

# Lingpeng Kong

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## Employment

- Senior Research Scientist, Google DeepMind, London, UK, 2019 - *present*
- Research Scientist, Google DeepMind, London, UK, 2017 - 2019
- Software Engineer, IBM China Systems and Technology Lab, Beijing, China, 2011 - 2012

## Education

- Ph.D. Computer Science, Carnegie Mellon University, 2017.
- M.S. Computer Science, Carnegie Mellon University, 2015.
- B.E. Computer Science, Beijing Language and Culture University, 2011.

## Awards and Honors

- EACL Outstanding Paper Award, 2017
- National Scholarship in China, 2010
- Meritorious Winner, The Mathematical Contest in Modeling (MCM), 2010

## Research Experience

- Intern, Google DeepMind, London, UK 1/2017 – 5/2017.
- Intern, Google Research, New York, NY 6/2016 – 9/2016.
- Visiting Ph.D. Student, University of Washington, Seattle, WA 10/2015 – 9/2017.
- Visiting Ph.D. Student, Harvard University, Cambridge, MA 6/2015.
- Intern, NEC Laboratories, China, Beijing, China 3/2011 – 7/2011.
- Research Assistant, High-Performance Computing Laboratory, Tsinghua University, Beijing, China 10/2010 – 3/2011.
- Research Assistant, Beijing Language and Culture University, Beijing, China 3/2010 – 10/2010.

## Teaching Experience

- Carnegie Mellon University, USA, Spring 2015  
Teaching Assistant for Chris Dyer, Alan W. Black and Shomir Wilson, *Natural Language Processing*
- Carnegie Mellon University, USA, Spring 2013  
Teaching Assistant for Roni Rosenfeld, *Machine Learning*
- Beijing Language and Culture University, China, Spring 2010  
Teaching Assistant for Rou Song, *Introduction to Natural Language Processing*

## Professional Activities

- Journal reviewer, *Transactions of the Association for Computational Linguistics* (TACL) 2015 -
- Journal reviewer, *The Journal of Artificial Intelligence Research* (JAIR) 2016 -
- Program committee member, ICML 2019, ACL 2019, ICML 2018, ICML 2017, NIPS 2017, EMNLP 2017, ACL 2017, ACL 2016, ICLR 2017, EMNLP 2016, EMNLP 2015, NAACL 2016, COLING 2016, and other various conferences and workshops.

## Languages

- Chinese (Native), English, Japanese (EJ1)

## Publications

### *Preprints & Technical reports*

1. Lei Yu, Laurent Sartran, Wojciech Stokowiec, Wang Ling, Lingpeng Kong, Phil Blunsom, Chris Dyer, [Putting Machine Translation in Context with the Noisy Channel Model](#), arXiv:1910.00553, October 2019.
2. Dani Yogatama, Cyprien de Masson d'Autume, Jerome Connor, Tomas Kocisky, Mike Chrzanowski, Lingpeng Kong, Angeliki Lazaridou, Wang Ling, Lei Yu, Chris Dyer, Phil Blunsom, [Learning and Evaluating General Linguistic Intelligence](#), arXiv:1901.11373, February 2019.
3. Jiangtao Feng, Lingpeng Kong, Po-Sen Huang, Chong Wang, Da Huang, Jiayuan Mao, Kan Qiao, Dengyong Zhou, [Neural Phrase-to-Phrase Machine Translation](#), arXiv:1811.02172, November 2018.
4. Lei Yu, Cyprien de Masson d'Autume, Chris Dyer, Phil Blunsom, Lingpeng Kong, Wang Ling, [Sentence Encoding with Tree-constrained Relation Networks](#), arXiv:1811.10475, November 2018.
5. Chris Alberti, Daniel Andor, Ivan Bogatyy, Michael Collins, Dan Gillick, Lingpeng Kong, Terry Koo, Ji Ma, Mark Omernick, Slav Petrov, Chayut Thanapirom, Zora Tung, David Weiss, [SyntaxNet Models for the CoNLL 2017 Shared Task](#), arXiv:1703.04929, March 2017. [\[Link\]](#)
6. Lingpeng Kong, Chris Alberti, Daniel Andor, Ivan Bogatyy, David Weiss, [DRAGNN: A Transition-based Framework for Dynamically Connected Neural Networks](#), arXiv:1703.04474, March 2017. [\[GitHub\]](#)[\[Google AI Blog\]](#)

7. Graham Neubig, Chris Dyer, Yoav Goldberg, Austin Matthews, Waleed Ammar, Antonios Anastasopoulos, Miguel Ballesteros, David Chiang, Daniel Clothiaux, Trevor Cohn, Kevin Duh, Manaal Faruqui, Cynthia Gan, Dan Garrette, Yangfeng Ji, Lingpeng Kong, Adhiguna Kuncoro, Gaurav Kumar, Chaitanya Malaviya, Paul Michel, Yusuke Oda, Matthew Richardson, Naomi Saphra, Swabha Swayamdipta, Pengcheng Yin, [DyNet: The Dynamic Neural Network Toolkit](#), arXiv:1701.03980, January 2017. [[GitHub](#)]
8. Lingpeng Kong, and Noah A. Smith, [An Empirical Comparison of Parsing Methods for Stanford Dependencies](#), arXiv:1404.4314, April 2014. [[code](#)]

### *Peer-refereed publications*

#### **Journal papers**

9. Hao Tang, Liang Lu, Lingpeng Kong, Kevin Gimpel, Karen Livescu, Chris Dyer, Noah A. Smith, Steve Renals, [End-to-End Neural Segmental Models for Speech Recognition](#), IEEE Journal of Selected Topics in Signal Processing, August 2017.

