Yu Sun Ph.D.

: https://hcig.wse.jhu.edu/
6225 Smith Ave., NE308, Baltimore, MD 21209
Curriculum Vitae (July 2026)

Academic Position

Johns Hopkins University, *Assistant Professor* — Baltimore, USA
Department of Electrical and Computer Engineering — 2024 - *present*

- Secondary: Department of Applied Mathematics and Statistics
- Affiliation: Data Science and Artificial Intelligence Institute (DSAI)
  Center of Imaging Science (CIS)
  Mathematical Institute for Data Science (MINDS)

Education and Training

California Institute of Technology — Pasadena, USA
Postdoctoral Research Associate — 2022 - 2024

- Advisor: Prof. Katherine L. Bouman
- Fellowship: Computing, Data, and Society Fellow

Washington University in St Louis — St Louis, USA
Ph.D. in Computer Science — 2018 - 2022

- Advisor: Prof. Ulugbek S. Kamilov
- Thesis: "Integrating Physical Models and Deep Priors for Computational Imaging."
  — Turner Dissertation Award 2022 —

Washington University in St. Louis — St Louis, USA
M.S. in Data Analytics & Statistics — 2015 - 2017

Sichuan University — Chengdu, China
B.E. in Electronics and Information Engineering — 2011 - 2015

Working Experience

Cedars Sinai Hospital | Los Angeles, U.S. — 8/2022 - 7/2023
Clinical Data Research Specialist

- Host: Dr. David Ouyang

Nvidia Inc. | Remote, U.S. — 5/2021 - 8/2021
Research Intern

- Host: Dr. Orazio Gallo

Capacity | St. Louis, U.S. — 5/2017 - 8/2017
Software Developer Intern

Awards and Honors

NSF CAREER Award — 2026
National Science Foundation

Rising Star Award — 2025
Conference on Parsimony and Learning

Computing, Data, and Society Fellow — 2024
CMS Department, California Institute of Technology

Turner Dissertation Award — 2023
CS Department, Washington University in St. Louis

- Top in the class

Honor 2019-2022

CS Department, Washington University in St. Louis

- Top 15% in the class

Student Travel Award 2019

NeurIPS

Professional Membership

Professional Society:

IEEE Signal Processing Society, ***Member*** 2022 - *present*

IEEE Signal Processing Society, ***Student Member*** 2018 - *2022*

Technical Committee:

IEEE SPS Computational Imaging Technical Committee, ***Member*** 2022 - *present*

Publications

Pre-prints ('∗' indicates equal contribution)

3. Y. He, W. Guo, D. Wei, E. Bell, J. Yi, **Y. Sun**, "VOLT: Volumetric Wide-Field Microscopy via 3D-Native Probabilistic Transport." Pre-print, arXiv:2604.18807, 2026.

2. J. Liu†, F. Petersen, Y. Gao, Y. Zhang, H. Kim, A. S. Chaudhari†, **Y. Sun**†, S. Ermon, S. Gatidis, "Unpaired Image-to-Image Translation via a Self-Supervised Semantic Bridge." Pre-print, arXiv:2602.16664, 2026. (†: Corresponding authors)

1. Y. Wang, J. Yu, W. Guo, **Y. Sun**, and J. U. Kang, "Super-Resolution Optical Coherence Tomography Using Diffusion Model-Based Plug-and-Play Priors." Technical Report, arXiv:2505.14916, 2025

Journal Publications ('∗' indicates equal contribution)

16. **Y. Sun**, Z. Wu, Y. Chen, B. T. Feng, and K. L. Bouman, "Provable Probabilistic Imaging using Score-Based Generative Priors." **IEEE Trans. Comput. Imag.**, vol. 10, pp. 1290-1305, 2024.
⋆ **Poster presentation at the Int. Conf. Comput. Photo. (ICCP 2023) and Conf. Parsi. Learn. (CPAL 2025).**

15. Z. Wu, T. Yin, **Y. Sun**, R. Frost, A. V. D. Kouwe, A. V. Dalca, and K. L. Bouman, "Learning Task-Specific Strategies for Accelerated MRI." **IEEE Trans. Comput. Imag.**, vol. 10, pp. 1040-1054, 2024.

