## Alan Ritter

Contact

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Research

Natural Language Processing, Information Extraction, Machine Learning, Social Media Analysis

**EDUCATION** 

### University of Washington, Seattle, WA USA

Ph.D. in Computer Science & Engineering

- Thesis: Extracting Knowledge from Twitter and the Web
- Committee: Oren Etzioni (Co-Chair), Mausam (Co-Chair), Luke Zettlemoyer
- 2007 2013

## Western Washington University, Bellingham, WA USA

B.S./M.S., Computer Science, December 2006

Professional Experience

## The Ohio State University, Columbus OH USA

Assistant Professor - Computer Science and Engineering

2014 - Present

## Carnegie Mellon University, Pittsburgh PA USA

Visiting Faculty - Language Technologies Institute

2019

• Host: Eduard Hovy

Postdoctoral Fellow - Machine Learning Department

2013 - 2014

• Advisor: Tom Mitchell

## Microsoft Research, Redmond WA USA

Consultant - Natural Language Processing Group

2014 - 2016

• Host: Bill Dolan

Intern - Natural Language Processing Group

2009

• Mentor: Colin Cherry

Intern - Knowledge Tools Group (Machine Learning Department)

2008

• Mentor: Sumit Basu

# Naval Research Laboratory, Marine Meteorology Division, Monterey, CA USA

Intern - Data Assimilation Group

2006

• Mentor: William Campbell

## Grants and Awards

NSF CAREER, (\$500k), Large-Scale Learning for Information Extraction, 2019-2024 DARPA, (\$800k), Logically Adaptive Molecular Design Automation (LAMDA), 2019-2023 IARPA, (\$850k), Task and User-Aware Representation Learning for Fine-Grained Cross-Lingual Information Retrieval, 2019-2023

NSF CRII, (\$151k) III: Learning to Extract Events from Knowledge Base Revisions, 2015-2018 Amazon Research Award, (\$50k) Integrating Data-Driven Conversation in Open-Domain Question Answering, 2018

**DARPA** (\$600k) Modeling the Spread of Information through Social and Knowledge Graphs, 2017-2021

IARPA (\$507k) Extracting a Realtime Cybersecurity Knowledge Graph from Text, 2016-2019

CMU Software Engineering Institute (\$40k) Events, relationships, and script learning for situational awareness, 1/2017-9/2017

NIH (co-PI with Po-Yin Yen) (\$100k) Supporting systematic review production with article similarity network visualization, 2016-2018

Criteo Faculty Research Award (co-PI with Wei Xu) (\$20k) 2018

Battelle BETHA Award (co-PI with Marie-Catherine de Marneffe) (\$23k) Trustworthiness in Social Media, 2017-2019

NDSEG Fellowship (2008)

Best Student Paper Award for Learning to Generalize for Complex Selection Tasks at the ACM Conference on Intelligent User Interfaces (2009)

Outstanding Student Organization Advisor Award, College of Engineering, Ohio State University (2018)

Lumley Research Award, College of Engineering, Ohio State University (2019)

External Thesis

Alex Memory

PhD, Oct 2019

Committees

Collective Relational Data Integration with Diverse and Noisy Evidence (Advisor: Lise Getoor)

University of Maryland

Young-Bum Kim

PhD, Feb 2015

Natural Language Technologies for Low-Resource Languages (Advisor: Benjamin Snyder)

University of Wisconsin

RECENT INVITED

Talks

Twitter, June 2019

University of Michigan, April 2019 University of Maryland, April 2019

Rice University, March 2019

University of Wisconsin, January 2019

Google Assistant and Dialogue Workshop, June 2018

Stanford NLP Seminar, May 2018

NeurIPS Workshop on Learning With Limited Labeled Data, December 2017

Microsoft Research Faculty Summit, July 2017

Google Natural Language Understanding Workshop, July 2017

Midwest Machine Learning Symposium, June 2017

University of Edinburgh, July 2016

Machine Learning Seminar, Purdue University, December 2015 School of Computer Science, Carnegie Mellon University, April 2015

Ph.D. Students

Ashutosh Baheti (2017-Present)

Yang Chen (2019-Present) Fan Bai (2016-Present)

Vardaan Pahuja (2019-Present)

Jeniya Tabassum, co-advised with Wei Xu (2015-Present)

Shi Zong (2017-Present)

Alumni

Alexander Konovalov. Predicting Knowledge Base Revisions from Realtime Text Streams. M.S.

