

HIGHLIGHTS

- interdisciplinary work connecting AI, theoretical computer science, linguistics, and biology
- AI/NLP for biology and drug discovery: mRNA vaccine design (**Nature**, 2023) [**Nature news**: ‘Remarkable’ AI tool designs mRNA vaccines that are more potent and stable]; COVID mRNA vaccine received Emergency Use Authorization in Laos (strong clinical trial results); homologous folding and drug targets discovery for SARS-CoV-2 (**PNAS**, 2021).
- award-winning work in NLP: *single-author* ACL 2008 Best Paper Award, EMNLP 2016 Best Paper Honorable Mention, **ACL 2019 Keynote**, and NAACL 2022 Best Demo Award.
- graduated 10 PhD students (the 1<sup>st</sup> one, Ashish Vaswani, was the 1<sup>st</sup> author of Transformer).

CONTACT  
INFORMATION

School of EECS, Oregon State University    [liang.huang@oregonstate.edu](mailto:liang.huang@oregonstate.edu)  
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Corvallis, OR 97331, USA    541-737-4694 (o)    541-737-1300 (f)

EDUCATION

**University of Pennsylvania**

Ph.D., Computer and Information Science    *Sep. 2003 – Dec. 2008*

Advisors: [Aravind Joshi](#) and [Kevin Knight](#) (external, USC). Committee: [Mitch Marcus](#), [Fernando Pereira](#), [Ben Taskar](#) (chair), and [Mark Johnson](#) (external, Brown)

Thesis: *Forest-based Algorithms in Natural Language Processing.*

(Nominated for the ACM Doctoral Dissertation Award.)

**Shanghai Jiao Tong University**

B.S., Computer Science (summa cum laude)    *Sep. 1999 – July. 2003*

Thesis: *Probabilistic k-best Earley Parsing for Classical and Modern Chinese.*

PROFESSIONAL  
EXPERIENCE

**Oregon State University**

*Full Professor (by courtesy)*, Biochemistry & Biophysics, College of Science    *2024/1–*

*Full Professor*, Computer Science, School of EECS, College of Engineering    *2023/9–*

*Associate Professor*, Computer Science, School of EECS    *2020/9–2023/9*  
(on leave 2021/9–2022/3)

*Bioengineering Graduate Group Faculty*    *2021/9–present*

*Assistant Professor*, Computer Science, School of EECS    *2015/9–2020/9*  
(on leave 2018/9–2019/3)

**Coderna.ai, Inc.**, co-founder (part-time)    *2023/3–present*

**Baidu Research USA**

*Distinguished Scientist* (including various part-time periods)    *2018/6–2022/6*

*Acting Head, Computational Biology Lab (CBL)*    *2020/8–2022/6*

*Head, Institute of Deep Learning USA (IDL-US)*    *2019/3–2022/6*

**IBM T. J. Watson Research Center**

*Part-Time Research Scientist* (manager: Bowen Zhou)    *2014/6–2017/1*

**City University of New York (CUNY)**

*Assistant Professor*, Computer Science, Queens College    *2012/8–2015/8*

*Doctoral Faculty*, Computer Science, The Graduate Center    *2012/8–2015/8*

## University of Southern California (USC)

*Research Assistant Professor*, Computer Science

2010/7–2012/8

*Computer Scientist*, Information Sciences Institute (ISI)

2009/7–2012/8

## Google Research (Mountain View):

*Research Scientist* (manager: Fernando Pereira)

2009/1–7

## RESEARCH INTERESTS

**AI/NLP for Computational Biology, Therapeutics, Vaccines, and Diagnostics:** mRNA vaccine design as lattice parsing [[Nature 2023](#), [Nature news](#), [Nature n & v](#)], RNA folding as natural language parsing [[ISMB 2019](#), [ISMB 2020](#), [NAR 2022](#), [NAR 2023](#)], homologous folding as synchronous parsing (targets for test kits and drug design for SARS-CoV-2) [[PNAS 2021](#)], and non-coding RNA design [[ISMB 2023](#), [RECOMB 2024](#)].

**Natural Language Processing:** efficient algorithms for NLP, parsing, semantic parsing, machine translation, simultaneous translation [[ACL 2019 Keynote](#); [CVPR 2021 Keynote](#)]; speech translation; sign language translation.

**Machine Learning:** scalable structured prediction (with inexact inference), deep learning, learning latent structures from unstructured data, online learning and parallelization.

See also: (1) [Google Scholar Profile](#); (2) [YouTube Playlist of My Invited Talks](#).

## HONORS AND RECOGNITIONS

### *Research Awards/Recognitions*

- [Distinguished Lecture](#), UW Allen School of Computer Science, Nov. 2023 ([video](#))
- Invited Speaker, [11th mRNA Health Conference, Oct. 2023](#), co-organized by 2023 Nobel Laureate [Katalin Kariko](#) ([video](#): Nature paper on AI-based mRNA design)
- NAACL 2022 Best Demo Paper Award
- ISMB 2021 [Integrative RNA \(iRNA\) COSI](#): Keynote
- [CVPR 2021 Invited Speaker](#)
- [ACL 2019 Keynote](#) ([video](#))
- Best Paper Finalist, SIGMOD 2018
- [Best Paper Honorable Mention, EMNLP 2016](#) (Cross and Huang, 2016b)
- Yahoo! Faculty Research and Engagement Award, 2015
- Google Faculty Research Award, 2013
- Google Faculty Research Award, 2010
- Best Paper Award Finalist: ACL 2010
- Best Paper Award Finalist: EMNLP 2008
- [Best Paper Award, ACL 2008](#) (Huang, 2008)
- Best Paper Award Finalist: ACL 2007

### *Teaching Awards*

- [University Prize for Excellence in Teaching by Graduate Students](#), University of Pennsylvania, 2005
- Nominated for the USC Viterbi School of Engineering Teaching Award, 2012

### *Programming Contest Awards (ACM/ICPC and OI)*

- Champions (as faculty advisor for the USC team), [ACM/ICPC Southern California Regionals](#) (advanced to the World Finals for the first time in USC history), 2011-2012.
- 4<sup>th</sup> Place, ACM International Collegiate Programming Contest, Asian Regionals, Shanghai site, 2000 (representing Shanghai Jiao Tong University).
- Bronze Medal (16th nationwide), National Olympiads in Informatics, China, 1996 (representing Shanghai).

MEDIA  
COVERAGE

**RNA Computational Biology, mRNA Vaccine Design, and SARS-CoV-2**

[Nature news](#) (*'Remarkable' AI tool designs mRNA vaccines that are more potent and stable*), [Nature news & views](#) (*A tool for optimizing messenger RNA sequence*), [IEEE Spectrum](#) (*Understanding coronavirus is like reading a sentence*), [Reuters](#), [Nasdaq](#), [MIT Tech Review](#), [Business Insider](#), [AnalyticsInsight](#)

**Simultaneous Translation**

[IEEE Spectrum](#), [MIT Technology Review](#), [FORTUNE](#), [CNBC](#), [The Register](#), etc.;  
Also on podcasts: [Eye-on-AI](#), [Data Skeptic](#), etc.

