XINYU LIU

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EDUCATION

Purdue University   *Aug 2016 - Aug 2024*
Ph.D. in Mathematics
Advisor: Dr. Jie Shen

Xiamen University   *Sep 2012 - Jun 2016*
B.S. in Mathematics

EMPLOYMENT

Visiting Assistant Professor   *Aug 2024 - Present*
Department of Mathematics, The Ohio State University
Mentor: Dr. Dongbin Xiu

PUBLICATIONS

Zhiqiang Cai, Tong Ding, Min Liu, **Xinyu Liu**, and Jianlin Xia. A structure-guided Gauss–Newton method for shallow ReLU neural network, arXiv:2404.05064, 2024.

Xinyu Liu, Jie Shen, and Xiangxiong Zhang. A simple GPU implementation of spectral-element methods for solving 3D Poisson type equations on rectangular domains and its applications, to appear in Communications in Computational Physics, 2024.

Xinyu Liu, Jie Shen, and Nan Zheng. Efficient energy stable numerical schemes for Cahn–Hilliard equations with dynamical boundary conditions, Journal of Computational Physics 509:113037, 2024.

Xinyu Liu, Jie Shen, and Xiangxiong Zhang. An efficient and robust scalar auxialiary variable based algorithm for discrete gradient systems arising from optimizations, SIAM Journal on Scientific Computing 45(5):A2304–A2324, 2023.

Zhiqiang Cai, Jingshuang Chen, Min Liu, and **Xinyu Liu**. Deep least-squares methods: An unsupervised learning-based numerical method for solving elliptic PDEs, Journal of Computational Physics 420:109707, 2020.

Jiahui Han, Shengtan Wu, and **Xinyu Liu**, jhan014 at SemEval-2019 Task 6: Identifying and Categorizing Offensive Language in Social Media, Proceedings of the 13th International Workshop on Semantic Evaluation, 2019.

HONORS & SCHOLARSHIPS

Bilsland Dissertation Fellowship, Purdue University   *2019 - 2020*

T.T.Moh Scholarship, Purdue University   *2016 - 2017*

National Scholarship, Ministry of Education of China   *2015 - 2016*

CONFERENCES & SEMINAR TALKS

Mini-symposium talk: The 9th Annual Meeting of SIAM Central States Section, University of Missouri-Kansas City, Kansas City, MO, Oct 05-07, 2024.

CCAM: Conference on Fast Direct Solvers, Purdue University, West Lafayette, IN, Nov 04-05, 2023.

NSF/CBMS Conference: The Cahn-Hilliard Equation: Recent Advances and Applications, University of Memphis, Burns, TN, May 20-24, 2019.