TIANYU DING

Principal Research Manager · Microsoft

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CONTACT

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EDUCATION

Johns Hopkins University — *Baltimore, Maryland, USA*
Ph.D. in Applied Mathematics and Statistics — 2016 – 2021
Advisor: Dr. Daniel P. Robinson and Dr. René Vidal
Master of Science in Engineering in Computer Science — 2017 – 2020
Master of Science in Engineering in Financial Mathematics — 2014 – 2016

Sun Yat-sen University — *Guangzhou, Guangdong, China*
Bachelor of Science in Mathematics — 2010 – 2014

WORK EXPERIENCE

Microsoft — *Redmond, Washington, USA*
Principal Research Manager — Sep. 2024 – Present
Senior Researcher — Nov. 2021 – Aug. 2024
Research Intern — Jun. 2021 – Oct. 2021
Research Intern — May. 2020 – Aug. 2020

MathWorks — *Natick, Massachusetts, USA*
C/C++ Software Engineer in Test Intern — Jan. 2019 – Jul. 2019

Johns Hopkins University — *Baltimore, Maryland, USA*
Research Assistant — Jan. 2018 – Jun. 2021
Teaching Assistant — Aug. 2015 – Dec. 2017

PUBLICATIONS

* *indicates equal contribution,* † *indicates corresponding authorship*

Published

1. Jiachen Jiang*, **Tianyu Ding***†, Ke Zhang, Jinxin Zhou, Tianyi Chen, Ilya Zharkov, Zhihui Zhu, and Luming Liang†, "Learning Where and What to Restore for Composite Image Restoration". *Neural Information Processing Systems (**NeurIPS**),* 2026.
2. Jiachen Jiang, **Tianyu Ding**, and Zhihui Zhu, "DeltaEvolve: Accelerating Scientific Discovery through Momentum-Driven Evolution". *International Conference on Machine Learning (**ICML**),* 2026.
3. Yanqi Bao, **Tianyu Ding**, Jing Huo, Wenbin Li, and Yang Gao, "FISN: Finding Spatial Neighborhoods for Generalizable Novel View Synthesis". *IEEE Transactions on Visualization and Computer Graphics (**TVCG**),* 2026.

4 Linjian Meng, Youzhi Zhang, Shangdong Yang, Wenbin Li, **Tianyu Ding**, and Yang Gao, "A Faster Parameter-Free Regret Matching Algorithms". *International Conference on Learning Representations (**ICLR**),* 2026.

5 Huminhao Zhu, Fangyikang Wang, **Tianyu Ding**, Qing Qu, and Zhihui Zhu, "Analyzing and Mitigating Model Collapse in Reflow Methods". *Conference on Parsimony and Learning (**CPAL**),* 2026.

6 Ke Zhang, **Tianyu Ding**†, Jiachen Jiang, Tianyi Chen, Ilya Zharkov, Vishal M Patel, and Luming Liang†, "ProCrop: Learning Aesthetic Image Cropping from Professional Compositions". *AAAI Conference on Artificial Intelligence (**AAAI**),* 2026.

7 Linjian Meng, Tianpei Yang, Youzhi Zhang, Zhenxing Ge, Shangdong Yang, **Tianyu Ding**, Wenbin Li, Bo An, and Yang Gao, "Efficient Last-Iterate Convergence in Solving Extensive-Form Games". *Neural Information Processing Systems (**NeurIPS**),* 2025.

8 Linjian Meng, Youzhi Zhang, Zhenxing Ge, **Tianyu Ding**, Shangdong Yang, Zheng Xu, Wenbin Li, and Yang Gao, "Last-Iterate Convergence of Smooth Regret Matching+ Variants in Learning Nash Equilibria". *Neural Information Processing Systems (**NeurIPS**),* 2025.

9 Bin Kang, Dong Liang, Junxi Mei, **Tianyu Ding**, and Mingqiang Wei, "Robust Fine-Grained Visual Categorization via Cyclical Attention". *IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**),* 2025.

10 Bin Kang, Zongyu Wang, Dong Liang, **Tianyu Ding**, and Songlin Du, "Robust Unsupervised Visual Tracking Via Image-to-Video Identity Knowledge Transferring". *Pattern Recognition (**PR**),* 2025.

