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# KAI ZHAO

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

**education** **Ph.D Student**, *Graduate Center, City University of New York*, New York, NY. 2010 - present.  
Mentor: Professor Liang Huang  
Major: Computer Science  
**B.Eng.**, *University of Science and Technology of China*, Hefei, China. 2006 - 2010.  
Graduated with Honors  
Major: Computer Science

**experience** **Research Assistant**, *City University of New York*, New York, NY. 2012 - present.  
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.

**Research Intern**, *Google Inc.*, New York, NY. Summer 2015.  
Structured Data Team  
Mentor: Hao Zhang  
Investigated inducing entity similarities from web table corpus with an alignment model.  
**Research Intern**, *Microsoft Research*, Redmond, WA. Summer 2014.  
Machine Translation Group  
Mentor: Hany Hassan  
Explored learning translation rules from monolingual continuous representations.  
**Research Intern**, *IBM T.J. Watson Research Center*, Yorktown Heights, NY. Summer 2013.  
Multilingual Natural Language Processing Group  
Mentor: Abe Ittycheriah  
Adapted large-scale discriminative training to syntax based machine translation system.

**publications** Feifei Zhai, Liang Huang, and Kai Zhao. “[Search-Aware Tuning for Hierarchical Phrase-based Decoding](#).” *Proceedings of EMNLP*, 2015.  
Kai Zhao, Hany Hassan, and Michael Auli. “[Learning Translation Models from Monolingual Continuous Representations](#).” *Proceedings of NAACL*, 2015.  
Kai Zhao and Liang Huang. “[Type-driven Incremental Semantic Parsing with Polymorphism](#).” *Proceedings of 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.

honors &  
awards

**Science Fellowship**, Graduate Center, City University of New York. 2010 & 2011.

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

**Outstanding Student Scholarship**, University of Science and Technology of China. 2008.