Kai Zhao

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Research Interests

Algorithms and theory in Natural Language Processing: Structured Prediction; Syntactic/Semantic Parsing; Online Learning; Machine Translation.

Education

2010–Present **Ph.D. Student**, *Graduate Center, City Univ. of New York*, New York, NY.
Mentor: Professor Liang Huang
Major: Computer Science

2006–2010 **Bachelor of Engineering**, *Univ. of Science and Technology of China*, Hefei, China.
Graduated with Honors
Major: Computer Science

Experience

Research

2012–Present **Research Assistant**, *City Univ. of New York*, New York, NY.
Focused on Structured Prediction problems in Natural Language Processing, including:
- incremental semantic parsing;
- incremental parsing with best-first search strategy;
- discriminative training for statistical machine translation;
- parallelizing online learning for large-scale NLP tasks.

Summer 2014 **Research Intern**, *Microsoft Research*, Redmond, WA.
Machine Translation Group
Mentor: Hany Hassan
Explored learning translation rules from monolingual continuous representations.

Summer 2013 **Research Intern**, *IBM T.J. Watson Research Center*, Yorktown Heights, NY.
Multilingual Natural Language Processing Group
Mentor: Abe Ittycheriah
Adapted large-scale discriminative training to syntax based machine translation system.

Teaching Assistant

Fall 2013 Programming Languages, *Graduate Center, CUNY*.

Spring 2013 Machine Learning, *Graudate Center, CUNY*.

Fall 2012 Python Programming, *Queens College, CUNY*.

Honors & Awards

2010 & 2011 **Science Fellowship**, *Graudate Center, CUNY*.

2009 **National Scholarship**, *Ministry of Education of China*.

2008 **Outstanding Student Scholarship**, *USTC*.

Publications

Kai Zhao and Liang Huang. Type-driven Incremental Semantic Parsing with Polymorphism. *Submitted to NAACL*, 2015.

Kai Zhao, Hany Hassan, and Michael Auli. Learning translation models from monolingual continuous representations. *Submitted to NAACL*, 2015.

Kai Zhao, Liang Huang, Haitao Mi, and Abe Ittycheriah. Hierarchical MT Training using Max-Violation Perceptron. *Proceedings of ACL*, 2014.

Kai Zhao, James Cross, and Liang Huang. Optimal Incremental Parsing via Best-First Dynamic Programming. *Proceedings of EMNLP*, 2013.

Heng Yu, Liang Huang, Haitao Mi, and Kai Zhao. Max-Violation Perceptron and Forced Decoding for Scalable MT Training. *Proceedings of EMNLP*, 2013.

Hao Zhang, Liang Huang, Kai Zhao, and Ryan McDonald. Online Learning for Inexact Hypergraph Search. *Proceedings of EMNLP*, 2013.

Yoav Goldberg, Kai Zhao, and Liang Huang. Efficient Implementation of Beam-Search Incremental Parsers. *Proceedings of ACL*, 2013.

Kai Zhao and Liang Huang. Minibatch and Parallelization for Online Large Margin Structured Learning. *Proceedings of NAACL*, 2013.