

Melissa Bica, Ph.D.

User Experience Researcher at Yahoo

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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** Dec. 2019
Dissertation: *The Crisis Informatics of Online Hurricane Risk Communication*
Committee: Leysia Palen (advisor), Kenneth Anderson, Julie Demuth, Brian Keegan, Clayton Lewis
NSF Graduate Research Fellow (awarded 2016)
Degree conferred in May 2020
- M.S., Computer Science, University of Colorado Boulder** May 2017
- B.S., Computer Science and Engineering, Santa Clara University** June 2014
Senior Thesis: *Text to Learn: A Digital Training System for Global Social Enterprises*
Graduated *cum laude*
- Study abroad semester, School of Informatics, University of Edinburgh, Scotland Fall 2012

PROFESSIONAL & RESEARCH EXPERIENCE

- Yahoo (contracted via Freed Vance Research Group), Boulder, CO (remote)** July 2020–present
User Experience Researcher
- University of Colorado Boulder, Boulder, CO** Aug. 2015–Dec. 2019
Graduate Research Assistant and NSF Graduate Research Fellow
- Yahoo/Verizon Media, Sunnyvale, CA** May–Aug. 2018
User Experience Research Intern, Yahoo! Mail
- Microsoft Research, Redmond, WA** June–Sep. 2017
Research Intern, Business AI Design & Ethics group
- National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan** June–July 2015
OSDC Partnership for International Research and Education Fellow
- Santa Clara University Miller Center for Social Entrepreneurship and Anudip Foundation, Kolkata, India and Santa Clara, CA** Feb.–Dec. 2013
Global Social Benefit Fellow
- Qualcomm Incorporated, San Diego, CA** June–Sep. 2012
Interim Engineering Intern

PUBLICATIONS

Archival, Peer-Reviewed Conference Papers

Frank Bentley, Max Silverman, & **Melissa Bica**. (2019). **Exploring Online Video Watching Behaviors**. In *Proceedings of the ACM International Conference on Interactive Experiences for Television and Online Video (TVX '19)*.

- Melissa Bica**, Julie L. Demuth, James E. Dykes, & Leysia Palen. (2019). **Communicating Hurricane Risks: Multi-Method Examination of Risk Imagery Diffusion**. In *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems* (CHI '19).
- Frank Bentley, Katie Quehl, Jordan Wirfs-Brock, & **Melissa Bica**. (2019). **Understanding Online News Behaviors**. In *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems* (CHI '19).
- Melissa Bica**, Leysia Palen, & Chris Bopp. (2017). **Visual Representations of Disaster**. In *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, & Jen Henderson. (2016). **Far Far Away in Far Rockaway: Responses to Risks and Impacts during Hurricane Sandy through First-Person Social Media Narratives**. In *Proceedings of the 13th International Conference on Information Systems for Crisis Response and Management* (ISCRAM '16).
- Kyoung-Sook Kim, **Melissa Bica**, Isao Kojima, & Hirotaka Ogawa. (2015). **RendezView: Look at Meanings of an Encounter Region over Local Social Flocks**. In *Proceedings of the 6th ACM SIGSPATIAL International Workshop on GeoStreaming*.

Journal Articles

- Melissa Bica**, Joy Weinberg, & Leysia Palen. (2020). **Achieving Accuracy through Ambiguity: The Interactivity of Risk Communication in Severe Weather Events**. *Computer Supported Cooperative Work* (Oct. 2020): 1–37.
- Julie L. Demuth, Rebecca E. Morss, Leysia Palen, Kenneth M. Anderson, Jennings Anderson, Marina Kogan, Kevin Stowe, **Melissa Bica**, Heather Lazrus, Olga Wilhelmi, & 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, & 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**, Jennifer Henderson, Jennifer Spinney, Leysia Palen, Erik Nielsen, Russ Schumacher, Julie Demuth, & Rebecca Morss. (2019). **Twitter in the Eye of the Storm: Examining Social Media Use for Overcoming Constraints in a Multi-Hazard Hurricane**. Presented at Fall 2019 VORTEX Southeast Workshop. [Poster]
- Melissa Bica**. (2019). **Human-Centered Data Science for Collaborative, Interdisciplinary Research**. Presented at “Human-Centered Study of Data Science Work Practices” Workshop at the ACM Conference on Human Factors in Computing Systems (CHI '19). [Workshop Paper]
- Melissa Bica**. (2018). **Sensemaking Around Visual Hurricane Risk Messaging**. Presented at “Sensemaking in a Senseless World” Workshop 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**. Presented at 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**. Presented at “Ethical Encounters in HCI Research” Workshop 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**. Presented at International Conference for High Performance Computing, Networking, Storage and Analysis (SC '15). [Poster]

INVITED PRESENTATIONS

Panelist, "Integrated Science: Challenges and Opportunities." NCAR/UCAR Advanced Study Program Colloquium: Quantifying and Communicating Uncertainty in High-Impact Weather Prediction. Boulder, CO. July 25, 2019.

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

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

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

Technical: Python, MongoDB, Jupyter Notebook, HTML/CSS/JS, R

PRESS COVERAGE

"Twitter could be confusing people who need crucial hurricane information." Ashley Michels. KDVR FOX31 Denver. Sep. 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. Jan. 6, 2016. <https://www.thesantaclara.org/blog/graduate-makes-waves-in-data-mining>

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

AWARDS

National Science Foundation Graduate Research Fellowship

June 2016

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

April 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 "Best in Session" Award (Santa Clara University)

May 2014

IEEE Women in Engineering International Leadership Conference Scholarship

April 2014

Upsilon Pi Epsilon Computing and Information Honor Society

April 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

ACADEMIC SERVICE

Reviewing

HKS Misinformation Review

Human-Computer Interaction

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 undergraduate researcher for CU Boulder's Undergraduate Research Opportunities Program (2019)

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

PROFESSIONAL MEMBERSHIP

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