

# Lauren Cairco Dukes

405 Brown Rd. Apt 22, Pendleton, SC 29670  
www.laurencaircodukes.com//lauren.c.dukes@gmail.com

## Education

Ph.D in progress	Clemson University, School of Computing, Clemson, SC <i>Proposed thesis title:</i> Development of a Scenario Builder Tool for Scaffolded Virtual Patients <i>Ph.D Advisor:</i> Dr. Larry F. Hodges <i>Anticipated Graduation Date:</i> Spring 2015
MS	Clemson University, School of Computing, Clemson, SC <i>Concentrations:</i> Graphics & Algorithms Fall 2009-Fall 2012
BS	Winthrop University, Rock Hill, SC <i>Major:</i> Computer Science <i>Minor:</i> Mathematics Fall 2005-Spring 2009 Magna cum laude

## Experience

Fall 2013-present	Graduate Instructor of Record Introduction to C for Non-Majors Clemson University, Clemson, SC
Fall 2009-present	Graduate Research Assistant in Virtual Environments Group Clemson University, Clemson, SC
Summer 2013	Research Intern in Mixed Reality Lab University of Southern California Institute for Creative Technologies Los Angeles, CA
Summer 2011	Research Intern Charles River Analytics, Cambridge, MA
Fall 2006-Spring 2009	Undergraduate Researcher in Future Computing Lab University of North Carolina-Charlotte, Charlotte, NC
Summer 2008	Research Experiences for Undergraduates Student Center for Human Computer Interaction Virginia Tech, Blacksburg, VA

Summer 2007	Computer Science Research Experiences for Undergraduates Student Future Computing Lab University of North Carolina-Charlotte, Charlotte, NC
Summer 2006	
Fall 2006-Spring 2007	Cognitive Science Research Experiences for Undergraduates Student Future Computing Lab University of North Carolina-Charlotte, Charlotte, NC

## Research

### Fully Reviewed Papers

Wu, X., Bertrand, J., Armstrong, R., Roy, T., Ebrahimi, E., **Dukes, L. C.**, Daily, S., Luo, J., Fasolino, T., Hodges, L. F., and Babu, S. (2014) Effects of Virtual Human Animation on Emotion Contagion in Simulated Inter-Personal Experiences. To appear in Proceedings of *IEEE Virtual Reality 2014 (IEEE VR 2014)*, March 29-April 2, 2014, Minneapolis, MI.

Pence, T. B., **Dukes, L.C.**, Hodges, L.F., Meehan, N. and A. Johnson. (2013) The Effects of Interaction and Visual Fidelity on Learning Outcomes for a Virtual Pediatric Patient System. In Proceedings of *International Conference on Healthcare Informatics 2013 (ICHI 2013)*, September 9-12, 2013, Philadelphia, PA, pp. 209-218. Acceptance rate: 30%.

**Dukes, L.C.**, Bertrand, J., Gupta, M., Armstrong, R., Fasolino, T., Babu, S., and Hodges, L.F. Empirical Evaluation of Traditional vs. Hybrid Interaction Metaphors in a Multitask Healthcare Simulation. In Proceedings of International Conference on Healthcare Informatics 2013 (ICHI 2013), September 9-12, 2013, Philadelphia, PA, pp. 89-98. Acceptance rate: 30%. **Best paper award.**

**Dukes L. C.**, Pence, T. B., Hodges, L. F., Meehan, N., Johnson, A. (2013) SIDNIE: Scaffolded Interviews Developed by Nurses in Education. In Proceedings of *Intelligent User Interfaces 2013 (IUI 2013)*, Santa Monica, CA, March 19-22, 2013, pp. 395-406. Acceptance rate: 22%.

**Dukes, L.C.**, Banic, A. U., McClendon, J., Pence, T. B., Mathieson, J., Summers, J., Hodges, L.F. (2013) Evaluation of System-Directed Multimodal Systems for Vehicle Inspection. *Journal of Computing and Information Science in Engineering* 13.1 (2013), pp. 011002-1 - 011002-9.

**Cairco, L.**, Ulinski, A., McClendon, J., Bloodworth, T., Mathieson, J., Hodges, L.F., and Summers, J. (2010) Interface Design and Display Modalities to Improve the Vehicle Inspection Process. In Proceedings of *ASME 2010 World Conference on Innovative Virtual Reality (Ames, IA, May 12-14, 2010)*, WINVR2010, pp. 275-284.

Wahid, S., Branham, S., **Cairco, L.**, McCrickard, D.S., and Harrison, S. (2009) Picking Up Artifacts: Storyboarding as a Gateway to Reuse. In Proceedings of *Interact 2009: The 12th IFIP Conference on Human-Computer Interaction* (Uppsala, Sweden, August 24-28, 2009), pp. 528-541. Acceptance rate: 29%.

**Cairco, L.**, Wilson, D.M., Fowler, V., LeBlanc, M. (2009) Avari: Animated Virtual Agent Retrieving Information. In Proceedings of the 47<sup>th</sup> ACM Southeast Conference (Clemson, SC, USA, March 19-21, 2009). ACMSE '09.

Dahlberg, T., Barnes, T., Rorrer, A., Powell, E., and **Cairco, L.** (2008) Improving retention and graduate recruitment through immersive research experiences for undergraduates. In Proceedings of the 39th *SIGCSE Technical Symposium on Computer Science Education* (Portland, OR, USA, March 12 - 15, 2008). SIGCSE '08. ACM, New York, NY, pp. 466-470.

