*. Master's thesis, Washington University, St. Louis, MO, May 1992.

Invited Presentations

- [1] "Functional and Performance Verification of Embedded Systems," Invited Talk at Virginia Tech Embedded Systems Colloquium, Blacksburg, VA. October 2003.
- [2] "Performance Analysis of High Performance Reconfigurable Computers," Invited Seminar, University of Cincinnati, Cincinnati OH. January 2003.
- [3] "Grid Applications for High Performance Reconfigurable Computing," SinRG Conference, CITR. January 2002.
- [4] "Computer Engineering Education at UT/ECE." Presentation at ADTRAN Corporation, Huntsville, AL. November 2001.
- [5] "Designing the Design Process: Applying Performance Evaluation to Verification Technologies." IEEE East Tennessee Chapter, November 2001.
- [6] "Systems Design with AMS HDLs: What's Next?" Panel presentation. In *Proceedings of 2001 IEEE International Workshop on Behavioral Modeling and Simulation*. October 2001.
- [7] "Language Interoperability for Hardware-Software Systems Design." Panel presentation, *IEEE Hardware Description Language Conference and Exposition*. February 2001.
- [8] "Setting the Context for VHDL 200X." Panel presentation, *IEEE/Accellera VHDL International User's Forum*. Orlando, FL, October 2000.
- [9] "System Level Design Language." Panel presentation, *1998 IEEE Asian South Pacific Design Automation Conference*. Yokohama, Japan, 13 February 1998.
- [10] "Costs and Benefits of Object-Oriented Extensions to VHDL." Panel presentation, *IEEE VHDL International Users' Forum*. Arlington, VA, Oct. 1997.
- [11] "System Level Design Language," Panel presentation, *IEEE VHDL International Users' Forum*. Arlington, VA, October 1997.
- [12] "What Advantages Can We Expect from Object-Oriented Extensions to VHDL?" Panel presentation, *European Design Automation Conference & EURO-VHDL*. Geneva, Switzerland, September 16-20, 1996.

Teaching*

Courses Taught at The University of Tennessee

<u>Semester</u>	<u>Course</u>	<u>Description</u>	<u># of Students</u>
Fall 2000	ECE 205 (3)	Electrical Engineering Computations	35
Spring 2001	ECE205 (3)	Electrical Engineering Computations	25
Summer 2001	ECE 351 (3)	Introduction to Logic Design of Digital Systems	19
Summer 2001	ECE 599 (3)	Embedded Systems Design	3
Fall 2001	ECE 205 (3)	Electrical Engineering Computations	36
Fall 2001	ECE 599 (3)	Computer Architecture	14
Fall 2001	ECE 691 (1)	Advanced Graduate Seminar	11
Spring 2002	ECE 452 (4)	Computer Engineering Capstone Senior Design	23
Spring 2002	ECE 692 (3)	Advanced Embedded Computing Systems	12
Spring 2002	ECE 691 (1)	Advanced Graduate Seminar	14
Summer 2002	ECE 491 (3)	Independent Study	1
Fall 2002	ECE 451 (3)	Computer Systems Architecture	36
Fall 2002	ECE 599 (3)	Computer Architecture	11
Fall 2002	ECE 691 (1)	Advanced Graduate Seminar	10
Spring 2003	ECE 400 (5)	Electrical Engineering Capstone Senior Design	26
Spring 2003	ECE 452 (4)	Computer Engineering Capstone Senior Design	33
Spring 2003	ECE 491 (3)	Independent Study	1
Spring 2003	ECE 501 (3)	Project in Lieu of Thesis	1
Spring 2003	ECE 691 (1)	Advanced Graduate Seminar	9
Spring 2003	ECE 692 (3)	Computer and Communications Systems Performance Evaluation	2
Fall 2003	ECE 451 (3)	Computer Systems Architecture	36
Fall 2003	ECE 599 (3)	Computer Architecture	2
Fall 2003	ECE 691 (1)	Advanced Graduate Seminar	5
Spring 2004	ECE 355 (3)	Computing System Fundamentals	68
Spring 2004	ECE 491 (3)	Independent Study	2
Spring 2004	ECE 692 (3)	Advanced Computer Architecture and Design	6
Summer 2004	ECE 355 (3)	Computing System Fundamentals	10
Fall 2004	ECE 451 (3)	Computer Systems Architecture	30
Fall 2004	ECE 491 (3)	Independent Study	1
Fall 2004	ECE 557 (3)	Computer Architecture	6
Spring 2005	ECE 355 (3)	Computing System Fundamentals	52

Spring 2005	ECE 659 (3)	Digital Systems Verification	9
Summer 2005	ECE 355 (3)	Computing System Fundamentals	15
Fall 2005	ECE 451 (3)	Computer Systems Architecture	26
Fall 2005	ECE 501 (3)	Project in Lieu of Thesis	1
Fall 2005	ECE 557 (3)	Computer Architecture	10

* Research contracts have funded on average 20% teaching release time from Spring 2002 until present.

Teaching Workshops and Conferences Attended

- Embedded Design Flow Faculty Workshop, Xilinx University Program (July 2005).
- DSP Design Flow Faculty Workshop, Xilinx University Program (July 2005).
- Professor Workshop with Synplify Pro and Synplify DSP Tools, Synplicity (July 2005).
- CMS 113 Online Assessment Course (August 2003).
- CMS 185 Using SmartBoard Technology (August 2003).
- CMS 110 Introduction to Online@UT Course Management System (August 2002).
- IEEE Microelectronic Systems Education Conference (June 2001, June 2003).
- ACM International Conference on Compilers, Architecture and Synthesis for Embedded Systems (November 2001).
- NSF/TFCC Workshop on Teaching Cluster Computing (July 2001).

