KATHRYN LAMAR-BRUNO

https://katielamar.github.io/

EDUCATION

University of California, San Diego *September 2023 - present*
Bioengineering Doctoral Student

University of California, Berkeley *August 2022 - May 2023*
Masters of Science Degree in Electrical Engineering Computer Science

University of California, Berkeley *August 2017 - May 2022*
Bachelor of Arts Degree in Applied Mathematics and Computer Science with Honors

Pasadena City College *August 2015 - June 2017*
Associates of Arts in Engineering and Technology with Honors

Pasadena City College *August 2015 - June 2017*
Associates of Arts in Natural Sciences with Honors

INTERESTS & SKILLS

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

RESEARCH EXPERIENCE

UC San Diego Graduate Student Researcher *August 2023 - present*
Member of Dr. Thomas Liu's & Dr. Albert Hsiao's labs
Associated with UC San Diego Center for Functional MRI
Associated with UC San Diego Artificial intelligence Data Analytics (AiDA) Lab

UC Berkeley Magnetic Resonance Imaging Research *April 2021 - August 2023*
Member of Professor Michael Lustig's Research Lab
Associated with Berkeley Artificial Intelligence Research (BAIR)

National Science Foundation Research Experience for Undergraduates *May 2021 - August 2021*
Summer Undergraduate Program in Engineering at Berkeley Research Fellow

Undergraduate Lab at UC Berkeley *June 2020 - May 2021*
Physics & Astronomy Lab Manager

UC Berkeley Undergraduate Research Apprentice Program *January 2020 - May 2020*
Research Apprentice in Professor Waqas Khalid's Lab

Undergraduate Lab at UC Berkeley *August 2019 - May 2020*
Biophysics Research Lead

GRANTS, FELLOWSHIPS, & AWARDS

National Institute of Health (NIH) *September 2024 - present*
Ruth L. Kirschstein Institutional National Research Service Award (NIH/NBIB T32 Grant)

UC San Diego Interfaces Graduate Training Program *September 2024 - present*
Trainee in Multi-scale Analysis of Biological Structures and Function

Alfred P. Sloan Foundation *September 2023 - present*
Sloan Scholar Award Recipient & Fellow

Semiconductor Research Corps (SRC) *May 2022 - August 2022*
Research Scholar Fellow

UC Berkeley Mathematics Honors Program *August 2021 - May 2022*
Honors Program Member

NSF Summer Undergraduate Program in Engineering Research at Berkeley *May 2021 - August 2021*
Research Fellow

Pasadena City College Mathematics Honors Scholarship *August 2017*
Scholarship Recipient

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 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.

TEACHING EXPERIENCE

UC San Diego Graduate Instructional Assistant *September 2023 - December 2023*
BENG 135: Biomedical Signals and Systems

UC Berkeley Graduate Student Instructor *January 2023 - May 2023*
Math 1A: Single Variable Calculus

UC Berkeley Graduate Student Instructor *August 2022 - December 2022*
BioEng C165: Medical Imaging Signals & Systems

UC Berkeley Undergraduate Student Instructor *January 2022 - May 2022*
Math 53: Multivariable Calculus

UC Berkeley EECS Academic Student Employee *August 2021 - December 2021*
EECS 16A: Designing Information Devices and Systems 1 Lab Tutor

UC Berkeley Residential Life Academic Program *August 2018 - December 2021*
Mathematics Tutor

UC Berkeley Student Learning Center *May 2018 - August 2018*
Summer Bridge Apprentice Mathematics Tutor And Grader

Pasadena City College Math Success Center *April 2016 - September 2016*
Mathematics Tutor

EXTRACURRICULAR

MUSA 74: Transition to Upper Division Mathematics *Fall 2019, Spring 2020, Spring 2021*
Course Designer and Instructor

UC Berkeley Mathematics Undergraduate Student Association *September 2019- May 2021*
Outreach Officer

Mathematics Undergraduate Student Association *August 2018 - December 2018*
Diversity Officer