

KATHRYN LAMAR-BRUNO

 <https://katielamar.github.io/>

EDUCATION

University of California, San Diego <i>Bioengineering Doctoral Student</i>	<i>September 2023 - present</i>
University of California, Berkeley <i>Masters of Science Degree in Electrical Engineering Computer Science</i>	<i>August 2022 - May 2023</i>
University of California, Berkeley <i>Bachelor of Arts Degree in Applied Mathematics and Computer Science <u>with Honors</u></i>	<i>August 2017 - May 2022</i>
Pasadena City College <i>Associates of Arts in Engineering and Technology <u>with Honors</u></i>	<i>August 2015 - June 2017</i>
Pasadena City College <i>Associates of Arts in Natural Sciences <u>with Honors</u></i>	<i>August 2015 - June 2017</i>

INTERESTS & SKILLS

Languages:	Python, Java, C, C++, Matlab, LaTeX, LabVIEW, SQL, & RISC-V.
Experience:	RTHawk Research Platform Application Design (HeartVista), MR Pulse Sequence Design (Spinbench).
Interests:	Biomedical Imaging, Biophotonics, Biomedical Signals, Physiological Modeling, Signal Processing Theory, & Stochastic Processes.

RESEARCH EXPERIENCE

UC Berkeley Magnetic Resonance Imaging Research <i>Member of Professor Michael Lustig's Research Lab</i> <i>Associated with Berkeley Artificial Intelligence Research (BAIR)</i>	<i>April 2021 - present</i>
National Science Foundation Research Experience for Undergraduates <i>Summer Undergraduate Program in Engineering at Berkeley Research Fellow</i>	<i>May 2021 - August 2021</i>
Undergraduate Lab at UC Berkeley <i>Physics & Astronomy Lab Manager</i>	<i>June 2020 - May 2021</i>
UC Berkeley Undergraduate Research Apprentice Program <i>Research Apprentice in Professor Waqas Khalid's Lab</i>	<i>January 2020 - May 2020</i>
Undergraduate Lab at UC Berkeley <i>Biophysics Research Lead</i>	<i>August 2019 - May 2020</i>
UC Berkeley Directed Reading Program <i>Selected Undergraduate Participant</i>	<i>January 2018 - May 2018</i>
UCLA Medical Center Care Extender Internship <i>Care Intern</i>	<i>January 2016 - June 2016</i>

SELECTED PRESENTATIONS

Cardiac and Respiratory-Resolved Image Reconstruction with the Beat Pilot Tone.

International Society for Magnetic Resonance in Medicine 2022 Joint Meeting.

📍 London, England, United Kingdom.

Retrospective Motion Correction for Magnetic Resonance Imaging using the Beat Pilot Tone.

UC Berkeley Engineering Research Symposium 2021.

📍 Berkeley, California, United States.

Retrospective Motion Correction for Magnetic Resonance Imaging using the Beat Pilot Tone.

Summer Undergraduate Program in Engineering Research at Berkeley 2021 Poster Session.

📍 Berkeley, California, United States.

The Discrete Laplacian.

UC Berkeley Directed Reading Program 2018 Project Presentations.

📍 Berkeley, California, United States.

The Mechanical Integrator.

Honors Transfer Council of California 2017 Honors Conference.

📍 Irvine, California, United States.

PUBLISHED WORK

Lamar, K. *Respiratory and Cardiac Motion Correction Using the Beat Pilot Tone*. Master's thesis, EECS Department, University of California, Berkeley, May 2023. UCB/EECS-2023-169.

Lamar-Bruno K, Anand S, Lustig M. *Cardiac and Respiratory-Resolved Image Reconstruction using the Beat Pilot Tone*. ISMRM-ESMRMB 2022 Abstract, May 2022.

Lamar, K. *Mechanical Integrator*. HTCC Building Bridges Journal, 5 March 2017.

HONORS THESIS

Lamar-Bruno, K. *Retrospective Motion Correction in Magnetic Resonance Imaging using the Beat-Pilot Tone*.

UC Berkeley Mathematics Honors Program 2022.

WORK EXPERIENCE

UC Berkeley Graduate Student Instructor

Math 1A: Single Variable Calculus

January 2023 - May 2023

UC Berkeley Graduate Student Instructor

BioEng C165: Medical Imaging Signals & Systems

August 2022 - December 2022

UC Berkeley Undergraduate Student Instructor

Math 53: Multivariable Calculus

January 2022 - May 2022

UC Berkeley EECS Academic Student Employee

EECS 16A: Designing Information Devices and Systems 1 Lab Tutor

August 2021 - December 2021

UC Berkeley Residential Life Academic Program

Mathematics Tutor

August 2018 - December 2021

UC Berkeley Student Learning Center
Summer Bridge Apprentice Mathematics Tutor And Grader

May 2018 - August 2018

Pasadena City College Math Success Center
Mathematics Tutor

April 2016 - September 2016

EXTRACURRICULAR

MUSA 74: Transition to Upper Division Mathematics
Course Designer and Instructor

Fall 2019, Spring 2020, Spring 2021

UC Berkeley Mathematics Undergraduate Student Association
Outreach Officer

September 2019- May 2021

Mathematics Undergraduate Student Association
Diversity Officer

August 2018 - December 2018

AWARDS

Sloan Scholar Fellowship
University of California, San Diego

September 2023 - present

International Society for Magnetic Resonance in Medicine Joint Meeting
Selected Abstract & Presenter

May 2022

UC Berkeley Mathematics Honors Program
Honors Program Member

August 2021 - May 2022

UC Berkeley Engineering Research Symposium
Selected Presenter

October 2021

NSF Summer Undergraduate Program in Engineering Research at Berkeley
Research Fellow

May 2021 - August 2021

Pasadena City College Mathematics Honors Scholarship
Scholarship Recipient

August 2017

Honors Transfer Council of California Research Conference
Selected Abstract & Presenter

April 2017