TEACHING  
EXPERIENCE

**Oregon State University**

AI 534, Machine Learning (e-campus)	<i>Fall 2023</i>
CS 325, Undergraduate Algorithms	<i>Spring 2023, Fall 2019</i>
CS 514, Graduate Algorithms (MS/MEng-level)	<i>Fall 2022, Winter 2018, Fall 2016</i>
AI 539/CS 519, Natural Language Processing	<i>Fall 2022, Fall 2019, Spring 2017</i>
CS 519, Applied Machine Learning (e-campus)	<i>Spring '22, '21, '20, '19, '18</i>
CS 534, Machine Learning	<i>Fall 2017</i>
CS 519, Scientific Writing and Presentation	<i>Spring 2016</i>
CS 480, Translators (Compiler Theory)	<i>Winter 2016</i>
CS 321, Theory of Computation (Automata & Formal Language Theory)	<i>Fall 2015</i>

**City University of New York (CUNY)**

Graduate Center: CS 71010, Programming Language Theory	<i>Fall 2014, Fall 2013</i>
Graduate Center: LING 83600/CS 84010, Language Technology	<i>Fall 2014, Spring 2013</i>
Queens College: CS 3813/780: Advanced Programming	<i>Fall 2014, Spring 2014</i>
Graduate Center: CS 87100, Scientific Writing and Presentation	<i>Fall 2013</i>
Graduate Center: CS 84010, Machine Learning	<i>Spring 2013</i>
Queens College: CS 3813/780: Python Programming and Text Processing	<i>Fall 2012</i>

**University of Southern California (USC) – all graduate courses**

CS 570, Analysis of Algorithms	<i>Spring 2012</i>
CS 561, Artificial Intelligence (in Prolog, with K. Sagae)	<i>Spring 2012</i>
CS 562, Stat. Natural Language Proc. (with Chiang & Knight)	<i>Fall '11, Fall '10, Fall '09</i>
CS 599, Machine Translation ( <i>new course</i> , with Chiang and Knight)	<i>Spring 2011</i>
CS 544, Natural Language Processing (with Hovy et al.)	<i>Spring 2010</i>
<i>Nominated for the USC Engineering School Teaching Award, 2012.</i>	

**University of Pennsylvania – all undergraduate courses**

<a href="#">CSE 399-004 Python Programming</a> ( <i>new course</i> )	<i>Spring 2006</i>
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Teaching Assistant, CSE 320 Analysis of Algorithms *Spring 2005*  
Teaching Assistant, CSE 262 Automata, Complexity & Computability *Fall 2004*  
*Received [The University Graduate Teaching Award \(2005\)](#).*  
*Recommended by the Department to be the first graduate student to teach a course.*

Conference Tutorials: Simultaneous Translation  
EMNLP 2020, virtual (attendance: ~90) *November 2020*

Conference Tutorials: [Scalable Large-Margin Structured Learning: Theory & Algorithms](#)  
ACL 2014, Baltimore, MD (attendance: ~100) *June 2014*  
ACL 2015, Beijing, China (attendance: ~100) *July 2015*

Conference Tutorials: [Tree-based and Forest-based Translation](#) (with Yang Liu)  
ACL 2010, Uppsala, Sweden (attendance: ~65) *July 2010*

Conference Tutorials: [Advanced Dynamic Programming for Computational Linguists](#)  
COLING 2008, Manchester, UK (attendance: ~70) *Aug 2008*  
NAACL 2009, Boulder, CO (attendance: ~65) *May 2009*

#### EXTERNAL FUNDING

Total Amount of Funding: \$13.1M; my share: **\$2.7M**.

- NSF Small, IIS-2009071, sole PI, 2020–2023, \$450k. REU: \$16k.
- Baidu Research Gift, sole PI, \$60k.
- NIH R01, co-I (PI: Robert Tanguay); 2019–2023. \$2.5M, my share: \$190k.
- NSF Small, IIS-1817231, sole PI, 2018–2021, \$400,000.
- Intel. PI. 2018–2021. \$300,000.
- DARPA XAI Project. co-PI. PI: Alan Fern. \$6.5M total (\$400k my share), 2017–2021.
- HP+OSU Seed Fund, “Activity Recognition from Sensors with Minimal Supervision”. PI. \$20,000. 2016-2017.
- Yahoo! Faculty Research and Engagement Award, “Incremental Semantic Parsing with Applications in Question Answering” (sole PI), unrestricted gift, \$25,000, 2015–2016.
- NSF, “EAGER: Collaborative Research: Scaling Up Discriminative Learning for Natural Language Understanding and Translation” (sole PI), \$135,372, 2014–2016. REU: \$8k.
- Google Faculty Research Award, “Towards Scalable Discriminative Training for Machine Translation: Fast Decoding, Parallelized Learning with Inexact Search, and Beam Ranking” (sole PI), unrestricted gift, \$87,947 for one year, 2013–2014.
- DARPA Deep Exploration and Filtering (DEFT) Program, “SPARKLER - Scalable Prosodic, Anomaly and Relational Knowledge exploration of Language with Enhanced Robustness” (co-PI), total amount of \$2,000,000 for 4.5 years (my budget: \$504,024), 2012–2017.
- Google Faculty Research Award, “Linear-time Dynamic Programming for Parsing and Machine Translation” (PI), unrestricted gift, \$75,000 for one year, 2010–2011.

#### PUBLICATIONS [\[Google Scholar\]](#) MY ADVISEES

#### IN PRESS

1. [Tianshuo Zhou, Wei Yu Tang, David H. Mathews, Liang Huang \(2023\). Undesignable RNA Structure Identification via Rival Structure Generation and Structure Decomposition.](#) To appear in *Proceedings of RECOMB 2024*.

