Lingpeng Kong

https://ikekonglp.github.io/

EMPLOYMENT

Assistant Professor, Department of Computer Science, The University of Hong Kong, 2020 - *present*

Senior Research Scientist, Google DeepMind, 2019 - 2020
Research Scientist, Google DeepMind, 2017 - 2019
Software Engineer, IBM China Systems and Technology Lab, 2011 - 2012

Research Internships: Google DeepMind (2017), Google Research (2016), University of Washington (2015-17), Harvard University (2015), NEC Laboratories China (2011), Tsinghua University (2010).

EDUCATION

Ph.D. Computer Science, Carnegie Mellon University, 2017
Thesis topic: Neural Representation Learning in Linguistic Structured Prediction [108]
Committee: Noah A. Smith*, Chris Dyer*, Alan W. Black, Michael Collins (*co-chair)
M.S. Computer Science, Carnegie Mellon University, 2015
B.E. Computer Science, Beijing Language and Culture University, 2011

RESEARCH HIGHLIGHTS AND AWARDS

2025 Highlight, CVPR [18].
2024 Outstanding Paper Award, ACL [41]. Oral, NeurIPS [33]. Spotlight, ICLR [53].
2023 Oral, ICLR [70]. Spotlight, ICLR [71,72].
2022 Spotlight, ICLR [90]. Spotlight, NeurIPS [80,81].
2021 Tencent AI Lab Rhino-Bird Award. Spotlight, ICLR [93].
2020 Spotlight, ICLR [94].
2017 Outstanding Paper Award, EACL [98].

SERVICE

Senior Area Chair: EMNLP (2024 - 2025), NAACL (2024 - 2025), IJCNLP/AACL (2023).
Action Editor: *Transactions on Machine Learning Research* (TMLR) (2024 -), *ACL Rolling Review* (2023 -).
Area Chair: NeurIPS (2022 - 2025), ICML (2023 - 2025), ICLR (2022 - 2025), COLM (2024 - 2025), EMNLP (2022 - 2023), COLING (2022), NLPCC (2021), NAACL (2020).
Program Committee Member: ICML (2017 - 2020), ACL (2016 - 2020), NeurIPS (2017), EMNLP (2015 - 2020), ICLR (2017), NAACL (2016), COLING (2016), and other various conferences and workshops.

ADVISING

PH.D., *completed*

- Jiahui Gao (2019-2023); [55,71,75,76,90]

PH.D., *post-thesis proposal*

- Chang Ma (2022-); [22,33,34,36,45,58]
- Xueliang Zhao (2022-); [43,46,47,51,66]
- Jiacheng Ye[1] (2022-); [23,24,25,27,32,42,56,61,67,71,75,76]
- Yiheng Xu[2] (2022-); [53]
- Qintong Li (2021-); [28,34,43,47,62,65,76,86]
- Lin Zheng (2021-); University Postgraduate Fellowship; M.Braun Postgraduate Prize in Computer Science; [32,34,39,49,60,68,70,83,84,91]

PH.D., *pre-thesis proposal*

- Zhihui Xie[3] (2024-); HKU Presidential PhD Scholarship (HKU-PS); [16,19]
- Xijia Tao (2024-); [29]
- Jing Xiong[4] (2024-); [17,9]
- Sheng Wang[5] (2024-); [21,28,42,44,65]
- Shansan Gong (2023-); HKU Presidential PhD Scholarship (HKU-PS); [23,26,27,32,41,47,50,57,73]
- Chenxin An (2023-); Hong Kong PhD Fellowship (HKPF); [20,26,27,41,50,80]
- Lei Li[6] (2023-); [18,19,20,26,29,35,40,48,54,59]
- Zhenyu Wu[7] (2023-); [24]

POST-DOCTORAL

- Xiachong Feng[8] (2024-); [8,40]