14. P. Goyes-Peñafiel, E. Vargas, C. V. Correa, **Y. Sun**, U. S. Kamilov, B. Wohlberg, and H. Arguello, "Coordinate-Based Seismic Interpolation in Irregular Land Survey: A Deep Internal Learning Approach," **IEEE Trans. Geo. Rem. Sen.**, vol. 61, pp. 1-12, 2023.

13. R. Liu*, **Y. Sun***, J. Zhu, L. Tian, and U. S. Kamilov, "Recovery of Continuous 3D Refractive Index Maps from Discrete Intensity-Only Measurements using Neural Fields." **Nature Machine Intelligence**, vol. 4, pp. 781–791, 2022.
⋆ **High-impact journal [5-Year Impact Factor = 36.0].**

12. W. Gan, **Y. Sun**, C. Eldeniz, J. Liu, H. An, and U. S. Kamilov, "Deformation-Compensated Learning for Image Reconstruction without Ground Truth," **IEEE Trans. Med. Imag.**, vol. 41, no. 9, pp. 2371-2384, 2022.

11. **Y. Sun**, J. Liu, M. Xie, B. Wohlberg, and U. S. Kamilov, "CoIL: Coordinate-based Internal Learning for Tomographic Imaging." **IEEE Trans. Comput. Imag**, vol. 7, pp. 1400-1412, 2021

10. J. Liu, **Y. Sun**, W. Gan, X. Xu, B. Wohlberg, and U. S. Kamilov, "SGD-Net: Efficient Model-Based Deep Learning with Theoretical Guarantees." **IEEE Trans. Comput. Imag.**, vol. 7, pp. 598-610, June 2021

9. **Y. Sun***, Z. Wu*, X. Xu*, B. Wohlberg, and U. S. Kamilov, "Scalable Plug-and-Play ADMM with Convergence Guarantees." **IEEE Trans. Comput. Imag.**, vol. 7, pp. 849-863, July 2021.

8. M. Torop, S. Kothapalli, **Y. Sun**, J. Liu, S. Kahali, D. A. Yablonskiy, and U. S. Kamilov, "Deep learning using a Biophysical Model for Robust and Accelerated Reconstruction (RoAR) of Quantitative and Artifact-free R2* images." **Magn. Reson. Med.**, vol. 84, pp. 2932-2942, 2020.

7. X. Xu, **Y. Sun**, J. Liu, B. Wohlberg, and U. S. Kamilov, "Provable Convergence of Plug-and-Play Priors with MMSE denoisers." **IEEE Signal Process. Lett.**, vol. 27, pp. 1280-1284, 2020.

6. G. Song, **Y. Sun**, J. Liu, and U. S. Kamilov, "A New Recurrent Plug-and-Play Prior Based on the Multiple Self-Similarity Network." **IEEE Signal Process. Lett.**, vol. 27, pp. 451-455, 2020.

5. J. Liu, **Y. Sun**, C. Eldeniz, W. Gan, H. An, and U. S. Kamilov, "RARE: Image Reconstruction using Deep Priors Learned without Ground Truth." **IEEE J. Sel. Topics Signal Process.**, vol. 14, no. 6, pp. 1088-1099, 2020.

4. Z. Wu, **Y. Sun**, A. Matlock, J. Liu, L. Tian, and U. S. Kamilov, "SIMBA: Scalable Inversion in Optical Tomography using Deep Denoising Priors." **IEEE J. Sel. Topics Signal Process.**, vol. 14, no. 6, pp. 1163-1175, 2020.
   ⋆ **Poster presentation at the Int. Conf. Image Proces. (ICIP 2021).**

3. **Y. Sun***, J. Liu*, and U. S. Kamilov, "Block Coordinate Regularization by Denoising," **IEEE Trans. Comput. Imag.**, vol. 6, pp. 908-921, 2020.

2. **Y. Sun**, B. Wohlberg, and U. S. Kamilov, "An Online Plug-and-Play Algorithm for Regularized Image Reconstruction." **IEEE Trans. Comput. Imag.**, vol.5, no.3, pp.395-408, 2019.

1. **Y. Sun**, Z. Xia, and U. S. Kamilov, "Efficient and Accurate Inversion of Multiple Scattering with Deep Learning," **Optics Express**, vol.26, no.11, pp.14678-14688, 2018.