11 Quanlin Chen, Yiyu Chen, Jing Huo, **Tianyu Ding**, Yang Gao, and Yuetong Chen, "Enhancing Trust-Region Bayesian Optimization via Newton Methods". *European Conference on Artificial Intelligence (**ECAI**),* 2025.

12 Xikang Guan, Zheng Gu, Jing Huo, **Tianyu Ding**, and Yang Gao, "CoT-VTM: Visual-to-Music Generation with Chain-of-Thought Reasoning". *Association for Computational Linguistics (**ACL**),* 2025.

13 Jongwoo Ko, Tianyi Chen, Sungnyun Kim, **Tianyu Ding**, Luming Liang, Ilya Zharkov, and Se-Young Yun, "DistiLLM-2: A Contrastive Approach Boosts the Distillation of LLMs". *International Conference on Machine Learning (**ICML**),* 2025.

14 Dongdong Ren, Wenbin Li, **Tianyu Ding**, Lei Wang, Qi Fan, Jing Huo, Hongbing Pan, and Yang Gao, "ONNXPruner: ONNX-Based General Model Pruning Adapter". *IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**),* 2025.

15 Yiyang Chen, **Tianyu Ding**, Lei Wang, Jing Huo, Yang Gao, and Wenbin Li, "Enhancing Few-Shot Class-Incremental Learning via Training-Free Bi-Level Modality Calibration". *Computer Vision and Pattern Recognition (**CVPR**),* 2025.

16 Xiaoyi Qu, David Aponte, Colby Banbury, Daniel Robinson, **Tianyu Ding**, Kazuhito Koishida, Ilya Zharkov, and Tianyi Chen, "Automated Joint Structured Pruning and Quantization for Efficient Neural Network Training and Compression". *Computer Vision and Pattern Recognition (**CVPR**),* 2025.

17 Pratheba Selvaraju, Victoria Fernandez Abrevaya, Timo Bolkart, Rick Akkerman, **Tianyu Ding**, Faezeh Amjadi, and Ilya Zharkov, "OFER: Occluded Face Expression Reconstruction". *Computer Vision and Pattern Recognition (**CVPR**),* 2025.

18 Yanqi Bao, **Tianyu Ding**, Jing Huo, Yaoli Liu, Yuxin Li, Wenbin Li, Yang Gao, and Jiebo Luo, "3D Gaussian Splatting: Survey, Technologies, Challenges, and Opportunities". *IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**),* 2025.

19 Yachao Li, Dong Liang, **Tianyu Ding**, and Sheng-Jun Huang, "StructSR: Refuse Spurious Details in Real-World Image Super-Resolution". *AAAI Conference on Artificial Intelligence (**AAAI**),* 2025.

20 Chao Li, Shaokang Dong, Shangdong Yang, Yujing Hu, **Tianyu Ding**, and Wenbin Li, "Multi-Task Multi-Agent Reinforcement Learning With Interaction and Task Representations". *IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**),* 2024.

21 Guang Yang, Zheng Xu, Jing Huo, Shangdong Yang, **Tianyu Ding**, Xingguo Chen, and Yang Gao, "State Abstraction via Deep Supervised Hash Learning". *IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**),* 2024.

22 Haidong Zhu[*], **Tianyu Ding**[*†], Tianyi Chen, Ilya Zharkov, Ram Nevatia, and Luming Liang[†], "CaesarNeRF: Calibrated Semantic Representation for Few-shot Generalizable Neural Rendering". *European Conference on Computer Vision (**ECCV**),* 2024.

23 Zheng Gu, Wenbin Li, **Tianyu Ding**, Zhengli Wang, Jing Huo, Kuihua Huang, and Yang Gao, "Task-aware Few-shot Image Generation via Dynamic Local Distribution Estimation and Sampling". *Pattern Recognition and Computer Vision (**PRCV**),* 2024.

24 Zhenxing Ge, Zheng Xu, **Tianyu Ding**, Linjian Meng, Bo An, Wenbin Li, and Yang Gao, "Safe and Robust Subgame Exploitation in Imperfect Information Games". *International Conference on Machine Learning (**ICML**),* 2024.