GRADUATE STUDENT VISITORS AND INDEPENDENT STUDY PROJECTS

2024: Seo Woon Baik,

2023: Liheng Chen [32,42,44], Zhiheng Lyu [30], Qingxiu Dong [45,54,59], Xuanyu Chen, Xiaoxu Li, Shuai Zhong

2022: Rui Shao, Dantong Li, Jiayi Xin, Chenxin An, Mukai Li [57,73], Haiteng Zhao [58]

2021: Xijia Tao, Xiangwei Kong, Shuailong Zhu, Jiahui Gao, Ya-Cheng Hsu, Jakob Prange (Georgetown University) [85], Chengzu Li [77], Yuval Kansal, King Min Hao, Ke Ma, Jiacheng Ye

2020: Zhiyong Wu [87,91,92], Hao Peng (University of Washington) [88,93], Huijie Pan [84], Yiming Wang, Chiu Yu Ying

[1] Co-advisor: Tao Yu (HKU) [2] Co-advisor: Tao Yu (HKU) [3] Co-advisor: Qi Liu (HKU) [4] Co-advisor: Ngai Wong (HKU) [5] Co-advisor: Chuan Wu (HKU) [6] Co-advisor: Qi Liu (HKU) [7] Shanghai Jiao Tong University (SJTU) [8] Co-host: Chuan Wu (HKU)

Teaching Experience

Instructor, Advanced Topics in Language Models (COMP8505), The University of Hong Kong, Spring 2025

Instructor, Introduction to Machine Learning (COMP3314), The University of Hong Kong, Spring 2022 - 2023, Fall 2023

Instructor, Natural Language Processing (COMP3361), The University of Hong Kong, Fall 2021 - 2022

Instructor, Natural Language Processing (for graduate students) (COMP7607), The University of Hong Kong, Fall 2022 - 2024

Teaching Assistant, Natural Language Processing, Carnegie Mellon University, Spring 2015

Teaching Assistant, Machine Learning, Carnegie Mellon University, Spring 2013

Publications

Preprints & Technical reports

1. 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.

2. 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.

3. 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.

4. 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]

5. 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]

6. 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]

7. 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

8. Xiachong Feng, Longxu Dou, Minzhi Li, Qinghao Wang, Yu Guo, Haochuan Wang, Chang Ma, and Lingpeng Kong, A Survey on Large Language Model-Based Social Agents in Game-Theoretic Scenarios, In Transactions on Machine Learning Research (**TMLR**), 2025

9. Jing Xiong, Gongye Liu, Lun Huang, Chengyue Wu, Taiqiang Wu, Yao Mu, Yuan Yao, Hui Shen, Zhongwei Wan, Jinfa Huang, Chaofan Tao, Shen Yan, Huaxiu Yao, Lingpeng Kong, Hongxia Yang, Mi Zhang, Guillermo Sapiro, Jiebo Luo, Ping Luo, Ngai Wong, Autoregressive Models in Vision: A Survey, In Transactions on Machine Learning Research (**TMLR**), 2025

10. Zhen Qin, Weixuan Sun, Kaiyue Lu, Dongxu Li, Xiaodong Han, Yuchao Dai, Lingpeng Kong, and Yiran Zhong, Linearized Relative Positional Encoding, In Transactions on Machine Learning Research (**TMLR**), 2023

11. Weixuan Sun, Zhen Qin, Hui Deng, Jianyuan Wang, Yi Zhang, Kaihao Zhang, Nick Barnes, Stan Birchfield, Lingpeng Kong, and Yiran Zhong, Vicinity Vision Transformer, In IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2023

12. Dani Yogatama, Cyprien de Masson d'Autume, Lingpeng Kong, Adaptive Semiparametric Language Models, Transactions of the Association for Computational Linguistics (**TACL**), April 2021.

