# ZHOUHAN LIN

## CONTACT INFORMATION

| | |
|---|---|
| **Email** | lin.zhouhan@gmail.com |
| **Address** | Rm. 437, Dianyuan Building 1, |
| | School of Eletronic Information and Electrical Engineering, |
| | Shanghai Jiao Tong University |
| | 800 Dongchuan Rd, Minhang District, Shanghai, China. 201100. |
| **Homepage** | `https://hantek.github.io` |
| **Google Scholar Page** | `https://scholar.google.com/citations?user=LNZ4efwAAAAJ` |
| **Personal GitHub** | `https://github.com/hantek` |
| **Lab GitHub** | `https://github.com/LUMIA-Group` |

## RESEARCH INTERESTS

**Research Areas:** Machine Learning, Representation Learning, Natural Language Processing, Speech Recognition

My core research interest is **to explore and develop machine intelligence capable of acquiring, synthesizing, reasoning, and interacting with abstract concepts** from large amounts of data. Almost all of my research efforts are centered around this goal, touching a diverse range of topics such as attention mechanisms, language modeling, conversational systems, automated summarization, grammatical inference, graph neural networks, and code generation, etc.

## EDUCATION

**Mila, University of Montreal**                                           *Sep. 2014 - Oct. 2019*
Department of Computer Science and Operational Research
Ph.D., Supervisor: Yoshua Bengio

**Harbin Institute of Technology**                                         *Aug. 2012 - Jul. 2014*
Department of Electronics and Information Engineering
M.Sc., Supervisor: Yushi Chen
    Honored Masters' Graduate of HIT (2/36)
    Excellent Masters' Thesis (2/36)

**Harbin Institute of Technology**                                         *Aug. 2008 - Jul. 2012*
Department of Electronics and Information Engineering
B.Sc., GPA: 85.6/100
    Honored Graduate of HIT (top 10%)
    Excellent Graduation Thesis (top 5%)

## WORK EXPERIENCE

**Shanghai Jiao Tong University, Shanghai**                                 Since Nov. 2020
*Assistant Professor;*
    *National Excellent Young Scientist;*
    *Shanghai Pujiang Scholar;*

**Facebook Inc., Menlo Park**                                              Jan. 2020 - Oct. 2020
*Visiting Scientist at Facebook AI Research*

## INTERNSHIP EXPERIENCE

**Google Inc., Montreal**                                                  Oct. 2018 - Dec. 2018
*Student Researcher at Google Research*

**Google Inc., New York**                                    Jun. 2018 - Sep. 2018
*Summer Intern at Google Research*

**Microsoft Corporation, Montreal**                          Sep. 2017 - May. 2018
*Student Researcher at Microsoft Research*

**IBM Corporation, Yorktown Heights**                        Jun. 2016 - Oct. 2016
*Summer Intern at IBM Watson*

## HONORS AND AWARDS

- Baidu AI Chinese Youth Scholars List, 2022

- National Excellence Fund for Young Scientists Program, 2021

- Shanghai Pujiang Scholar, 2021

- Highest Impact Paper Award, IEEE Geoscience and Remote Sensing Society, 2019

- AdeptMind Scholarship, 2018

- ICLR Travel Award, 2016, 2017, 2018

- 2nd Place in NIPS Demonstration, 2017

- Best Workshop Paper Mention, NIPS 2016

## SELECTED PUBLICATIONS

(*) indicates equal contribution. (#) indicates the corresponding author.
For more papers please refer to my Google Scholar page:
`https://scholar.google.ca/citations?user=LNZ4efwAAAAJ&hl=en`

1. Ziwei He, Meng Yang, Minwei Feng, Jingcheng Yin, Xinbing Wang, Jingwen Leng, **Zhouhan Lin**#, Fourier Transformer: Fast Long Range Modeling by Removing Sequence Redundancy with FFT Operator, Findings of the Association for Computational Linguistics, ACL, 2023.

2. Jiexing Qi, Shuhao Li, Zhixin Guo, Yusheng Huang, Chenghu Zhou, Weinan Zhang, Xinbing Wang, **Zhouhan Lin**#, Text Classification In The Wild: A Large-Scale Long-Tailed Name Normalization Dataset, 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023.

3. Yusheng Huang, Jiexing Qi, Xinbing Wang, and **Zhouhan Lin**#, Asymmetric Polynomial Loss for Multi-Label Classification, 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023.

4. Cheng Deng, Tianhang Zhang, Zhongmou He, Qiyuan Chen, Yuanyuan Shi, Le Zhou, Luoyi Fu, Weinan Zhang, Xinbing Wang, Chenghu Zhou, **Zhouhan Lin**#, Junxian He#, Learning A Foundation Language Model for Geoscience Knowledge Understanding and Utilization, arXiv preprint arXiv:2306.05064, 2023.

5. Yunchong Song, Chenghu Zhou, Xinbing Wang, **Zhouhan Lin**#, Ordered GNN: Ordering Message Passing to Deal with Heterophily and Over-smoothing, The Eleventh International Conference on Learning Representations (ICLR), 2022.