19. He Zhang,\* Liang Zhang,\* Ang Lin,\* Congcong Xu,\* Ziyu Li, Kaibo Liu, Boxiang Liu, Xiaopin Ma, Fanfan Zhao, Huiling Jiang, Chunxiu Chen, Haifa Shen, Hangwen Li, David H. Mathews, Yujian Zhang, Liang Huang (2023). [Algorithms for Optimized mRNA Design Improves Stability and Immunogenicity](#). *Nature* **621**, 396–403.  
**Nature news:**  
[“Remarkable’ AI tool designs mRNA vaccines that are more potent and stable”](#).  
**Nature news & views:** [A tool for optimizing messenger RNA sequence](#).  
 A COVID mRNA vaccine designed by this algorithm received **Emergency Use Authorization** in Laos, with strong clinical trial results (phases 1/2).  
**Licensed to Sanofi** (non-exclusively).
18. He Zhang,\* Sizhen Li,\* Ning Dai, Liang Zhang, David H. Mathews, and Liang Huang (2022). [LinearCoFold and LinearCoPartition: Linear-Time Algorithms for Secondary Structure Prediction of Interacting RNA molecules](#). *Nucleic Acids Research*, **51** (18).
17. Tianshuo Zhou, Ning Dai, Sizhen Li, Max Ward, David H. Mathews, Liang Huang (2023). [RNA design via structure-aware multifrontier ensemble optimization](#). *Bioinformatics*, **39** (supp\_1). (journal version of ISMB 2023 paper).
16. Shuangli Li, Jingbo Zhou, Tong Xu, Liang Huang, Fan Wang, Haoyi Xiong, Weili Huang, Dejing Dou, and Hui Xiong (2022). [GIANT: Protein-Ligand Binding Affinity Prediction via Geometry-aware Interactive Graph Neural Network](#). *IEEE Transactions on Knowledge and Data Engineering (TKDE)*. (journal version of KDD ’21 paper).
15. Subham Dasgupta, Jane K. La Du, Gloria R. Garcia, Sizhen Li, Konoha Tomono-Duval, Yvonne Rericha, Liang Huang, Robyn Tanguay (2022). [A CRISPR-Cas9 mutation in sox9b long intergenic noncoding RNA \(slincR\) affects zebrafish development, behavior, and regeneration](#). *Toxicological Sciences*, **194** (2).
14. Terry Zhou, Nora Gilliam, Sizhen Li, Simone Spaudau, Raven Osborn, Christopher Anderson, Thomas Mariani, Juilee Thakar, Stephen Dewhurst, David Mathews, Liang Huang, and Yan Sun (2022). [Generation and functional analysis of defective viral genomes during SARS-CoV-2 infection](#). *mBio*. **14** (3). Editor’s Pick.
13. He Zhang, Liang Zhang, Sizhen Li, David Mathews, and Liang Huang (2022). [LazySampling and LinearSampling: Fast Stochastic Sampling of RNA Secondary Structure with Applications to SARS-CoV-2](#). *Nucleic Acids Research*, **51** (2).
12. Sizhen Li, He Zhang, Liang Zhang, Kaibo Liu, Boxiang Liu, David H. Mathews, Liang Huang (2021). [LinearTurboFold: Linear-Time Global Prediction of Conserved Structures for RNA Homologs with Applications to SARS-CoV-2](#). *Proceedings of National Academy of Sciences of the USA (PNAS)*, Dec. 2021.
11. Haifeng Wang, Hua Wu, Zhongjun He, Liang Huang, and Kenneth Church (2021). Progress in Machine Translation (invited review article). *Engineering*.
10. Boxiang Liu, Kaibo Liu, He Zhang, Liang Zhang, Yucheng Bian, and Liang Huang (2020). [CoV-Seq: SARS-CoV-2 Genome Analysis and Visualization](#). *Journal of Medical Internet Research (JMIR)*, **22** (10).
9. Boxiang Liu and Liang Huang (2021). [ParaMed: A Parallel Corpus for English-Chinese Translation in the Biomedical Domain](#). *BMC Medical Informatics and Decision Making*, **21** (258).
8. He Zhang, Liang Zhang, David H. Mathews, and Liang Huang (2019). [LinearPartition: Linear-Time Approximation of RNA Folding Partition Function and Base Pairing Probabilities](#). *Bioinformatics*, **36** (Supp. 1), July 2020 (conference version in ISMB 2020).
7. Liang Huang, He Zhang, Dezhong Deng, Kai Zhao, Kaibo Liu, David Hendrix, and David Mathews (2019). [LinearFold: Linear-Time Approximate RNA Folding by 5’-to-3’ Dynamic Programming and Beam Search](#). *Bioinformatics*, **35** (14), July 2019, i295–i304 (conference version in ISMB 2019).

6. Benjamin McCamish, Vahid Ghadakchi, Arash Termehchy, Behrouz Touri, Eduardo Cotilla-Sanchez, Liang Huang, and Soravit Changpinyo (2019). [A Game-theoretic Approach to Data Interaction](#), *ACM Transactions on Database Systems (TODS)*, **45** (1). (conference version in SIGMOD 2019).
5. Padideh Danaee, Mason Rouches, Michelle Wiley, Dezhong Deng, Liang Huang, and David Hendrix (2018). [bpRNA: large-scale automated annotation and analysis of RNA secondary structure](#). *Nucleic Acids Research*, **46** (11), 5381-5394.
4. Wenbin Jiang, Yajuan Lü, Liang Huang and Qun Liu (2015). [Automatic Adaptation of Annotations](#). *Computational Linguistics*, **41** (1), pp. 119-147.
3. Liang Huang, Hao Zhang, Daniel Gildea, and Kevin Knight (2009). [Binarization of Synchronous Context-Free Grammars](#). *Computational Linguistics*, **35** (4). December 2009. Conference version appeared at HLT-NAACL 2006 (see below).
2. Adam Lucas, Liang Huang, Aravind Joshi, and Ken Dill (2007). [Statistical Mechanics of Helix Bundles using a Dynamic Programming Approach](#). *Journal of American Chemical Society (JACS)*, **129** (14), pp. 4272–4281.
1. Ken Dill, Adam Lucas, Julia Hockenmaier, Liang Huang, David Chiang, and Aravind Joshi (2007). [Computational Linguistics: a new tool for exploring biopolymer structures and statistical mechanics](#). *Polymer*, **48** (15), pp. 4289-4300.

#### BOOK CHAPTERS

1. He Zhang, Liang Zhang, Sizhen Li, Kaibo Liu, David Mathews, and Liang Huang (2022). [Linear-Time Algorithms for RNA Structure Prediction](#). *Methods in Molecular Biology*, Springer Nature. **Invited article**.

#### EDITED PROCEEDINGS

2. Hua Wu, Colin Cherry, Liang Huang, Zhongjun He, et al. (eds.) (2021). [Proceedings of the Second Workshop on Automatic Simultaneous Translation](#). NAACL 2021.
1. Hua Wu, Colin Cherry, Liang Huang, Zhongjun He, et al. (eds.) (2020). [Proceedings of the First Workshop on Automatic Simultaneous Translation](#). ACL 2020.

#### REFEREED CONFERENCE PAPERS (54 in top-conferences defined by [csrankings.org](https://csrankings.org))

69. Tianshuo Zhou, Ning Dai, Sizhen Li, Max Ward, David H Mathews, Liang Huang (2023). [RNA design via structure-aware multifrontier ensemble optimization](#). In *Proceedings of ISMB 2023*. Journal version in *Bioinformatics*.
68. He Bai, Renjie Zheng, Junkun Chen, Xintong Li, Mingbo Ma, and Liang Huang (2022). [A3T: Alignment-Aware Acoustic and Text Pretraining for Speech Synthesis and Editing](#). In *Proceedings of ICML 2022*.
67. Hui Zhang\*, Tian Yuan\*, Junkun Chen\*, Xintong Li, Renjie Zheng, Yuxin Huang, Xiaojie Chen, Enlei Gong, Zeyu Chen, Xiaoguang Hu, Dianhai Yu, Yanjun Ma, Liang Huang (2022). [PaddleSpeech: An Easy-to-Use All-in-One Speech Toolkit](#). In *Proceedings of NAACL 2012: Demo Track*.  
**Best Demo Paper Award.**
66. Junkun Chen, Renjie Zheng, Atsuhito Kita, Mingbo Ma, and Liang Huang (2021). [Improving Simultaneous Translation with Pseudo References](#). In *Proceedings of EMNLP 2021*.
65. Renjie Zheng, Junkun Chen, Mingbo Ma, and Liang Huang (2021). [Fused Acoustic and Text Encoding for Multimodal Bilingual Pretraining and Speech Translation](#). In *Proceedings of ICML 2021*.
64. Junkun Chen, Mingbo Ma, Renjie Zheng, and Liang Huang (2021). [Direct Simultaneous Speech-to-Text Translation Assisted by Synchronized Streaming ASR](#). In *Proceedings of ACL 2021: Findings*.

