

University of Maryland, College Park
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Cody Buntain

Personal Information

Research Focus **Illuminating social issues through computational methods, social media, and large-scale machine learning**, *computational social science, credibility of social data, crisis informatics, social journalism, social networks, machine learning, information retrieval.*

Positions

10/2016–Present **Postdoctoral Fellow, Intelligence Community Postdoctoral Research Fellowship Program**, *UMIACS, University of Maryland*, College Park, MD.

Advisor: Professor Jennifer Golbeck

Education

8/2011–12/2016 **PhD in Computer Science**, *University of Maryland*, College Park, MD.

Advisor: Professor Jennifer Golbeck

Committee: Professor Jimmy Lin, Professor Nicholas Diakopoulos, Professor Hector Corrada Bravo, Professor V.S. Subrahmanian

5/2007–5/2010 **MS in Computer Science**, *University of Alabama in Huntsville*, Huntsville, AL.

Advisor: Professor Daniel Rochowiak

8/2003–5/2007 **BS in Computer Science and Mathematics**, *University of Alabama in Huntsville*, Huntsville, AL.

Honors: Summa Cum Laude

Relevant Employment Background

8/2015–12/2015 **Adjunct Professor**, *Computer Science Department, American University*, Washington, DC.

8/2011–3/2014 **Research Scientist**, *Raytheon Pikewerks*, Arlington, VA.

8/2009–8/2011 **Director of Research**, *Pikewerks Corporation*, Madison, AL.

5/2009–8/2009 **Research Engineer**, *Pikewerks Corporation*, Madison, AL.

Research, Scholarly, and Creative Activities

Monographs, Reports, and Extension Publications

- Cody Buntain, **Discovering Credible Events In Near Real Time From Social Media Streams**, Ph.D. Thesis, University of Maryland, College Park, 2016.
- Cody Buntain, **A Game-Theoretic Comparison Of Genetic And Model-Based Agents In Learning Strategic Interactions**, Master's Thesis, University of Alabama in Huntsville, 2010.

Refereed Journal Publications

- Cody Buntain and Jennifer Golbeck, Trust Transfer Between Contexts, *Journal of Trust Management*, 2(1):6, 2015.

Refereed Conference Proceedings

- Cody Buntain and Jennifer Golbeck, I Want to Believe: Journalists and Crowdsourced Accuracy Assessments in Twitter, *Under Review*, 2017.
- Cody Buntain, Erin McGrath, and Brandon Behlendorf, Improving Social Science-Oriented Search with Microblog Data Resellers and Network Analysis, *Under Review*, 2017.
- Cody Buntain, and Jimmy Lin, Burst Detection in Social Media Streams for Tracking Interest Profiles in Real Time, in *Proceedings of the 39th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, pages 777-780, July 2016, Pisa, Italy.
- Cody Buntain, Jennifer Golbeck, Brooke Liu, and Gary LaFree, Evaluating Public Response to the Boston Marathon Bombing and Other Acts of Terrorism through Twitter, in *Proceedings of the International AAAI Conference on Web and Social Media*, 2016.
- Cody Buntain, Jimmy Lin, and Jennifer Golbeck, Learning to Discover Key Moments in Social Media Streams, in *Proceedings of the IEEE Consumer Communications and Networking Conference*, 2016.
- Cody Buntain, Sarit Kraus, and Amos Azaria, Leveraging Fee-Based, Imperfect Advisors in Human-Agent Games of Trust, in *Proceedings of the Twenty-Eighth Conference on Artificial Intelligence*, 2014.
- Cody Buntain, Jennifer Golbeck, Dana Nau, and Sarit Kraus, Advice and trust in games of choice, in *Tenth Annual International Conference on Privacy, Security and Trust (PST)*, 2012, pp. 157–158.
- John Rushing, Todd Berendes, Hong Lin, Cody Buntain, and Sara Graves, Spyglass: A system for ontology based document retrieval and visualization, *22nd International FLAIRS Conference*, 2009.
- Cody Buntain, 3D ontology visualization in semantic search, in *Proceedings of the 46th Annual Southeast Regional Conference of the ACM*, 2008, pp. 204–208.

Refereed Workshops

- Cody Buntain, Erin McGrath, and Jennifer Golbeck, “Tracking Emigration from Conflict Areas using Social Media,” in the Workshop on Social Media and Demographics Research at ICWSM, 2016.
- Cody Buntain, Erin McGrath, Jennifer Golbeck, and Gary LaFree, “Comparing Social Media and Traditional Surveys Around the Boston Marathon Bombing,” in 6th Workshop on Making Sense of Microposts (#Microposts2016), 2016.
- Cody Buntain, and Jimmy Lin, “Burst Detection in Social Media Streams for Tracking Interest Profiles in Real Time,” in Proceedings of the Twenty-Fourth Text REtrieval Conference (TREC 2015), November 2015, Gaithersburg, Maryland.
- Cody Buntain, Jennifer Golbeck, and Gary LaFree, “Powers and Problems of Integrating Social Media Data with Public Health and Safety,” in the *Proceedings of the Bloomberg Data for Good Exchange*, 2015.
- Cody Buntain, “Discovering Credible Events in Near Real Time from Social Media Streams,” in PhD Symposium, 24th International World Wide Web Conference, WWW '15, 2015.
- Cody Buntain and Jennifer Golbeck, “This is your Twitter on drugs. Any questions?,” in Workshop on Modeling social media: mining big data in social media and the web (MSM 2015), in 24th International World Wide Web Conference, WWW '15, 2015.
- Cody Buntain, Language-Agnostic Event Detection Across Sports from Twitter and Using Temporal Features, in *Workshop on Large Scale Sports Analytics, KDD*, 2014.
- Cody Buntain and Jennifer Golbeck, Trust Transfer Between Contexts, in *Proceedings of the Workshop on Incentives and Trust in E-Communities, AAAI*, 2014.
- Cody Buntain and Jennifer Golbeck, Social Roles in Multi-Community Websites, in *Proceedings of the 5th International Workshop on Modeling Social Media*, 2014.
- Nadya Belov, Jason Schlachter, Cody Buntain, and Jennifer Golbeck, Computational trust assessment of open media data, *2013 IEEE International Conference on Multimedia and Expo Workshops (ICMEW)*, 2013.