13. Adhiguna Kuncoro*, Lingpeng Kong*, Daniel Fried*, Dani Yogatama, Laura Rimell, Chris Dyer, Phil Blunsom, Syntactic Structure Distillation Pretraining For Bidirectional Encoders, Transactions of the Association for Computational Linguistics (**TACL**), September 2020.

14. Lei Yu, Laurent Sartran, Wojciech Stokowiec, Wang Ling, Lingpeng Kong, Phil Blunsom, Chris Dyer, Better Document-level Machine Translation with Bayes' Rule, Transactions of the Association for Computational Linguistics (**TACL**), April 2020.

15. 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

16. Zhihui Xie, Jie chen, Liyu Chen, Weichao Mao, Jingjing Xu, and Lingpeng Kong, Teaching Language Models to Critique via Reinforcement Learning, In Proceedings of the International Conference on Machine Learning, Vancouver, Canada, July 2025. **ICML 2025**

17. Jing Xiong, Jianghan Shen, Chuanyang Zheng, Zhongwei Wan, Chenyang Zhao, Chiwun Yang, Fanghua Ye, Hongxia Yang, Lingpeng Kong, and Ngai Wong, ParallelComp: Parallel Long-Context Compressor for Length Extrapolation, In Proceedings of the International Conference on Machine Learning, Vancouver, Canada, July 2025. **ICML 2025**

18. Lei Li, Yuancheng Wei, Zhihui Xie, Xuqing Yang, Yifan Song, Peiyi Wang, Chenxin An, Tianyu Liu, Sujian Li, Bill Yuchen Lin, Lingpeng Kong, Qi Liu, VL-RewardBench: A Challenging Benchmark for Vision-Language Generative Reward Models, In Proceedings of the Conference on Computer Vision and Pattern Recognition, Nashville, TN, June 2025. [Highlight] **CVPR 2025**

19. Zhihui Xie, Jiahui Gao, Lei Li, Zhenguo Li, Qi Liu, Lingpeng Kong, Jailbreaking as a Reward Misspecification Problem, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

20. Lei Li, Yuanxin Liu, Linli Yao, Peiyuan Zhang, Chenxin An, Lean Wang, Xu Sun, Lingpeng Kong, and Qi Liu, Temporal Reasoning Transfer from Text to Video , In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

21. Sheng Wang, Liheng Chen, Pengan Chen, Jingwei Dong, Boyang Xue, Jiyue Jiang, Lingpeng Kong, Chuan Wu, MoS: Unleashing Parameter Efficiency of Low-Rank Adaptation with Mixture of Shards, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

22. Chang Ma, Haiteng Zhao, Junlei Zhang, Junxian He, and Lingpeng Kong, Language Model Non-Myopic Generation for Reasoning and Planning , In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

23. Jiacheng Ye, Jiahui Gao, Shansan Gong, Lin Zheng, Xin Jiang, Zhenguo Li, Lingpeng Kong, Beyond Autoregression: Discrete Diffusion for Complex Reasoning and Planning, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

24. Jiacheng Ye, Zhenyu Wu, Jiahui Gao, Zhiyong Wu, Xin Jiang, Zhenguo Li, Lingpeng Kong, Implicit Search via Discrete Diffusion: A Study on Chess, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

25. Jiahui Gao, Renjie Pi, Jipeng Zhang, Jiacheng Ye, Wanjun Zhong, Yufei Wang, Lanqing Hong, Jianhua Han, Hang Xu, Zhenguo Li, and Lingpeng Kong, G-LLaVA: Solving Geometric Problem with Multi-Modal Large Language Model, In International Conference on Learning Representations, Singapore, April 2025.**ICLR 2025**

26. Chenxin An, Jun Zhang, Ming Zhong, Lei Li, Shansan Gong, Yao Luo, Jingjing Xu, Lingpeng Kong, Why Does the Effective Context Length of LLMs Fall Short?, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

