Xiaohan Chen

Contact

E-mail: xiaohan.chen@utexas.edu
Homepage: xiaohanchen.com

Education Background

University of Texas at Austin — **Austin, TX, U.S.**
Ph.D. in Electrical and Computer Engineering — Aug, 2020 — Present
Supervisor: Prof. Zhangyang (Atlas) Wang

Texas A&M University — **College Station, TX, U.S.**
Ph.D. in Computer Science — Aug, 2017 — Aug, 2020
Supervisor: Prof. Zhangyang (Atlas) Wang

University of Science and Technology of China — **Hefei, Anhui, China**
B.S. in Mathematics and Applied Mathematics — Sep, 2013 — Jun, 2017
B.E. in Computer Science (Minor Degree)

Professional Experience

Research Intern — Jun, 2020 — Aug, 2020
Microsoft AI & Cloud, Bellevue, WA, U.S.
Supervisor: Dr. Yu Cheng and Dr. Zhe Gan

Research Assistant — Jan, 2020 — May, 2020
The Department of Computer Science and Engineering
Texas A&M University, College Station, TX, U.S.
Supervisor: Prof. Zhangyang (Atlas) Wang

Research Intern — Jun, 2019 — Nov, 2019
Max Planck Institute for Intelligent Systems, Tübingen, Germany
Supervisor: Dr. Krikamol Muandet and Dr. Siyu Tang

Teaching Assistant — Aug 2018 — May, 2019
The Department of Computer Science and Engineering
Texas A&M University, College Station, TX, U.S.
Courses: CSCE 633 - Machine Learning, Fall 2018 and Spring 2019
Instructors: Prof. Bobak J. Mortazavi and Prof. Zhangyang (Atlas) Wang

Research Assistant — Aug, 2017 — Aug, 2018
The Department of Computer Science and Engineering
Texas A&M University, College Station, TX, U.S.
Supervisor: Prof. Zhangyang (Atlas) Wang

Research Interests

- *Machine Learning*
  - *Sparse and low-rank models*: solving inverse problems via learning-based approaches with guarantees; sparse learning for energy-effcient models.
- *Lottery Ticket Hypothesis*

- *Network Analysis in Deep Learning*
- *Deep Learning Theories*
- *Computer Vision*
- *Meta Learning*
- *Optimization*
  - *Sparse optimization*: iterative algorithms in sparse coding and compressive sensing.

Conference Publications

* The authors equally contributed to the paper.

1. Several new submissions to NeurIPS 2020.
2. One submission to JMLR.
3. 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.
4. Y. Zhao, **X. Chen**, 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.
5. 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.
6. **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.
7. 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.
8. **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.
9. **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.
10. 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.

Honors and Awards

Scholarships

- 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

- Future Net, HUAWEI CodeCraft Coding Contest, **Top 8 in East China** — May, 2016
- COMAP's Mathematical Contest in Modeling (MCM), **Honorable Mention** — Apr, 2016
- RoboGame of USTC, **the 2^{nd} place** — Nov, 2015

– Outstanding Young Volunteer, USTC Jul, 2014

Services

– *Reviewer*, AAAI 2020
– *Reviewer*, ACCV 2020
– *Reviewer*, CVPR 2020, 2021
– *Reviewer*, ECCV 2020
– *Reviewer*, ICCV 2019
– *Reviewer*, ICLR 2020
– *Reviewer*, IEEE Signal Processing Letters
– *Reviewer*, NeurIPS 2019, 2020
– *Reviewer*, WACV 2019, 2020, 2021
– *Student Volunteer*, AAAI 2018

Technical Skills

Computer Languages	C, C++, Python, Matlab
Protocols & APIs	XML, JSON
Databases	PostgreSQL
Tools	Git, Vim, Visual Studio, Mathematica
LaTeX	