

Melissa Bica

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RESEARCH AREAS

Human-computer interaction (HCI), crisis informatics, computer supported cooperative work (CSCW), social computing, information science, user experience

EDUCATION

- Ph.D., Computer Science, University of Colorado Boulder** expected 2019
Committee: Leysia Palen (advisor, chair), Clayton Lewis, Brian C. Keegan, Kenneth M. Anderson, Julie L. Demuth
NSF Graduate Research Fellow
- M.S., Computer Science, University of Colorado Boulder** 2017
- B.S., Computer Science and Engineering, Santa Clara University** 2014
Graduated *cum laude*
- Study abroad, School of Informatics, University of Edinburgh, Scotland Fall 2012

PUBLICATIONS

Archival, Peer-Reviewed Conference Papers

- Melissa Bica**, Julie L. Demuth, James E. Dykes, and Leysia Palen. (in press). **Communicating Hurricane Risks: Multi-Method Examination of Risk Imagery Diffusion**. To appear in *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI 2019)*.
- Frank Bentley, Katie Quehl, Jordan Wirfs-Brock, and **Melissa Bica**. (in press). **Understanding Online News Behaviors**. To appear in *Proceedings of the CHI Conference on Human Factors in Computing Systems Proceedings (CHI 2019)*.
- Melissa Bica**, Leysia Palen, and Chris Bopp. (2017). **Visual Representations of Disaster**. *Proceedings of the 20th ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '17)*.
- Jennings Anderson, Marina Kogan, **Melissa Bica**, Leysia Palen, Kenneth M. Anderson, Kevin Stowe, Rebecca Morss, Julie Demuth, Heather Lazrus, Olga Wilhelmi, and Jen Henderson. (2016). **Far Far Away in Far Rockaway: Responses to Risks and Impacts during Hurricane Sandy through First-Person Social Media Narratives**. *Proceedings of the 13th International Conference on Information Systems for Crisis Response and Management (ISCRAM '16)*.
- Kyoung-Sook Kim, **Melissa Bica**, Isao Kojima, and Hirotaka Ogawa. (2015). **RendezView: Look at Meanings of an Encounter Region over Local Social Flocks**. *Proceedings of the 6th ACM SIGSPATIAL International Workshop on GeoStreaming*.

Journal Articles

- Julie L. Demuth, Rebecca E. Morss, Leysia Palen, Kenneth M. Anderson, Jennings Anderson, Marina Kogan, Kevin Stowe, **Melissa Bica**, Heather Lazrus, Olga Wilhelmi, and Jen Henderson. (2018). **"Sometimes da #beachlife ain't always da wave": Understanding People's Evolving Hurricane Risk Communication, Risk Assessments, and Responses Using Twitter Narratives**. *Weather, Climate, and Society* 10, 3: 537–560.

Rebecca E. Morss, Julie L. Demuth, Heather Lazrus, Leysia Palen, C. Michael Barton, Christopher A. Davis, Chris Snyder, Olga V. Wilhelmi, Kenneth M. Anderson, David A. Ahijevych, Jennings Anderson, **Melissa Bica**, Kathryn R. Fossell, Jennifer Henderson, Marina Kogan, Kevin Stowe, and Joshua Watts. (2017). **Hazardous weather prediction and communication in the modern information environment.** *Bulletin of the American Meteorological Society* 98, 12: 2653–2674.

Non-Archival Workshop Papers & Posters

Melissa Bica. (2018). **Sensemaking Around Visual Hurricane Risk Messaging.** Workshop on Sensemaking in a Senseless World at the ACM Conference on Human Factors in Computing Systems (CHI '18). [Workshop Paper]

Melissa Bica. (2017). Visual Representations of Disaster: Analysis of Disaster-Related Online Imagery. CRA-W Grad Cohort Workshop. [Poster]

Melissa Bica and Jennings Anderson. (2016). **“You Are What You Tweet!” The Ethics of (Re) Publishing Public Data as Crafted Narratives.** Workshop on Ethical Encounters in HCI Research at the ACM Conference on Human Factors in Computing Systems (CHI '16). [Workshop Paper]

Melissa Bica and Kyoung-Sook Kim. (2015). **RendezView: An Interactive Visual Mining Tool for Discerning Flock Relationships in Social Media Data.** International Conference for High Performance Computing, Networking, Storage and Analysis (SC '15). [Poster]

CONFERENCE PRESENTATIONS

Presenter and panelist, “The Other Uncertainty: Social, Political, and Cultural Forms of Uncertainty in Weather Contexts.” American Meteorological Society 99th Annual Meeting. Phoenix, AZ. January 7, 2019.

