

# Shomir Wilson

EECS Department  
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## EDUCATION

2011	<b>Ph.D.</b> , Computer Science	University of Maryland
2008	<b>M.S.</b> , Computer Science	University of Maryland
2005	<b>B.S.</b> , Computer Science, <b>B.S.</b> , Mathematics, <b>B.A.</b> , Philosophy	Virginia Tech

## RESEARCH AND TEACHING EXPERIENCE

<b>Assistant Professor</b> University of Cincinnati - EECS Department Director of the Human Language Technologies Lab Member of the University of Cincinnati Institute for Analytics Innovation	August 2016 – present (Cincinnati, OH)
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<b>Project Scientist</b> Carnegie Mellon University - School of Computer Science <i>Supervisor:</i> Norman Sadeh	August 2015 – August 2016 (Pittsburgh, PA)
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<b>Lecturer</b> Carnegie Mellon University - School of Computer Science <i>Course:</i> Natural Language Processing (11-411 / 11-611) <i>Co-Instructors:</i> Chris Dyer and Alan W Black	January 2015 – May 2015 (Pittsburgh, PA)
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<b>NSF International Research Fellow</b> Carnegie Mellon University - School of Computer Science <i>Host:</i> Alan W Black	August 2014 – July 2015 (Pittsburgh, PA)
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<b>NSF International Research Fellow</b> University of Edinburgh - School of Informatics <i>Host:</i> Jon Oberlander	August 2013 – July 2014 (Edinburgh, United Kingdom)
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<b>Postdoctoral Fellow</b> Carnegie Mellon University - School of Computer Science <i>Supervisor:</i> Norman Sadeh	September 2011 – July 2013 (Pittsburgh, PA)
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<b>NSF EAPSI Visiting Scholar</b> National University of Singapore - School of Computing <i>Host:</i> Min-Yen Kan	May – August 2010 (Singapore)
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<b>NSF EAPSI Visiting Scholar</b> Macquarie University - School of Computing <i>Host:</i> Robert Dale	May – August 2009 (Sydney, Australia)
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**Graduate Research Assistant**  
University of Maryland - Computer Science Department  
*Advisor:* Donald Perlis

May 2006 – May 2011  
(College Park, MD)

**Graduate Teaching Assistant**  
University of Maryland - Computer Science Department  
*Course:* Introduction to Low-Level Programming Concepts (CMSC 212)  
*Supervisors:* Jan Plane and Peter Keleher (fall), Larry Herman (spring)

Fall 2005 – Spring 2006  
(College Park, MD)

## GRANTS AND RESEARCH SUPPORT

Carnegie Mellon University	\$36,625	2016-09-01 – 2018-02-28
“Extraction of Data Practices from Privacy Policy Text”		
Subcontract from the Usable Privacy Policy Project, NSF SaTC Frontier Project		
National Science Foundation	\$98,100	2013-08-01 – 2015-03-31
OISE: IRFP: “Metalanguage Identification for Interactive Language Technologies” (#1159236)		

## AWARDS AND RECOGNITION

Best Paper Finalist at the 25th World Wide Web Conference, 2016.

National Science Foundation SEE Innovation Research Highlight: “Refining a Computer’s Understanding of Language”, 2012.

National Science Foundation #1015666: East Asia and Pacific Summer Institutes (Singapore Program), 2010. Additional support provided by the Singaporean National Research Foundation.

National Science Foundation #0914091: East Asia and Pacific Summer Institutes (Australia Program), 2009. Additional support provided by the Australian Academy of Sciences.

University of Maryland International Conference Student Support Award, 2011.

University of Maryland Block Grant Fellowship, 2005–2007.

## SERVICE

NSF SaTC Proposal Review Panels, 2016 and 2017.

Lead organizer of the AAAI Fall Symposium on Privacy and Language Technologies, 2016.  
(<https://sites.google.com/site/fspl1t2016/>)

Grand Awards Judge for the Intel International Science and Engineering Fair, 2012 and 2015.