63. Junkun Chen, Mingbo Ma, Renjie Zheng, and Liang Huang (2021). [SpecRec: An Alternative Solution for Improving End-to-End Speech](#). In *Proceedings of Interspeech 2021*.
62. Xingyu Cai, Jiahong Yuan, Renjie Zheng, Liang Huang, and Kenneth Church (2021). [Speech Emotion Recognition with Multi-task Learning](#). In *Proceedings of Interspeech 2021*.
61. Shuangli Li, Jingbo Zhou, Tong Xu, Liang Huang, Fan Wang, Haoyi Xiong, Weili Huang, Dejing Dou, and Hui Xiong (2021). [Structure-aware Interactive Graph Neural Networks for the Prediction of Protein-Ligand Binding Affinity](#). In *Proceedings of KDD 2021*.
60. Renjie Zheng, Mingbo Ma, Baigong Zheng, Kaibo Liu, Jiahong Yuan, Kenneth Church, Liang Huang (2020). [Fluent and Low-latency Simultaneous Speech-to-Speech Translation with Self-adaptive Training](#). In *Proceedings of EMNLP 2020: Findings*.
59. Mingbo Ma, Baigong Zheng, Kaibo Liu, Renjie Zheng, Hairong Liu, Kainan Peng, Kenneth Church, Liang Huang (2020). [Incremental Text-to-Speech Synthesis with Prefix-to-Prefix Framework](#). In *Proceedings of EMNLP 2020: Findings*.
58. He Zhang, Liang Zhang, David Mathews, Liang Huang (2020). [LinearPartition: Linear-Time Approximation of RNA Folding Partition Function and Base-Pairing Probabilities](#). In *Proceedings of ISMB 2020*. Journal version in *Bioinformatics*.
57. Renjie Zheng, Mingbo Ma, Baigong Zheng, Kaibo Liu, and Liang Huang (2020). [Opportunistic Decoding with Timely Correction for Simultaneous Translation](#). In *Proceedings of ACL 2020*.
56. Baigong Zheng, Kaibo Liu, Renjie Zheng, Mingbo Ma, Hairong Liu, and Liang Huang (2020). [Simultaneous Translation Policies: From Fixed to Adaptive](#). In *Proceedings of ACL 2020*.
55. Renjie Zheng, Baigong Zheng, Mingbo Ma, and Liang Huang (2019). [Speculative Beam Search for Simultaneous Translation](#). In *Proceedings of EMNLP 2019*.
54. Baigong Zheng, Renjie Zheng, Mingbo Ma, and Liang Huang (2019). [Simpler and Faster Learning of Adaptive Policies for Simultaneous Translation](#). In *Proceedings of EMNLP 2019*.
53. Mingbo Ma, Liang Huang, Hao Xiong, Renjie Zheng, Kaibo Liu, Baigong Zheng, Chuanqiang Zhang, Zhongjun He, Hairong Liu, Xing Li, Hua Wu, and Haifeng Wang (2019). [STACL: Simultaneous Translation with Integrated Anticipation and Controllable Latency](#). In *Proceedings of ACL 2019*.
52. Hairong Liu, Mingbo Ma, Liang Huang, Hao Xiong, and Zhongjun He (2019). [Robust Neural Machine Translation with Joint Textual and Phonetic Embedding](#). In *Proceedings of ACL 2019*.
51. Baigong Zheng, Renjie Zheng, Mingbo Ma, and Liang Huang (2019). [Simultaneous Translation with Flexible Policy via Restricted Imitation Learning](#). In *Proceedings of ACL 2019*.
50. Liang Huang, He Zhang, Dezhong Deng, Kai Zhao, Kaibo Liu, David Hendrix, and David Mathews (2018). [LinearFold: Linear-Time Approximate RNA Folding by 5'-to-3' Dynamic Programming and Beam Search](#). In *Proceedings of ISMB 2019* (journal version in *Bioinformatics*).
49. Mingbo Ma, Renjie Zheng, and Liang Huang (2019). [Learning to Stop in Structured Prediction for Neural Machine Translation](#). In *Proceedings of NAACL 2019*.
48. Renjie Zheng, Mingbo Ma and Liang Huang (2018). [Multi-Reference Training with Pseudo-Reference Generation for Text Generation](#). In *Proceedings of EMNLP 2018*.
47. Yilin Yang, Liang Huang and Mingbo Ma (2018). [Break the Beam Search Curse: A Study of Rescoring Methods and Stopping Criteria for Neural Machine Translation](#). In *Proceedings of EMNLP 2018*.
46. Jiaji Huang, Yi Li, Wei Ping and Liang Huang (2018). [Large Margin Neural Language Model](#). In *Proceedings of EMNLP 2018*.
45. Wen Zhang, Lei Shen, Yang Feng, Liang Huang and Qun Liu (2018). [Cube Pruning for Neural Machine Translation](#). In *Proceedings of EMNLP 2018*.