Conference Publications ('∗' indicates equal contribution)

25. Yuanyun Hu*, Yuli Wang*, ... , Bo Chen, **Yu Sun**, Harrison Bai, "SurgRFO: Foundation Model Based Compositional Synthesis of Critical Retained Foreign Objects in Intraoperative Chest X-rays" Proc. Int. Conf. on Medical Image Computing and Computer-Assisted Intervention (**MICCAI 2026**), in press.
   ⋆ **Poster presentation [Acceptance Rate: 1211/4402=27.5%].**

24. M. Renaud*, J. Hermant*, D. Wei*, and **Y. Sun**, "Provably Accelerated Imaging with Restarted Inertia and Score-based Image Priors." Proc. Int. Conf. Learning Representation (**ICLR 2026**), in press.
   ⋆ **Poster presentation [Acceptance Rate: 5339/18949=28.1%].**

23. Y. Hu, E. Bell, G. Wang, and **Y. Sun**, "PRISM: Probabilistic and Robust Inverse Solver with Measurement-Conditioned Diffusion Prior for Blind Inverse Problems." Proc. IEEE Int. Conf. Acoustics, Speech and Signal Process (**ICASSP 2026**), pp. 11432-11436, Barcelona, Spain, May 4-8.
   ⋆ **Oral presentation.**

22. S. Wang, Q. Li, H. He, J. Gao, Z. Wang, **Y. Sun**, X. Zhang, T. Chi, and W. Cao, "Multi-Agent Generative Synthesis for Analog/RF Circuit: from Scalable Topology Generation to Efficient

Inverse Design" IEEE/ACM International Conference On Computer Aided Design (**ICCAD 2025**), Munich, Germany, Oct 26-30.
⋆ **Invited paper**.

21. W. Guo, J. Yu, Y. Wang, J. U. Kang, **Y. Sun**, "PSI3D: Plug-and-Play 3D Stochastic Inference with Slice-wise Latent Diffusion Prior." Proc. 59th Asilomar Conf. Signals, Systems, & Computers (**ACSSC 2025**), Pacific Grove, Oct 26-29.
⋆ **Invited paper**.

20. J. Alido, T. Li, **Y. Sun**, and L. Tian, "Whitened Score Diffusion: A Structured Prior for Imaging Inverse Problems." Adv. in Neural Information Processing Systems (**NeurIPS 2025**), San Diego, Dec 2-7.
⋆ **Poster presentation [Acceptance Rate: 5290/21575 = 24.5%]**.

19. Y. Wang, H. Jung, D. Peng, Y. Dai, J. Wu, H. Guan, Y. Kato, Z. Jiao, **Y. Sun**, I. Kamel, J. Lima, C. T. Lin, and H. Bai, "Self-Supervised Contrastive Learning for Cardiac MR Sequence Classification." MICCAI 2025 Workshop on Multimodal Learning and Fusion Across Scales for Clinical Decision Support (**ML-CDS 2025**), Daejeon, South Korea, Sep 27.

18. Y. Gao, W. Guo, and **Y. Sun**, "Neural Inverse Scattering with Score-Based Regularization." Proc. IEEE Conf. Comput. Imaging using Synthetic Apertures (**CISA 2025**), pp 1-5, College Park, June 2-6.
⋆ **Oral presentation**.

17. H. Zheng, W. Chu, B. Zhang, Z. Wu, A. Wang, B. Feng, C. Zou, **Y. Sun**, N. B. Kovachki, Z. E Ross, K. Bouman, and Y. Yue, "InverseBench: Benchmarking Plug-and-Play Diffusion Models for Scientific Inverse Problems." Proc. Int. Conf. Learning Representation (**ICLR 2025**), Singapore, Apr. 24-28.
⋆ **Spotlight presentation [Acceptance Rate: 587/11500 = 5.1%]**.

16. Z. Wu, **Y. Sun**, Y. Chen, B. Zhang, Y. Yue, and K. L. Bouman, "Principled Probabilistic Imaging using Diffusion Models as Plug-and-Play Priors." Adv. in Neural Information Processing Systems (**NeurIPS 2024**), pp. 118389-118427, Vancouver, Canada, Dec. 10-15.
⋆ **Poster presentation [Acceptance Rate: 4043/15671 = 25.8%]**.