PRESS COVERAGE

“Twitter could be confusing people who need crucial hurricane information.” Ashley Michels. KDVR FOX31 Denver. September 11, 2018. <https://kdvr.com/2018/09/11/twitter-could-be-confusing-people-who-need-crucial-hurricane-information/>

“Graduate Makes Waves in Data Mining.” Jenni Sigl. The Santa Clara. January 7, 2016. <http://thesantaclara.org/graduate-makes-waves-in-data-mining/>

“Mining social media to manage crises.” Sam Stalion. Science Node. December 2, 2015. <https://sciencenode.org/feature/mining-social-media-to-manage-crises.php>

PROFESSIONAL & RESEARCH EXPERIENCE

Oath Inc., Sunnyvale, CA Summer 2018
User Experience Research Intern, Yahoo! Mail

Microsoft Research, Redmond, WA Summer 2017
Research Intern, Business AI Design & Ethics group

National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan Summer 2015
OSDC Partnership for International Research and Education Fellow

Santa Clara University Center for Science, Technology, & Society and Anudip Foundation, Feb.–Dec. 2013
Kolkata, India and Santa Clara, CA
Global Social Benefit Fellow

Qualcomm Incorporated, San Diego, CA Summer 2012
Interim Engineering Intern

TEACHING EXPERIENCE

University of Colorado Boulder

Guest Lecturer for CSCI 4830: HCC Big Data Computing

Oct. 2015

Teaching Assistant for CSCI 1300: Introduction to Programming

Aug. 2014–May 2015

Santa Clara University

Guest Lecturer for COEN 100: Undergraduate Research Seminar

May 23, 2018

SKILLS

Programming Languages & Tools: Python, MongoDB, Jupyter Notebook, HTML/CSS/JS, R, MATLAB, Tableau, QGIS

Methods: quantitative/qualitative data analysis, visual content analysis, surveys, interviews, ethnographic observation, think-alouds, cognitive walkthroughs, personas/user stories, in-lab studies

AWARDS

National Science Foundation Graduate Research Fellowship

June 2016

Open Science Data Cloud Partnerships for International Research and Education (PIRE) Fellowship

Apr. 2015

Graduate Student Research Community Development Award

Oct. 2014

Dean's Fellowship (CU Boulder)

AY 2014–2015

Dean's List (Santa Clara University)

AY 2013–2014

Senior Design Presentation Session Award (Santa Clara University)

May 2014

IEEE Women in Engineering International Leadership Conference Scholarship

Apr. 2014

Upsilon Pi Epsilon Computing and Information Honor Society

Apr. 2014

Willem P. Roelandts and Maria Constantino-Roelandts Grant

Nov. 2013

Tau Beta Pi Engineering Honor Society

Oct. 2013

Grace Hopper Celebration of Women in Computing Scholarship

July 2013

Global Social Benefit Fellowship

Feb. 2013

Cisco-SCU Engineering Fellowship

May 2012

Richard Tapia Celebration of Diversity in Computing Scholarship

Apr. 2011

ACADEMIC SERVICE

Reviewing

ACM Conference on Human Factors in Computing Systems (CHI)

ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)

International Journal of Disaster Risk Reduction

ACM Transactions on Information Systems

International Conference on Information Systems for Crisis Response and Management (ISCRAM)

Weather, Climate and Society

Student Volunteering

CHI 2016–2018

International Conference for High Performance Computing, Networking, Storage, and Analysis (SC15)

Mentoring

Mentored 8 undergraduate researchers for the Discovery Learning Apprenticeship (Spring 2016)

PROFESSIONAL MEMBERSHIP

ACM, ACM-W, ACM Special Interest Group Computer-Human Interaction (SIGCHI), Colorado Virtual Operations Support Team (COVOST)