



Biography. Hi! I am an Assistant Professor of Radiology at the [Martinos Center](#), Harvard Medical School (supported by a NIH K99/R00 Career Development Award) and Research Affiliate with the Computer Science and Artificial Intelligence Lab ([CSAIL](#)) at the Massachusetts Institute of Technology, where I design novel computational imaging methods for radiology. Previously, I was a Postdoctoral Scholar in the Department of Electrical Engineering, [Stanford University](#), where I worked on computational imaging and model compression. I received my PhD in electrical engineering from the University of New South Wales, Sydney, NSW, Australia. My research expertise lies in the design of novel methods for computational imaging and, in particular, 3D image reconstruction and related inverse problems in medical imaging. I received the 2018 Australian Pattern Recognition Society (APRS)'s best paper award for my work on "fast optical flow extraction from compressed video".

Research Statement. I seek to improve healthcare outcomes by making fundamental contributions to the science of computational radiology. Examples of computational radiology problems I have solved include accurate MRI of moving subjects from a single MR slice stack; registration of medical images of different contrast to deci-voxel accuracy; and supervised image reconstruction with few labeled images. Coming from an imaging and signal processing background, I am also interested in solving more general computational imaging problems in hopes that the developed techniques will find use in radiology one day. Examples of computational imaging problems I have solved include 100x faster motion estimation using filtering; non-line-of-sight surface reconstruction using Cholesky–Wiener filtering; and 30x smaller convolutional neural networks using transform quantization for real-time imaging. Continue reading [here](#).

Teaching and Diversity Statements. These can be found [here](#), and [here](#).

Latest News

- Oct 26, 2025 My work "3D computational neuroimaging via slab photography and deep learning" is to be published soon. Check back [here](#) for the preprint.
- Jun 14, 2025 My work "Foundations of large language model compression. Part 1: weight quantization" has been presented at [ICML 2025](#). Preprint is available [here](#).
- May 17, 2024 A bunch of us were invited to present in [Randy Buckner](#)'s group. We had fun! I presented my CVPR work "Fully convolutional slice-to-volume reconstruction for single-stack MRI".
- Feb 26, 2024 I'll be presenting my work "Fully convolutional slice-to-volume reconstruction for single-stack MRI" at [CVPR 2024](#). Come check out our [poster](#) in the Thursday AM session!
- Jan 16, 2024 I'll be giving an invited talk "Efficient methods for computational radiology and imaging" at Cornell next week. Thanks [Mert Sabuncu](#) for the invite! Talk slides can be found [here](#).
- Dec 12, 2023 Our work on the reconstruction of dissection photographs for 3D neuropathology (led by [Harshvardhan Gazula](#)) has been accepted for publication in eLife. See more [here](#).
- Oct 6, 2023 I am coorganizing the first edition of the Auckland–Boston Workshop on Medical Imaging at the Auckland Bioengineering Institute. The registration link can be found [here](#).
- Jun 14, 2023 I'll be presenting my work "Supervision by denoising" at [ICCP 2023](#) (oral). This work will be published in an upcoming issue of the IEEE Trans Pattern Anal Mach Intell.

May 15, 2023 Notice of Award received for the NIH K99/R00 Award [K99AG081493](#) (\$995,000 across 5 years), where I am the sole Principal Investigator. Thanks NIH for the awesome support!

Older news has been archived.