Buyun Liang

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EDUCATION

University of Pennsylvania — **Philadelphia, PA, USA**
Ph.D. in Computer and Information Science | Advisor: Prof. René Vidal — *Starting from Sep 2023*

University of Minnesota, Twin Cities — **Minneapolis, MN, USA**
M.Sc in Computer Science | Advisor: Prof. Ju Sun — *Sep 2020 - May 2023 (expected)*
- GPA: 4.0/4.0

University of Minnesota, Twin Cities — **Minneapolis, MN, USA**
M.Sc in Materials Science (Ph.D. Track) | Advisor: Prof. Ilja Siepmann — *Sep 2018 - Aug 2020*
- GPA: 3.66/4.0 | GPA of AI-related courses: 4.0/4.0

Nanjing University — **Nanjing, Jiangsu, China**
B.Sc in Physics (Elite Program) — *Sep 2014 - Jun 2018*
- GPA: 89.6/100

RESEARCH INTERESTS

Optimization for AI, Trustworthy AI, AI for Science

SELECTED PUBLICATIONS

[1] **Buyun Liang**, Wenjie Zhang, Hengyue Liang, Tim Mitchell, Ying Cui, Ju Sun. *NCVX: A General-Purpose Optimization Solver for Machine Learning, and Practical Techniques.* In preparation for IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI).[**website**]

[2] **Buyun Liang**, Tim Mitchell, Ju Sun. *NCVX: A General-Purpose Optimization Solver for Constrained Machine and Deep Learning.* In Neural Information Processing Systems (NeurIPS) Workshop on Optimization for Machine Learning (OPT 2022). [**paper**][**poster**]

[4] Hengyue Liang, **Buyun Liang**, Le Peng, Ying Cui, Tim Mitchell, Ju Sun. *Optimization and Optimizers for Adversarial Robustness.* Under review at International Journal of Computer Vision (IJCV). [**paper**]

[5] Hengyue Liang, **Buyun Liang**, Le Peng, Ying Cui, Tim Mitchell, Ju Sun. *Implications of Solution Patterns on Adversarial Robustness.* In Computer Vision and Pattern Recognition (CVPR) Workshop of Adversarial Machine Learning on Computer Vision (Art of Robustness). [**paper**]

[6] Hengyue Liang, **Buyun Liang**, Ying Cui, Tim Mitchell, Ju Sun. *Optimization for Robustness Evaluation beyond ℓ_p Metrics.* In IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2023) & Neural Information Processing Systems (NeurIPS) Workshop on Optimization for Machine Learning (OPT 2022). [**paper**][**poster**]

TUTORIALS

Deep Learning with Nontrivial Constraints, *in SDM23* [**website**]

PROFESSIONAL SERVICE

Reviewer: Artificial Intelligence and Statistics (AISTATS), Uncertainty in Artificial Intelligence (UAI).

EMPLOYMENT HISTORY

University of Minnesota, Twin Cities — **Minneapolis, MN, USA**
Graduate Research Assistantship from CS&E — *Jun 2021 - Jan 2022 & May 2022 - Present*
Graduate Teaching Assistantship from CS&E — *Jan 2022 - May 2022*
Graduate Research Assistantship from CEMS — *Sep 2018 - Aug 2020*
Graduate Teaching Assistantship from CEMS — *Jan 2019 - May 2019*