(2018)

Sandesh Swamy. Forecasting Event Outcomes from User Predictions on Twitter. M.S. (2017)

### TEACHING

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OSU CSE 5525: Speech and Language Processing (Fall 2019)
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OSU CSE 5525: Speech and Language Processing (Spring 2019)

OSU CSE 5523: Machine Learning and Statistical Pattern Recognition (Fall 2018)

OSU CSE 5539: Social Media and Text Analytics (Spring 2018)

OSU CSE 5522: Survey of Artificial Intelligence II: Advanced Techniques (Fall 2017)

OSU CSE 5523: Machine Learning and Statistical Pattern Recognition (Spring 2017)

OSU CSE 5525: Speech and Language Processing (Spring 2016)

OSU CSE 5539: Web Information Extraction (Fall 2015)

OSU CSE 5522: Survey of Artificial Intelligence II: Advanced Techniques (Spring 2015)

OSU CSE 5539: NLP and IE for the Social Web (Fall 2014)

#### SERVICE

Organizer ACL Workshop on Noisy User-Generated Text (WNUT 2015, 2016, 2017, 2018, 2019), Sentiment Analysis in Twitter Shared Task (SemEval 2013,2014,2015,2016), Named Entity Recognition in Twitter Shared Task (at WNUT 2015, 2016)

Area Chair ACL 2014 (NLP for the web and social media), NAACL 2015 (Information Extraction and Question Answering), EMNLP 2016 (Information Extraction, Information Retrieval and Question Answering), NAACL 2018 (Computational Social Science), EMNLP 2018 (Text Mining and Information Retrieval), CoNLL 2018, ACL 2019 (Information Extraction and Text Mining), EMNLP 2019 (Social Media and Computational Social Science), ACL 2020 (Information Extraction)

Steering Committee SemEval 2016,2018,2019,2020

Research Proposal Reviewing Panelist for U.S. National Science Foundation, IIS, (Twice in 2017, Twice in 2018, Once in 2019), Independent Reviewer for Hong Kong Research Grants Council (2016), Independent Reviewer for Natural Sciences and Engineering Research Council of Canada (2016), Independent Reviewer U.S. Department of Energy (2015)

Departmental Service Graduate Studies Committee (2016-2019), Curriculum Committee (2019-Present), Graduate Admissions Committee - Artificial Intelligence Group Representative (2014-Present), Prospective Ph.D. Student Visit Day Organizer, (2014-2016)

## PUBLICATIONS

## Fan Bai, Alan Ritter

"Structured Minimally Supervised Learning for Neural Relation Extraction" To Appear in Proceedings of NAACL 2019

Shi Zong, Alan Ritter, Graham Mueller and Evan Wright

"Analyzing the Perceived Severity of Cybersecurity Threats Reported on Social Media" To Appear in Proceedings of NAACL 2019 [Covered by WIRED]

Ashutosh Baheti, Alan Ritter, Jiwei Li, Bill Dolan

"Generating More Interesting Responses in Neural Conversation Models with Distributional Constraints"

Proceedings of EMNLP 2018

Chaitanya Kulkarni, Wei Xu, Alan Ritter, Raghu Machiraju

"An Annotated Corpus for Machine Reading of Instructions in Wet Lab Protocols" Proceedings of NAACL 2018 (short paper)

Jiwei Li, Will Monroe, Tianlin Shi, Sbastien Jean, **Alan Ritter**, Dan Jurafsky "Adversarial Learning for Neural Dialogue Generation"

