

# Leticia Mattos Da Silva

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## Education

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Massachusetts Institute of Technology Ph.D. in Computer Science, advised by Justin Solomon	Sept. 2021 – <i>present</i>
Massachusetts Institute of Technology S.M. in Computer Science, advised by Justin Solomon	June 2023
University of California, Los Angeles B.S. in Mathematics <i>cum laude</i>	March 2021

## Research Positions

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Guest Researcher Flatiron Institute, Simons Foundation, New York, NY	Aug. 2024 – <i>present</i>
Pre-Doctoral Researcher Flatiron Institute, Simons Foundation, New York, NY	May – Aug. 2024
Research Scientist Intern Adobe Inc., San Jose, CA (Remote)	May – Aug. 2022
Research Intern Fields Institute for Research in Mathematical Sciences, Toronto, ON (Remote)	July – Aug. 2021
Research Intern Fields Institute for Research in Mathematical Sciences, Toronto, ON (Remote)	July – Aug. 2020
Student Researcher SMALL Research Experience for Undergraduates, Williamstown, MA	June – Aug. 2019

## Honors and Awards

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MathWorks Engineering Fellowship	2024
EECS MathWorks Fellowship	2023
Schwarzman College of Computing Fellowship funded by Google	2022
Google Lime Scholarship <i>semi-finalist</i>	2022
Distinguished Graduate Fellowship in Electrical Engineering and Computer Science	2021
Will Rogers Memorial Scholarship	2021
De Anza Physical Sciences, Mathematics, and Engineering Scholarship	2017

## Publications

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3. [Through The Looking Glass: Mirror Schrödinger Bridges](#) 2024  
Leticia Mattos Da Silva, Silvia Sellán, Justin Solomon  
Under Peer Review
2. [A Framework for Solving Parabolic Partial Differential Equations on Discrete Domains](#) 2024  
Leticia Mattos Da Silva, Oded Stein, Justin Solomon  
ACM Transactions on Graphics
1. [Breaking Good: Fracture Modes for Realtime Destruction](#) 2022  
Silvia Sellán, Jack Luong, Leticia Mattos Da Silva, Aravind Ramakrishnan, Yuchuan Yang, Alec Jacobson  
ACM Transactions on Graphics

## Presentations

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### INVITED TALKS

- Talk Title TBC TBC  
Visual Computing Seminar, MIT
- Talk Title TBC TBC  
Visgraf Seminar, IMPA – Instituto de Matemática Pura e Aplicada
- The Differential Equations Multiverse: From PDE to SDE in Computer Graphics Nov. 2024  
Computational Science & Engineering Community Seminar, MIT
- Towards Broader Parabolic PDE Solvers in Computer Graphics Sept. 2024  
PAB Seminar, The University of Edinburgh, *hosted by Amir Vaxman*
- An Iterative High-Order Method for PDE on Moving Surfaces Aug. 2024  
Geometric Computing Lab, New York University, *hosted by Daniele Panozzo*
- Variational Characterizations of Nonlinear PDE on Geometric Domains May 2024  
The Scientific AI Group, University of Texas at Austin, *hosted by Richard Tsai*

### CONTRIBUTED TALKS

- A Framework for Solving Parabolic PDE on Discrete Domains Nov. 2024  
31st Annual Fall Workshop on Computational Geometry, Tufts University
- A Framework for Solving Parabolic PDE on Discrete Domains July 2024  
SIGGRAPH, Denver, CO
- Log of Heat Equation Nov. 2021  
Graduate Women in Course 6 Research Summit, MIT
- Fracture Harmonics May 2021  
Women in Math Research Night, University of California, Los Angeles
- When Bands Play in Random Matrix Theory Aug. 2019  
Young Mathematicians Conference, Columbus, OH, with Charles Devlin VI

## POSTERS

Perron's Method for the Landau Equation ICMS Workshop, Edinburgh, UK	Sept. 2024
An Iterative High-Order Method for PDE on Moving Surfaces Flatiron Institute, Simons Foundation, New York, NY	Aug. 2024
Solving Parabolic PDE with MATLAB MathWorks Day, MIT	April 2024
Solving Parabolic PDE on Discrete Domains ICERM Workshop <i>PDEs and Geometry: Numerical Aspects</i> , Brown University	March 2024

## Academic Service

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Member of the Graduate Student Advisory Group School of Engineering, MIT	Sept. 2024 – <i>present</i>
Organizer of Special Session on Graduate Admissions Summer Geometry Initiative, MIT	Aug. 2024
Organizer of Admitted Students' DEI Lunch EECS Department, MIT	March 2024
Graduate Applications Reviewer EECS Department, MIT	Jan. 2024
Executive Member of Diversity, Equity, and Inclusion EECS Graduate Student Association, MIT	Jan. 2023 – Dec. 2023
Volunteer for Graduate Recruitment Effort The Society of Hispanic Engineers (SHPE) National Convention, Salt Lake City, UT	Nov. 2023
Disability Justice Council Representative Graduate Student Council, MIT	Sept. 2021 – June 2023
Executive Member of New Student Orientation EECS Graduate Student Association, MIT	Jan. 2022 – Dec. 2022
Student Mentor for the Graduate Assistance Application Program EECS Department, MIT	2021 & 2022
Organizer of Special Session on Graduate Admissions Summer Geometry Initiative, MIT	July 2021
Student Volunteer Eurographics/ACM SIGGRAPH Symposium on Geometry Processing (SGP)	July 2021
Co-organizer of Outreach Program <i>Noches de Ciencias</i> Society of Latino Engineers and Scientists, University of California, Los Angeles	Sept. 2019 – March 2020
Co-organizer of Tutor Training Workshops Math Performance Success Program, De Anza College	Sept. 2017 – June 2018

## Mentoring

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Ayyoob Berhane, Undergraduate Researcher, SuperUROP Scholar, MIT	2024 – 2025
Akshata Tiwari, Undergraduate Researcher, UROP, MIT	2024
Francisco Unai Caja López, Summer Geometry Institute Fellow	2023
Anna Cole Percy, Summer Geometry Institute Fellow	2023
Matheus da Silva Araujo, Summer Geometry Institute Fellow	2023
Hossam Mohamed Saeed Gize, Summer Geometry Institute Fellow	2023
Dora Zhao, Graduate Application Mentee, <i>now at Stanford</i>	2022
Olga Guţan, Graduate Application Mentee, <i>now at CMU</i>	2021

## Teaching Positions

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### SUMMER GEOMETRY INITIATIVE, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Teaching Assistant	Summer 2023
Progressive Mesh Compression, <i>supervised by Paul Kry</i>	

### COURSES AT THE UNIVERSITY OF CALIFORNIA, LOS ANGELES

Instructor	Summer 2019 & 2020
First-Year Engineering Transition Bridge: Differential and Integral Calculus	
Teaching Assistant	Fall 2019
Introduction to Engineering Disciplines	

### COURSES AT DE ANZA COLLEGE

Teaching Assistant	Fall 2016 – Spring 2018
Intermediate Algebra, Precalculus, Integrated Statistics	