

Xiaohan Chen

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GitHub: <https://github.com/xhchrm>

Education Background

University of Texas at Austin

Ph.D. (4th year) in Electrical and Computer Engineering

Visual Informatics Group

Supervisor: Prof. Zhangyang (Atlas) Wang

Austin, TX, U.S.

Aug, 2020 — Present

Texas A&M University

Ph.D. in Computer Science

Supervisor: Prof. Zhangyang (Atlas) Wang

College Station, TX, U.S.

Aug, 2017 — Aug, 2020

University of Science and Technology of China

B.S. in Mathematics and Applied Mathematics

B.E. in Computer Science (Double Degree)

Hefei, Anhui, China

Sep, 2013 — Jun, 2017

Professional Experience

Research Intern

Microsoft Cloud & AI, Bellevue, WA, U.S.

Supervisor: [Dr. Yu Cheng](#) and [Dr. Zhe Gan](#)

May, 2021 — Aug, 2021

Oct, 2020 — Dec, 2020

Jun, 2020 — Aug, 2020

Research Intern

Max Planck Institute for Intelligent Systems, Tübingen, Germany

Supervisor: [Dr. Krikamol Muandet](#) and [Dr. Siyu Tang](#)

Jun, 2019 — Nov, 2019

Research Interests

- *Sparse Optimization and Inverse Problems*
- *Learning to Optimize, and Meta Learning*
- *Efficient Deep Learning, and Sparse Neural Networks (Lottery Ticket Hypothesis)*

Conference and Journal Publications

* The authors equally contributed to the paper.

1. T. Meng*, **X. Chen***, Y. Jiang, Z. Wang, “A Design Space Study for LISTA and Beyond”, *International Conference on Learning Representations (ICLR)*, 2021.
2. J. Shen*, **X. Chen***, H. Heaton*, T. Chen, J. Liu, W. Yin, Z. Wang, “Learning A Minimax Optimizer: A Pilot Study”, *International Conference on Learning Representations (ICLR)*, 2021.
3. **X. Chen**, Z. Wang, S. Tang, K. Muandet, “MATE: Plugging in Model Awareness to Task Embedding for Meta Learning”, *In Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2020.
4. H. You, **X. Chen**, Y. Zhang, C. Li, S. Li, Z. Liu, Z. Wang, Y. Lin, “ShiftAddNet: A Hardware-Inspired Deep Network”, *In Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2020.

5. H. Heaton, **X. Chen**, Z. Wang, W. Yin, “Safeguarded Learned Convex Optimization”, under review in *Journal of Machine Learning Research (JMLR)*.
6. Z. Huo, A. Pakbin, **X. Chen**, N. Hurley, Y. Yuan, X. Qian, Z. Wang, S. Huang, B. Mortazavi, “Uncertainty Quantification for Deep Context-Aware Mobile Activity Recognition and Unknown Context Discovery”, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2020.
7. **X. Chen***, Y. Zhao*, Y. Wang, C. Li, Y. Xie, Z. Wang, Y. Lin, “SmartExchange: Trading Higher-cost Memory Storage/Access for Lower-cost Computation”, *IEEE/ACM International Symposium on Computer Architecture (ISCA)*, 2020.
8. H. You, C. Li, P. Xu, Y. Fu, **X. Chen**, Y. Lin, Z. Wang, R. Baraniuk, “Drawing Early-Bird Tickets: Toward More Efficient Training of Deep Networks”, *International Conference on Learning Representations (ICLR)*, 2020.
9. **X. Chen***, Z. Jiang*, Y. Wang*, P. Xu, Y. Zhao, Y. Lin, Z. Wang, “E2-Train: Energy-Efficient Deep Network Training with Data-, Model-, and Algorithm-Level Saving”, *In Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2019.
10. E. Ryu, J. Liu, S. Wang, **X. Chen**, Z. Wang, W. Yin, “Plug-and-Play Methods Provably Converge with Properly Trained Denoisers”, *International Conference on Machine Learning (ICML)*, 2019.
11. **X. Chen***, J. Liu*, Z. Wang, W. Yin, “ALISTA: Analytic Weights Are As Good As Learned Weights in LISTA”, *International Conference on Learning Representations (ICLR)*, 2019.
12. **X. Chen***, J. Liu*, Z. Wang, W. Yin, “Theoretical Linear Convergence of Unfolded ISTA and Its Practical Weights and Thresholds”, *In Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2018.
13. N. Bansal, **X. Chen**, Z. Wang, “Can We Gain More from Orthogonality Regularizations in Training Deep Networks?”, *In Proceedings of Advances in Neural Information Processing Systems (NeurIPS)*, 2018.

Pre-prints and Non-archival Venues

* The authors equally contributed to the paper.

1. **X. Chen**, Y. Cheng, S. Wang, Z. Gan, Z. Wang, J. Liu, “EarlyBERT: Efficient BERT Training via Early-bird Lottery Tickets”, *arXiv pre-print*.
2. **X. Chen***, Y. Zhao*, Y. Wang, P. Xu, H. You, C. Li, Y. Fu, Y. Lin, Z. Wang “SmartDeal: Re-Modeling Deep Network Weights for Efficient Inference and Training”, *arXiv pre-print*.

Honors and Awards

Scholarships

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|---|-----------|
| – Qualcomm Innovation Fellowship 2021 Selected Abstract | Dec, 2020 |
| – ICLR Travel Award | Mar, 2019 |
| – NeurIPS Travel Award | Oct, 2018 |
| – AAAI Student Scholarship | Dec, 2017 |
| – Outstanding New Student Award, Top Class Award | Sep, 2013 |

Others

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| – COMAP’s Mathematical Contest in Modeling (MCM), Honorable Mention | Apr, 2016 |
| – RoboGame of USTC, the 2nd place | Nov, 2015 |
| – Outstanding Young Volunteer, USTC | Jul, 2014 |

Service and Teaching

- *Reviewer*: NeurIPS (2019/2020), ICML (2020, 2021), ICLR (2020), CVPR (2020, 2021), ECCV (2020), ICCV (2019), AAAI (2020,2021), ACCV (2020), WACV (2019/2020/2021)
- *Teaching Assistant*: CSCE 633, Machine Learning, Texas A&M University (2018/2019)
- *Student Volunteer*: AAAI 2018

Technical Skills

Deep Learning Frameworks	PyTorch, TensorFlow, MXNet
Computer Languages	C, C++, Python, MATLAB
Tools	Git, Vim, Visual Studio, Mathematica
L^AT_EX	