6. Jiexing Qi, Jingyao Tang, Ziwei He, Xiangpeng Wan, Chenghu Zhou, Xinbing Wang, Quanshi Zhang, **Zhouhan Lin**#, RASAT: Integrating relational structures into pretrained seq2seq model for text-to-SQL, Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP), 2022.

7. Pan, Xichen, Peiyu Chen, Yichen Gong, Helong Zhou, Xinbing Wang, and **Zhouhan Lin**#. Leveraging Uni-Modal Self-Supervised Learning for Multimodal Audio-Visual Speech Recognition, Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL), 2022.

8. Guan, Yue, Zhengyi Li, Jingwen Leng#, **Zhouhan Lin**#, Minyi Guo, and Yuhao Zhu. Block-Skim: Efficient Question Answering for Transformer, Proceedings of the AAAI Conference on Artificial Intelligence. Vol. 36. No. 10, 2022.

9. Shengyuan Hou*, Jushi Kai*, Haotian Xue, Bingyu Zhu, Bo Yuan, Longtao Huang, Xinbing Wang, **Zhouhan Lin**#, Syntax-guided Localized Self-attention by Constituency Syntactic Distance, Findings of the Association for Computational Linguistics: EMNLP, 2022.

10. Ning Shi, Bin Tang, Bo Yuan, Longtao Huang, Yewen Pu, Jie Fu, **Zhouhan Lin**#, Text editing as imitation game, Findings of the Association for Computational Linguistics: EMNLP, 2022.

11. Yue Guan, Zhengyi Li, Jingwen Leng#, **Zhouhan Lin**, Minyi Guo#, Transkimmer: Transformer Learns to Layer-wise Skim, Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL), 2022.

12. Shi, Ning, Wei Wang, Boxin Wang, Jinfeng Li, Xiangyu Liu, and **Zhouhan Lin**#. Incorporating External POS Tagger for Punctuation Restoration, Proc. Interspeech, pp. 1987-1991, 2021.

13. Wenyu Du*, **Zhouhan Lin***, Yikang Shen, Timothy J. ODonnell, Yoshua Bengio, Yue Zhang. Exploiting Syntactic Structure for Better Language Modeling: A Syntactic Distance Approach, Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL), 2020.

14. Yikang Shen*, **Zhouhan Lin***, Athul Paul Jacob, Alessandro Sordoni, Aaron Courville, Yoshua Bengio. Straight to the Tree: Constituency Parsing with Neural Syntactic Distance, Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL), 2018.

15. **Zhouhan Lin**, Minwei Feng, Cicero Nogueira dos Santos, Mo Yu, Bing Xiang, Bowen Zhou and Yoshua Bengio. A Structured Self-attentive Sentence Embedding, The Sixth International Conference on Learning Representations (ICLR), 2017.

16. **Zhouhan Lin**, Matthieu Courbariaux, Roland Memisevic, and Yoshua Bengio. Neural networks with few multiplications, The Fifth International Conference on Learning Representations (ICLR), 2016.

17. Yikang Shen, **Zhouhan Lin**, Chin-Wei Huang, Aaron Courville. Neural Language Modeling by Jointly Learning Syntax and Lexicon, The Seventh International Conference on Learning Representations (ICLR), 2018.

18. Yushi Chen, **Zhouhan Lin**, Xing Zhao, Gang Wang, and Yanfeng Gu. Deep learning-based classification of hyperspectral data, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing 7, no. 6 (2014): 2094-2107.

19. **Zhouhan Lin**, Yushi Chen, Xing Zhao, and Gang Wang. Spectral-spatial classification of hyperspectral image using autoencoders. 9th IEEE International Conference on Information, Communications and Signal Processing (ICICS), pp. 1-5, 2013.

## PROFESSIONAL SERVICES

| | |
|---|---|
| **Program Committee (Area Chair)** | EMNLP 2022, AAAI 2022, AACL 2022 |
| **Program Committee (Reviewer)** | Having been a reviewer for most of the top-tier conferences for multiple years. Some of them include: NeurIPS, ICLR, ICML, AAAI, IJCAI, AISTATS, ACL, NAACL, EMNLP |
| **Journal Reviewer** | Journal of Machine Learning Research (JMLR) IEEE Trans. on Neural Nets. and Learning Sys. (TNNLS) IEEE Trans. on Multi Media (TMM) IEEE Trans. on Geoscience and Remote Sensing (TGARS) IEEE Trans. on Computers (TOC) IEEE Geoscience and Remote Sensing Magazine (GRSM) |

## MEDIA COVERAGE

- Large AI Models: How to Overcome Data Bottlenecks, Yicai Channel, `https://m.yicai.com/news/101791285.html`

- ChatGPT: Past and Present, China Society of Image and Graphics, `https://mp.weixin.qq.com/s/awXA4yVUn20MnyCl3EuOLw`

- IBM Making Plans to Commercialize Its Brain-Inspired Chip, MIT Tech Review, `https://www.technologyreview.com/s/542366/ibm-making-plans-to-commercialize-its-brain-inspired-chip/`

- What is self-attention?, Synced, `https://www.jiqizhixin.com/articles/100902`