44. Juneki Hong and Liang Huang (2018). [Linear-Time Constituency Parsing with RNNs and Dynamic Programming](#). In *Proceedings of ACL 2018*.
43. B. McCamish, V. Ghadakchi, A Termehchy, B. Touri, and L. Huang (2018). [The Data Interaction Game](#). In *Proceedings of SIGMOD 2018*. **Best Paper Finalist**.
42. Tianze Shi, Liang Huang, and Lillian Lee (2017). [Fast\(er\) Exact Decoding and Global Training for Transition-Based Dependency Parsing via A Minimal Feature Set](#). In *Proceedings of EMNLP 2017*.
41. Kai Zhao and Liang Huang (2017). [Joint Syntactic and Discourse Parsing with Recurrent Neural Models](#). In *Proceedings of EMNLP 2017*.
40. Liang Huang, Kai Zhao, and Mingbo Ma (2017). [When to Finish? Optimal Beam Search for Neural Text Generation \(modulo beam size\)](#). In *Proceedings of EMNLP 2017*.
39. Mingbo Ma, Liang Huang, Bing Xiang, and Bowen Zhou (2017). [Group Sparse CNNs for Question Classification with Answer Sets](#). In *Proceedings of ACL 2017*.
38. Mingbo Ma, Kai Zhao, Liang Huang, Bing Xiang and Bowen Zhou (2017), [Jointly Trained Sequential Labeling and Classification by Sparse Attention Neural Networks](#). In *Proceedings of Interspeech 2017*.
37. Kai Zhao, Liang Huang, and Mingbo Ma (2016). [Textual Entailment with Structured Attentions and Composition](#). In *Proceedings of COLING 2016*.
36. James Cross and Liang Huang (2016b). [Span-Based Constituency Parsing with a Structure-Label System and Provably Optimal Dynamic Oracles](#). In *Proc. of EMNLP 2016*. **Best Paper Honorable Mention**.
35. James Cross and Liang Huang (2016a). [Incremental Parsing with Minimal Features Using Bi-Directional LSTM](#). In *Proceedings of ACL*.
34. Reza Ghaeini, Xiaoli Fern, Liang Huang and Prasad Tadepalli (2016). [Event Nugget Detection with Bidirectional Recurrent Neural Networks](#). In *Proceedings of ACL*.
33. Feifei Zhai and Liang Huang (2015). [A Pilot Study Towards End-to-End MT Training](#). In *Proceedings of MT Summit XV*.
32. Feifei Zhai, Liang Huang and Kai Zhao (2015). [Search-Aware Tuning for Hierarchical Phrase-based Decoding](#). In *Proceedings of EMNLP 2015*.
31. Mingbo Ma, Liang Huang, Bing Xiang, and Bowen Zhou (2015). [Dependency-based Convolutional Neural Networks for Sentence Embedding](#). In *Proceedings of ACL 2015*.
30. Kai Zhao and Liang Huang (2015). [Type-Driven Incremental Semantic Parsing with Polymorphism](#). In *Proceedings of NAACL 2015*.
29. Haitao Mi and Liang Huang (2015). [Shift-Reduce Constituency Parsing with Dynamic Programming and POS Tag Lattice](#). In *Proceedings of NAACL 2015*.
28. I. Naim, Y. Song, Q. Liu, L. Huang, H. Kautz, J. Luo, and D. Gildea (2015). [Discriminative Unsupervised Alignment of Natural Language Instructions with Corresponding Video Segments](#). In *Proceedings of NAACL 2015*.
27. Lemao Liu and Liang Huang (2014). [Search-Aware Tuning for Machine Translation](#). In *Proceedings of EMNLP 2014*.
26. Heng Yu, Haitao Mi, Liang Huang and Qun Liu (2014). [A Structured Language Model for Incremental Tree-to-String Translation](#). In *Proceedings of COLING 2014*.
25. Kai Zhao, Liang Huang, Haitao Mi, and Abe Ittycheriah (2014). [Hierarchical MT Training using Max-Violation Perceptron](#). In *Proceedings of ACL 2014*.
24. Heng Yu, Liang Huang, Haitao Mi and Kai Zhao (2013). [Max-Violation Perceptron and Forced Decoding for Scalable MT Training](#). In *Proceedings of EMNLP 2013*.
23. Kai Zhao, James Cross, and Liang Huang (2013). [Dynamic Programming for Optimal Best-First Shift-Reduce Parsing](#). In *Proceedings of EMNLP 2013*.
22. Hao Zhang, Kai Zhao, Liang Huang, and Ryan McDonald (2013). [Online Learning for Inexact Hypergraph Search](#). In *Proceedings of EMNLP 2013*.



21. Yoav Goldberg, Kai Zhao, and Liang Huang (2013). [Efficient Implementation of Beam-Search Incremental Parsers](#). In *Proceedings of ACL 2013*.
20. Qi Li, Heng Ji, and Liang Huang (2013). [Joint Event Extraction via Structured Prediction with Global Features](#). In *Proceedings of ACL 2013*.
19. Kai Zhao and Liang Huang (2013). [Minibatch and Parallelization for Large-Margin Structured Learning](#). In *Proceedings of NAACL 2013*.
18. Liang Huang, Suphan Fayong, and Yang Guo (2012). [Structured Perceptron with Inexact Search](#). In *Proceedings of NAACL 2012*.
17. Ashish Vaswani, Liang Huang and David Chiang (2012). [Smaller Alignment Models for Better Translations: Unsupervised Word Alignment with the  \$\ell\_0\$ -norm](#). In *Proceedings of ACL 2012*.
16. Ashish Vaswani, Haitao Mi, Liang Huang and David Chiang (2011). [Rule Markov Models for Fast Tree-to-String Translation](#). In *Proceedings of ACL 2011*.
15. Liang Huang and Haitao Mi (2010). [Efficient Incremental Decoding for Tree-to-String Translation](#). In *Proceedings of EMNLP 2010*.
14. Liang Huang and Kenji Sagae (2010). [Dynamic Programming for Linear-time Incremental Parsing](#). In *Proceedings of ACL 2010*. **Nominated for the Best Paper Award.**
13. Haitao Mi, Liang Huang, and Qun Liu (2010). Machine Translation with Lattices and Forests. In *Proceedings of COLING 2010*.
12. Liang Huang, Wenbin Jiang, and Qun Liu (2009). [Bilingually-Constrained \(Monolingual\) Shift-Reduce Parsing](#). In *Proceedings of EMNLP 2009*.
11. Wenbin Jiang, Liang Huang, and Qun Liu (2009). [Automatic Adaptation of Annotation Standards: Chinese Word Segmentation and POS Tagging: A Case Study](#). In *Proceedings of ACL-IJCNLP 2009*.
10. Liang Huang (2008). [Advanced Dynamic Programming in Semiring and Hypergraph Frameworks](#). In *Proceedings of COLING 2008*. Survey paper to accompany the conference tutorial.
9. Haitao Mi and Liang Huang (2008). [Forest-based Translation Rule Extraction](#). In *Proceedings of EMNLP 2008*. **Nominated for the Best Paper Award.**
8. Haitao Mi, Liang Huang and Qun Liu (2008). [Forest-based Translation](#). In *Proceedings of ACL 2008*.
7. Wenbin Jiang, Liang Huang, Qun Liu, and Yajuan Lü (2008). [A Cascaded Linear Model for Joint Chinese Word Segmentation and Part-of-Speech Tagging](#). In *Proceedings of ACL 2008*.
6. Liang Huang (2008). [Forest Reranking: Discriminative Parsing with Non-Local Features](#). In *Proceedings of ACL 2008*.  
**Received ACL Best Paper Award.** (*one of the 4 single-author awards in ACL history*)  
 Recognized in ACL 2012 as the **most-cited paper** published in 2008 within the [ACL Anthology](#) (most NLP conferences and journals).
5. Liang Huang and David Chiang (2007). [Forest Rescoring: Faster Decoding with Integrated Language Models](#). In *Proceedings of ACL 2007*. **Nominated for the Best Paper Award.**
4. Liang Huang, Kevin Knight, and Aravind Joshi (2006). [Statistical Syntax-Directed Translation with Extended Domain of Locality](#). In *Proceedings of AMTA 2006*.
3. Hao Zhang, Liang Huang, Dan Gildea and Kevin Knight (2006). [Synchronous Binarization for Machine Translation](#). In *Proc. of NAACL 2006*.  
 Journal version appeared in *Computational Linguistics* (2009). (see above)
2. Stephanie Weirich and Liang Huang (2005). [A Design for Type-Directed Programming in Java](#). In *Electronic Notes in Theoretical Computer Science*, **138** (2), 117-136.