27. Shansan Gong, Shivam Agarwal, Yizhe Zhang, Jiacheng Ye, Lin Zheng, Mukai Li, Chenxin An, Peilin Zhao, Wei Bi, Jiawei Han, Hao Peng, and Lingpeng Kong, Scaling Diffusion Language Models via Adaptation from Autoregressive Models, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

28. Qintong Li, Jiahui Gao, Sheng Wang, Renjie Pi, Xueliang Zhao, Chuan Wu, Xin Jiang, Zhenguo Li, Lingpeng Kong, Forewarned is Forearmed: Harnessing LLMs for Data Synthesis via Failure-induced Exploration, In International Conference on Learning Representations, Singapore, April 2025. **ICLR 2025**

29. Xijia Tao, Shuai Zhong, Lei Li, Qi Liu, Lingpeng Kong, ImgTrojan: Jailbreaking Vision-Language Models with ONE Image, In Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics, Albuquerque, New Mexico, April 2025. **NAACL 2025**

30. Zhiheng Lyu, Kevin Yang, Lingpeng Kong, Daniel Klein, FactTrack: Time-Aware World State Tracking in Story Outlines, In Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics, Albuquerque, New Mexico, April 2025. **NAACL 2025**

31. Jiyue Jiang, Pengan Chen, Liheng Chen, Sheng Wang, Qinghang Bao, Lingpeng Kong, Yu Li, Chuan Wu, How Well Do LLMs Handle Cantonese? Benchmarking Cantonese Capabilities of Large Language Models, In Findings of the Conference of the North American Chapter of the Association for Computational Linguistics, Albuquerque, New Mexico, April 2025. **NAACL 2025 Findings**

32. Jiacheng Ye*, Shansan Gong*, Liheng Chen*, Lin Zheng, Jiahui Gao, Han Shi, Chuan Wu, Xin Jiang, Zhenguo Li, Wei Bi, and Lingpeng Kong, Diffusion of Thought: Chain-of-Thought Reasoning in Diffusion Language Models, In Advances in Neural Information Processing Systems, Vancouver, December 2024. **NeurIPS 2024**

33. Chang Ma, Junlei Zhang, Zhihao Zhu, Cheng Yang, Yujiu Yang, Yaohui Jin, Zhenzhong Lan, Lingpeng Kong, and Junxian He, AgentBoard: An Analytical Evaluation Board of Multi-turn LLM Agents, In Advances in Neural Information Processing Systems, Vancouver, December 2024. [Oral] **NeurIPS 2024**

34. Chang Ma, Haiteng Zhao, Lin Zheng, Jiayi Xin, Qintong Li, Lijun Wu, Zhihong Deng, Yang Young Lu, Qi Liu, Sheng Wang, and Lingpeng Kong, Retrieved Sequence Augmentation for Protein Representation Learning, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Miami, Florida, November 2024. **EMNLP 2024**

35. Lei Li, Zhihui Xie, Mukai Li, Shunian Chen, Peiyi Wang, Liang Chen, Yazheng Yang, Benyou Wang, Lingpeng Kong, and Qi Liu, VLFeedback: A Large-Scale AI Feedback Dataset for Large Vision-Language Models Alignment, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Miami, Florida, November 2024. **EMNLP 2024**

36. Haiteng Zhao, Chang Ma, Guoyin Wang, Jing Su, Lingpeng Kong, Jingjing Xu, Zhi-Hong Deng, Hongxia Yang, Empowering Large Language Model Agents through Action Learning, In Proceedings of the Conference on Language Modeling, Philadelphia, Pennsylvania, October 2024. **COLM 2024**

37. Qiushi Sun, Zhangyue Yin, Xiang Li, Zhiyong Wu, Xipeng Qiu, Lingpeng Kong , Corex: Pushing the Boundaries of Complex Reasoning through Multi-Model Collaboration, In Proceedings of the Conference on Language Modeling, Philadelphia, Pennsylvania, October 2024. **COLM 2024**