Poster Presentations

- Cody Buntain, Christopher Natoli, and Miroslav Živković, Comparing algorithms for detecting abrupt change points in data, in *Proceedings of the 2014 Conference on Super Computing*, November 2014.
- Cody Buntain, Jennifer Golbeck, Dana Nau, and Sarit Kraus, Advice and trust in games of choice, in *University of Maryland AI Day*, April 2012.

Invited Talks

- Tutorial on Social Media Analytics During Crises

HCIL Symposium, University of Maryland, College Park
College Park, MD (26 May 2016)

- “Researching Ferguson: Advanced Analytical Techniques”
University of Maryland, College Park
College Park, MD (9 April 2015)
- “Data’s Metamorphosis: Algorithms for Detecting Change Points in Data”
University of Amsterdam
Amsterdam, NL (24 July 2014)
- “Applications of and Issues in Machine Learning in Social Networks”
University of Alabama in Huntsville
Huntsville, AL (29 May 2013)
- “Supply Chain Risk Management for Fun and Profit”
InfraGard Huntsville Chapter
Huntsville, AL (March 2011)
- “Environmental key generation and hardware-binding”
The Anti-Tamper Short Course
Huntsville, AL (10 June 2010)

Professional Talks

- “On Shaky Ground – Low-Level Threats in the Supply Chain”
North Alabama Cyber Security Summit
Huntsville, AL (June 2012)
- “Learn, protect, adapt: Expanding protections outside the box”
Software Protection, Information Assurance, and Anti-Tamper SBIR Workshop
Dayton, OH (July 2010)

Contracts and Grants

Role and Program: **PI**, “Automated Program Analysis in Cybersecurity”

Employer: Raytheon Pikewerks

Sponsor: Defense Advanced Research Projects Agency (DARPA)

Duration: March 2012 – August 2013

Role and Program: **PI**, “Deception Studio: Attacker Characterization and Dynamic Relocation”
Phase II

Employer: Pikewerks Corporation

Sponsor: Air Force Research Labs (AFRL)

Duration: March 2011 – April 2013

Role and Program: **PI**, “Imbuing Trust in Untrusted Hardware to Improve Protections” Phase I

Employer: Pikewerks Corporation

Sponsor: Air Force Research Labs (AFRL)

Duration: November 2010 – May 2011

Role and Program: **PI**, “Deception Studio: Attacker Characterization and Dynamic Relocation” Phase I

Employer: Pikewerks Corporation

Sponsor: Air Force Research Labs (AFRL)

Duration: November 2009 – May 2010

Fellowships and Awards

Award: Best Paper Honorable Mention

Institution: #Microposts2016, Workshop on Understanding Microposts

Paper Title: Comparing Social Media and Traditional Surveys Around the Boston Marathon Bombing

Date: April 2016

Award: Goldhaber Travel Award

Institution: University of Maryland

Date: April 2015

Award: International Conference Student Support Award

Institution: University of Maryland

Date: April 2015

Award: Conference Travel Award

Institution: University of Maryland

Date: March 2015

Award: OSD-PIRE Fellowship

Institution: Florida International University and the University of Amsterdam

Date: Summer 2014

Award: Goldhaber Travel Award

Institution: University of Maryland

Date: March 2014

Award: International Conference Student Support Award

Institution: University of Maryland

Date: February 2014

Award: Gannon Travel Grant for Conference Presentation

Institution: University of Maryland – Computer Science Department

Date: February 2014

Reviewing Activities for Journals and Other Learned Publications

- **ICWSM**: Program Committee Member for the International AAAI Conference on Web and Social Media, 2017
- **Social Media + Society**: External Reviewer, 2017
- **ICWSM**: Program Committee Member for the International AAAI Conference on Web and Social Media, 2016
- **CHI**: ACM Conference on Human Factors in Computing, 2014
- **HICSS-48**: 48th Annual Hawaii International Conference on System Sciences

Teaching and Mentoring

Courses Taught

- **CSC546**: Introduction to Computer Networks
American University, Fall 2015
- **CMSC132**: Introduction to Java Programming II (Teaching Assistant)
University of Maryland, Fall 2011 – Two lab sections

Mentoring Roles

- Alumnus Chapter Advisor to the Huntsville Chapter of Delta Chi
Fall 2009 – Fall 2011