25 Jinxin Zhou[*], **Tianyu Ding**[*†], Tianyi Chen, Jiachen Jiang, Ilya Zharkov, Zhihui Zhu, and Luming Liang[†], "DREAM: Diffusion Rectification and Estimation-Adaptive Models". *Computer Vision and Pattern Recognition (**CVPR**),* 2024.

26 Wenxiao Deng, Wenbin Li, **Tianyu Ding**, Lei Wang, Hongguang Zhang, Kuihua Huang, Jing Huo, and Yang Gao, "Exploiting Inter-sample and Inter-feature Relations in Dataset Distillation". *Computer Vision and Pattern Recognition (**CVPR**),* 2024.

27 Yanqi Bao, **Tianyu Ding**, Jing Huo, Wenbin Li, Yuxin Li, and Yang Gao, "InsertNeRF: Instilling Generalizability into NeRF with HyperNet Modules". *International Conference on Learning Representations (**ICLR**),* 2024.

28 Zhenxing Ge, Zheng Xu, **Tianyu Ding**, Wenbin Li, and Yang Gao, "Efficient Subgame Refinement for Extensive-form Games". *Neural Information Processing Systems (**NeurIPS**),* 2023.

29 Yanqi Bao, Yuxin Li, Jing Huo, **Tianyu Ding**, Xinyue Liang, Wenbin Li, and Yang Gao, "Where and How: Mitigating Confusion in Neural Radiance Fields from Sparse Inputs". *ACM International Conference on Multimedia (**ACMMM**),* 2023.

30 Yiyu Chen, Jing Huo, **Tianyu Ding**, and Yang Gao, "A Survey of Meta-Reinforcement Learning Research". *Journal of Software (**JoS**),* 2023.

31 Tianyi Chen, Luming Liang, **Tianyu Ding**, Zhihui Zhu, and Ilya Zharkov, "OTOv2: Automatic, Generic, User-Friendly". *International Conference on Learning Representations (**ICLR**),* 2023.

32 Jinxin Zhou, Xiao Li, **Tianyu Ding**, Chong You, Qing Qu, and Zhihui Zhu, "On the Optimization Landscape of Neural Collapse under MSE Loss: Global Optimality with Unconstrained Features". *International Conference on Machine Learning (**ICML**),* 2022.

33 Zhicheng Geng*, Luming Liang*, **Tianyu Ding**, and Ilya Zharkov, "RSTT: Real-time Spatial Temporal Transformer for Space-Time Video Super-Resolution". *Computer Vision and Pattern Recognition (**CVPR**),* 2022.

34 Zhihui Zhu*, **Tianyu Ding***, Jinxin Zhou, Xiao Li, Chong You, Jeremias Sulam, and Qing Qu, "A Geometric Analysis of Neural Collapse with Unconstrained Features". *Neural Information Processing Systems (**NeurIPS**),* 2021.

35 Tianyi Chen, Bo Ji, **Tianyu Ding**, Biyi Fang, Guanyi Wang, Zhihui Zhu, Luming Liang, Yixin Shi, Sheng Yi, and Xiao Tu, "Only Train Once: A One-Shot Neural Network Training and Pruning Framework". *Neural Information Processing Systems (**NeurIPS**),* 2021.

36 **Tianyu Ding**, Zhihui Zhu, René Vidal, and Daniel P. Robinson, "Dual Principal Component Pursuit for Robust Subspace Learning: Theory and Algorithms for a Holistic Approach". *International Conference on Machine Learning (**ICML**),* 2021.

37 **Tianyu Ding***, Luming Liang*, Zhihui Zhu, and Ilya Zharkov, "CDFI: Compression-Driven Network Design for Frame Interpolation". *Computer Vision and Pattern Recognition (**CVPR**),* 2021.

38 **Tianyu Ding**, Zhihui Zhu, Manolis C. Tsakiris, René Vidal, and Daniel P. Robinson, "Dual Principal Component Pursuit for Learning a Union of Hyperplanes: Theory and Algorithms". *Artificial Intelligence and Statistics (**AISTATS**),* 2021.

