

Haoruo Peng

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, 2009 – 2013

RESEARCH AREAS

Natural Language Processing, Machine Learning

WORK EXPERIENCE

Particle Media Inc, Mountain View **April 2019 - present**
Head of Content Science

Brain Technologies LLC, San Mateo **July 2018 - April 2019**
Head of NLP

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

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

Google, Mountain View **May - August 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

KnowSemLM: A Knowledge Infused Semantic Language Model
Haoruo Peng, Qiang Ning, Dan Roth
SIGNLL Conference on Computational Natural Language Learning (CoNLL) 2019

Toward any-language zero-shot topic classification of textual documents
Yangqiu Song, Shyam Upadhyay, **Haoruo Peng**, Stephen Mayhew, Dan Roth
Artificial Intelligence Journal (AIJ) 2019

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*, Daniel Khashabi*, 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

TinkerBell: Cross-lingual Cold-Start Knowledge Base Construction
Mohamed Al-Badrashiny, Jason Bolton, Arun Tejasvi Chaganty, Kevin Clark, Craig Harman, Lifu Huang, Matthew Lamm, Jinhao Lei, Di Lu, Xiaoman Pan, Ashwin Paranjape, Ellie Pavlick, **Haoruo Peng**, Peng Qi, Pushpendre Rastogi, Abigail See, Kai Sun, Max Thomas, Chen-Tse Tsai, Hao Wu, Boliang Zhang, Chris Callison-Burch, Claire Cardie, Heng Ji, Christopher D Manning, Smaranda Muresan, Owen Rambow, Dan Roth, Mark Sammons, Benjamin Van Durme
Text Analysis Conference (TAC) 2017

UI CCG TAC-KBP2017 submissions: Entity discovery and linking, and event nugget detection and co-reference

Chase Duncan, Liang-Wei Chan, **Haoruo Peng**, Hao Wu, Shyam Upadhyay, Nitish Gupta, Chen-Tse Tsai, Mark Sammons, Dan Roth
Text Analysis Conference (TAC) 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

Evaluating Parallel Logistic Regression Models

Haoruo Peng, Ding Liang, Cyrus Choi
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

- **Area Chair** : Action Editor for the ACL Rolling Review (ARR 2021 - October); ACL 2021
- **Conference Reviewer / Program Committee** : ACL 2018-2022; EMNLP 2018-2021; NAACL 2019, 2021; NeurIPS 2019; ICML 2019; IJCAI 2015, 2016, 2019; AAI 2015, 2018, 2019; ECML 2015; NLPCC 2017, 2018; SDM 2015
- **Journal Reviewer** : IEEE - Transactions on Audio, Speech and Language Processing 2020; Elsevier - Data In Brief 2019