1. L. Huang, Y. Peng, Z. Wu, Z. Yuan, H. Wang and H. Liu (2003). [Pseudo Context-Sensitive Models for Parsing Isolating Languages: Classical Chinese – A Case Study](#). In *Proceedings of the International Conference on Intelligent Text Processing and Computational Linguistics (CICLING)*.

#### REFEREED WORKSHOP PAPERS

5. Liang Huang (2007). [Binarization, Synchronous Binarization, and Target-side Binarization](#). In *Proceedings of NAACL Workshop on Syntax and Structure in Statistical Translation (SSST)*.
4. Liang Huang and David Chiang (2005). [Better  \$k\$ -best Parsing](#). In *Proceedings of the 9th International Workshop on Parsing Technologies (IWPT)*.
3. Liang Huang, Hao Zhang and Daniel Gildea (2005). [Machine Translation as Lexicalized Parsing with Hooks](#). In *Proceedings of the 9th International Workshop on Parsing Technologies (IWPT)*.
2. Stephanie Weirich and Liang Huang (2004). [A Design for Type-Directed Programming in Java](#). In *Proceedings of the Workshop on Object-Oriented Developments (WOOD)*. Extended version as Penn/CIS Technical Report MS-CIS-04-11.
1. L. Huang, Y. Peng, H. Wang, and Z. Wu (2002). [PCFG Parsing for Restricted Classical Chinese Texts](#). In *First Workshop on Chinese Processing (SIGHAN)* at COLING, Taipei.

#### THESES/DISSERTATIONS

2. Liang Huang (2008). [Forest-Based Algorithms for Natural Language Processing](#). *Ph.D. Dissertation, University of Pennsylvania*.  
**Nominated for the ACM Doctoral Dissertation Award.**
1. Liang Huang (2003). Probabilistic  $k$ -best Earley Parsing for Classical and Modern Chinese. *Bachelor's Thesis (with highest distinction), Shanghai Jiao Tong University*.

#### BOOKS

1. Rujia Liu and Liang Huang (2003). [The Art of Algorithms and Programming Contests \(in Chinese\)](#). Tsinghua University Press. *National best seller in computer science*.

#### POSTDOCS

- [Lemao Liu](#) (2013/11–2014/7): machine translation, structured prediction. Now Research Scientist at NICT, Japan.
- [Feifei Zhai](#) (2014/9–2015/8): machine translation, unsupervised learning. Now Research Staff Member at IBM Watson.

#### PHD THESES SUPERVISED (10)

1. [Ashish Vaswani](#) (USC, co-advised by D. Chiang). Defended June 2014. **First author of “Attention is all you need”** (Transformer paper).
2. [James Cross](#) (CUNY→Oregon State). Defended December 2016. **EMNLP 2016 Best Paper Honorable Mentions**. Parsing with Recurrent Neural Networks. Now at Facebook AI Research (FAIR).
3. [Kai Zhao](#) (CUNY→Oregon State). Defended June 2017. structured prediction, parsing, machine translation. Now Sr. Research Scientist at Google NYC.
4. [Mingbo Ma](#) (CUNY→Oregon State). Defended September 2018. Now Tech Lead Manager at TikTok
5. [Renjie Zheng](#) (Oregon State). Defended Spring 2020. Now Sr. NLP Algorithm Engineer & Tech Lead at Bytedance
6. [He Zhang](#) (Oregon State). Defended Fall 2021. Now Staff Scientist at Baidu Research USA
7. [Liang Zhang](#) (Oregon State). Defended Spring 2022. Now Full Professor at China Pharmaceutical University

8. [Juneki Hong](#) (Oregon State). Defended Spring 2022. Now NLP Engineer at Bytedance
9. [Junkun Chen](#) (Oregon State). Defended Fall 2022. Now Sr. Applied Scientist at Microsoft Research.
10. [Sizhen Li](#) (Oregon State). Defended Fall 2022. **1st-author of PNAS paper**. Now Research Scientist, Sanofi.

PHD STUDENTS  
(ACTIVE)

- [Ning Dai](#) (Oregon State). Since Fall 2021.
- [Tianshuo Zhou](#) (Oregon State). Since Summer 2022.
- [Zetian Wu](#) (Oregon State). Since Fall 2022.
- Zhang Li (Shanghai Jiao Tong University, external co-advisor). Since Fall 2023.
- Milan Gautam (Oregon State). Since Winter 2024.

MS STUDENTS

- [Apoorv Malik](#) (Oregon State). Since Fall 2022.

M.S. THESES  
SUPERVISED (5)

1. [Luyao Zhang](#) (2015–2016). Now CS instructor at Oregon State.
2. He Zhang (2017–2018). Now Research Engineer at Baidu Research USA.
3. Kaibo Liu (2017–2018). Now Research Engineer at Baidu Research USA.
4. Matthew Meyn (2017–2019). Now Engineer at Systems & Technology Research (STR).
5. Liang Zhang (2018–2019). Continued to PhD.

UNDERGRADUATE  
STUDENTS

- [Wei Yu Tang](#) (Oregon State, EECS REU)
- Otso Barron (Oregon State, NSF REU)
- Aaron Cheng (Univ. of Pennsylvania, NSF REU)
- Atsuhito Kita (Oregon State; EMNLP 2021 paper and went to Columbia for grad school)

SUMMER  
INTERNS

- [Renjie Zheng](#) (2017/10-12): converted to PhD student at OSU.
- Heng Yu (Ph.D. student from CAS/ICT, 2013/7–11): machine translation, latent variable structured prediction. Now Research Scientist at Alibaba.
- Zhuoran Yu (M.S. student from NYU-Poly, 2013/6–2013/9): parsing algorithms. Now Software Engineer at Google Research, NYC.
- Licheng Fang (PhD, Rochester), Summer 2011. Now Software Engineer at Google.
- [Alexander Rush](#) (PhD, MIT), Summer 2010. Now professor at Cornell.
- [Yoav Goldberg](#) (PhD, Ben Gurion), Summer 2010 (with Knight & Chiang). Now professor at Bar Ilan University.

