

SHORT CV OF BIN DONG

- EDUCATION
- Ph.D in Mathematics
University of California, Los Angeles, 2005–2009.
 - M.Sc. in Mathematics
National University of Singapore, 2003–2005.
 - B.S. in Mathematics
Peking University, 1999–2003.
- POSITIONS
- Executive Vice President, Zhongguancun Academy, Beijing, China. 2024 - present.
 - Boya Distinguished Professor, Beijing International Center for Mathematical Research, Peking University, 2024 - present.
 - Professor, Beijing International Center for Mathematical Research, Peking University, 2023 - present.
 - Deputy Director, Center for Machine Learning Research, Peking University, 2022 - present.
 - Associate Professor (Tenured), Beijing International Center for Mathematical Research, Peking University, 2018 - 2022.
 - Associate Professor (w/o Tenure), Beijing International Center for Mathematical Research, Peking University, 2014 - 2018.
 - Assistant Professor, Department of Mathematics, The University of Arizona, 2011 - 2014.
 - SEW Assistant Professor, Department of Mathematics, UCSD
2009 - 2011.
- RESEARCH INTERESTS
- Computational imaging
 - Scientific computing
 - Machine learning
- HONORS AND AWARDS
- Invited lecture, the International Congress on Industrial and Applied Mathematics (ICIAM), 2027.
 - Wang Xuan Outstanding Young Scholar Award, 2023.
 - New Cornerstone Investigator, The New Cornerstone Investigator Program, 2023.
 - Invited Sectional Lecture, The International Congress of Mathematicians (ICM), 2022.
 - Qiu Shi Outstanding Young Scholar Award, Qiu Shi Foundation, Hongkong, China, 2014.
- JOURNAL EDITORIAL SERVICE
- Editorial board, Communications in Mathematical Sciences, 2025–
 - Editorial board, SIAM Journal on Scientific Computing, 2025–
 - Editorial board, SIAM Journal on Imaging Science, 2025–
 - Associate editor, Journal of Machine Learning, 2022–
 - Associate editor, Journal of Computational Mathematics, 2021–
 - Associate editor, CSIAM Transactions on Applied Mathematics, 2019–
 - Editorial board, Inverse Problems and Imaging, AIMS, 2018–
 - Guest editor, Applied and Computational Harmonic Analysis, Elsevier, 2015–2016
- SELECTED TALKS
- Invited lecture. the 11th International Congress on Industrial and Applied Mathematics (ICIAM 2027), The Hague, The Netherlands, July 12–17, 2027.
 - Plenary talk. Joint SIAM Conference on Imaging Science 2026 (IS26) and Mathematics of Data Science (DMS), Salt Lake City, Utah, November 16–19, 2026.
 - Plenary talk. 1st Italy-China Mathematical Meeting, ICTP, Trieste, Italy, September 7–9, 2026.
 - Plenary talk. The Sixth National Conference on Big Data and Artificial Intelligence, CSIAM, Guilin, Guangxi, July 18-20, 2025.

- Plenary talk. The 21st Annual Meeting of the China Society for Industrial and Applied Mathematics (CSIAM), Kunming, China, Oct. 12-15, 2023.
- Plenary talk. The 13th Annual Meeting of the China Society for Computational Mathematics (CSCM), Nanking, China, July 15-19, 2023.
- 45-minutes invited lecture, International Congress of Mathematicians (ICM), July 6–14, 2022.
- Plenary talk. 3rd Annual “Deep Recon Workshop”, Massachusetts General Hospital and CAM-CA, Harvard University, November 14-15, 2021.
- Plenary talk. The Second National Conference on Big Data and Artificial Intelligence, CSIAM, Kunming, China, July 5-7, 2019.
- Plenary talk. The 11th National Conference on Inverse Problems, Imaging and Applications, Lanzhou, China, June 22-24, 2019.

