

Patrick A. Carrington

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Education

2016 (expected)	Ph.D. Human-Centered Computing, University of Maryland, Baltimore County (UMBC) Advisors: Amy Hurst and Shaun K. Kane
2012	M.S. Human-Centered Computing, University of Maryland, Baltimore County (UMBC)
2011	B.S. Information Systems [Cum Laude], University of Maryland, Baltimore County (UMBC) Information Systems Certificate: Web Development

Publications

Refereed Conference Papers

- [C.4] Carrington, P., Hurst, A., and Hurst, A. (2015) "But I don't take steps": Examining the inaccessibility of fitness device for wheelchair athletes. *Proc. ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2015)*. ACM. ^[23% Acceptance Rate]
- [C.3] Carrington, P., Hosmer, S., Yeh, T., Hurst, A., and Kane, S.K. (2015) "Like This, But Better": Supporting Novices' Design and Fabrication of 3D Models Using Existing Objects. *Proc. iConference 2015*.
- [C.2] Carrington, P., Hurst, A., and Kane, S.K. (2014) The Gest-Rest: A Pressure-Sensitive Chairable Input Pad for Power Wheelchair Armrests. *Proc. ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2014)*. ACM. ^[26% Acceptance Rate]
- [C.1] Carrington, P., Hurst, A., and Kane, S.K. (2014) Wearables and Chairables: Inclusive Design of Mobile Input and Output Techniques for Power Wheelchair Users. *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI 2014)*. ACM. ^[23% Acceptance Rate] **Best Paper Honorable Mention (Top 5%)**

Refereed Conference Posters

- [P.2] Carrington, P., Hurst, A., and Kane, S. K. (2013). How Power Wheelchair Users Choose Computing Devices. In *Proc. ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2013)* p. 52. ACM.
- [P.1] Carrington, P., Kuber, R., Anthony, L., Hurst, A. and Prasad, S. (2012) Developing an Interface to Support Procedural Memory Training using a Participatory-Based Approach. In *Proc. BCS HCI 2012*, 333-338.

Refereed Workshop Papers

- [W.2] Carrington, P., Hurst, A., Kane, S.K. (2014) Designing Chairables: Assistive Augmentations to Support Wheelchair Users. Workshop on Assistive Augmentation in Conjunction with CHI 2014.
- [W.1] Anthony, L., Carrington, P., Chu, P., Kidd, C., Lai, J., and Sears, A. (2011) Gesture Dynamics: Features Sensitive to Task Difficulty and Correlated with Physiological Sensors. In *Proc. ICMI MMCogEmS 2011*.

Doctoral Consortium

- [D.1] Carrington, P. (2014) Developing a Chairable Computing Platform to Support Power Wheelchair Users. *ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2014)*.

Invited Magazine Articles

- [M.1] Kane, S.K., Hurst, A., Buehler, E., Carrington, P., Williams, M. (2014) Collaboratively Designing Assistive Technology. *ACM Interactions*. 21, 2 (March 2014), p. 78-81.

Non-Refereed Publications and Tech Reports

- [O.1] Anthony, L., Carrington, P., Chu, P., Kidd, C., Lai, J., and Sears, A. (2011). Detecting Events of Interest with Physiological Sensors in a Real-World Email Search Task. Technical Report UMBC-IS-TR-007, 10 Oct 2011.

Honors and Achievements

2015	Generation Google Scholarship: Scholarship Recipient
2014	CHI 2014: Best Paper Honorable Mention
2012	QoLT Summer Research Symposium: Best Paper Award and Best Elevator Pitch Award
2011 – 2013	National Science Foundation: LSAMP Bridge to the Doctorate Fellowship

Other Presentations

June 2015	The Gest-Rest Family: Comparing Input Possibilities for Wheelchair Armrests Google Scholar's Retreat Poster Session [Poster]
November 2014	Designing Accessible Interactive Systems for People with Mobility Impairments Invited HCI Seminar [Talk]
March 2013	The Easy Make Oven <i>Philadelphia AMP Research Symposium</i> [Talk]
Feb 2013	The Easy Make Oven: An Interactive Surface for Scanning and Modifying Physical Prototypes <i>UMBC Graduate Research Conference</i> [Talk]
April 2012	Detecting Affect using Posture Data from a Smart Chair <i>UMBC Graduate Research Conference</i> [Poster]
April 2012	ProcedurePal: a Mobile App to Support Procedural Memory Training Information Systems Department Poster Session [Poster]

Research Experience

Aug 2011 – Present	Graduate Research Assistant , Department of Information Systems, UMBC <ul style="list-style-type: none">Design and implement solutions to address accessibility challenges faced by individuals with varying abilities. Utilize qualitative and quantitative methods to understand user behaviors.Worked with different hardware components to design, implement and evaluate the potential use of optical multi-touch interactive technologies to support design of physical prototypes.
May – July 2012	QoLT Bridge Researcher , Quality of Life Technology Center, Carnegie Mellon University <ul style="list-style-type: none">Developed and conducted pilot studies to test the benefits of different types of visual feedback on intelligibility in an autonomous driving car simulation.
Jan 2011 - Aug 2011	Research Assistant , Department of Information Systems, UMBC <ul style="list-style-type: none">Implemented sensing technologies to detect and identify changes in cognitive stress including eye tracking, pressure, and distance; physiological sensors included pulse rate, respiration, and Galvanic Skin Response.
Jan 2009 – Dec 2010	Undergraduate Research Assistant , Department of Information Systems, UMBC <ul style="list-style-type: none">Coordinated and administered data collection sessions for stress-detection through typing.Analyzed text data to discover characteristics of words, syllables, and abbreviations related to meaning.

Industry Experience

June – Sep 2015	Human Factors Engineering Intern , User Experience Research, NDG Smart Device Innovation, Intel
May – Aug 2014	Human Factors Engineering Intern , User Experience Research, NDG Smart Device Innovation, Intel
April – Aug 2013	Rehabilitation Aide , International Center for Spinal Cord Injury, Kennedy Krieger Institute
Jan 2009 – May 2011	Web Developer , Department of Information Systems, UMBC
June – Dec 2010	Business Analysis Intern , IS & T Global Sustainment, Lockheed Martin Aeronautics Company

Teaching Experience

Fall 2014, Spring 2015	Instructor , IS 101: Introduction to Computer Based Systems
Spring 2014	Teaching Assistant , Information Architecture for the Web (Online), <i>Instructor:</i> Dr. Anita Komlodi
Fall 2011	Teaching Assistant , Introduction to Computer Based Systems, <i>Instructor:</i> Dana Smith

Volunteering

Fall 2015	Human-Centered Information Systems: Graduate Student Organization President
Spring 2015	Human-Centered Information Systems: Graduate Student Organization Vice-President
2014 – 2015	Prototyping and Design Lab: Lab Manager
2013 – 2015	LSAMP Bridge to Doctorate Peer Mentor
2013 – 2015	Graduate Organization for IS: Liason for HCC
Feb 2014	IS Dept. PhD Day Panelist: How to be a Successful PhD Student
2014	Reviewer: Papers and Notes submissions to CHI 2015
2013 – 2015	Reviewer: Work-in-Progress submissions to CHI 2013, 2014, 2015
2014 – 2015	Senior Student Volunteer: CSCW 2014 and CHI 2014
Sep 2013	Organizer: UMBC exhibit at Mini-MakerFaire
2012 - 2014	Student Volunteer: UbiComp 2014, CHI 2013, and UIST 2012