

Objective

Seeking a challenging career opportunity that will add to the technical and managerial skills that I have acquired

Expertise

Software Engineering; Software Processes; Agent-based Simulation; Project Simulation, Project Management

Computational Experience

Languages –C#, C++, C, Java, MATLAB, BASIC, FORTRAN, COBOL, HTML, Assembly language, SQL, PHP, VHDL

Softwares –SQL, PHP, Oracle, PSPICE, MS Office, Citygreen, SYSTAT, ANSYS, virtual wafer lab, QM for Windows, Excel QM, AUTOCAD, DEVJAVA, RePast

Platforms –Windows 95/98/NT/XP/Professional/Vista, .NET, UNIX

Education:

2007: Auburn University, Auburn AL

Doctor of Philosophy (Computer Science and Software Engineering), Dec, 2007

Dissertation: “A flexible model for multi-agent based simulation of software development process”

Language: C#

Major Professor: Dr. David Umphress

G.P.A.: 3.91 / 4.0

2004: Wilkes University, Wilkes-Barre PA

Master of Science (Electrical Engineering), May, 2004

Thesis: “Artificial Intelligence: Combined use of Circumstance Descriptors and Recursive Simulation”

Language: C++, Java

Major Professor: Dr. John B. Gilmer

G.P.A.: 4.0 / 4.0

2002: Wilkes University, Wilkes-Barre PA

Bachelor of Science (Electrical Engineering), May, 2002

Project: “Interactive Modeling and Design of Antenna Array Steering”

Language: C

Major Professor: Dr. Umid R. Nejib

G.P.A.: 3.75 / 4.0

Publications:

- “A Flexible Model for Simulation of Software Development Process”. R. Agarwal, D. Umphress. Submitted to Journal of Computing and Information Technology, 2007.
- “Extreme Programming for a Single Person Team”. R. Agarwal, D. Umphress. Submitted to Journal of Computer Science, 2007.
- “Lifelong Learning: Becoming Computer Savvy at a Later Age”. C. Seals, K. Clanton, R. Agarwal, F. Doswell. Submitted to Journal of Usability Study, 2007.
- “Experiences of computing camps to aid at-risk youth”. C. Seals, R. Agarwal, S. Agarwal, C. Evans. Submitted to Journal of Transformative Education, 2007.
- “Learning Mathematics through Culture”. R. Agarwal, A. Williams, C. Seals. In STARS Celebration 2007-“Shaping the Future”, Charlotte, North Carolina.
- “Its Not Your Regular BORING Club!”. R. Agarwal, P. Gupta, R. Lindsey, C. Seals. In STARS Celebration 2007-“Shaping the Future”, Charlotte, North Carolina.
- “The Application of Evolutionary Computation in Evacuation Planning”. R. Muhdi, A. Garrett, R. Agarwal, J. Davis, G. Dozier, D. Umphress. In Proceedings of the IEEE Intelligent Transportation Systems Conference. Special Session on Study and Potential Solutions to Evacuation Planning Issues for IEEE ITSC 2006. pp. 600-605
- “Back From the Future: Using Projected Futures from Recursive Simulation to Aid Decision making in the Present”. R. Agarwal, J. Gilmer. In Proceedings of the Society for Modeling and Simulation International. Symposium on Military, Government & Aerospace Simulation for ASTC 2004. pp. 61-64
- “Interactive modeling and design of phased array antennas”. R. Agarwal, S. Malik, P. Gupta. Published in the Transactions of IEEE Region 2, Student Paper Contest, 2002, Scranton University.

Seminars and Presentations:

- The Application of Evolutionary Computation in Evacuation Planning – Paper Presentation, IEEE Intelligent Transportation Systems Conference. Special Session on Study and Potential Solutions to Evacuation Planning Issues for IEEE ITSC 2006
- Agent Simulation and AI Methods for Conflict Analysis, Resolution, and Management – Seminar Presentation, Auburn University, 2005
- Software quality in Portable Wireless devices (Cell phones) – Seminar Presentation, Auburn University, 2005
- SimBuilder – Seminar Presentation, Auburn University, 2004
- Back from the Future: Using Projected Futures from Recursive Simulation to Aid Decision making in the Present – Paper Presentation, Society for Modeling and Simulation International. Symposium on Military, Government & Aerospace Simulation for ASTC, 2004
- Interactive modeling and design of phased array antennas – Paper Presentation, IEEE Region 2, Student Paper Contest, Scranton University, 2002.

