

# Yuheng Hu

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## CONTACT INFORMATION

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## RESEARCH INTERESTS

My research lies at the intersection of **Social Computing**, **HCI** and **Machine Learning** with an emphasis on (1) Computational methods for modeling and predicting large-scale time-varying human behaviors (on both individual and collective levels) from massive user-generated content during public/breaking/local events, and (2) Intelligent user interfaces for better civic and community engagement.

## EDUCATION

**Arizona State University**, Tempe, AZ, U.S  
Ph.D. student, Computer Science, Jan 2010 - July 2014, Expected

- *Thesis*: Event Analytics on Social media: Challenges and Solutions
- *Committee*: Dr. Subbarao Kambhampati (Chair), Dr. Huan Liu, Dr. Hari Sundaram, Dr. Eric Horvitz (Microsoft Research), Dr. John Krumm (Microsoft Research)
- *Course work*: Machine learning, Social computing, Information visualization, Information Retrieval, Natural language processing

**Florida International University**, Miami, FL, U.S  
M.S., Computer Science, Jan 2008 – Dec 2009

**Zhejiang University**, Hangzhou, Zhejiang, P. R. China  
B.S., Computer Science, Sep 2003 – Jul 2007

## HONORS AND AWARDS

- **Best Paper Honorable Mention**, CHI 2013
- University Graduate Fellowship, Arizona State University, 2012-2014
- Conference Travel Awards (Multimedia-11, AAAI-12, ICWSM-12, ICWSM-13, CHI-13)
- Presidential Fellowship, Florida International University, 2008 - 2009
- Outstanding Undergraduate Thesis Award, Zhejiang University, 2007
- Bronze Medal, College Student Programming Contest of Zhejiang Province, 2006
- Excellent Student Scholarship, Zhejiang University, 2004 - 2007

## RESEARCH EXPERIENCES

**Department of Computer Science, Arizona State University**  
**Research Assistant**, Jan 2010 – Present  
*Advisor*: Subbarao Kambhampati

**Microsoft Research**  
**Research Intern**, June 2013 – Aug 2013  
*Mentor*: Shelly D. Farnham, *Manager*: Lili Cheng

**Microsoft Research**  
**Research Intern**, June 2013 – Aug 2013  
*Mentor*: Shelly D. Farnham, *Manager*: Lili Cheng

**Avaya Labs Research**  
**Research Intern**, May 2011 – Aug 2011  
*Mentor*: Ajita John, *Manager*: Dorée Duncan Seligmann

**Peer-Reviewed Conference Proceedings**

1. **Yuheng Hu**, Lydia Manikonda, Subbarao Kambhampati. (2014), *Why We Instagram: A First Analysis of Instagram Photo Content and Users*. in Proc. of ICWSM-14: Int'l AAAI Conference on Weblogs and Social Media .
2. Kartik Talamadupula, Subbarao Kambhampati, **Yuheng Hu**, Tuan Nguyen, Hankz Hankui Zhuo. (2013), *Herdin the Crowd: Automated Planning for Crowdsourced Planning*. in Proc. of HComp-13: The First AAAI Conference on Human Computation and Crowdsourcing
3. **Yuheng Hu**, Fei Wang, Subbarao Kambhampati. (2013), *Listen to the Crowd: Automated Analysis of Events via Aggregated Twitter Sentiment*. in Proc. of IJCAI-13: the 23rd Intl. Joint Conference on Artificial Intelligence [Oral+Poster Presentation, 21%]
4. **Yuheng Hu**, Kartik Talamadupula, Subbarao Kambhampati. (2013), *Dude, srsly?: The Surprisingly Formal Nature of Twitter's Language*. in Proc. of ICWSM-13: Int'l AAAI Conference on Weblogs and Social Media [20%]
5. **Yuheng Hu**, Shelly D. Farnham, Andrés Monroy-Hernández. (2013), *Whoo.ly: Facilitating Information Seeking For Hyperlocal Communities Using Social Media*. in Proc. of CHI-13: SIGCHI Conference on Human Factors in Computing Systems, [**Best Paper Honorable Mention**, 20%]
6. **Yuheng Hu**, Ajita John, Fei Wang, Subbarao Kambhampati. (2012), *ET-LDA: Joint Topic Modeling for Aligning Events and their Twitter Feedback*, in Proc. of AAAI-12, Twenty-Sixth Conference on Artificial Intelligence [Oral+Poster Presentation, 24%]
7. **Yuheng Hu**, Ajita John, Dorée Duncan Seligmann, Fei Wang. (2012), *What were the Tweets about? Topical Associations between Public Events and Twitter Feeds*. in Proc. of ICWSM-12: Int'l AAAI Conference on Weblogs and Social Media, [Oral+Poster Presentation, 20%]
8. **Yuheng Hu**, Ajita John, Doree Duncan Seligmann. (2011), *Event Analytics via Social Media*, in Proc of SBNMA-2011: ACM MM 2011 Workshop on Social and Behavioral Networked Media Access [25%]
9. Vagelis Hristidis, **Yuheng Hu**, Panagiotis G. Ipeirotis. (2010), *Ranked Queries over Sources with Boolean Query Interfaces without Ranking Support*, in Proc. of ICDE-10: 26th IEEE International Conference on Data Engineering, [20%]
10. **Yuheng Hu**, Shuoping Wang, Zhendong Wu. (2007), *WISNO: Ontological Data Processing Strategy for Wireless Sensor*, in Proc. of ChinaCom-07: The Second International Conference in Communications and Networking in China, [25%]
11. **Yuheng Hu**, Zhengdong Wu, Ming Guo. (2007), *Ontology-driven Adaptive Data-Processing in Wireless Sensor Networks*, in Proc. of InfoScale-07: The Second International Conference on Scalable Information Systems, [24%]
12. Ming Guo, Yong Zhu, **Yuheng Hu**, Weishuai Yang. (2007), *SOGA: Fine-Grained Authorization for Self-Organizing Grid*, in Proc. APWeb/WAIM-07: The Joint International Conferences on Asia-Pacific Web Conference (APWeb) and Web-Age Information Management (WAIM), [26%]