39 Tianyi Chen, **Tianyu Ding**, Bo Ji, Guanyi Wang, Yixin Shi, Sheng Yi, Xiao Tu, and Zhihui Zhu, "Orthant Based Proximal Stochastic Gradient Method for ℓ_1 Regularized Optimization". *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (**ECML-PKDD**),* 2020.

40 Zhihui Zhu, **Tianyu Ding**, Daniel P. Robinson, Manolis C. Tsakiris, and René Vidal, "A Linearly Convergent Method for Non-Smooth Non-Convex Optimization on the Grassmannian with Applications to Robust Subspace and Dictionary Learning". *Neural Information Processing Systems (**NeurIPS**),* 2019.

41 **Tianyu Ding***, Zhihui Zhu*, Tianjiao Ding, Yunchen Yang, René Vidal, Manolis C. Tsakiris, and Daniel P. Robinson, "Noisy Dual Principal Component Pursuit". *International Conference on Machine Learning (**ICML**),* 2019.

Preprints

1 Jiacheng Yang, Tongying Xiao, Yunkai Dang, Cong Wang, Yuekun Yang, Qi Fan, **Tianyu Ding**, Wenbin Li, Feng Miao, and Yang Gao, "BUS: Brain-Inspired Unsupervised Self-Reflection via Backward Prediction for Multimodal Reasoning". *arXiv:2607.07361,* 2026.

2 Tianyi Chen, Michael Solodko, Sen Wang, Jongwoo Ko, Junheng Hao, Colby Banbury, Sara Abdali, Saeed Amizadeh, Qing Xiao, Yinheng Li, **Tianyu Ding**, Kamran Ghasedi Dizaji, Suzhen Zheng, Hao Fan, Justin Wagle, Pashmina Cameron, and Kazuhito Koishida, "AppSelectBench: Application-Level Tool Selection Benchmark". *arXiv:2511.19957,* 2025.

3 Quanlin Chen, Yiyu Chen, Jing Huo, **Tianyu Ding**, Yang Gao, and Yuetong Chen, "Enhancing Trust-Region Bayesian Optimization via Newton Methods". *arXiv:2508.18423,* 2025.

4 Wei Lai, **Tianyu Ding**, Lei Wang, Jing Huo, Yang Gao, and Wenbin Li, "Robust Dataset Distillation by Matching Adversarial Trajectories". *arXiv:2503.12069,* 2025.

5 Tianyi Chen, Xiaoyi Qu, David Aponte, Colby Banbury, Jongwoo Ko, **Tianyu Ding**, Yong Ma, Vladimir Lyapunov, Ilya Zharkov, and Luming Liang, "HESSO: Towards Automatic Efficient and User Friendly Any Neural Network Training and Pruning". *arXiv:2409.09085,* 2024.

6 Jiwei Guan, **Tianyu Ding**, Longbing Cao, Lei Pan, Chen Wang, and Xi Zheng, "Probing the Robustness of Vision-Language Pretrained Models: A Multimodal Adversarial Attack Approach". *arXiv:2408.13461,* 2024.

7 Pratheba Selvaraju, **Tianyu Ding**[†], Tianyi Chen, Ilya Zharkov, and Luming Liang, "FORA: Fast-Forward Caching in Diffusion Transformer Acceleration". *arXiv:2407.01425,* 2024.

8 **Tianyu Ding**, Jinxin Zhou, Tianyi Chen, Zhihui Zhu, Ilya Zharkov, and Luming Liang, "AdaContour: Adaptive Contour Descriptor with Hierarchical Representation". *arXiv:2404.08292,* 2024.

9 Guangzhi Wang, Tianyi Chen, Kamran Ghasedi, HsiangTao Wu, **Tianyu Ding**, Chris Nuesmeyer, Ilya Zharkov, Mohan Kankanhalli, and Luming Liang, "S3Editor: A Sparse Semantic-Disentangled Self-Training Framework for Face Video Editing". *arXiv:2404.08111,* 2024.

10 Tianyi Chen, **Tianyu Ding**, Zhihui Zhu, Zeyu Chen, HsiangTao Wu, Ilya Zharkov, and Luming Liang, "OTOv3: Automatic Architecture-Agnostic Neural Network Training and Compression from Structured Pruning to Erasing Operators". *arXiv:2312.09411,* 2023.

