

# JESSICA ANN ROBERTS

CURRICULUM VITAE

October 2018

Carnegie Mellon University  
Human-Computer Interaction Institute  
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## ACADEMIC POSITIONS

**Postdoctoral Research Fellow** 2017-present  
Human-Computer Interaction Institute, Carnegie Mellon University  
**Postdoctoral Researcher** 2015-2017  
Northwestern University & Field Museum of Natural History

## EDUCATION

**University of Illinois at Chicago, PhD in Learning Sciences** 2016  
Geospatial Analysis and Visualization Certificate (College of Urban Planning)  
*Dissertation:* Connecting Visitors to Data: Exploring Tools for Mediating Learning Talk at an Interactive Museum Exhibit  
*Committee:* Leilah Lyons, Susan Goldman, Tom Moher, Michael Horn, Robb Lindgren  
**National-Louis University, Alternative Certification Program for Elementary Education** 2004  
Self-contained K-9 Certification  
**Northwestern University, Bachelor of Science in Interdepartmental Studies in Communication** 2003  
*Specialization:* Theatre lighting design

## HONORS

CHI 2018 Honorable Mention Award [2018]  
CSCL 2017 Best Paper Award [2017]  
John Woodbridge Williams Memorial Scholarship for Outstanding Theatre Design, Northwestern University [2002, 2003]

## PEER-REVIEWED JOURNAL ARTICLES

- [J2] **Roberts, J.** and Lyons, L. (2017). The Value of Learning Talk: Applying a novel dialogue scoring method to inform interaction design in an open-ended, embodied museum exhibit. *International Journal of Computer Supported Collaborative Learning*. 12(4), 343-376. DOI 10.1007/s11412-017-9262-x
- [J1] Lyons, L., Becker, D., & **Roberts, J. A.** (2010). Analyzing the affordances of mobile technologies for informal science learning. *Museums & Social Issues*, 5(1), 87-102.

## PEER-REVIEWED CONFERENCES, FULL<sup>1</sup>

- [C6] **Roberts, J.**, Banerjee, A., Hong, A., McGee, S., Horn, M., Matcuk, M. (2018). Digital Exhibit Labels in Museums: Promoting Visitor Engagement with Cultural Artifacts. In Proceedings of the 2018 ACM SIGCHI Conference on Human Factors in Computing Systems (p. 623). ACM. *Honorable Mention Award*
- [C5] **Roberts, J.**, & Lyons, L. (2017). Scoring Qualitative Informal Learning Dialogue: The SQuILD Method

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<sup>1</sup> In the field of human-computer interaction, archival papers in premiere conferences such as the Association for Computing Machinery's (ACM) CHI, TEL, and IDC undergo highly selective, multi-stage peer review processes. These conferences often exceed journals in their selectivity, citations, and impact. Thus in human-computer interaction, proceedings publications in these venues are considered on par with publications in a journal. For rankings see: [https://scholar.google.com/citations?view\\_op=top\\_venues&vq=eng\\_humancomputerinteraction](https://scholar.google.com/citations?view_op=top_venues&vq=eng_humancomputerinteraction)

- for Measuring Museum Learning Talk. In Proceedings of the 12<sup>th</sup> International Conference on Computer-Supported Collaborative Learning. Philadelphia, Pennsylvania, USA. *Best Paper Award*.
- [C4] McGee, S., **Roberts, J.**, Banerjee, A., Foong, E., Matcuk, M., Horn, M. (2017). Designing Digital Rails to Foster Scientific Curiosity around Museum Collections. Annual meeting of the American Educational Researchers Association. Austin, Texas, USA.
- [C3] Cafaro, F., Lyons, L., Kang, R., Radinsky, J., **Roberts, J.**, & Vogt, K. (2014, February). Framed guessability: using embodied allegories to increase user agreement on gesture sets. In *Proceedings of the 8th International Conference on Tangible, Embedded and Embodied Interaction* (pp. 197-204). ACM.
- [C2] **Roberts, J.**, Lyons, L., Cafaro, F., & Eydt, R. (2014, June). Interpreting data from within: Supporting human-data interaction in museum exhibits through perspective taking. In Proceedings of the 2014 Conference on Interaction Design and Children (pp. 7-16). ACM.
- [C1] Cafaro, F., Panella, A., Lyons, L., **Roberts, J.**, & Radinsky, J. (2013, April). I see you there!: Developing identity-preserving embodied interaction for museum exhibits. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 1911-1920). ACM.