15. W. Shangguan*, **Y. Sun***, W. Gan, and U. S. Kamilov, "Learning Cross-Video Neural Representations for High-Quality Frame Interpolation." Proc. European Conference on Computer Vision (**ECCV 2022**), pp. 511-528, Tel Aviv, Israel, October 23-27.
⋆ **Poster presentation [Acceptance rate: 1492/5803 = 26%]**.

14. M. Xie*, J. Liu*, **Y. Sun**, B. Wohlberg, U. S. Kamilov, "Joint Reconstruction and Calibration using Regularization by Denoising." Proc. IEEE/CVF Int. Conf. Computer Vision Workshops (**ICCVW 2021**), October 11-17.

13. J. Liu, **Y. Sun**, W. Gan, X. Xu, B. Wohlberg, and U. S. Kamilov, "Stochastic Deep Unfolding for Imaging Inverse Problems," Proc. IEEE Int. Conf. Acoustics, Speech and Signal Process (**ICASSP 2021**), pp. 1395-1399, Toronto, Canada, June 6-11.

12. W. Gan, **Y. Sun**, C. Eldeniz, J. Liu, H. An, and U. S. Kamilov, "Deep Image Reconstruction for MRI using Unregistered Measurement Pairs without Ground Truth," Proc. Int. Soc. of Magnetic Resonance in Medicine (**ISMRM 2021**), p. 1959, May 15-20.

11. **Y. Sun**, J. Liu, Y. Sun, B. Wohlberg, and U. S. Kamilov, "ASYNC-RED: A Provably Convergent Asynchronous Block Parallel Stochastic Method using Deep Denoising Priors." Proc. Int. Conf. Learning Representation (**ICLR 2021**), Vienna, Austria, May 4-8.
⋆ **Spotlight presentation [Acceptance Rate: 114/2997 = 4%]**.

10. W. Gan, **Y. Sun**, C. Eldeniz, H. An and U. S. Kamilov, "Deep Image Reconstruction using Unregistered Measurements without Groundtruth." Proc. Int. Symp. Biomedical Imaging 2021 (**ISBI 2021**), pp. 1531-1534, Nice, France, April 13-16.

9. X. Xu, J. Liu, **Y. Sun**, B. Wohlberg, and U. S. Kamilov, "Boosting the Performance of Plug-and-Play Priors via Denoiser Scaling," Proc. 54th Asilomar Conf. Signals, Systems, & Computers (**ACSSC 2020**), pp. 1305-1312, Pacific Grove, CA, November 1–5.

8. J. Liu, C. Eldeniz, **Y. Sun**, W. Gan, S. Chen, H. An, and U. S. Kamilov, "RED-N2N: Image Reconstruction for MRI using Deep CNN Priors Trained without Ground Truth," Proc. Int. Soc. of Magnetic Resonance in Medicine (**ISMRM 2020**), p. 993, August 8-14.

7. J. Liu, **Y. Sun**, and U. S. Kamilov, "Infusing Learned Priors into Model-Based Multispectral Imaging," IEEE Int. Workshop on Computational Advances in Multi-Sensor Adaptive Processing (**CAMSAP 2019**), Guadeloupe, France, December 15-18.

6. **Y. Sun**, J. Liu, and U. S. Kamilov, "Block Coordinate Regularization by Denoising," Adv. in Neural Information Processing Systems (**NeurIPS 2019**), pp. 382-392, Vancouver, Canada, Dec 8-14.
   ⋆ **Poster presentation [Acceptance Rate: 1428/6743 = 21%]**.

5. Z. Wu, **Y. Sun**, J. Liu, and U. S. Kamilov, "Online Regularization by Denoising with Application to Phase Retrieval," Proc. IEEE/CVF Int. Conf. Computer Vision Workshops (**ICCVW 2019**), pp. 3887-3895, Seoul, Korea, October 27-November 2.

4. J. Liu, **Y. Sun**, X. Xu, and U. S. Kamilov, "Image Restoration using Total Variation Regularized Deep Image Prior," Proc. IEEE Int. Conf. Acoustics, Speech and Signal Process. (**ICASSP 2019**), pp.7715-7719, Brighton, UK, May 12-17.

3. **Y. Sun**, S. Xu, Y. Li, L. Tian, B. Wohlberg, and U. S. Kamilov, "Regularized Fourier Ptychography using an Online Plug-and-Play Algorithm," Proc. IEEE Int. Conf. Acoustics, Speech and Signal Process. (**ICASSP 2019**), pp.7665-7669, Brighton, UK, May 12-17.
   ⋆ **Oral presentation**.

