

# Haoruo Peng

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## CONTACT INFORMATION

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## EDUCATION

**University of Illinois, Urbana Champaign**  
Ph.D., Computer Science, 2013 – 2018  
Advisor: Prof. Dan Roth

**Tsinghua University, China**  
Bachelor, Computer Science, 2013

## RESEARCH AREAS

Natural Language Processing, Machine Learning

## WORK EXPERIENCE

**Brain Technologies LLC, San Mateo** **July 2018 - present**  
Head of NLP

**Facebook, Menlo Park** **May - Aug 2017**  
Intern, Supervised by Dr. Zhongyuan Wang

**Microsoft Research, Redmond** **May - Aug 2016**  
Intern, Supervised by Dr. Ming-Wei Chang

**Google, Mountain View** **May - Aug 2014**  
Intern, Supervised by Dr. Samer Hassan

**Yahoo! Global R&D Center, Beijing** **Oct 2012 - Jul 2013**  
Intern, Supervised by Lin Liu

**Google Research, Beijing** **Oct 2011 - Aug 2012**  
Intern, Supervised by Dr. Edward Y. Chang and Prof. Zhihua Zhang

## PUBLICATIONS IN HIGHLY SELECTIVE VENUES

*Improving Temporal Relation Extraction with A Globally Acquired Statistical Resource*  
Qiang Ning, Hao Wu, **Haoruo Peng**, Dan Roth  
Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)  
2018

*Maximum Margin Reward Networks for Learning from Explicit and Implicit Supervision*  
**Haoruo Peng**, Ming-Wei Chang, Wen-tau Yih  
Empirical Methods in Natural Language Processing (EMNLP) 2017

*Story Comprehension for Predicting What Happens Next*  
Snigdha Chaturvedi, **Haoruo Peng**, Dan Roth  
Empirical Methods in Natural Language Processing (EMNLP) 2017

*A Joint Model for Semantic Sequences: Frames, Entities, Sentiments*  
**Haoruo Peng**, Snigdha Chaturvedi, Dan Roth  
SIGNLL Conference on Computational Natural Language Learning (CoNLL) 2017

*Bilingual Lexicon Induction From Non-Parallel Data With Minimal Supervision*  
Meng Zhang, **Haoruo Peng**, Yang Liu, Huanbo Luan, Maosong Sun  
Thirty-First AAAI Conference on Artificial Intelligence (AAAI) 2017

*Event Detection and Co-reference with Minimal Supervision*  
**Haoruo Peng**, Yangqiu Song, Dan Roth  
Empirical Methods in Natural Language Processing (EMNLP) 2016

*Two Discourse Driven Language Models for Semantics*  
**Haoruo Peng**, Dan Roth  
Annual Meeting of the Association for Computational Linguistics (ACL) 2016

*Cross-lingual Dataless Classification for Many Languages*  
Yangqiu Song, Shyam Upadhyay, **Haoruo Peng**, Dan Roth  
International Joint Conference on Artificial Intelligence (IJCAI) 2016

*A Joint Framework for Coreference Resolution and Mention Head Detection*  
**Haoruo Peng**, Kai-Wei Chang, Dan Roth.  
SIGNLL Conference on Computational Natural Language Learning (CoNLL) 2015

*Solving Hard Coreference Problems*  
**Haoruo Peng**<sup>\*</sup>, Daniel Khashabi<sup>\*</sup>, Dan Roth  
Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) 2015

*A Scalable Approach to Column-Based Low-Rank Matrix Approximation*  
Yifan Pi, **Haoruo Peng**, Shuchang Zhou, Edward Y. Chang, Zhihua Zhang.  
International Joint Conference on Artificial Intelligence (IJCAI) 2013

*Sublinear Algorithms for Penalized Logistic Regression in Massive Datasets*  
**Haoruo Peng**, Zhengyu Wang, Edward Y. Chang, Shuchang Zhou, Zhihua Zhang  
European Conference on Machine Learning (ECML) 2012

\* denotes equal contribution

OTHER  
PUBLICATIONS

*CogCompTime: A Tool for Understanding Time in Natural Language Text*  
Qiang Ning, Ben Zhou, Zhili Feng, **Haoruo Peng**, Dan Roth  
Conference on Empirical Methods in Natural Language Processing (EMNLP'18 demo track), 2018

*Regions, Periods, Activities: Uncovering Urban Dynamics via Cross-Modal Representation Learning*  
Chao Zhang, Keyang Zhang, Quan Yuan, **Haoruo Peng**, Yu Zheng, Tim Hanratty, Shaowen Wang, Jiawei Han  
World Wide Web Conference (WWW) 2017

*Illinois CCG Entity Discovery and Linking, Event Nugget Detection and Co-reference, and Slot Filler Validation Systems for TAC 2016*  
Chen-Tse Tsai, Stephen Mayhew, **Haoruo Peng**, Mark Sammons, Bhargav Mangipundi, Pavankumar Reddy, and Dan Roth  
Text Analysis Conference (TAC) 2016

*Illinois CCG TAC 2015 Event Nugget, Entity Discovery and Linking, and Slot Filler Validation Systems*  
Mark Sammons, **Haoruo Peng**, Yangqiu Song, Shyam Upadhyay, Chen-Tse Tsai, Pavankumar Reddy, Subhro Roy, Dan Roth  
Text Analysis Conference (TAC) 2015

*The University of Illinois submission to the WMT 2015 Shared Translation Task*  
Lane Schwartz, Bill Bryce, Chase Geigle, Sean Massung, Yisi Liu, **Haoruo Peng**, Vignesh Raja, Subhro Roy, Shyam Upadhyay  
Workshop on Statistical Machine Translation (WMT) 2015

*Improving a Pipeline Architecture for Shallow Discourse Parsing*

Yangqiu Song, **Haoruo Peng**, Parisa Kordjamshidi, Mark Sammons, Dan Roth  
SIGNLL Conference on Computational Natural Language Learning: Shared Task (CoNLL-Shared Task) 2015

*ILLINOIS-PROFILER: Knowledge schemas at scale*

Zhiye Fei, Daniel Khashabi, **Haoruo Peng**, and Dan Roth  
IJCAI Workshop on Cognitive Knowledge Acquisition and Applications (Cognitum) 2015

*Learning for Logistic Regression Model in Parallel*

**Haoruo Peng**, Ding Liang, Cyrus Choi, Edward Y. Chang  
IEEE Big Data Workshop on Scalable Machine Learning 2013

HONORS AND  
AWARDS

- EMNLP Student Scholarship, 2017
- Recipient of the **Friend of Tsinghua-ESS Scholarship**, awarded by Tsinghua University, 2011
- Ranked 2nd class in the **NetEase Cup Programming Contest** (tryout for ACM/ICPC). Ranked 18/109, 2010
- Ranked 2nd class in the **SoHu Cup AI Contest**. Developed an AI with changing strategies for a role-playing game based on the history of “Three Kingdoms”, 2010

TEACHING  
EXPERIENCE

- **Teaching Assistant** for CS446 Machine Learning, UIUC, Fall 2015

SERVICE

**Reviewer** : AAAI 2015 2018, ACL 2018, ECML 2015, EMNLP 2018, IJCAI 2015 2016, NLPCC 2017 2018, SDM 2015