11 **Tianyu Ding**, Tianyi Chen, Haidong Zhu, Jiachen Jiang, Yiqi Zhong, Jinxin Zhou, Guangzhi Wang, Zhihui Zhu, Ilya Zharkov, and Luming Liang, "The Efficiency Spectrum of Large Language Models: An Algorithmic Survey". *arXiv:2312.00678,* 2023.

12 Tianyi Chen, **Tianyu Ding**, Badal Yadav, Ilya Zharkov, and Luming Liang, "LoRAShear: Efficient Large Language Model Structured Pruning and Knowledge Recovery". *arXiv:2310.18356,* 2023.

13 Tianyi Chen, Luming Liang, **Tianyu Ding**, and Ilya Zharkov, "Towards Automatic Neural Architecture Search within General Super-Networks". *arXiv:2305.18030,* 2023.

14 **Tianyu Ding**[*], Luming Liang[*], Zhihui Zhu, Tianyi Chen, and Ilya Zharkov, "Sparsity-guided Network Design for Frame Interpolation". *arXiv:2209.04551,* 2022.

15 Tianyi Chen*, Bo Ji*, Yixin Shi, **Tianyu Ding**, Biyi Fang, Sheng Yi, and Xiao Tu, "Neural Network Compression via Sparse Optimization". *arXiv:2011.04868,* 2020.

16 Tianyi Chen, Guanyi Wang, **Tianyu Ding**, Bo Ji, Sheng Yi, and Zhihui Zhu, "Half-Space Proximal Stochastic Gradient Method for Group-Sparsity Regularized Problem". *arXiv:2009.12078,* 2020.

Patents

1 **Tianyu Ding**, Luming Liang, Ilya Zharkov, and Tianyi Chen, "Encoding Irregular Shapes Using Angle-Based Contour Descriptors". *Filed through Microsoft, US Patent 12,694,545,* 2026.

2 Tianyi Chen, **Tianyu Ding**, Luming Liang, and Ilya Zharkov, "Inference Acceleration of a Model using an In-Place Mixture-of-Experts". *Filed through Microsoft, US Patent App. 19/019,234,* 2026.

3 Jongwoo Ko, Tianyi Chen, **Tianyu Ding**, Luming Liang, and Ilya Zharkov, "Knowledge Distillation using Hybrid Loss Function for Different Sample Types". *Filed through Microsoft, US Patent App. 19/025,011,* 2026.

4 **Tianyu Ding**, Haidong Zhu, Tianyi Chen, Ilya Zharkov, and Luming Liang, "View Synthesis Utilizing Scene-Level Features And Pixel-Level Features". *Filed through Microsoft, US Patent 12,615,353,* 2026.

5 **Tianyu Ding**, Jinxin Zhou, Tianyi Chen, Ilya Zharkov, and Luming Liang, "Adaptive Model For Super-Resolution". *Filed through Microsoft, US Patent 12,586,155,* 2026.

6 Tianyi Chen, **Tianyu Ding**, Xiaoyi Qu, David Aponte, Ilya Zharkov, and Luming Liang, "Jointly Pruning and Quantizing a Neural Network". *Filed through Microsoft, US Patent App. 18/828,005,* 2026.

7 Tianyi Chen, **Tianyu Ding**, Yong Ma, Ilya Zharkov, and Luming Liang , "Pruning of Neural Network with Corrective Identification of Redundancy". *Filed through Microsoft, US Patent App. 18/828,038,* 2026.

8 **Tianyu Ding**, Ji Li, Gaurav Tendolkar, Li Chen, Luming Liang, Nitesh Yadav, and Chenzhong Yin, "Relighting Image Data based upon Determined Surface Normal Orientation". *Filed through Microsoft, in progress,* 2025.

9 Tianyi Chen, **Tianyu Ding**, Luming Liang, and Ilya Zharkov, "Compressing A Large Language Model That Includes Low Rank Adaption Modules". *Filed through Microsoft, US Patent App. 18/439,710,* 2025.