2. **Y. Sun**, B. Wohlberg, and U. S. Kamilov, "Plug-In Stochastic Gradient Method," Proc. Int. Biomedical and Astronomical Signal Processing Frontiers Workshop (**BASP 2019**), p.75, Villars-sur-Ollon, Switzerland, February 3-8.

1. **Y. Sun** and U. S. Kamilov, "Stability of Scattering Decoder For Nonlinear Diffractive Imaging," Proc. 4th Int. Traveling Workshop on Interactions between Sparse models and Technology (**iTWIST 2018**), p.31, Marseille, France, November 21-23.
   ⋆ **Oral presentation**.

Invited Talks

Conference, Workshop & Seminar Talks:

Deep Reconstruction Workshop | Philadelphia 7/2026
Invited by *Dr. Grace Gang*

XRM Imaging Group Seminar, Zeiss United States | Remote 5/2026
Invited by *Dr. Shiqi Xu*

SIAM Conference on Uncertainty Quantification | Minneapolis, U.S. 3/2026
Invited by *Prof. Nicole Yang*

Invited Paper Presentation, IEEE Asilomar Conference | Pacific Grove, U.S. 10/2025
Invited by *Prof. Ulugbek Kamilov and Prof. Salman Asif*

Rising Star Presentation, CPAL | Palo Alto, U.S. 3/2025
Invited by *CPAL Program Committee*

Deep Reconstruction Workshop | Baltimore, U.S. 3/2025
Invited by *Prof. Webster Stayman*

F.M. Kirby Center Seminar, Johns Hopkins University | Baltimore, U.S. 1/2025
Invited by *Prof. Hanzhang Lu*

Imaging Seminar, Purdue University | West Lafayette, U.S. 10/2024
Invited by *Prof. Stanly Chan*

MINDS Seminar, Johns Hopkins University | Baltimore, U.S. 10/2024
Invited by *Prof. Rama Chellappa*

ECE Seminar, Johns Hopkins University | Baltimore, U.S. 10/2024
Invited by *Prof. Sijia Geng*

Computational Imaging Workshop, IMSI, UChicago | Chicago, U.S. 8/2024
Invited by *Prof. Ulugbek Kamilov*

SIAM Conference on Imaging Science | Atlanta, U.S. 5/2024
Invited by *Prof. Wenjing Liao, Prof. Ju Sun, Prof. Zhizhen Zhao*

ECE Seminar, Johns Hopkins University | Baltimore, U.S. 3/2024
Invited by *Prof. Pablo Iglesias*

CSE College Seminar, Georgia Tech | Atlanta, U.S. 3/2024
Invited by *Prof. Duen Horng Chau*

EI Computational Imaging XXII | San Francisco, U.S. 1/2024
Invited by *Prof. Charles Bouman*

EI Implicit Neural Representations for Inverse Imaging | San Francisco, U.S. 1/2024
Invited by *Dr. Aditya Mohan*

Computational Camera and Display Workshop, CVPR | New Orleans, U.S. 7/2022
Invited by *Prof. Emma Alexander*

Imaging & Vision Seminar, Rice University | Remote 7/2022
Invited by *Dr. Dushyant Mehra*

Research Group Talks:

Yi Lab | Johns Hopkins University 11/2024
Invited by *Prof. Ji Yi*

AI for Engineering and Medicine Lab | Johns Hopkins University 10/2024
Invited by *Prof. Rama Chellappa*

Fazlyab Lab | Johns Hopkins University 10/2024
Invited by *Prof. Mahyar Fazlyab*

Computational Biophotonics Lab | Johns Hopkins University 10/2024
Invited by *Prof. Nick Durr*

Biophotonics Imaging Technology Lab | Johns Hopkins University 10/2024
Invited by *Prof. Xingde Li*

Intelligence Optical Imaging and Vision Lab | Johns Hopkins University 10/2024
Invited by *Prof. Jin Kang*

Signals, Learning, and Imaging Research Group | Michigan State University 9/2024
Invited by *Prof. Sai Ravishankar*

Stanford Computational Imaging Lab | Stanford University 1/2022
Invited by *Prof. Gordon Wetzstein*