38. Jiahui Gao, Renjie Pi, Tianyang Han, Han Wu, Lanqing Hong, Lingpeng Kong, Xin Jiang, Zhenguo Li, CoCA: Regaining Safety-awareness of Multimodal Large Language Models with Constitutional Calibration, In Proceedings of the Conference on Language Modeling, Philadelphia, Pennsylvania, October 2024. **COLM 2024**

39. Lin Zheng, Jianbo Yuan, Lei Yu, Lingpeng Kong, A Reparameterized Discrete Diffusion Model for Text Generation, In Proceedings of the Conference on Language Modeling, Philadelphia, Pennsylvania, October 2024. [GitHub] **COLM 2024**

40. Lei Li, Yuqi Wang, Runxin Xu, Peiyi Wang, Xiachong Feng, Lingpeng Kong, and Qi Liu, Multimodal ArXiv: A Dataset for Improving Scientific Comprehension of Large Vision-Language Models, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024**

41. Chenxin An, Shansan Gong, Ming Zhong, Xingjian Zhao, Mukai Li, Jun Zhang, Lingpeng Kong, and Xipeng Qiu, L-Eval: Instituting Standardized Evaluation for Long Context Language Models, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. [Outstanding Paper Award] **ACL 2024**

42. Sheng Wang, Boyang Xue, Jiacheng Ye, Jiyue Jiang, Liheng Chen, Lingpeng Kong, and Chuan Wu, PRoLoRA: Partial Rotation Empowers More Parameter-Efficient LoRA, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024**

43. Qintong Li, Leyang Cui, Xueliang Zhao, Lingpeng Kong, and Wei Bi, GSM-Plus: A Comprehensive Benchmark for Evaluating the Robustness of LLMs as Mathematical Problem Solvers, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024**

44. Sheng Wang, Liheng Chen, Jiyue Jiang, Boyang Xue, Lingpeng Kong, and Chuan Wu, LoRA Meets Dropout under a Unified Framework, In Findings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024 Findings**

45. Yudong Wang, Chang Ma, Qingxiu Dong, Lingpeng Kong, and Jingjing Xu, A Challenging Benchmark for Low-Resource Learning, In Findings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024 Findings**

46. Xueliang Zhao, Xinting Huang, Wei Bi, and Lingpeng Kong, SEGO: Sequential Subgoal Optimization for Mathematical Problem-Solving, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024**

47. Xueliang Zhao, Xinting Huang, Tingchen Fu, Qintong Li, Shansan Gong, Lemao Liu, Wei Bi, and Lingpeng Kong, BBA: Bi-Modal Behavioral Alignment for Reasoning with Large Vision-Language Models , In Findings of the Annual Meeting of the Association for Computational Linguistics, August 2024. **ACL 2024 Findings**

48. Peiyi Wang, Lei Li, Liang Chen, Zefan Cai, Dawei Zhu, Binghuai Lin, Yunbo Cao, Lingpeng Kong, Qi Liu, Tianyu Liu, and Zhifang Sui, Large Language Models are not Fair Evaluators, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Thailand, August 2024. **ACL 2024**

49. Lin Zheng, Jianbo Yuan, Zhi Zhang, Hongxia Yang, and Lingpeng Kong, Self-Infilling Code Generation, In Proceedings of the International Conference on Machine Learning, Vienna, Austria, July 2024. **ICML 2024**

50. Chenxin An, Fei Huang, Jun Zhang, Shansan Gong, Xipeng Qiu, Chang Zhou, and Lingpeng Kong, Training-Free Long-Context Scaling of Large Language Models, In Proceedings of the International Conference on Machine Learning, Vienna, Austria, July 2024. **ICML 2024**

51. Xueliang Zhao, Wenda Li, and Lingpeng Kong, Decomposing the Enigma: Subgoal-based Demonstration Learning for Formal Theorem Proving, In Proceedings of the International Conference on Machine Learning, Vienna, Austria, July 2024. **ICML 2024**