Projects:

- SDPTool: A flexible model for multi-agent based simulation of eXtreme Programming.
- Agent-Based Simulation of Strategic Negotiation and Conflict Resolution Using Rubinstein's Protocol of Alternating Offers.
- Multilevel Agent-based simulation modeling for Power Transition Dynamics.
- Combined use of Circumstance Descriptors and Recursive Simulation to improve decision making in Command and Control simulation.
- Running of the trains using the Motorola 68000 processor and using the FPGA design.
- Fabrication of transistors on a silicon wafer (Athena, Atlas).
- Interactive Modeling and Design of Antenna Array Steering.
- Designed Generic Analog and Digital Filters (MATLAB, Signal Processing Toolkit).
- Traffic Intersection Control using the FPGA design.
- Transaction Processing in an Enterprise (Embedded SQL, C).

Work experience:

8/2005-Present: Graduate Teaching Assistant, Computer Science and Software Engineering, Auburn University.

- Teaching MATLAB programming language.
- Assisting professors in research, teaching, grading and lab setups.

5/2005-2/2006: TWC Technology Transfer Intern, Thomas Walter Center for Technology Management, Auburn University.

- Evaluating the commercial feasibility of new inventions of engineering faculty.
- Estimating commercial scale operations from laboratory results.
- Performing cost and business analysis of scaled-up version of new technologies.
- Finding potential licensees.

8/2004-8/2005: Graduate Research Assistant, Computer Science and Software Engineering, Auburn University.

- Developed Taxonomy on Multimodels.
- Designed Multilevel Agent-based simulation modeling for Power Transition Dynamics.
- Assisted professor in research and organizational tasks.

8/2002-5/2004: Graduate Teaching Assistant, Division of Engineering, Wilkes University.

- Taught Control Systems, Mechatronics, Communication Theory, MATLAB, Computer Organization, Machine Vision and Navigation, C and C++.
- Assisted professors in research, teaching, grading and lab setups.
- Developed the Engineering division ABET website (<http://sg.wilkes.edu/ABET>)
- Setup the Control Systems Lab.

9/2001-8/2002: Department Assistant, Division of Engineering, Wilkes University.

- Designed and tested experiments for electronics laboratory.
- Assisted professors in grading, lab setups and with clerical and organizational tasks of the engineering department.

8/2001-12/2001: Institutional Research Office, Wilkes University.

- Assisted with statistical projects using MS Excel and SYSTAT.

Volunteer experience:

- Camp ROC (Reaching our children), summer camp for Elementary and Middle school children, Auburn University.
- Computer Club at Cary Woods Elementary School, Auburn University
- KEMET Academy: Summer outreach activities, Auburn University
- Participated in Red Cross community services and functions, Wilkes University.
- Assisted in organizing various IEEE meetings for IEEE Student Chapter, Wilkes University.

Achievements and interests:

- Awarded first prize for “Learning Mathematics through Culture”. R. Agarwal, A. Williams, C. Seals. In *STARS Celebration 2007-“Shaping the Future”*, Charlotte, North Carolina.
- Awarded third prize for “Its Not Your Regular BORING Club!”. R. Agarwal, P. Gupta, R. Lindsey, C. Seals. In *STARS Celebration 2007-“Shaping the Future”*, Charlotte, North Carolina.
- Awarded Graduate Assistant scholarship for PhD degree, 2004-2007, Auburn University
- President for Wilkes International Students Association (WISA), 2003-2004, Department of Engineering, Wilkes University.
- Coordinator for Engineering Students Advisory Board (ESAB), 2002-2004, Department of Engineering, Wilkes University.
- Awarded Graduate Assistant scholarship for MSEE program, 2002-2004, Wilkes University
- Outstanding student of the year award, 2001-2002, Wilkes University.
- Wilkes University Dean’s List, 2001-2004, Wilkes University.
- Member of Sigma Xi society, and IEEE, 2001-2004.

References:

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