Chicago Y. Park

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EDUCATION

2024 - Present	**Washington University in St. Louis (WashU)** PhD Candidate in Computer Science	St. Louis, MO
2022 - 2024	**WashU** BS in Computer Science *summa cum laude*	St. Louis, MO

RESEARCH EXPERIENCES

May 2024 - Aug 2024	**Los Alamos National Laboratory** Research Intern - Advisor: Dr. Michael T. McCann, Dr. Brendt Wohlberg, and Dr. Cristina Garcia-Cardona	Los Alamos, NM
Jul 2022 - May 2024	**Computational Imaging Group (CIG) at WashU** Undergrad. Researcher & 2023 Summer Research Intern - Advisor: Prof. Ulugbek S. Kamilov	St. Louis, MO
Jun 2020 - Dec 2021	**Intelligent and Interaction Lab at Kookmin University** Undergrad. Researcher & Lab Leader - Advisor: Prof. Sang Hun Lee	Seoul, South Korea

PUBLICATIONS

PREPRINT

1. **Chicago Park**, Yuyang Hu, Michael T. McCann, Cristina Garcia-Cardona, Brendt Wohlberg, and Ulugbek S. Kamilov. "Plug-and-Play Priors as a Score-Based Method," *arXiv:2412.11108, 2024.*

   • 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.

2. **Chicago 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.

JOURNAL PAPERS

3. **Chicago Park***, Weijie Gan*, Zihao Zou, Yuyang Hu, Zhixin Sun and Ulugbek S. Kamilov. "Efficient 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.

CONFERENCE PAPERS

4. **Chicago 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.

5. **Young Il Park**, Hyun Jae Lee and Sang Hun Lee*, "Estimation of Lateral Distances between Vehicles and Lane Markers Using Sensor Fusion and Deep Neural Networks," *The Korean Society of Automotive Engineers 2021 annual autumn conference and exhibition*, Yeosu, Nov 17-20, 2021.

• TL;DR: Paper proposes a new metric, lateral distance between vehicles and lanes, and introduces a deep neural network-based sensor fusion technique to measure it for autonomous vehicles.

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**

Mentorship

Jan 2025 - Present   **Dijkstra Liu**   St. Louis, MO
WashU Undergraduate research

Jan 2025 - Present   **Ran Duan**   St. Louis, MO
WashU Undergraduate research

Oct 2024 - Present   **Emily Zeiberg**   St. Louis, MO
WashU Master research

Aug 2024 - Present   **Jason Zhao**   St. Louis, MO
WashU Undergraduate research

Teaching Experiences

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

Military Service

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

March 13, 2025