#### REVIEWED CONFERENCES, SHORT

- [S5] **Roberts, J.**, Crowley, K., & Louw, M. (2018). Creating a Visual Representation of Expert Strategies to Inform the Design of Digital Tools for Citizen Science. In Proceedings of the 2018 International Conference of the Learning Sciences. London, UK.
- [S4] Horn, M., **Roberts, J.**, Banerjee, A., & McGee, S. (2017). Touch | Don't Touch: Exploring the role of interactive displays in natural history museums to help visitors appreciate objects behind glass. In Proceedings of the 12<sup>th</sup> International Conference on Computer-Supported Collaborative Learning. Philadelphia, Pennsylvania, USA.
- [S3] Cafaro, F., Lyons, L., **Roberts, J.**, & Radinsky, J. (2014, June). The uncanny valley of embodied interaction design. In *Proceedings of the 2014 conference on Designing Interactive Systems* (pp. 1075-1078). ACM.
- [S2] **Roberts, J.**, Cafaro, C., Kang, R., Vogt, K., Lyons, L., & Radinsky, J. (2013). That's me and that's you: Museum visitors' perspective-taking around an embodied interaction data map display. In Proceedings of the 10th International Conference on Computer-Supported Collaborative Learning (pp. 343-344).
- [S1] **Roberts, J.**, Lyons, L., Radinsky, J., Cafaro, F. (2012). Connecting Visitors to Exhibits through Design: Exploring United States census data with CoCensus. In Proceedings of the 2012 International Conference of the Learning Sciences.

#### REVIEWED CONFERENCE ABSTRACTS

- [A7] Jorion, N., **Roberts, J.**, Bowers, A., Tissenbaum, M., Lyons, L., Kumar, V., Berland, M. (2018). Uncovering Patterns in Constructionist Collaborative Learning Activities via Cluster Analysis of Museum Exhibit Log Files. Paper presented at the annual meeting of the American Educational Researchers Association.
- [A6] **Roberts, J.**, Banerjee, A., Matcuk, M., McGee, S., Horn, M. (2016). Uniting Big and Little Data to Understand Visitor Behavior. Poster presented at the annual meeting of the Visitor Studies Association, July 2016, Boston, MA.
- [A5] **Roberts, J.**, Lyons, L., Cafaro, F., & Eydt, R. (2015). Harnessing motion-sensing technologies to engage visitors with digital data. In Proceedings of the 19th annual Museums and the Web conference. Available online: <http://mw2015.museumsandtheweb.com/proposal/harnessing-motion-sensing-technologies-to-engage-visitors-with-digital-data/>
- [A4] Lyons, L., and **Roberts, J.** (2014). Scaffolding the collaborative interpretation of data in a museum exhibit. In Leilah Lyons (chair), Synergistic Scaffolding of Technologically-enhanced STEM Learning in Informal Institutions. Symposium conducted at the International Conference of the Learning Sciences.
- [A3] **Roberts, J.**, Lyons, L., Radinsky, J. (2013) Become one with the data: Technological support of shared exploration of data in informal settings. In Anne Knowles (Chair), From Visualizing to Understanding

Historical Change: Using GIS Tools on the Web, in Class, and in Museums. Paper session conducted at the meeting of the Social Science History Association.

- [A2] **Roberts, J.**, Radinsky, J., Lyons, L., Cafaro, F. (2012, April) Co-Census: Designing an interactive museum space to prompt negotiated narratives of ethnicity, community, and identity. In Josh Radinsky (Chair), Tools for Constructing Historical Narratives: Teaching African American and Latino Histories With GIS Census Maps. Symposium conducted at the meeting of the American Educational Research Association.
- [A1] Melendez, J., **Roberts, J.**, Radinsky, J. (2010, November). GIS census data browsers: Tools for constructing social and historical narratives. In A. Beveridge (Chair), New Directions in Historical GIS(1): Substantive Findings and Web-Based Resources. Paper session conducted at the meeting of the Social Science History Association.

#### OTHER SCHOLARLY CONTRIBUTIONS

- [O1] **Roberts, J.**, Hall, A., & Goldman, S. (2017) Learning Sciences. In K. Peppler (Ed.), *SAGE Encyclopedia of Out of School Learning*.

