

Jaejin Cho

Personal Details

Position Assistant Professor
Affiliation Sejong University
Department of Artificial Intelligence and Robotics

Research Interests

Machine Learning network design, manifold learning, self-supervised learning, physics-informed learning, noise2noise, segmentation
Medical Imaging image reconstruction, MRI physics, diffusion MRI, sequence design, parallel imaging, quantitative imaging

Experience

Sejong University Seoul, Korea
Assistant Professor at Dept of AI and Robotics Mar. 2024 – Current

Athinoula A. Martinos Center for Biomedical Imaging Boston, MA, USA
Massachusetts General Hospital (MGH) / Harvard Medical School (HMS)
Research Fellow Nov. 2018 – Jan. 2024

- *Principal Investigator: Dr. Berkin Bilgic*
- *Role: To develop neural networks for rapid MRI acquisition*

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, Korea
M.S. & Ph.D. in Dept of Electrical Engineering Mar. 2012 – Feb. 2019

- *Academic Advisor: Dr. HyunWook Park*
- *Ph.D. Thesis: Water-Fat Separated Image Reconstruction for Bipolar Multi-Echo Gradient Recalled Echo Imaging in MRI*
- *M.S. Thesis: Off-resonance Artifact Reduction Using the Echo-time Encoding Technique in MRI*

Korea University Seoul, Korea
B.S. in Dept of Electrical Engineering Mar. 2008 – Feb. 2012

Other Experience

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| <i>Invited Lecture</i> | ISMRM 2022 Conference Educational Lecture – <i>Diffusion Artifact and Correction</i> |
| <i>Moderator</i> | ISMRM-endorsed Workshop (2021) – <i>MRI Acquisition and Reconstruction</i> |
| <i>Review service</i> | Magnetic Resonance in Medicine / Medical Physics / IEEE Transactions on Computational Imaging / Sensors |

Honors

- Editor's Choice Articles – Bioengineering Journal, Special Issue - AI in MRI: Frontiers and Applications
- ISMRM Merit Award – Summa cum laude, 2016 (top 5% review score, first author)
- ISMRM Merit Award – Magna cum laude, 2015 (top 15% review score, first author)
- National Science and Engineering Scholarship – Korea Student Aid Foundation, 2010-2011

Selected Publications

1. **Jaejin Cho**[†], Borjan Gagoski[†], Taehyung Kim, Fuyixue Wang, Daniel Nico Splitthoff, Wei-Ching Lo, Wei Liu, Daniel Polak, Stephen Cauley, Kawin Setsompop, P. Ellen Grant, Berkin Bilgic, "Time-efficient, High Resolution 3T Whole Brain Quantitative Relaxometry using 3D-QALAS with Wave-CAIPI Readouts". *Magnetic Resonance in Medicine* 91.2 (2024): 630-639. <https://doi.org/10.1002/mrm.29865>
2. **Jaejin Cho**, Yohan Jun, Xiaoqing Wang, Caique Kobayashi, and Berkin Bilgic. "Improved Multi-Shot Diffusion-Weighted MRI with Zero-Shot Self-Supervised Learning Reconstruction" *Medical Image Computing and Computer Assisted Intervention – MICCAI 2023. Lecture Notes in Computer Science*, vol 14220. Springer, Cham. https://doi.org/10.1007/978-3-031-43907-0_44
3. **Jaejin Cho**, Borjan Gagoski, Taehyung Kim, Qiyuan Tian, Stephen Robert Frost, Itthi Chatnuntawech, and Berkin Bilgic. "Wave-Encoded Model-based Deep Learning for Highly Accelerated Imaging with Joint Reconstruction." *Bioengineering* 9.12 (2022): 736. <https://doi.org/10.3390/bioengineering9120736>
4. **Jaejin Cho**, Congyu Liao, Qiyuan Tian, Zijing Zhang, Jinmin Xu, Wei-Ching Lo, Benedikt A. Poser et al. "Highly Accelerated EPI with Wave Encoding and Multi-shot Simultaneous Multi-Slice Imaging." *Magnetic Resonance in Medicine* 88.3 (2022): 1180-1197. <https://doi.org/10.1002/mrm.29291>