Computational Imaging Systems Lab | Boston University 12/2021
Invited by *Prof. Lei Tian*

Image Science Lab | Carnegie Mellon University 12/2021
Invited by *Prof. Aswin Sankaranarayanan*

Computational Cameras Group | California Institute of Technology 10/2021
Invited by *Prof. Katie Bouman*

Research Funding

NSF CAREER Award | Principal Investigator 4/2026-*present*
"CAREER: Provable, Flexible, & Scalable Integration of Physical and Diffusion Models for Probabilistic Imaging", ***$763,515.00***

Nvidia Academic Grant | Principal Investigator 2/2026-*present*
"Reliable and Efficient Generative AI for Physics-Infused Computational Imaging", ***One DGX Spark machine (in-kind)***

Academic Services

Organizers for:

IEEE Computational Imaging Using Synthetic Apertures (CISA) | Albany, NY 2026
Chair of the Technical Committee

IEEE ICASSP, Special Session | Hyderabad, India 2025
Theme: "Computational Imaging in the Age of Generative AI"

Journal Editors for:

Journal of Mathematical Imaging and Vision, ***Editorial Board Member*** 2025 - *present*

Special Issue of Journal of Mathematical Imaging and Vision, ***Guest Editor*** 2025

IEEE Open Journal of Signal Processing, ***Consultant Associate Editor*** 2022 - *present*

Journal Reviewers for:

Nature Communications (**Nat. Commun**)

OSA **Optica**

Biophysical Journal (**BJ**)

IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**)

IEEE Journal of Selected Topics in Signal Processing (**JSTSP**)

IEEE Transactions on Computational Imaging (**TCI**)

IEEE Transactions on Medical Imaging (**TMI**)

IEEE Transactions on Signal Processing (**TSP**)

IEEE Transactions on Image Processing (**TIP**)

IEEE Signal Processing Letters (**SPL**)

SIAM Journal on Imaging Sciences (**SIIMS**)

SIAM Journal on Scientific Computing (**SISC**)

Signal Processing (**SP**)

Applied Mathematics and Computation (**AMC**)

Digital Signal Process (**DSP**)

SPIE Journal on Electronic Imaging (**JEI**)

Conference Area Chairs for:

IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**)

Neural Information Processing Systems (**NeurIPS**)

Conference Reviewer/PCs for:

International Conference on Learning Representations (**ICLR**)

International Conference on Machine Learning (**ICML**)

Neural Information Processing Systems (**NeurIPS**)

Computer Vision and Pattern Recognition (**CVPR**)

European Conference on Computer Vision (**ECCV**)

International Conference on Computational Photography (**ICCP**)

International Joint Conference on Artificial Intelligence (**IJCAI**)

IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**)

IEEE International Symposium on Biomedical Imaging (**ISBI**)

University Service

Committees:

JHU ECE Graduate Student Committee 2024-*present*

Departmental Qualify Exam

Jiarui Wang 1/2026
Electrical and Computer Engineering
Advisor: Dr. Mahyar Fazlyab

Doctoral/Graduate Board Oral Exams:

Jinglun Yu 5/2026
Electrical and Computer Engineering
Advisor: Dr. Jin Kang
Title: "Physics-informed AI-enhanced optical imaging systems for image-guided surgery"

Peiqing Teng 4/2026
Biomedical Engineering
Advisor: Webber Stayman

Esther Whang 5/2025
Biomedical Engineering
Advisor: Dr. Adam Charles & Dr. Ji Yi
Title: "Fast Two-photon Microscopy by Neuroimaging with Oblong Random Acquisition"

Aniket Roy 12/2024
Computer Science
Advisor: Dr. Rama Chellappa
Title: "Learning More from Less: Resource-Constrained Generative AI for Classification, Generation, and Personalization"

Doctoral Thesis Proposal:

Esther Whang 2/2026
Biomedical Engineering
Advisor: Dr. Adam Charles & Dr. Ji Yi
Title: "Neuroimaging with Oblong Random Acquisition"

Linh Hoang 8/2025
Biomedical Engineering
Advisor: Dr. Ji Yi
Title: "Enhancing volumetric microscopy with blind computational correction of spatially variant aberrations using neural field representation"

Doctoral Thesis Committee:

Zhangxing Bian 4/2026
Electrical and Computer Engineering
Advisor: Dr. Jerry Prince
Title: "Motion Estimation and Disentanglement in Tagged Magnetic Resonance Imaging "

Vineet Shenoy 4/2026
Electrical and Computer Engineering
Advisor: Dr. Rama Chellappa
Title: "Learning-Based Recovery of Physiological Signals from Video: Deep Unrolling, Temporal Modeling, and Uncertainty Quantification in laboratory and clinical settings"

Yuehan Liu 12/2025
Biomedical Engineering
Advisor: Dr. Xingde Li
Title: "Two-Photon Fiberscopy for Brain Imaging in Freely-Behaving Rodents"

Jeffrey Alido 6/2025
Electrical and Computer Engineering, Boston University
Advisor: Dr. Lei Tian
Title: "Deep Learning Approaches for Imaging Inverse Problems with Structured Noise"

Teaching

Johns Hopkins University:

Optimization, EN.520.430. Spring 2026.

Computational Imaging, EN.520.458/658. Spring 2025, Fall 2025.

Previously Taught at Washington University in St. Louis (*As Teaching Assistant*):

Sparse Model for Imaging, CSE 585T. Fall 2018.

Optimization, ESE 415. Fall 2018, Spring 2019, Spring 2020.

Cloud Computing and Big Application, CSE 427S. Fall 2016, Spring 2017, Fall 2017.

MENTORSHIP

Postdoctoral Researcher:

Deliang Wei 8/2025-*present*
Data Science and AI Institute
- Ph.D. in Mathematics, East China Normal University

Ph.D. Students:

Wenhan Guo 8/2025-*present*
Electrical and Computer Engineering

Evan Bell 8/2025-*present*
Electrical and Computer Engineering
– DoE Computational Science Graduate Fellowship –

M.S./B.S. Students:

Xuzhe Zhi (M.S. CS, 2025-2026) *Ph.D. at JHU*
Haoyue Guan (M.S. CS, 2025-2026) *Ph.D. at Emory U.*
Yetao He (M.S. BME, 2025-2026) *Ph.D. at UCLA*
Yuan Gao (M.S. HSI, 2024-2026) *Ph.D. at UNC*
Yuanyun Hu (M.S. BME, 2024-2025) *M.S. at Tsinghua U.*
Guannan He (M.S. ECE, 2024-2025) *Ph.D. at Wake Forest U.*
Xinmin Shen (B.S. AMS, 2024)
Xinyao Shao (M.S. ECE, 2024)
Bingyan Liang (M.S. DS, 2024, University of Wisconsin-Madison)

Previous Students at California Institute of Technology (*Co-advised with Prof. Bouman*):

Zihui Wu (Ph.D. CMS, 2022-2024) *Jump Trading*
Heriniaina Rajaoberison (M.S. CMS, 2022-2024)
Zijun Deng (B.S. CMS, 2023-2024) *Ph.D. at Georgia Tech*

Previous Students at Washington University in St. Louis (*Co-advised with Prof. Kamilov*):

Wentao Shangguan (M.S. CSE, 2021-2022) *Ph.D. at Boston U.*
Renhao Liu (B.S./M.S. CSE, 2021-2022) *Google Inc.*
Mingyang Xie (B.S. CSE, 2019-2021) *Ph.D. at U. Maryland*
Yiran Sun (M.S. CSE, 2021) *Ph.D. at Rice U.*
Weijie Gan (M.S. CSE, 2019-2021) *Ph.D. at Wash U.* $\rightarrow$ *Accenture*
Zihui Wu (B.S. CSE, 2018-2020) *Ph.D. at Caltech*
Max Torop (M.S. CSE, 2019-2020) *Ph.D. at Northeastern U.*
Shiqi Xu (M.S. ESE, 2018-2019) *Ph.D. at Duke U.* $\rightarrow$ *Zeiss*

Jiaming Liu (M.S. ESE, 2018-2019)	*Ph.D. at Wash. U → Postdoc at Stanford U.*
Zach Pewitt (M.S. ESE, 2018)	*Boeing*
Joseph Han (M.S. ESE 2018)	*Deloitte*
Jialong Zhang (M.S. ESE, 2018)	*Schlumberger*
Fangying Zhai (M.S. ESE, 2018)	*Google Inc.*
Chunyuan Li (M.S. CSE, 2018)	