52. Wenhao Zhu, Hongyi Liu, Qingxiu Dong, Jingjing Xu, Lingpeng Kong, Jiajun Chen, Lei Li, and Shujian Huang, Multilingual Machine Translation with Large Language Models: Empirical Results and Analysis. In Findings of the Conference of the North American Chapter of the Association for Computational Linguistics, Mexico City, Mexico, June 2024. **NAACL 2024 Findings**

53. Yiheng Xu*, Hongjin Su*, Chen Xing*, Boyu Mi, Qian Liu, Weijia Shi, Binyuan Hui, Fan Zhou, Yitao Liu, Tianbao Xie, Zhoujun Cheng, Siheng Zhao, Lingpeng Kong, Bailin Wang, Caiming Xiong, and Tao Yu, Lemur: Harmonizing Natural Language and Code for Language Agents, In International Conference on Learning Representations,Vienna Austria, May 2024. [Spotlight] **ICLR 2024**

54. Lei Li, Jingjing Xu, Qingxiu Dong, Ce Zheng, Qi Liu, Lingpeng Kong, Xu Sun, Can Language Models Understand Physical Concepts?, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Singapore, December 2023. **EMNLP 2023**

55. Renjie Pi, Jiahui Gao, Shizhe Diao, Rui Pan, Hanze Dong, Jipeng Zhang, Lewei Yao, Jianhua Han, Hang Xu, Lingpeng Kong, Tong Zhang, DetGPT: Detect What You Need via Reasoning, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Singapore, December 2023. **EMNLP 2023**

56. Jiacheng Ye, Chengzu Li, Lingpeng Kong, Tao Yu, Generating Data for Symbolic Language with Large Language Models, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Singapore, December 2023. **EMNLP 2023**

57. Shansan Gong, Mukai Li, Jiangtao Feng, Zhiyong Wu, Lingpeng Kong, Bridging Discrete and Continuous Text Spaces for Accelerated Seq2Seq Diffusion Models, In Findings of the Conference on Empirical Methods in Natural Language Processing, Singapore, December 2023. **EMNLP 2023 Findings**

58. Haiteng Zhao, Shengchao Liu, Chang Ma, Hannan Xu, Jie Fu, Zhi-Hong Deng, Lingpeng Kong, Qi Liu, GIMLET: A Unified Graph-Text Model for Instruction-Based Molecule Zero-Shot Learning, In Advances in Neural Information Processing Systems, New Orleans, Louisiana, December 2023. **NeurIPS 2023**

59. Qingxiu Dong, Jingjing Xu, Lingpeng Kong, Zhifang Sui, Lei Li, Statistical Knowledge Assessment for Generative Language Models, In Advances in Neural Information Processing Systems, New Orleans, Louisiana, December 2023. **NeurIPS 2023**

60. Shuyang Jiang, Jun Zhang, Jiangtao Feng, Lin Zheng, and Lingpeng Kong, Attentive Multi-Layer Perceptron for Non-autoregressive Generation, In Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Turin, Italy, September 2023. **ECML/PKDD 2023**

61. Zhiyong Wu*, Yaoxiang Wang*, Jiacheng Ye*, and Lingpeng Kong, Self-Adaptive In-Context Learning: An Information Compression Perspective for In-Context Example Selection and Ordering, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Toronto, Canada, July 2023. **ACL 2023**

62. Qintong Li, Zhiyong Wu, Lingpeng Kong, and Wei Bi, Explanation Regeneration via Information Bottleneck, In Findings of the Annual Meeting of the Association for Computational Linguistics, Toronto, Canada, July 2023. **ACL 2023 Findings**

63. Fei Yuan, Yinquan Lu, Wenhao Zhu, Lingpeng Kong, Lei Li, and Jingjing Xu, Lego-MT: Learning Detachable Models for Massively Multilingual Machine Translation, In Findings of the Annual Meeting of the Association for Computational Linguistics, Toronto, Canada, July 2023. **ACL 2023 Findings**

