

Shelby Solomon Darnell

PhD Student
in
Human Centered Computing

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Education

- 2009-present **PhD Student of Computer Science in School of Computing**
Clemson University, Clemson, South Carolina
Advisor: Juan E. Gilbert
Expected to complete dissertation by May 2013.
- 2006 **Master of Engineering in Software Engineering**
Auburn University, Auburn, Alabama
Title: Alleviating Escape Panic Using Evolutionary Intelligence
Advisor: Gerry V. Dozier
- 2003 **Bachelor of Science in Computer Engineering**
Auburn University, Auburn, Alabama

Professional Experience

- 2010-present **Graduate Research Assistant**
Human Centered Computing Lab, Clemson University, South Carolina
- 2011 **Graduate Teaching Assistant**
School of Computing, Clemson University, South Carolina
- 2009-2010 **Graduate Research Assistant**
Biometrics and Pattern Recognition Lab, Clemson University, South Carolina
- 2006-2009 **L-3 Communications Mission Integration Division Software Engineer**,
Greenville, Texas
 - designed and implemented client-server enterprise software
 - professional recruiting
 - performed job duties of Project Engineer trainee
 - built Systems Integration Lab (SIL) for new project effort
- 2004-2005 **Computer System Administrator**, Auburn University, Alabama
Student-Athlete Support Services (SASS)
- 2004-2005 **Graduate Research Assistant**, Auburn University, Alabama
Worked with Professor Cheryl Seals; did visual programming of educational simulations with end user programming, intelligent agents, usability evaluation, computer supported collaborative work and minimalism.
- 2003-2005 **Graduate Teaching Assistant**, Personal Computer Applications
- 2003 **Undergraduate Teaching Assistant**, Auburn University, Alabama
- 2002-2003 **College of Engineering Tutor**, Auburn University, Alabama
I tutored the following courses for Auburn's College of Engineering:
 - Calculus I - III
 - Differential Equations
 - Computer Applications
 - Fundamentals of Computing I & II
 - Software Construction

- Introduction to Algorithms
- Software Modeling and Design
- Engineering Physics I & II
- 2002-2003 **Assistant System Administrator**
Department of Computer Science and Software Engineering (CSSE), Auburn University, Alabama
- 2001-2002 **Bellsouth Minority Engineering Program Mentor-Tutor**
Auburn University, Alabama
I tutored the following engineering courses:
 - Calculus I-III
 - Differential Equations
 - Computer Applications
 - Fundamentals of Computing I & II
 - Engineering Physics I & II

Publications

1. Hollingsworth, K., Darnell, S.S., Miller, P.E., Woodard, D.L., Bowyer, K.W. and Flynn, P.J. (2011) **Human and Machine Performance on Periocular Biometrics Under Near-Infrared Light and Visible Light**. IEEE Transactions on Information Forensics and Security (to appear).
2. Gilbert, J.E., Johnson-Stokes, W., Darnell, S.S., Ekandem, J.I., Alnizami, H., Martin, A.M., (2011) **Accessible Voting: One Machine, One Vote for Everyone**. ACM CHI '11 Video Presentation, Vancouver, CA, May 10, 2011.
3. Darnell, S.S., Alvarez, I., Ekandem, J.I., Woodard, D.L. and Gilbert, J.E. (2011), **MyDash: The Biometric Digital Dashboard**, In Proceedings of the 3rd Workshop on Multimodal Interfaces for Automotive Applications (MIAA '11) organized at the 2011 International Conference on Intelligent User Interfaces (IUI '11), February 13, 2011, Palo Alto, CA, pp. 53-56.
4. Darnell, S.S., **Alleviating Escape Panic Using Evolutionary Intelligence**, Auburn University Theses and Dissertations, May 2006.
5. Carnahan, B., Muhdi, R., Fu, S., Darnell, S.S., Davis, J., Dozier, G. and Smith, A., **GENEVAC: Evolving Exits for Evacuation Models Via Steady-State Genetic Search**, Technical Report: Auburn University CSSE05-06, May 18, 2005.

Presentations

MyDash: The Biometric Digital Dashboard for MIAA 2011

This presentation introduces a digital dashboard that utilizes biometric identification to seamlessly start your car, load your personalized settings and connect you, privately and securely, to your online identity.

Workshops

3rd International Workshop on Multimodal Interfaces for Automotive Applications (MIAA) *MIAA 2011*

The goal of this workshop is to present, discuss, and outline context-aware multimodal interfaces for drivers and car passengers. Providing a personalized experience for different users will be an aspect of particular interest.

Conferences

Richard Tapia Celebration of Diversity in Computing *Spring 2011, Fall 2005, Fall 2003*

Three day conference on a variety of Computer Science disciplines in various locations across the country.

ACM 2011 International Conference on Intelligent User Interfaces *IUI 2011*

IUI 2011 is the annual meeting of the intelligent interfaces community and serves as the principal international forum for reporting outstanding research and development on intelligent user interfaces. Palo Alto, CA.

Service

1. Student Volunteer - NSF Broadening Impacts for Research and Discovery Summit (BIRDS) June 21-24, 2010

Awards and Honors

1. Clemson University Graduate Research Assistantship in Human Centered Computing, 2011
2. Clemson University Graduate Scholars Fellowship 2009-2011
3. Clemson University Alumni Graduate Fellowship, 2010
4. Clemson University Graduate Research Assistantship in Biometrics, 2009.
5. Purdue University PhD Fellowship in Computer and Information Technology, 2009 (Awarded, not accepted).
6. Auburn University Part-time Graduate Research Assistant in Game Concepts and Technology with Dr. Cheryl Seals, 2003-2005.
7. Auburn University Part-time Graduate Teaching Assistantship, 2003-2005.
8. AU Board of Trustees Scholarship to Auburn University, 2000-2003.
9. Alabama Power Foundation Scholarship to Auburn University, 2001-2002.
10. William F. and Brenda W. Hayes Scholarship to Auburn University, 2001-2002.
11. Minority Engineering Program Scholarship to Auburn University, 2000-2001.
12. Tau Sigma National Honor Society Inductee, 2001 -
A transfer student honor society for those in the top 10 percent of their class.

13. Dean's List, 1999 - University of Alabama in Huntsville.

Professional Memberships

1. Institute of Electrical and Electronics Engineers
(IEEE) Computer Society, since 2008.
2. Association for Computing Machinery (ACM), since 2009.
3. Brothers of the Academy Institute
(BOTA-<http://www.brothersoftheacademy.org>), since 2009.