

# KATHRYN LAMAR-BRUNO

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

## EDUCATION

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

## INTERESTS & SKILLS

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

## RESEARCH EXPERIENCE

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<b>UC Berkeley Magnetic Resonance Imaging Research</b> <i>Member of Professor Michael Lustig's Research Lab</i> <i>Associated with Berkeley Artificial Intelligence Research (BAIR)</i>	<i>April 2021 - August 2023</i>
<b>National Science Foundation Research Experience for Undergraduates</b> <i>Summer Undergraduate Program in Engineering at Berkeley Research Fellow</i>	<i>May 2021 - August 2021</i>
<b>Undergraduate Lab at UC Berkeley</b> <i>Physics &amp; Astronomy Lab Manager</i>	<i>June 2020 - May 2021</i>
<b>UC Berkeley Undergraduate Research Apprentice Program</b> <i>Research Apprentice in Professor Waqas Khalid's Lab</i>	<i>January 2020 - May 2020</i>
<b>Undergraduate Lab at UC Berkeley</b> <i>Biophysics Research Lead</i>	<i>August 2019 - May 2020</i>

## SELECTED PRESENTATIONS

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*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

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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

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

UC Berkeley Mathematics Honors Program 2022.

## WORK EXPERIENCE

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**UC San Diego Graduate Instructional Assistant**

*BENG 135: Biomedical Signals and Systems*

*September 2023 - December 2023*

**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**

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**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**

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**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*