SELECTED
PUBLICATIONS

1. Jiedong Jiang, Wanyi He, Yuefeng Wang, Guoxiong Gao, Yongle Hu, Jingting Wang, Nailong Guan, Peihao Wu, Chunbo Dai, Liang Xiao, Bin Dong, *FATE: A Formal Benchmark Series for Frontier Algebra of Multiple Difficulty Levels*, ICLR 2026 (arXiv:2511.02872).
2. Hanyu Wang, Ruohan Xie, Yutong Wang, Guoxiong Gao, Xintao Yu, Bin Dong, *Aria: An Agent For Retrieval and Iterative Auto-Formalization via Dependency Graph*, ICLR 2026 (arXiv:2510.04520).
3. Zhanhong Ye, Zining Liu, Bingyang Wu, Hongjie Jiang, Leheng Chen, Minyan Zhang, Xiang Huang, Qinghe Meng, Jingyuan Zou, Hongsheng Liu, Bin Dong, *PDEformer-2: A Versatile Foundation Model for Two-Dimensional Partial Differential Equations*, arXiv:2507.15409, 2025.
4. Guoxiong Gao, Yutong Wang, Jiedong Jiang, Qi Gao, Zihan Qin, Tianyi Xu, Bin Dong, Herald: A Natural Language Annotated Lean 4 Dataset, The Thirteenth International Conference on Learning Representations (ICLR 2025) (arXiv:2410.10878).
5. Guoxiong Gao, Haocheng Ju, Jiedong Jiang, Zihan Qin, Bin Dong, *A Semantic Search Engine for Mathlib4*, The 2024 Conference on Empirical Methods for Natural Language Processing (EMNLP 2024) (arXiv:2403.13310).
6. Zifan Chen, Yang Chen, Yu Sun, Lei Tang, Li Zhang, Yajie Hu, Meng He, Zhiwei Li, Siyuan Cheng, Jiajia Yuan, Zhenghang Wang, Yakun Wang, Jie Zhao, Jifang Gong, Liying Zhao, Baoshan Cao, Guoxin Li, Xiaotian Zhang, Bin Dong, and Lin Shen, Predicting gastric cancer response to anti-HER2 therapy or anti-HER2 combined immunotherapy based on multi-modal data, *Signal Transduction and Targeted Therapy*, **9**:222, 2024.
7. Zhanhong Ye, Xiang Huang, Leheng Chen, Hongsheng Liu, Zidong Wang, Bin Dong, *PDEformer: Towards a Foundation Model for One-Dimensional Partial Differential Equations*, ICLR 2024 Workshop on AI4DifferentialEquations In Science (arXiv:2402.12652).
 - Long version: Zhanhong Ye, Xiang Huang, Leheng Chen, Zining Liu, Bingyang Wu, Hongsheng Liu, Zidong Wang, Bin Dong, *PDEformer-1: A Foundation Model for One-Dimensional Partial Differential Equations*, arXiv:2407.06664.
8. Bin Dong, Xuhua He, Pengfei Jin, Felix Schremmer, Qingchao Yu, *Machine learning assisted exploration for affine Deligne-Lusztig varieties*, *Peking Mathematical Journal*, pp. 1–50, 2024 (arXiv:2308.11355).
9. Jiajia Yuan, Peng Bao, Zifan Chen, Mingze Yuan, Jie Zhao, Jiahua Pan, Yi Xie, Yanshuo Cao, Yakun Wang, Zhenghang Wang, Zhihao Lu, Xiaotian Zhang, Jian Li, Lei Ma, Yang Chen, Li Zhang, Lin Shen and Bin Dong, *Advanced Prompting as a Catalyst: Empowering Large Language Models in the Management of Gastrointestinal Cancers*, *The Innovation Medicine*, **1**(2), 100019, 2023.
10. Xiang Huang, Zhanhong Ye, Hongsheng Liu, Bei Shi, Zidong Wang, Kang Yang, Yang Li, Bingya Weng, Min Wang, Haotian Chu, Jing Zhou, Fan Yu, Bei Hua, Lei Chen, Bin Dong,

Meta-Auto-Decoder for Solving Parametric Partial Differential Equations, NeurIPS 2022, spotlight (arXiv:2111.08823).

11. Zichao Long, Yiping Lu and Bin Dong, *PDE-Net 2.0: Learning PDEs from Data with A Numeric-Symbolic Hybrid Deep Network*, Journal of Computational Physics, 399, 108925, 2019.
12. Dinghuai Zhang, Tianyuan Zhang, Yiping Lu, Zhanxing Zhu, Bin Dong, *You Only Propagate Once: Accelerating Adversarial Training Using Maximal Principle*, NeurIPS 2019
13. Yiping Lu, Aoxiao Zhong, Quanzheng Li and Bin Dong, *Beyond Finite Layer Neural Networks: Bridging Deep Architectures and Numerical Differential Equations*, Thirty-fifth International Conference on Machine Learning (ICML), 2018.
14. Zichao Long, Yiping Lu, Xianzhong Ma and Bin Dong, *PDE-Net: Learning PDEs from Data*, Thirty-fifth International Conference on Machine Learning (ICML), 2018.
15. Bin Dong, Qingtang Jiang and Zuowei Shen, *Image restoration: wavelet frame shrinkage, nonlinear evolution PDEs, and beyond*, Multiscale Modeling and Simulation: A SIAM Interdisciplinary Journal, 15(1), 606–660, 2017.
16. Jian-Feng Cai, Bin Dong and Zuowei Shen, *Image restoration: A wavelet frame based model for piecewise smooth functions and beyond*, Applied and Computational Harmonic Analysis, 41(1), 94–138, 2016.
17. Jian-Feng Cai, Bin Dong, Stanley Osher and Zuowei Shen, *Image restoration: total variation; wavelet frames; and beyond*, Journal of the American Mathematical Society, **25(4)**, 1033–1089, 2012.