INVITED TALKS  
[[PLAYLIST ON YOUTUBE](#)]

- “Fighting COVID-19 with RNA Folding and RNA Design.”
18. [U. of Washington Allen School of CSE, Distinguished Lecture](#) *Nov 2023*
  17. [Allen Institute of Artificial Intelligence \(AI2\)](#) *Nov 2023*
  16. [11<sup>th</sup> mRNA Health Conference](#) (*co-organized by Nobel Laureate Dr. Kariko*) *Oct 2023*
  15. Google, Inc. *Aug 2023*
  14. [Tsinghua University AI Research Institute](#) *Sep 2022*
  13. Bayer Inc. *Aug 2022*
  12. [Columbia University NLP Seminar](#) *April 2022*
  11. University of Rochester Biochemistry and Biophysics Seminar *March 2022*
  10. [Pfizer Inc.](#) *Nov 2021*
  9. ILCC Seminar, School of Informatics, University of Edinburgh *Nov 2021*

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|--|-------------------|
| 8. <a href="#">Keynote, ISMB 2021 Integrated RNA Biology COSI</a>            | <i>July 2021</i>  |
| 7. Emory University CS Colloquium  | <i>March 2021</i> |
| 6. University of Pennsylvania Computational Linguistics Seminars             | <i>Jan 2021</i>   |
| 5. Keynote, Fosun Health Symposium on mRNA Therapeutics                      | <i>Nov 2020</i>   |
| 4. Keynote, 5th Annual Chinese Summit on Language and Intelligence           | <i>Oct 2020</i>   |
| 3. <a href="#">UC Santa Barbara 2020 Responsible Machine Learning Summit</a> | <i>Oct 2020</i>   |
| 2. Riboclub: RNA Biology and Technology – The Current Pandemic and Beyond    | <i>Sep 2020</i>   |
| 1. USC/ISI NL Seminar  | <i>May 2020</i>   |
| “Recent Advances in Speech Translation.”                                     |                   |
| 4. Facebook (Meta) AI Research   | <i>Aug 2022</i>   |
| 3. Apple Inc.  | <i>May 2022</i>   |
| 2. Google Research   | <i>June 2021</i>  |
| 1. Keynote, Second Workshop on Automatic Simultaneous Translation            | <i>June 2021</i>  |
| “Breakthrough in Simultaneous Translation.”                                  |                   |
| 5. <a href="#">Invited Talk, CVPR 2021</a>                                   | <i>June 2021</i>  |
| 4. University of Pennsylvania Computational Linguistics Seminars             | <i>Sep 2020</i>   |
| 3. <a href="#">ACL 2019 Invited Talk</a>                                     | <i>July 2019</i>  |
| 2. Stanford NLP Seminar  | <i>Jan 2019</i>   |
| 1. Google AI   | <i>Nov 2018</i>   |
| “Linear-Time Structure Prediction in Language and Biology.”                  |                   |
| 3. University of California, Riverside                                       | <i>Feb 2020</i>   |
| 2. University of California, Santa Cruz                                      | <i>Jan 2019</i>   |
| 1. University of Rochester, CS Colloquium                                    | <i>Feb 2017</i>   |
| “Linear-Time Prediction of RNA Secondary Structures.”                        |                   |
| 6. Keynote at Second Southern California NLP Symposium                       | <i>Sep 2019</i>   |
| 5. Keynote at First West Coast NLP Summit (@Facebook)                        | <i>Sep 2018</i>   |
| 4. EterRNA Conference 2018, Stanford University Medical School               | <i>Aug 2018</i>   |
| 3. PingWest SYNC 2018 Silicon Valley Innovation Conference                   | <i>Aug 2018</i>   |
| 2. University of Rochester Medical School, Bioinformatics Cluster            | <i>June 2018</i>  |
| 1. Center for Genome Research and Biocomputing, Oregon State University      | <i>Feb 2017</i>   |
| “Marrying Dynamic Programming and Recurrent Neural Networks.”                |                   |
| 2. Facebook AI Research  | <i>Nov 2017</i>   |
| 1. Keynote at EMNLP 2017 Workshop on Structured Prediction                   | <i>Sep 2017</i>   |
| “Linear-time Language Understanding and Learning.”                           |                   |
| 7. University of Oregon, Eugene, OR  | <i>Feb 2015</i>   |
| 6. University of Washington, Seattle, WA (UW-MSR Joint Symposium)            | <i>Feb 2014</i>   |
| 5. Tsinghua University   | <i>Jan 2014</i>   |
| 4. Stony Brook University (CS Colloquium)                                    | <i>Sep 2013</i>   |
| 3. University of Rochester (CS Colloquium)                                   | <i>Oct 2012</i>   |

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|---|------------------|
| 2. TTI Chicago  | <i>Mar 2012</i>  |
| 1. Carnegie Mellon University (Faculty Candidate Talk)                | <i>Feb 2012</i>  |
| “Search-Aware Tuning for Machine Translation.”                        |                  |
| 2. Bloomberg Research   | <i>Nov 2014</i>  |
| 1. Columbia University  | <i>Oct 2014</i>  |
| “Structured Learning with Inexact Inference.”                         |                  |
| 3. Baidu Inc., Beijing  | <i>Jan 2014</i>  |
| 2. University of Massachusetts, Amherst                               | <i>Mar 2013</i>  |
| 1. Columbia University (host: Michael Collins)                        | <i>Apr 2012</i>  |
| “Large-Scale Discriminative Training for Machine Translation.”        |                  |
| 4. <a href="#">Microsoft Research, Redmond, WA</a>                    | <i>Feb 2014</i>  |
| 3. Microsoft Research Asia, Beijing                                   | <i>Jan 2014</i>  |
| 2. Johns Hopkins University   | <i>Nov 2013</i>  |
| 1. USC Information Sciences Institute (USC/ISI)                       | <i>Sep 2013</i>  |
| “Linear-time Dynamic Programming for Incremental Parsing.”            |                  |
| 8. Facebook, Palo Alto (NLP Faculty Summit)                           | <i>Oct 2015</i>  |
| 7. Educational Testing Service (ETS), Princeton, NJ                   | <i>May 2013</i>  |
| 6. AT&T Labs Research, Florham Park, NJ                               | <i>Jan 2013</i>  |
| 5. IBM Research, T.J. Watson (hosts: Salim Roukos and Bing Zhao)      | <i>May 2011</i>  |
| 4. MIT CSAIL (host: Michael Collins)                                  | <i>Oct 2010</i>  |
| 3. Johns Hopkins University (CLSP Seminar, host: Fred Jelinek)        | <i>Sep 2010</i>  |
| 2. Google Research, Mountain View (host: Hiyan Alshawi)               | <i>July 2010</i> |
| 1. University of California at San Diego (host: Roger Levy)           | <i>May 2010</i>  |
| “Forest-based Algorithms in Natural Language Processing.”             |                  |
| 7. Yahoo! Research, Santa Clara, CA                                   | <i>Aug 2009</i>  |
| 6. Carnegie Mellon University (LTI Seminar), Pittsburgh, PA           | <i>May 2009</i>  |
| 5. MIT CSAIL, Cambridge, MA   | <i>Oct 2008</i>  |
| 4. Johns Hopkins University (CLSP Seminar), Baltimore, MD             | <i>Apr 2008</i>  |
| 3. <a href="#">Google Research, Mountain View, CA</a>                 | <i>Mar 2008</i>  |
| 2. Stanford University, Stanford, CA                                  | <i>Mar 2008</i>  |
| 1. University of California at Berkeley, Berkeley, CA                 | <i>Mar 2008</i>  |
| “Tree-based and Forest-based Translation.”                            |                  |
| 5. Pomona CS Colloquium + Harvey Mudd                                 | <i>Oct 2010</i>  |
| 4. University of California at Berkeley                               | <i>Feb 2009</i>  |
| 3. The Chinese University of Hong Kong (CUHK)                         | <i>Nov 2008</i>  |
| 2. Hong Kong University of Science and Technology (HKUST)             | <i>Nov 2008</i>  |
| 1. BBN Technologies, Cambridge, MA                                    | <i>Oct 2008</i>  |
| “Binarizing Synchronous Grammars for Machine Translation.”            |                  |
| 2. Institute of Computing Tech., Chinese Academy of Sciences, Beijing | <i>July 2007</i> |
| 1. Hong Kong University of Science and Technology (HKUST)             | <i>July 2007</i> |
| “Fast Decoding with Synchronous Grammars and $n$ -gram Models.”       |                  |