10 Tianyi Chen, **Tianyu Ding**, Luming Liang, Ilya Zharkov, and Guangzhi Wang, "Sparse Semantic Disentangled Face Attribute Editing". *Filed through Microsoft, US Patent App. 18/411,253,* 2025.

11 Luming Liang, Zhicheng Geng, Ilya Zharkov, and **Tianyu Ding**, "Unified Space-Time Interpolation of Video Information". *Filed through Microsoft, US Patent 12,250,400,* 2025.

12 **Tianyu Ding**, Jiachen Jiang, Tianyi Chen, Luming Liang, and Ilya Zharkov, "Content and Task-Aware Image Restoration". *Filed through Microsoft, in progress,* 2025.

13 Tianyi Chen, **Tianyu Ding**, Luming Liang, and Ilya Zharkov, "Computer-Implemented Technologies For Training And Compressing A Deep Neural Network". *Filed through Microsoft, US Patent App. 18/325,379,* 2024.

14 Luming Liang, **Tianyu Ding**, and Ilya Zharkov, "Video Frame Interpolation Via Feature Pyramid Flows". *Filed through Microsoft, US Patent 12,003,885,* 2024.

MENTORING

Jiachen Jiang
Research Intern, Microsoft (Jiachen is a Ph.D. student from Department of Computer Science and Engineering at Ohio State University, since 2023)
One-step diffusion for reference-based super-resolution May. 2026 – Aug. 2026
All-in-one image restoration May. 2024 – Aug. 2024
The internship project has been accepted by NeurIPS 2026!

Ke Zhang May. 2024 – Aug. 2024
Research Intern, Microsoft (Ke was a first-year Ph.D. student from Department of Electrical and Computer Engineering at Johns Hopkins University)
She was working on the project about aesthetic image cropping.
The internship project has been accepted by AAAI 2026!

Haidong Zhu May. 2023 – Aug. 2023
Research Intern, Microsoft (Haidong was a fourth-year Ph.D. student from Department of Computer Science at University of Southern California)
He was working on the project about generalizable & few-shot NeRF.
The internship project has been accepted by ECCV 2024!

Jinxin Zhou May. 2023 – Aug. 2023
Research Intern, Microsoft (Jinxin was a second-year Ph.D. student from Department of Computer Science and Engineering at Ohio State University)
He was working on the project about efficient training of diffusion models.
The internship project has been accepted by CVPR 2024!

TALKS

Invited Conference Presentations

1 **Tianyu Ding**. (Poster) DREAM: Diffusion Rectification and Estimation-Adaptive Models *Computer Vision and Pattern Recognition (**CVPR**), Seattle, Washington, USA,* June 2024.

2 **Tianyu Ding**. (Poster) RSTT: Real-time Spatial Temporal Transformer for Space-Time Video Super-Resolution. *Computer Vision and Pattern Recognition (**CVPR**), New Orleans, Louisiana, USA,* June 2022.

3 **Tianyu Ding**. (Poster) Dual Principal Component Pursuit for Robust Subspace Learning: Theory and Algorithms for a Holistic Approach. *International Conference on Machine Learning (**ICML**), Online,* July 2021.

4 **Tianyu Ding**. (Poster) CDFI: Compression-Driven Network Design for Frame Interpolation. *Computer Vision and Pattern Recognition (**CVPR**), Online,* June 2021.

5 **Tianyu Ding**. (Poster) Dual Principal Component Pursuit for Learning a Union of Hyperplanes: Theory and Algorithms. *Artificial Intelligence and Statistics (**AISTATS**), Online,* April 2021.

6 **Tianyu Ding**. (Oral) Noisy Dual Principal Component Pursuit. *International Conference on Machine Learning (**ICML**), Long Beach, California, USA,* June 2019.

Invited Seminar Presentations at Universities

1 **Tianyu Ding**. DREAM: Diffusion Rectification and Estimation-Adaptive Models. *Nanjing University-Suzhou Campus, School of Intelligent Science and Technology, Suzhou, Jiangsu, China,* December, 2023.

2 **Tianyu Ding**. DREAM: Diffusion Rectification and Estimation-Adaptive Models. *Nanjing University of Aeronautics and Astronautics, College of Computer Science and Technology, Nanjing, Jiangsu, China,* December, 2023.