Proposal reviewer for the Portuguese Foundation of Science and Technology (FCT), 2012.

Graduate Student Representative to the Computer Science Department Council, 2008-2009.

Session Chair for Logic Programming and Knowledge Engineering at AAAI 2008.

## PUBLICATIONS AND WRITINGS

### Peer-Reviewed Conference Proceedings

1. Automated analysis of privacy requirements for mobile apps. Sebastian Zimmeck, Ziqi Wang, Lieyong Zou, Roger Iyengar, Bin Liu, Florian Schaub, Shomir Wilson, Norman Sadeh, Steven M. Bellovin, and Joel Reidenberg. In *Proceedings of the Network and Distributed System Security Symposium*, San Diego, California, March 2017.
2. The creation and analysis of a website privacy policy corpus. Shomir Wilson, Florian Schaub, Aswarth Abhilash Dara, Frederick Liu, Sushain Cherivirala, Pedro Giovanni Leon, Mads Schaarup Andersen, Sebastian Zimmeck, Kanthashree Mysore Sathyendra, N. Cameron Russell, Thomas B. Norton, Eduard Hovy, Joel Reidenberg, and Norman Sadeh. In *Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics*, Berlin, Germany, August 2016.
3. Crowdsourcing annotations of websites' privacy policies: Can it really work? Shomir Wilson, Florian Schaub, Rohan Ramanath, Norman Sadeh, Fei Liu, Noah Smith and Frederick Liu. In *Proceedings of the 25th International World Wide Web Conference*, Montreal, Canada, April 2016. **Best Paper Finalist.**
4. This table is different: A WordNet-based approach to identifying references to document entities. Shomir Wilson, Alan W Black, and Jon Oberlander. In *Proceedings of the 8th International Global WordNet Conference*, Bucharest, Romania, January 2016.
5. Identifying relevant text fragments to help crowdsource privacy policy annotations. Rohan Ramanath, Florian Schaub, Shomir Wilson, Fei Liu, Norman Sadeh, and Noah Smith. In *Proceedings of the Second AAAI Conference on Human Computation and Crowdsourcing*, works-in-progress track, Pittsburgh, PA, November 2014.
6. Determiner-established deixis to communicative artifacts in pedagogical text. Shomir Wilson and Jon Oberlander. In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics*, Baltimore, MD, June 2014.
7. Toward automatic processing of English metalanguage. Shomir Wilson. In *Proceedings of the 6th International Joint Conference on Natural Language Processing*, Nagoya, Japan, October 2013.
8. Privacy manipulation and acclimation in a location sharing application. Shomir Wilson, Justin Cranshaw, Norman Sadeh, Alessandro Acquisti, Lorrie Cranor, Jay Springfield, Sae Young Jeong, and Arun Balasubramanian. In *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing*, Zurich, Switzerland, September 2013.
9. Tweets are forever: A large-scale quantitative analysis of deleted tweets. Hazim Almuhiemi, Shomir Wilson, Bin Liu, Norman Sadeh, and Alessandro Acquisti. In *Proceedings of the 2013 ACM Conference on Computer Supported Cooperative Work*, San Antonio, TX, February 2013.
10. The creation of a corpus of English metalanguage. Shomir Wilson. In *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics*, Jeju, South Korea, July 2012.
11. Application of MCL in a dialog agent. Darsana Josyula, Scott Fults, Michael L. Anderson, Shomir Wilson, and Don Perlis. In *Papers from the Third Language and Technology Conference*, Poznań, Poland, October 2007.

12. Toward domain-neutral human-level metacognition. Michael L. Anderson, Matt Schmill, Tim Oates, Don Perlis, Darsana Josyula, Dean Wright, and Shomir Wilson. In *Papers from the 2007 AAAI Spring Symposium on Logical Formalizations of Commonsense Reasoning*, Palo Alto, CA, March 2007.