64. Wenhao Zhu, Jingjing Xu, Shujian Huang, Lingpeng Kong, and Jiajun Chen, INK: Injecting kNN Knowledge in Nearest Neighbor Machine Translation, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Toronto, Canada, July 2023. **ACL 2023**

65. Jiyue Jiang, Sheng Wang, Qintong Li, Lingpeng Kong, and Chuan Wu, A Cognitive Stimulation Therapy Dialogue System with Multi-Source Knowledge Fusion for Elders with Cognitive Impairment, In Proceedings of the Annual Meeting of the Association for Computational Linguistics, Toronto, Canada, July 2023. **ACL 2023**

66. Xueliang Zhao, Tingchen Fu, Lemao Liu, Lingpeng Kong, Shuming Shi, and Rui Yan, SORTIE: Dependency-Aware Symbolic Reasoning for Logical Data-to-text Generation, In Findings of the Annual Meeting of the Association for Computational Linguistics, Toronto, Canada, July 2023. **ACL 2023 Findings**

67. Jiacheng Ye, Zhiyong Wu, Jiangtao Feng, Tao Yu, and Lingpeng Kong, Compositional Exemplars for In-context Learning, In Proceedings of the International Conference on Machine Learning, Honolulu, Hawaii, July 2023. [GitHub] **ICML 2023**

68. Jun Zhang*, Shuyang Jiang*, Jiangtao Feng, Lin Zheng, and Lingpeng Kong, CAB: Comprehensive Attention Benchmarking on Long Sequence Modeling, In Proceedings of the International Conference on Machine Learning, Honolulu, Hawaii, July 2023. **ICML 2023**

69. Xuyang Shen, Dong Li, Jinxing Zhou, Zhen Qin, Bowen He, Xiaodong Han, Aixuan Li, Yuchao Dai, Lingpeng Kong, Meng Wang, and Yiran Zhong, Fine-grained Audible Video Description, In Proceedings of the Conference on Computer Vision and Pattern Recognition, Vancouver, Canada, June 2023. **CVPR 2023**

70. Lin Zheng, Jianbo Yuan, Chong Wang, and Lingpeng Kong, Efficient Attention via Control Variates, In International Conference on Learning Representations, Kigali, Rwanda, May 2023. [Oral] **ICLR 2023**

71. Jiahui Gao, Renjie Pi, Lin Yong, Hang Xu, Jiacheng Ye, Zhiyong Wu, Weizhong Zhang, Xiaodan Liang, Zhenguo Li, and Lingpeng Kong, Self-Guided Noise-Free Data Generation for Efficient Zero-Shot Learning, In International Conference on Learning Representations, Kigali, Rwanda, May 2023. [Spotlight] **ICLR 2023**

72. Zhen Qin, Xiaodong Han, Weixuan Sun, Bowen He, Dong Li, Dongxu Li, Yuchao Dai, Lingpeng Kong, and Yiran Zhong, Toeplitz Neural Network for Sequence Modeling, In International Conference on Learning Representations, Kigali, Rwanda, May 2023. [Spotlight] **ICLR 2023**

73. Shansan Gong, Mukai Li, Jiangtao Feng, Zhiyong Wu, and Lingpeng Kong, DiffuSeq: Sequence to Sequence Text Generation with Diffusion Models, In International Conference on Learning Representations, Kigali, Rwanda, May 2023. **ICLR 2023**

74. Sijie Chen, Zhiyong Wu, Jiangjie Chen, Zhixing Li, Yang Liu, and Lingpeng Kong, Unsupervised Explanation Generation via Correct Instantiations, In Proceedings of AAAI Conference on Artificial Intelligence, Washington, DC, February 2023. **AAAI 2023**