#### MANUSCRIPTS IN PROGRESS

- Roberts, J.** and Louw, M. (under review) Negotiating the Contested Spaces of a Digital Boundary Object through Co-design
- Roberts, J.** and Lyons L. (under review) Examining Spontaneous Perspective Taking and Fluid Self-to-Data Relationships in Informal, Open-ended Data Exploration
- Roberts, J.** and Louw, M. (in progress). Connecting Expert Knowledge to Volunteer Needs: An interdisciplinary co-design process for developing a digital teaching collection in freshwater biomonitoring.

#### INVITED TALKS

- 2018** Alliance Best Paper Session, London Festival of Learning. London, UK.

#### SELECTIVE COMPETITIONS AND INVITED WORKSHOPS

- 2017** Early Career Workshop, International Conference of Computer Supported Collaborative Learning
- 2015** IGNITE Challenge, Hatfield Marine Science Center, Oregon State University
- 2015** Graduate Student Colloquium, Annual Conference of Museums and the Web
- 2015** Doctoral Consortium, International Conference of Tangible, Embedded, and Embodied Interaction
- 2013** Doctoral Consortium, International Conference of Computer Supported Collaborative Learning

#### TEACHING

2018	Learning Media Methods (undergraduate, co-instructor)	Carnegie Mellon University
2017	Evaluating Institutions: Research and Evaluation Methods in Museums (graduate)	University of Illinois at Chicago
2017	Human-Computer Interaction (undergraduate/graduate)	North Central College, Naperville, Illinois
2007-2009	Paralegal and attorney training for domestic violence pro bono clinic (professional)	Latham & Watkins LLP
2005-2009	LSAT, GMAT, ACT Test preparation (high school and post-baccalaureate)	Kaplan Test Prep
2003-2006	Self-contained elementary school, 4 <sup>th</sup> , 7 <sup>th</sup> , and 8 <sup>th</sup> grades	Chicago Public Schools

#### ADDITIONAL ACADEMIC POSITIONS

<b>Research Assistant</b>	2009-2015
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Learning Sciences Research Institute, University of Illinois at Chicago  
**Editorial Assistant**  
 Journal of the Learning Sciences

2012-2014

### PROFESSIONAL AFFILIATIONS

Association of Computing Machinery (ACM)  
 ACM Special Interest Group on Computer-Human Interaction (SIGCHI)  
 International Society of the Learning Sciences (ISLS)  
 American Educational Researchers Association (AERA)  
 Visitor Studies Association (VSA)

### SERVICE

*Reviewer:* Tangible, Embedded, and Embodied Interaction (TEI); SIGCHI Conference on Human Factors in Computing Systems (CHI); International Conference of Computer Supported Collaborative Learning (CSCL); Interaction Design and Children (IDC), International Conference of the Learning Sciences (ICLS), National Science Foundation; Visitor Studies Association; International Journal of Child-Compute Interaction

*Instructional Workshops:* Introduction to RefWorks (Learning Sciences Student Association - LSSA), NVivo (LSSA), Scrivener Demonstration (Learning Sciences Research Institute (LSRI) Brown Bag), Training Course on Informal Research for Practitioners (New York Hall of Science Explainers)

*Technology Demonstrations:* Introduction to Museum Research (LSRI visiting high school students), CoCensus demo (NSF Assistant Director visit; UIC Board of Visitors)

*Committees:* CHI Subcommittee Associate Chair - Learning, Education and Families (2019); Museums and the Web Local Committee (2015);

### RESEARCH MENTORING

Jessy Ma, summer REU intern, Carnegie Mellon University (summer 2018)  
 Grace Guo, undergraduate research assistant, Carnegie Mellon University (2017-2018)  
 Annette Hong, undergraduate research assistant, Northwestern University (2017)  
 Eureka Foong, graduate research assistant, Northwestern University (2016-2017)  
 Tyler Lindow, graduate research assistant, Northwestern University (2016-2017)  
 Rebecca Eydt, research associate, New York Hall of Science (2013-2016)  
 Kristin Vogt, graduate research assistant, University of Illinois at Chicago (2012-2013)

### COMMUNITY INVOLVEMENT

*Director of Student Relations and Outreach*, Do the Write Thing Challenge Chicago, 2009-2017  
*Secretary*, Gardens of Ravenswood Condominium Association, 2010-2013  
*Young Alumni President*, Northwestern University Alumni Club of Chicago, 2007-2009