Current Graduate Students – Major Advisor

<u>Name</u>	<u>Degree Program</u>	<u>Start Date</u>	<u>Expected Completion Date</u>
Yu Bi	Ph.D.	August 2004	December 2007
Akila Gothandaraman	Ph.D.	August 2004	December 2007
Arpit Jain	M.S.	August 2005	December 2006
Allen Kemp	M.S.	August 2004	May 2006
Junkyu Lee	M.S.	August 2005	May 2007
Xiang Li	Ph.D.	August 2003	December 2006
Michael McCollum	Ph.D.	May 2004	May 2006
Saumil Merchant	Ph.D.	August 2003	August 2006
Nader Michou	M.S.	August 2004	December 2005
Neil Troy	M.S.	August 2003	May 2006
Bhanu Rekapalli	Ph.D.	January 2004	December 2006
Derek Ziemian	M.S.	August 2003	December 2005

Previous Graduate Students – Major Advisor

Tik-Hing Choi, M.S., May 2003.

Project title: “Floating-Point Matrix-Vector Multiplication Using Reconfigurable System.”

Hongtau Du, M.S., August 2003 (with H. Qi).

Thesis title: “Dimensionality Reduction using Parallel Independent Component Analysis in Hyperspectral Image Analysis.”

Saumil Merchant, M.S., August 2003.

Thesis title: “Approaches for MATLAB Applications Acceleration Using High Performance Reconfigurable Computers.”

Bhanu Rekapalli, M.S., August 2003.

Thesis title: “Genomic Data Analysis Using Grid-Based Computing.”

Melissa C. Smith, Ph.D, December 2003.

Dissertation title: “Analytical Modeling of High Performance Reconfigurable Computers: Prediction and Analysis of System Performance.”

Kirk Baugher, M.S., May 2004.

Thesis title: “Sparse Matrix Sparse Vector Multiplication using Parallel and Reconfigurable Computing.”

Venkatesh Bhaskaran, M.S., May 2004.

Thesis title: "Parameterized Implementation of K-means Clustering on Re-configurable Systems."

Mahesh Dorai, M.S., May 2004.

Thesis title: "A Reconfigurable Computing Solution to the Parameterized Vertex Cover Problem."

Yuan He, M.S., May 2004.

Thesis title: "Hyper-Spectral Image Processing Using High Performance Reconfigurable Computers."

Sampath Kothandaraman, M.S., May 2004.

Thesis title: "Implementation of Block-based Neural Networks on Reconfigurable Computing Platforms."

Michael McCollum, M.S., May 2004.

Thesis title: "Accelerating Exact Stochastic Simulation."

Nitin Tiwari, M.S., May 2004.

Courses only option.

Jeff Krumm, M.S., August 2004.

Thesis title: "Calculated Combustion: An Investigation of Electronic Equipment Tenability in Data Center Fires."

Brandon Thurmon, M.S., August 2005.

Thesis title: "Reconfigurable Hardware Acceleration of Exact Stochastic Simulation."

Graduate Student Committee Member

<u>Name</u>	<u>Degree Program</u>	<u>Graduation Date</u>	<u>Major Advisor</u>
Marc Royer	M.S. Electrical Engineering	December 2001	D. Bouldin
Eric Hannah	M.S. Electrical Engineering	May 2002	D. Bouldin
Jeanne Lehrter	M.S. Computer Science	May 2002	M. Langston
Jason Koay	M.S. Electrical Engineering	December 2002	D. Bouldin
Adam Miller	M.S. Electrical Engineering	August 2003	D. Bouldin
Xiaoquan Fu	M.S. Electrical Engineering	August 2003	D. Bouldin
Fuat Karakaya	Ph.D. Electrical Engineering	December 2003	D. Bouldin
Siddhartha Devalapalli	M.S. Electrical Engineering	May 2004	D. Bouldin
Magesh Thiyagarajan	M.S. Electrical Engineering	May 2004	I. Alexeff
Ashwin Balakrishnan	M.S. Electrical Engineering	August 2004	D. Bouldin
Chen Jin	M.S. Electrical Engineering	August 2004	M. Howlader
Rishi Srivastava	M.S. Electrical Engineering	August 2004	D. Bouldin
Yang Liu	M.S. Electrical Engineering	December 2004	H. Qi
Suresh Polisetty	M.S. Electrical Engineering	December 2004	D. Bouldin
Henry Sutters	M.S. Computer Science	December 2004	M. Langston
Derek Austin	Ph.D. Electrical Engineering	May 2005	M. Simpson
Xiaojing Yang	Ph.D. Electrical Engineering	May 2005	M. Simpson
Mardav Wala	M.S. Electrical Engineering	May 2005	D. Bouldin
Eric Hullander	M.S. Electrical Engineering	August 2005	M. Simpson
Ashwin Seshadri	M.S. Electrical Engineering	August 2005	M. Ferdjallah

Undergraduate Students Participating in Research - Advisor

<u>Name</u>	<u>Start Date</u>	<u>End Date</u>	<u>Outcome</u>
Kirk Baugher	January 2003	May 2003	completed M.S. degree
Joe Lancaster	August 2002	May 2003	current PhD student
Ben Boggess	June 2004	December 2004	employed at AEDC
Brian Sharp	June 2005	present	current student