## Posters

**Dukes, L.C.**, Hodges, L. F. (2014). Poster: Development of a Scenario Generation Tool for Scaffolded Virtual Patients. To appear in Proceedings of *IEEE Virtual Reality 2014* (IEEE VR 2014), March 29-April 2, 2014, Minneapolis, MI.

Jones, J. A., **Dukes, L. C.**, Bolas, M. (2014) Poster: Automated Calibration of Display Characteristics (ACDC) for Head-Mounted Display and Arbitrary Surfaces. To appear in Proceedings of *IEEE Virtual Reality 2014* (IEEE VR 2014), March 29-April 2, 2014, Minneapolis, MI.

Krum, D., Phan, T., **Dukes, L. C.**, Wang, P., Bolas, M. (2014) Poster: Tablet-based Interaction Panels for Immersive Environments. To appear in Proceedings of *IEEE Virtual Reality 2014* (IEEE VR 2014), March 29-April 2, 2014, Minneapolis, MI.

**Dukes, L.C.**, Bertrand, J., Gupta, M., Armstrong, R., Fasolino, T., Babu, S., and Hodges, L.F. (2013) Poster: Comparing Usability of a Single versus Dual Interaction Metaphor in a Multitask Healthcare Simulation. In Proceedings of *IEEE Three Dimensional User Interfaces 2013* (IEEE 3DUI 2013), Orlando, FL, March 16-17, 2013, pp. 133-134.

**Cairco, L.**, and McCrickard, D. S. (2009) Encouraging Design Reuse and Contribution in HCI Storyboarding. In ACM Student Research Competition at SIGCSE (Chattanooga, TN, USA, March 4-7, 2009). SIGCSE '09.

**Cairco, L.**, S. Babu, A. Ulinski, C. Zanbaka, L. F. Hodges (2007). Shakespearean Karaoke. In Proceedings of *ACM Virtual Reality Systems and Technology 2007* (VRST07), Newport Beach, CA, November 5-7, 2007, pp. 239-240.

## Presentations & Demos

Bertrand, J.; **Cairco Dukes, L.**; Dukes, P.; Ebrahimi, E.; Hayes, A.; Mack, N.; McClendon, J.; Parmar, D.; Pence, T.B.; Shannon, B.; Wachter, A.; Yanxiang Wu; Babu, S.; Hodges, L.F., (2013). Serious games for training, rehabilitation and workforce development. *IEEE Virtual Reality (VR) 2013*, pp.195,196, 18-20 March 2013.

**Dukes, L.** (2013) Empirical Evaluation of Traditional vs. Hybrid Interaction Metaphors in a Multitask Healthcare Simulation. Visual Computing Seminar, Clemson University, August 30, 2013.

**Dukes, L.** (2013) My Summer Internship at ICT. Visual Computing Seminar, Clemson University, October 25, 2013.

**Dukes, L.** (2012) Research as Community Service. School of Computing Graduate Student Association Tech Talks Series. September 27, 2012.

**Cairco, L.**, Bertrand, J., Gupta, M., Armstrong, R., Babu, S., Hodges, L. F., Fasolino, T. (2012) Towards Simulation Training for Nursing Surveillance. In Proceedings of Carolina Women in Computing 2012 (CWIC 2012). Columbia, SC, February 17-18, 2012.

Bloodworth, T., **Cairco, L.**, McClendon, J., Hodges, L. F., Babu, S., Meehan, N., Johnson, A., and Ulinski, A. C. (2012) Initial Evaluation of a Virtual Pediatric Patient System. In Proceedings of Carolinas Women in Computing (CWIC) 2012. Columbia, SC, February 17-18, 2012.

**Cairco, L.** (2011) Lessons Learned as a Woman in Computing. Winthrop University, Rock Hill, SC. March 22, 2011.

## Honors

Clemson University School of Computing Outstanding Ph.D. Student of the Year, 2013

Accepted into IEEE VR 2014 Doctoral Consortium

Best Paper Award for International Conference for Healthcare Informatics, 2013

Clemson University School of Computing Masters' Student of the Year, 2012

NSF Graduate Research Fellowship Recipient, 2009-2012

Clemson University R.C. Edwards Graduate Fellowship Recipient 2009

Recipient of Essam El-Kwae Student-Faculty Research Award, with Dr. Larry F. Hodges and other members of the AVARI team, 2008

Accepted into Google Workshop for Women Engineers, 2008

Recipient of South Carolina Palmetto Fellows Scholarship, 2005-2009

Recipient of Winthrop University Trustees Scholarship, 2005-2009

Recipient of ACM-W Conference Attendance Scholarship for VRST, 2007

## **Service & Other Activities**

Member of Phi Kappa Phi Honors Society

Member of Upsilon Pi Epsilon National Computer Science Honors Society

Member of Kappa Mu Epsilon National Mathematics Honors Society

Student Volunteer at IEEE VR 2013

Student Volunteer at Carolinas Women In Computing 2012

Computer Science Graduate Student Association Secretary, 2010-2011

Graduate Mentor for Human Centered Computing REU, Summer 2010

Student Volunteer at IEEE VR 2010

STARS Alliance Team Member & Leader, 2006-2009

President of Winthrop University ACM chapter, 2007-2009

ACM International Collegiate Programming Competition participant, 2007-2009

Student Volunteer at ACM VRST 2007

Student Volunteer at IEEE VR 2007

## **Research Interests**

Human-computer interaction, virtual characters, virtual reality for training applications

Research project descriptions are available at <http://www.laurencaircodukes.com>