75. Jiacheng Ye, Jiahui Gao, Zhiyong Wu, Jiangtao Feng, Tao Yu, and Lingpeng Kong, ProGen: Progressive Zero-shot Dataset Generation via In-context Feedback, In Findings of the Conference on Empirical Methods in Natural Language Processing, Abu Dhabi, December 2022. **EMNLP 2022 Findings**

76. Jiacheng Ye*, Jiahui Gao*, Qintong Li, Hang Xu, Jiangtao Feng, Zhiyong Wu, Tao Yu, and Lingpeng Kong, ZeroGen: Efficient Zero-shot Learning via Dataset Generation, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Abu Dhabi, December 2022. **EMNLP 2022**

77. Tianbao Xie*, Chen Henry Wu*, Peng Shi, Ruiqi Zhong, Torsten Scholak, Michihiro Yasunaga, Chien-Sheng Wu, Ming Zhong, Pengcheng Yin, Sida Wang, Victor Zhong, Bailin Wang, Chengzu Li, Connor Boyle, Ansong Ni, Ziyu Yao, Dragomir Radev, Caiming Xiong, Lingpeng Kong, Rui Zhang, Noah A. Smith, Luke Zettlemoyer, and Tao Yu, UnifiedSKG: Unifying and Multi-Tasking Structured Knowledge Grounding with Text-to-Text Language Models, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Abu Dhabi, December 2022. **EMNLP 2022**

78. Zhen Qin, Xiaodong Han, Weixuan Sun, Dongxu Li, Lingpeng Kong, Nick Barnes, and Yiran Zhong, The Devil in Linear Transformer, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Abu Dhabi, December 2022. **EMNLP 2022**

79. Changlong Yu, Tianyi Xiao, Lingpeng Kong, Yangqiu Song, and Wilfred Ng, An Empirical Revisiting of Linguistic Knowledge Fusion in Language Understanding Tasks, In Proceedings of the Conference on Empirical Methods in Natural Language Processing, Abu Dhabi, December 2022. **EMNLP 2022**

80. Chenxin An, Jiangtao Feng, Kai Lv, Lingpeng Kong, Xipeng Qiu, and Xuanjing Huang, CoNT: Contrastive Neural Text Generation, In Advances in Neural Information Processing Systems, New Orleans, Louisiana, November 2022. [Spotlight] **NeurIPS 2022**

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101. 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**

102. 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**

103. 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**

104. Lingpeng Kong, Nathan Schneider, Swabha Swayamdipta, Archna 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**

105. William Yang Wang, Lingpeng Kong, Kathryn Mazaitis, and 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**

106. 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**

107. Likun Qiu, Lei Wu, Changjian Hu, Kai Zhao, and 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

108. Lingpeng Kong, Neural Representation Learning in Linguistic Structured Prediction, CMU-LTI-17-008, Carnegie Mellon University, Pittsburgh, PA, October 2017.

Peer-refereed workshop publications

109. 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.

110. 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]

Invited Talks

2025 Colloquium, University of Cambridge.
Keynote, MBZUAI Workshop.
Keynote, AI, Science, and Society @ AI Action Summit, École polytechnique.
2023 Invited Talk, Asian Engineering Deans' Summit.
Invited Talk, Tencent.
2022 Invited Talk, Tam Wing Fan Innovation Wing.
Westlake Engineering Lecture Series, Westlake University.
Colloquium, Nanjing University.
2021 Invited Talk, Tencent AI Lab.
Invited Talk, ByteDance.
Colloquium, Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences.
Invited Talk, Zoom.
Invited Talk, HKU-TCL Joint Research Centre for Artificial Intelligence.
Keynote, Genetic and Evolutionary Computation Conference (GECCO-2021).
2020 Colloquium, University of Cambridge.
2019 Colloquium, Peking University.
Invited Talk, Fudan University.
Colloquium, University of Cambridge.
2017 Colloquium, National Taiwan University.
2016 Colloquium, Academia Sinica.