Chicago Y. Park

Email: chicago@wustl.edu **Webpage:** chicagopark.github.io **Office:** WashU CS PhD Office

Education

2024 - Present **Washington University in St. Louis (WashU)** St. Louis, MO
PhD Candidate in Computer Science

2022 - 2024 **WashU** St. Louis, MO
BS in Computer Science
summa cum laude

Research Experiences

May 2025 - Present **Los Alamos National Laboratory** Los Alamos, NM
Research Intern
- Advisor: Dr. Michael T. McCann, Dr. Brendt Wohlberg, and Dr. Cristina Garcia-Cardona

May 2024 - Aug 2024 **Los Alamos National Laboratory** Los Alamos, NM
Research Intern
- Advisor: Dr. Michael T. McCann, Dr. Brendt Wohlberg, and Dr. Cristina Garcia-Cardona

Jul 2022 - May 2024 **Computational Imaging Group (CIG) at WashU** St. Louis, MO
Undergrad. Researcher & 2023 Summer Research Intern
- Advisor: Prof. Ulugbek S. Kamilov

Publications

Preprint

1. **Chicago Y. Park**, Shirin Shoushtari, Hongyu An, and Ulugbek S. Kamilov. "Measurement Score-Based Diffusion Model," *arXiv:2505.11853, 2025.*

   • TL;DR: We propose the first measurement score-based diffusion model that directly learns partial measurement scores using only noisy and subsampled measurements.

2. **Chicago Y. Park**, Michael T. McCann, Cristina Garcia-Cardona, Brendt Wohlberg, and Ulugbek S. Kamilov. "Random Walks with Tweedie: A Unified Framework for Diffusion Models," *arXiv:2411.18702, 2024.*

   • TL;DR: We present a configurable theoretical framework for score-based diffusion models, leading to generic algorithm templates of influential diffusion models and enabling faster and more flexible sampling strategies.

Conference papers

3. **Chicago Y. Park**, Yuyang Hu, Michael T. McCann, Cristina Garcia-Cardona, Brendt Wohlberg, and Ulugbek S. Kamilov. "Plug-and-Play Priors as a Score-Based Method," *IEEE International Conference on Image Processing (ICIP), 2025.*

   • TL;DR: We reinterpret plug-and-play (PnP) methods as score-based approaches, enabling the use of score-based diffusion model (SBM) priors in PnP without retraining, allowing direct comparison with SBM-based reconstruction methods.

4. **Chicago Y. Park***, Shirin Shoushtari*, Weijie Gan, and Ulugbek S. Kamilov. "Convergence of Nonconvex PNP-ADMM with MMSE Denoisers," *2023 IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), 2023*, in press. **[Best Student Paper Award Finalist]**

   • TL;DR: We propose the theoretical and experimental evidence for the effective use of expansive CNN denoisers in the PnP-ADMM framework to solve convex or non-convex imaging inverse problems.

Journal papers

5. **Chicago Y. Park***, Weijie Gan*, Zihao Zou, Yuyang Hu, Zhixin Sun and Ulugbek S. Kamilov. "Effcient Model-based Deep Learning via Network Pruning and Fine-Tuning," *Journal of Mathematical Imaging and Vision, 2025.*

   • TL;DR: We propose the new approach combining network pruning and fine-tuning to enhance the efficiency of model-based deep learning for imaging inverse problems.

Academic services

Journal Reviewers for

Oct 2024	**IEEE Transactions on Computational Imaging (TCI)**

Conference Reviewers for

Oct 2024	**IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)**

Honors and Awards

Apr 2024	**Ernest. D Weiss Senior Award** Issued by Department of Computer Science and Engineering, WashU	St. Louis, MO
2024 - 2029	**Dean's Select PhD Fellowship** Issued by WashU	St. Louis, MO
Dec 2023	**Student Travel Award** Issued by 2023 IEEE CAMSAP	Hacienda Belén, Costa Rica
Dec 2023	**Best Student Paper Award Finalist** Issued by 2023 IEEE CAMSAP	Hacienda Belén, Costa Rica
Aug 2022 - May 2024	**Dean's List** Issued by WashU	St. Louis, MO
2021	**Honorable Judge Award, 9th Cloud Programming World Cup** Issued by Forum 8	Tokyo, Japan
2020 - 2022	**Full Silla Scholarship** Issued by Sillaholdings	Seoul, South Korea

Professional Societies

Sep 2024 - present	**Society for Industrial and Applied Mathematics(SIAM) Graduate Student Member**
Apr 2024 - present	***Tau Beta Pi* Engineering Honor Society**
Oct 2023 - present	**Institute of Electrical and Electronics Engineers(IEEE) Student Member**

Research Mentorship

Jan 2025 - Present	**Dijkstra Liu** WashU Undergraduate Research	St. Louis, MO
Jan 2025 - Present	**Ran Duan** WashU Undergraduate Research	St. Louis, MO
Oct 2024 - Present	**Emily Zeiberg** WashU Master Research	St. Louis, MO
Aug 2024 - Present	**Jason Zhao** WashU Undergraduate Research	St. Louis, MO

Teaching Experiences

Jan 2023 - Dec 2023	**CSE 247 Data Structure and Algorithm, WashU** Teaching Assistant	St. Louis, MO

Military Service

Feb 2017 - Nov 2018	**Republic of Korea Army** Sergent & Company Signaller & Barber	Gangwon, South Korea

May 23, 2025