**Peer-Reviewed Journal Articles**

1. Vagelis Hristidis, **Yuheng Hu**, Panagiotis G. Ipeirotis. (2011), *Relevance-based Retrieval on Hidden-Web Text Databases without Ranking Support*, IEEE Transactions on Knowledge and Data Engineering (TKDE)

**Paper Under Review**

1. **Yuheng Hu**, Lydia Manikonda, Subbarao Kambhampati. *Analyzing User Activities, Demographics, Social Network Structure and User-Generated Content on Instagram*.

2. **Yuheng Hu**, Shelly Farnham. *Understanding and Predicting People's Community Engagement on Social Media*.
3. **Yuheng Hu**, Ajita John, Fei Wang, Dorée Duncan Seligmann, Subbarao Kambhampati, *ET-LDA: Joint Topic Modeling For Aligning, Analyzing and Sensemaking of Public Events and Their Twitter Feeds*, submitted to ACM Transactions on Web (TWeb)
4. Sushovan De, **Yuheng Hu**, Yi Chen, Subbarao Kambhampati, *BayesWipe: A Bayesian Framework for Unsupervised, On-Demand Data Cleaning*

#### PATENTS

1. **Yuheng Hu**, Shelly D. Farnham, Andrés Monroy-Hernández, *Obtaining Hyperlocal Content From Social Media*, Filed at Microsoft Research (MS 338658.01)
2. **Yuheng Hu**, Ajita John, Doree Duncan Seligmann, *System And Methods For Aligning Messages To An Event Based On Semantic Similarity*, Filed at Avaya Labs, Patent granted (ID: US Patent 20130081056)

#### INVITED TALKS & PRESENTATIONS

- *Understanding and Predicting People's Community Engagement on Social Media*, University of Washington, September 2013
- *Understanding and Predicting People's Community Engagement on Social Media*, Microsoft Research, August 2013
- *Dude, srsly?: The Surprisingly Formal Nature of Twitters Language*, ICWSM, June 2013
- *Whoo.ly: Towards Building Hyperlocal Communities From Social Media*, Microsoft Research, August 2012
- *Whoo.ly: Building Hyperlocal Communities From Social Media*, MSN online division, Microsoft, August 2012
- *Building Hyperlocal Communities From Social Media*, HCI talks, Microsoft Research, August 2012
- *What were the Tweets about? Topical Associations between Public Events and Twitter Feeds*, ICWSM, June 2012
- *Events Analytics via Social media*, Avaya Labs, August 2011
- *Events Analytics via Social media*, Rutgers University, August 2011
- *SOGA: Fine-Grained Authorization for Self-Organizing Grid*, APWeb'07, June 2007.
- *WISNO: Ontological Data Processing Strategy for wireless sensor networks*, Zhejiang University, August 2007.
- *Ontology-driven Adaptive Data-Processing in Wireless Sensor Networks*, Infoscale, May 2007

#### PROFESSIONAL SERVICES

##### **Program Committee Member:**

- The AAAI Conference on Artificial Intelligence (AAAI 2014)
- The International AAAI Conference on Weblogs and Social Media (ICWSM 2014)
- The ACM International Conference on Multimedia (MM 2014)
- The International Joint Conferences on Artificial Intelligence (IJCAI 2013)
- The International AAAI Conference on Weblogs and Social Media (ICWSM 2013)
- The ACM International Conference on Multimedia (MM 2013)

**Reviewer:** ACM Conference on Web Search and Data Mining (WSDM 2013, 2014), CHI 2014, CSCW 2014, CHI-Interactivity 2013, MobileHCI 2013, ACM Conference on Hypertext (2012, 2013), International Workshop on Real-Time Analysis and Mining of Social Streams (RAMSS 2012), ACM Multimedia 2012, Journal of Information Retrieval, International World Wide Web Conference (WWW 2012, 2013), The AAAI Conference on Artificial Intelligence (AAAI 2010, 2012), ACM Transactions on Database Systems (TODS) 2011.

#### SELECTED PRESS

- *10-01-2013*: “Twitter Analysis of Public Opinion ”. PBS Horizon Show
- *09-20-2013*: “Tapping Twitter data for in-depth analysis of public opinion”. ASU news
- *09-22-2013*: “A Hyperlocal Twitter Filter That Gets Neighbors Talking To Each Other”. Fast-Company
- *08-23-2013*: “Microsoft Research launches beta of Twitter aggregator Whooly”. Neowin
- *08-22-2013*: “Microsoft Research launches Whooly localized Twitter project”. The Seattle Times

#### REFERENCES

Available upon request