### **Peer-Reviewed Symposium Proceedings**

1. Analyzing vocabulary intersections of expert annotations and topic models for data practices in privacy policies. Frederick Liu, Shomir Wilson, Florian Schaub and Norman Sadeh. In *Proceedings of the AAAI Fall Symposium on Privacy and Language Technologies*, Arlington, VA, November 2016.
2. Automatic extraction of opt-out choices from privacy policies. Kanthashree Mysore Sathyendra, Florian Schaub, Shomir Wilson and Norman Sadeh. In *Proceedings of the AAAI Fall Symposium on Privacy and Language Technologies*, Arlington, VA, November 2016.
3. Analyzing and predicting privacy law compliance of mobile apps. Sebastian Zimmeck, Ziqi Wang, Lieyong Zou, Roger Iyengar, Bin Liu, Florian Schaub, Shomir Wilson, Norman Sadeh, Steven M. Bellovin and Joel Reidenberg. In *Proceedings of the AAAI Fall Symposium on Privacy and Language Technologies*, Arlington, VA, November 2016.
4. The Metacognitive Loop: An architecture for building robust intelligent systems. Hamid Haidarian, Wikum Dinalankara, Scott Fults, Shomir Wilson, Don Perlis, Matt Schmill, Tim Oates, Darsana Josyula, and Michael Anderson. In *Proceedings of the AAAI Fall Symposium on Commonsense Knowledge*, Arlington, VA, November 2010.

### **Peer-Reviewed Journal Articles**

1. (Forthcoming) PrivOnto: A semantic framework for the analysis of privacy policies. Alessandro Oltramari, Dhivya Piraviperumal, Florian Schaub, Shomir Wilson, Sushain Cherivirala, Thomas B. Norton, N. Cameron Russell, Peter Story, Joel Reidenberg, and Norman Sadeh. Accepted to appear in *Semantic Web*.
2. (Forthcoming) Nudges for privacy and security: Understanding and assisting users' choices online. Pedro Giovanni Leon, Idris Adjerid, Rebecca Balebako, Laura Brandimarte, Saranga Komanduri, Florian Schaub, Manya Sleeper, Yang Wang, Shomir Wilson, Alessandro Acquisti, Lorrie Faith Cranor, and Norman Sadeh. Accepted to appear in *ACM Computing Surveys*.
3. In search of the use-mention distinction and its impact on language processing tasks. Shomir Wilson. *The International Journal of Computational Linguistics and Applications* 2(1-2), pp. 139-154, 2011.

### **Book Chapters**

1. (Forthcoming) A bridge from the use-mention distinction to natural language processing. Shomir Wilson. In Saka, P., Johnson, M. (Ed.), *The Semantics and Pragmatics of Quotation*. Springer, 2017.
2. The metacognitive loop and reasoning about anomalies. Matthew Schmill, Michael L. Anderson, Scott Fults, Darsana Josyula, Tim Oates, Donald Perlis, Hamid Haidarian Shahri, Shomir Wilson,

and Dean Wright. In Cox, M., Raja, A. (Ed.), *Metareasoning: Thinking About Thinking*. MIT Press, MA, 2010.

### **Magazine Article**

- A self-help guide for autonomous systems. Michael L. Anderson, Scott Fults, Darsana P. Josyula, Tim Oates, Don Perlis, Matthew D. Schmill, Shomir Wilson, and Dean Wright. *AI Magazine*, Summer 2008.

### **Peer-Reviewed Conference Poster Abstracts**

1. Visualization and interactive exploration of data practices in privacy policies. Sushain K. Cherivirala, Florian Schaub, Mads Schaarup Andersen, Shomir Wilson, Norman Sadeh, and Joel R. Reidenberg. In *Proceedings of the Twelfth Symposium on Usable Privacy and Security*, Denver, CO, 2016.
2. Towards usable privacy policies: Semi-automatically extracting data practices from websites' privacy policies. Norman Sadeh, Alessandro Acquisti, Travis Breaux, Lorrie Cranor, Aleecia McDonald, Joel Reidenberg, Noah Smith, Fei Liu, N. Cameron Russell, Florian Schaub, Shomir Wilson, James Graves, Pedro Leon, Rohan Ramanath, and Ashwini Rao. In *Proceedings of the Tenth Symposium on Usable Privacy and Security*, Palo Alto, CA, July 2014.

