

Leticia Mattos Da Silva

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Education

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

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

Oberwolfach Leibniz Graduate Student (OWLG)	2025
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

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

INVITED TALKS

- Title TBC April 2025
Visual Computing Seminar, MIT
- Title TBC March 2025
Visgraf Seminar, IMPA – Instituto de Matemática Pura e Aplicada
- Tackling Nonlinear and Nonconvex Challenges with Geometric Algorithms Feb. 2025
Computer Graphics Seminar, ISTA, *hosted by Samara Ren*
- Geometric Algorithms, Stochasticity and the Fokker-Planck Equation Feb. 2025
Oberwolfach Workshop *Mathematical Imaging and Surface Processing*
- 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 Sept. 2024
ICMS Workshop, Edinburgh, UK

An Iterative High-Order Method for PDE on Moving Surfaces Aug. 2024
Flatiron Institute, Simons Foundation, New York, NY

Solving Parabolic PDE with MATLAB April 2024
MathWorks Day, MIT

Solving Parabolic PDE on Discrete Domains March 2024
ICERM Workshop *PDEs and Geometry: Numerical Aspects*, Brown University

Academic Service

Member of the Graduate Student Advisory Group Sept. 2024 – *present*
School of Engineering, MIT

Organizer of Special Session on Graduate Admissions Aug. 2024
Summer Geometry Initiative, MIT

Organizer of Admitted Students' DEI Lunch March 2024
EECS Department, MIT

Graduate Applications Reviewer Jan. 2024
EECS Department, MIT

Executive Member of Diversity, Equity, and Inclusion Jan. 2023 – Dec. 2023
EECS Graduate Student Association, MIT

Volunteer for Graduate Recruitment Effort Nov. 2023
The Society of Hispanic Engineers (SHPE) National Convention, Salt Lake City, UT

Disability Justice Council Representative Sept. 2021 – June 2023
Graduate Student Council, MIT

Executive Member of New Student Orientation Jan. 2022 – Dec. 2022
EECS Graduate Student Association, MIT

Student Mentor for the Graduate Assistance Application Program 2021 & 2022
EECS Department, MIT

Organizer of Special Session on Graduate Admissions July 2021
Summer Geometry Initiative, MIT

Student Volunteer July 2021
Eurographics/ACM SIGGRAPH Symposium on Geometry Processing (SGP)

Co-organizer of Outreach Program *Noches de Ciencias* Sept. 2019 – March 2020
Society of Latino Engineers and Scientists, University of California, Los Angeles

Co-organizer of Tutor Training Workshops Sept. 2017 – June 2018
Math Performance Success Program, De Anza College

Mentoring

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 Guțan, Graduate Application Mentee, <i>now at CMU</i>	2021

Teaching Positions

COURSES AT MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Teaching Assistant	Fall 2025
Applied Numerical Algorithms	

SUMMER GEOMETRY INITIATIVE

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	