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| 1. Microsoft Research, Redmond   | <i>Dec 2006</i>  |
| “Better $k$ -best Parsing, Hypergraphs, and Dynamic Programming.”      |                  |
| 9. Institute of Automation, Chinese Academy of Sciences, Beijing       | <i>Nov 2007</i>  |
| 8. Microsoft Research Asia, Beijing                                    | <i>July 2007</i> |
| 7. Universität at Potsdam (CL Kolloquium), Potsdam, Germany            | <i>June 2007</i> |
| 6. University of Alberta (AI Seminar), Edmonton, Canada                | <i>Oct 2006</i>  |
| 5. Microsoft Research, Redmond, WA                                     | <i>Dec 2005</i>  |
| 4. University of Rochester (big picture series), Rochester, NY         | <i>Nov 2005</i>  |
| 3. New York University (NYCNLP series), New York, NY                   | <i>Nov 2005</i>  |
| 2. Google Research, Mountain View, CA                                  | <i>Oct 2005</i>  |
| 1. USC Information Sciences Institute (NL seminar), Marina del Rey, CA | <i>June 2005</i> |

PROFESSIONAL  
SERVICE

- Action Editor ( $\simeq$  Assoc. Editor), Transactions of the ACL (TACL), 2021–present
- Editorial Board, COVID, 2022–present
- NSF Panelist, 2014, 2015, 2017  $\times$  2, 2019  $\times$  2, 2020, 2021, 2022, 2024.
- Grant Proposal Reviewer, Foreign NSFs: Canadian (NSERC), 2017; Hong Kong Research Grants Council, 2017; The Netherlands (NWO), 2017; Israeli (ISF), 2015.
- Program Co-Chair, International Conference on Parsing Technologies (IWPT 2013)
- Senior Area Chair, EMNLP 2023 (parsing & syntax)
- Senior Area Chair, EMNLP 2022 (machine translation)
- Area Chair, ACL 2020 (syntax and parsing)
- Area Chair, ACL 2019 (sentence-level semantics)
- Area Chair, EMNLP 2018 (Syntax and Parsing)
- Senior Area Chair, ACL 2018 (Syntax and Parsing)
- Area Chair, IJCNLP 2017 (Tagging and Parsing)
- Area Chair, EMNLP 2016 (Segmentation, Tagging, and Parsing)
- Area Chair, ACL 2014 (Machine Translation), and ACL 2012 (Syntax and Parsing)
- Senior Program Committee, IJCAI 2016 and IJCAI 2013
- Standing Review Committee, Transactions of the ACL (TACL), 2014–2016 & 2018–2020
- Textbook Reviewer: *Cambridge University Press*, 2016; *Oxford University Press*, 2010
- Journal Reviewer for
  - *Computational Linguistics*, 2008–present
  - *Transactions of the Association of Computational Linguistics (TACL)*, 2012–
  - *Journal of Artificial Intelligence Research (JAIR)*, 2014, 2016
  - *Journal of Natural Language Engineering*, 2011
  - *Computational Intelligence*, 2011
  - *ACM Transactions on Intelligent Systems and Technology*, 2010–2011
  - *Journal of Computer Science and Technology*, 2010
  - *IEEE Transactions on Audio, Speech and Language Processing*, 2008
  - *ACM Transactions on Asian Language Information Processing*, 2008, 2011
  - *Bioinformatics*, 2021
  - *Computational Biology and Chemistry*, 2021
  - *PLOS Computational Biology*, 2021
  - *Nature Machine Intelligence*, 2021–2023

- *Nature Communications*, 2023
- *Formal Aspects of Computing*, 2022

- Conference PC Member for
  - ISMB 2023–2024
  - ACL, annually 2006–present (top conference)
  - HLT-NAACL, annually 2007–present (top conference)
  - EMNLP, annually 2007–present (top conference)
  - NIPS 2016, 2017 (top conference)
  - ICML 2016, 2017 (top conference)
  - ICLR 2016, 2017
  - AAAI 2015 (top conference)
  - IWPT 2011; MT Summit 2009; AMTA 2008; CoNLL 2007–2009

INTERNAL  
SERVICE

- Chair, Interdisciplinary Advising Committee for the AI Graduate Program, School of EECS, Oregon State U., 2022–2023.
- Faculty Hiring Committee for AI, School of EECS, Oregon State U., 2022–2023.
- Faculty Steering Committee (sole representative from College of Engineering), Center for Quantitative Life Sciences (CQLS), Oregon State U., 2021–present.
- Faculty Hiring Committee for Associate Head, School of EECS, Oregon State U., 2020–2021.
- Data Science Hiring Committee, College of Engineering, Oregon State U., 2016–2017.
- CS Undergrad. Curriculum Committee, School of EECS, Oregon State U., 2015–2016.
- Curriculum Committee, CUNY Graduate Center CS Program, 2012–2015.
- Co-Organizer, [CUNY NLP Seminar Series](#), 2012–2015.
- Co-Organizer and Coach, CUNY/QC Programming Contests, 2013–2015.
- PhD Admissions and Fellowship Committee, USC CS Dept, 2010–2012.
- Co-Organizer and Coach, USC Programming Contests (ACM/ICPC), 2009–2012. Champions, Southern California Regionals, 2011 (first time in USC history)
- Co-Organizer, NACLO: Computational Linguistics Olympiad, USC/ISI site, 2009–2012.

OTHER  
INFORMATION

- Citizen of the People’s Republic of China. Permanent Resident of the US.
- Born 1981, Shanghai, China.
- Human Languages: [Wu](#) (mother tongue), Mandarin (native); English (fluent); French, Spanish and Italian (basic); Japanese (basic conversational).
- Computer Languages: Python, Haskell, OCaml,  $\LaTeX$ , Java, C/C++, Pascal, Prolog.
- Hobbies/Interests: Historical Geography, Historical Linguistics, History of Mathematics, Classical Chinese (esp. poetry), Classical Music, Ping-Pong, Badminton, Football (Soccer not “handegg”!), Go, English poetry (esp. Shakespearean sonnet and Robert Frost), etc.

LAST UPDATED

December 2023.