### **Peer-Reviewed Workshop Proceedings**

1. Demystifying Privacy Policies with Language Technologies: Progress and Challenges. Shomir Wilson, Florian Schaub, Aswarth Dara, Sushain K. Cherivirala, Sebastian Zimmeck, Mads Schaarup Andersen, Pedro Giovanni Leon, Eduard Hovy, and Norman Sadeh. In *Proceedings of the Workshop on Text Analytics for Cybersecurity and Online Safety (TA-COS) at LREC*, Portoroz, Slovenia, May 2016.
2. Distinguishing use and mention in natural language. Shomir Wilson. In *Proceedings of the NAACL HLT Student Research Workshop*, Los Angeles, CA, June 2010.
3. The role of metacognition in robust AI systems. Matt Schmill, Tim Oates, Michael L. Anderson, Darsana Josyula, Don Perlis, Shomir Wilson, and Scott Fults. In *Papers from the Workshop on Metareasoning at the 23rd AAAI Conference on Artificial Intelligence*, Chicago, IL, July 2008.
4. Ontologies for reasoning about failures in AI systems. Michael L. Anderson, Scott Fults, Darsana Josyula, Tim Oates, Don Perlis, Matt Schmill, and Shomir Wilson. In *Proceedings of the First International Workshop on Metareasoning in Agent-Based Systems*, Honolulu, HI, 2007.

### **Dissertation**

- *A Computational Theory of the Use-Mention Distinction in Natural Language*. Shomir Wilson. University of Maryland, 2011.

### **Technical Reports**

1. The Usable Privacy Policy Project: Combining crowdsourcing, machine learning and natural language processing to semi-automatically answer those privacy questions users care about. Norman

Sadeh, Alessandro Acquisti, Travis Breaux, Lorrie Cranor, Aleecia McDonald, Joel Reidenberg, Noah Smith, Fei Liu, N. Cameron Russell, Florian Schaub, and Shomir Wilson. Technical Report CMU-ISR-13-119, Carnegie Mellon University, 2013.

2. Automatic categorization of privacy policies: A pilot study. Waleed Ammar, Shomir Wilson, Norman Sadeh, and Noah A. Smith. Technical Report CMU-LTI-12-019 / CMU-ISR-12-114, Carnegie Mellon University, 2012.

## INVITED TALKS

“Text Analysis to Support the Privacy of Internet Users”, Hutton Lecture Series, Division of Biomedical Informatics, Cincinnati Children’s Hospital Medical Center, 17 February 2017.

“Text Analysis to Support the Privacy of Internet Users”, Computer Science Colloquium, Georgetown University. 21 November 2016.

“Crowdsourcing Annotations of Websites’ Privacy Policies: Can It Really Work?”, Encore Track at the Fourth AAAI Conference on Human Computation and Crowdsourcing, Austin, Texas. 1 November 2016.

“Introspective Users and Introspective Text: Some Recent Results”, CHIME Text Seminar, National University of Singapore. 5 January 2016.

“Identifying Deixis to Communicative Artifacts in Text”, NLIP Seminar Series, Cambridge University. 9 May 2014.

“An Empirical Approach to Metalanguage”, ILCC/HCRC Seminar Series, University of Edinburgh. 6 September 2013.

“A Computational Approach to Metalanguage and the Use-Mention Distinction”, CL+NLP Lunch, Carnegie Mellon University. Pittsburgh, PA, 23 April 2013.

“Distinguishing Use and Mention in Natural Language”, Centre for Language Technology Seminar Series, Macquarie University. Sydney, Australia, 2009.