

# JESSICA ANN ROBERTS

CURRICULUM VITAE

September 2019

School of Interactive Computing  
Georgia Institute of Technology  
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## ACADEMIC POSITIONS

<b>Assistant Professor</b>	2019-present
School of Interactive Computing, Georgia Institute of Technology	
<b>Postdoctoral Research Associate</b>	2017-2019
Human-Computer Interaction Institute, Carnegie Mellon University	
<b>Learning Sciences Researcher</b>	2015-2017
Northwestern University & Field Museum of Natural History	

## EDUCATION

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

- [J3] **Roberts, J.** & Lyons, L. (in press). Examining Spontaneous Perspective-Taking and Fluid Self-to-Data Relationships in Informal, Open-Ended Data Exploration. *Journal of the Learning Sciences*. DOI 10.1080/10508406.2019.1651317
- [J2] **Roberts, J.** & 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>

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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, TEI, and IDC undergo highly selective, multi-stage peer review processes. These conferences often exceed journals in their selectivity, citations,

- [C6] <sup>8</sup> **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] <sup>9</sup> **Roberts, J.**, & Lyons, L. (2017). Scoring Qualitative Informal Learning Dialogue: The SQuILD Method 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

- [A8] Sanford-Dolly, C., Louw, M., & **Roberts, J.** (2019). Impacts of an online macroinvertebrates observation and identification tool on volunteers' accuracy and confidence in water quality biomonitoring training. Accepted for presentation at the Citizen Science Association Conference, Raleigh, NC. March 2019.
- [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

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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)

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., & **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**

- [O2] Louw, M., Muenz, T., **Roberts, J.**, Wilson, M., and Kerlin, S. (2018). Aquatic Macroinvertebrate Identification Trainings for Volunteers: Results of a National Materials and Practices Inventory Survey. Technical report published through the Carnegie Mellon University School of Computer Science. Pittsburgh, PA USA. (CMU-HCII-18-104)
- [O1] **Roberts, J.**, Hall, A., & Goldman, S. (2017) Learning Sciences. In K. Peppler (Ed.), *SAGE Encyclopedia of Out of School Learning*.

**INVITED TALKS**

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

**SELECTIVE COMPETITIONS AND INVITED WORKSHOPS**

- 2019 VisualISE Conference, Exploratorium, San Francisco, USA
- 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
Learning Sciences Research Institute, University of Illinois at Chicago		
<b>Editorial Assistant</b>		2012-2014
Journal of the Learning Sciences		

**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**

*Committees:* CHI Subcommittee Associate Chair - Learning, Education and Families (2019, 2020); Museums and the Web Local Committee (2015)  
*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-Computer 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)

**RESEARCH MENTORING**

Aiqi Cui, undergraduate research assistant, Carnegie Mellon University (2018-2019)  
 Jamie Dorst, undergraduate research assistant, Carnegie Mellon University (2018-2019)  
 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