3 **Tianyu Ding**. Seeking Low-dimensionality in Deep Neural Networks. *Nanjing University of Aeronautics and Astronautics, College of Computer Science and Technology, MIIT Key Laboratory of Pattern Analysis and Machine Intelligence, Online,* March, 2023.

4 **Tianyu Ding**. Seeking Low-dimensionality in Deep Neural Networks. *University of Science and Technology of China, School of Earth and Space Sciences, Computational Interpretation Group, Online,* January, 2023.

5 **Tianyu Ding**. Seeking Low-dimensionality in Deep Neural Networks. *Nanjing University, Department of Computer Science and Technology, State Key Laboratory of Novel Software Technology, Nanjing, Jiangsu, China,* January, 2023.

6 **Tianyu Ding**. Seeking Low-dimensionality in Deep Neural Networks. *ShanghaiTech University, School of Information Science and Technology, Shanghai, China,* October, 2022.

Internal Department and Other Presentations

1 **Tianyu Ding**. DREAM: Diffusion Rectification and Estimation-Adaptive Models. *Microsoft, Applied Sciences Group, ASG Research Day, Online,* August, 2024.

2 **Tianyu Ding**. Seeking Low-dimensionality in Deep Neural Networks. *Microsoft, Applied Sciences Group, ASG Research Day, Online,* April, 2023.

3 **Tianyu Ding**. Compression-Driven Network Design for Frame Interpolation. *AI TIME (Youth PhD Talk), Online,* August, 2021.

4 **Tianyu Ding**. Compression-Driven Network Design for Frame Interpolation. *Johns Hopkins University, Department of Applied Mathematics and Statistics, Baltimore, Maryland,* April, 2021.

TEACHING

Teaching Fellow — Spring 2021
Department of Applied Mathematics and Statistics, JHU

EN 553.282.13(14) A Hands-On Introduction to MATLAB — Intersession 2016 – 2019
Instructor, JHU

EN 553.665 Introduction to Convexity Fall 2019
Teaching Assistant, JHU

EN 553.761 Nonlinear Optimization Fall 2016 & Fall 2017
Teaching Assistant, JHU

EN 553.644 Introduction to Financial Derivatives Fall 2017
Teaching Assistant, JHU

EN 553.645 Interest Rate and Credit Derivatives Spring 2016 & Spring 2017
Teaching Assistant, JHU

EN 553.627 Stochastic Processes Fall 2015 & Fall 2016
Teaching Assistant, JHU

EN 553.628 Stochastic Processes and Applications to Finance Spring 2016
Teaching Assistant, JHU

PROFESSIONAL SERVICE

Conference Reviewer

AAAI Conference on Artificial Intelligence (2026, 2027)
ACM International Conference on Multimedia (2025, 2026)
ACM Multimedia Asia (2025, 2026, 2027)
Asian Conference on Computer Vision (2024)
Artificial Intelligence and Statistics (2021, 2025, 2026, 2027)
British Machine Vision Conference (2024, 2025, 2026)
Computer Vision and Pattern Recognition (2021, 2022, 2023, 2024, 2025, 2026)
European Conference on Computer Vision (2022, 2024)
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (2020)
International Conference on Computer Vision (2021, 2023, 2025)
International Conference on Learning Representations (2021, 2022, 2023, 2024, 2025, 2026, 2027)
International Conference on Machine Learning (2021, 2023, 2024, 2025, 2026)
Neural Information Processing Systems (2020, 2021, 2022, 2023, 2024, 2025, 2026)
Winter Conference on Applications of Computer Vision (2026, 2027)

Journal Reviewer

The Visual Computer (3)
Computer Science Review (1)
Journal of Electronic Imaging (2)
IEEE Transactions on Multimedia (2)
IEEE Transactions on Image Processing (2)
SCIENCE CHINA Information Sciences (1)
IEEE Transactions on Mobile Computing (2)
Transactions on Machine Learning Research (13)
IEEE Journal of Selected Topics in Signal Processing (1)
ACM Transactions on Multimedia Computing, Communications, and Applications (4)