Proceedings of EMNLP 2017

Sandesh Swamy, Alan Ritter and Marie-Catherine de Marneffe

"i have a feeling trump will win....... Forecasting Winners and Losers from User Predictions on Twitter"

Proceedings of EMNLP 2017

Alexander Konovalov, Benjamin Strauss, Alan Ritter and Brendan O'Connor

"Learning to Extract Events from Knowledge Base Revisions"

Proceedings of WWW 2017

Jiwei Li, Will Monroe, Alan Ritter, Michel Galley, Jianfeng Gao, Dan Jurafsky

"Deep Reinforcement Learning for Dialogue Generation"

Proceedings of EMNLP 2016

Jeniya Tabassum, Alan Ritter, Wei Xu

"A Minimally Supervised Method for Recognizing and Normalizing Time Expressions in Twitter" Proceedings of EMNLP 2016

Xinlei Chen, Alan Ritter, Abhinav Gupta and Tom Mitchell

"Sense Discovery via Co-Clustering on Images and Text"

Proceedings of CVPR 2015

Alan Ritter, Evan Wright William Casey and Tom Mitchell

"Weakly Supervised Extraction of Computer Security Events from Twitter"

Proceedings of WWW 2015

Tom Mitchell, William Cohen, Estevam Hruschka, Partha Talukdar, Justin Betteridge, Andrew Carlson, Bhavana Dalvi, Matt Gardner, Bryan Kisiel, Jayant Krishnmurthy, Ni Lao, Kathryn Mazaitis, Tahir Mohammad, Ndapa Nakashole, Emmanouil Antonios Platanios, **Alan Ritter**, Mehdi Samadi, Burr Settles, Richard Wang, Derry Wijaya, Abhinav Gupta, Xinlei Chen, Abulhair Saparov, Malcolm Greaves and Joel Welling

"Never Ending Learning"

Proceedings of AAAI 2015

Jiwei Li, Alan Ritter, Claire Cardie and Eduard Hovy

"Major Life Event Extraction from Twitter based on Congratulations/Condolences Speech Acts" Proceedings of EMNLP 2014

Jiwei Li, Alan Ritter and Eduard Hovy

"Weakly Supervised User Profile Extraction from Twitter"

Proceedings of ACL 2014

Wei Xu, Alan Ritter, Chris Callison-Burch, William B. Dolan and Yangfeng Ji

"Extracting Lexically Divergent Paraphrases from Twitter"

Proceedings of TACL 2014

Alan Ritter, Luke Zettlemoyer, Mausam and Oren Etzioni

"Modeling Missing Data in Distant Supervision for Information Extraction"

Proceedings of TACL 2013

Alan Ritter, Mausam, Oren Etzioni, Sam Clark

"Open Domain Event Extraction from Twitter"

Proceedings of KDD 2012

Wei Xu, **Alan Ritter**, Bill Dolan, Ralph Grishman, Colin Cherry "Paraphrasing for Style" Proceedings of Coling 2012

**Alan Ritter**, Sam Clark, Mausam, Oren Etzioni "Named Entity Recognition in Tweets: An Experimental Study" Proceedings of EMNLP 2011

**Alan Ritter**, Colin Cherry, Bill Dolan "Data-Driven Response Generation in Social Media" Proceedings of EMNLP 2011

**Alan Ritter**, Mausam and Oren Etzioni "A Latent Dirichlet Allocation Method for Selectional Preferences" Proceedings of ACL 2010

**Alan Ritter**, Colin Cherry and Bill Dolan "Unsupervised Modeling of Twitter Conversations" Proceedings of HLT-NAACL 2010

Alan Ritter and Sumit Basu
"Learning to Generalize for Complex Selection Tasks"
Best Student Paper Award
Proceedings of IUI 2009

Alan Ritter, Doug Downey, Stephen Soderland, and Oren Etzioni "It's a Contradiction – No, It's Not: A Case Study using Functional Relations" Proceedings of EMNLP 2008