#### **Peer-refereed conference publications**

10. Lingpeng Kong, Cyprien de Masson d'Autume, Wang Ling, Lei Yu, Zihang Dai, Dani Yogatama, [A Mutual Information Maximization Perspective of Language Representation Learning](#), In International Conference on Learning Representations, Ethiopia, April 2020. [[Spotlight](#)] **ICLR 2020**
11. Cyprien de Masson d'Autume, Sebastian Ruder, Lingpeng Kong, Dani Yogatama, [Episodic Memory in Lifelong Language Learning](#), In Advances in Neural Information Processing Systems, Vancouver, Canada, December 2019. **NeurIPS 2019**
12. Lingpeng Kong, Gabor Melis, Wang Ling, Lei Yu, Dani Yogatama, [Variational Smoothing in Recurrent Neural Network Language Models](#), In International Conference on Learning Representations, New Orleans, Louisiana, May 2019. **ICLR 2019**
13. Liang Lu, Lingpeng Kong, Chris Dyer, Noah A. Smith, [Multi-task Learning with CTC and Segmental CRF for Speech Recognition](#), In Proceedings of the Annual Conference of the International Speech Communication Association, Stockholm, Sweden, August 2017. **INTERSPEECH 2017**
14. Adhiguna Kuncoro, Miguel Ballesteros, Lingpeng Kong, Chris Dyer, Graham Neubig, Noah A. Smith, [What Do Recurrent Neural Network Grammars Learn About Syntax?](#), In Proceedings of the Conference of the European Chapter of the Association for Computational Linguistics, Valencia, Spain, January 2017. [[Outstanding Paper Award](#)] **EACL 2017**
15. Liang Lu\*, Lingpeng Kong\*, Chris Dyer, and Noah A. Smith, Steve Renals, [Segmental Recurrent Neural Networks for End-to-end Speech Recognition](#), In Proceedings of the Annual Conference of the International Speech Communication Association, San Francisco, California, September 2016. (\*equal contribution) **INTERSPEECH 2016**
16. Adhiguna Kuncoro, Miguel Ballesteros, Lingpeng Kong, Chris Dyer, and Noah A. Smith, [Distilling an Ensemble of Greedy Dependency Parsers into One MST Parser](#), In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Austin, TX, November 2016 **EMNLP 2016**
17. Lingpeng Kong, Chris Dyer, and Noah A. Smith, [Segmental Recurrent Neural Networks](#), in Proceedings of International Conference on Learning Representations, San Juan, Puerto Rico, May 2016. [[GitHub](#)] **ICLR 2016**

18. Dani Yogatama, Lingpeng Kong, and Noah A. Smith, [Bayesian Optimization of Text Representations](#), in Proceedings of the Conference on Empirical Methods in Natural Language Processing, Lisboa, Portugal, September 2015. **EMNLP 2015**
19. Lingpeng Kong, Alexander M. Rush, and Noah A. Smith, [Transforming Dependencies into Phrase Structures](#), in Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics, Denver, CO, May 2015. [[GitHub](#)] **NAACL 2015**
20. Lingpeng Kong, Nathan Schneider, Swabha Swayamdipta, Archana Bhatia, Chris Dyer and Noah A. Smith, [A Dependency Parser for Tweets](#), in Proceedings of the Conference on Empirical Methods in Natural Language Processing, Doha, October 2014. [[GitHub](#)] **EMNLP 2014**
21. William Yang Wang, Lingpeng Kong, Kathryn Mazaitis, William W. Cohen, [Dependency Parsing for Weibo: An Efficient Probabilistic Logic Programming Approach](#), in Proceedings of the Conference on Empirical Methods in Natural Language Processing, Doha, Qatar, October 2014. **EMNLP 2014**
22. Lingpeng Kong, and Likun Qiu, [Formalization and Rules for Recognition of Satirical Irony](#), in Proceedings of the International Conference on Asian Language Processing, Penang, Malaysia, November 2011. **IALP 2011**
23. Likun Qiu, Lei Wu, Changjian Hu, Kai Zhao, Lingpeng Kong, [Improving Chinese Dependency Parsing with Self-Disambiguating Patterns](#), in Proceedings of the International Conference on Asian Language Processing, Penang, Malaysia, November 2011. **IALP 2011**

### Thesis

24. Lingpeng Kong, [Neural Representation Learning in Linguistic Structured Prediction](#), CMU-LTI-17-008, Carnegie Mellon University, Pittsburgh, PA, October 2017.

### Peer-refereed workshop publications

25. Yangfeng Ji, Trevor Cohn, Lingpeng Kong, Chris Dyer, Jacob Eisenstein, [Document Context Language Models](#), in International Conference on Learning Representations Workshop Track, San Juan, Puerto Rico, May 2016. **ICLR 2016**
26. Ting-Hao (Kenneth) Huang, Yun-Nung Chen, and Lingpeng Kong, [ACBiMA: Advanced Chinese Bi-Character Word Morphological Analyzer](#), in Proceedings of The 8th SIGHAN Workshop on Chinese Language Processing, Beijing, China, July 2015. [[GitHub](#)] **SIGHAN-8**