



Erick Jimenez Berumen

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EDUCATION

Boston University <i>Ph.D Computer Science</i>	2023–Present
California Institute of Technology <i>B.S. Applied and Computational Mathematics</i>	2019–2023
City Honors College Preparatory High School (Dual Enrollment at El Camino College) <i>High School Diploma</i>	2015–2019

RESEARCH EXPERIENCE

Caltech Summer Undergraduate Research Fellowship (SURF) <i>Research Fellow</i>	Summer 2022
<ul style="list-style-type: none">Implemented Tri-partitions and Bases of an Ordered Complex by Edelsbrunner and Ölsboöck (2021) advised by Prof. Peter Schröder	
MIT Summer Geometry Initiative (SGI) <i>Research Fellow</i>	Summer 2021
<ul style="list-style-type: none">Singularity-Free Frame Fields on Pixel Domains advised by Prof. Mikhail Bessmeltsev and Prof. Edward ChienJoints for Elastic Strips advised by Christian HafnerSubdivision Surface Fitting advised by Paul Zhang	

TEACHING EXPERIENCE

CS 179: GPU Programming <i>Undergraduate TA</i>	Spring 2023
<ul style="list-style-type: none">Led bi-weekly recitation lectures on various topics in GPU Programming in CUDA.Held weekly office hours providing personalized assistance on various programming assignments.	
CS 177: Discrete Differential Geometry <i>Undergraduate TA</i>	Winter 2023
<ul style="list-style-type: none">Graded problem sets and held weekly office hours on various topics in Discrete Differential Geometry (Exterior Calculus, Conformal Maps for Surface Parameterization, Mean Curvature Flow, etc.)	
CS 171: Introduction to Computer Graphics <i>Undergraduate TA</i>	Fall 2023
<ul style="list-style-type: none">Led bi-weekly recitation lectures on selected topics within Computer Graphics (Fundamentals of Geometry Processing, Energy-conserving Physics Simulation, Ray Tracing).Held weekly office hours providing personalized assistance on various programming assignments.	

PUBLICATIONS

Gutan, Olga, Shreya Hegde, **Erick Jimenez Berumen**, Mikhail Bessmeltsev, and Edward Chien (2023). “Singularity-Free Frame Fields for Line Drawing Vectorization”. In: Computer Graphics Forum 42.5

Mitra, Rahul, **Erick Jimenez Berumen**, Megan Hofmann, and Edward Chien (2024). “Singular Foliations for Knit Graph Design”. In: ACM SIGGRAPH 2024 Conference Proceedings, pp. 1–9.

AWARDS

Boston University Dean’s Fellowship	Fall 2023
Questbridge National College Match Scholarship	Spring 2019
<ul style="list-style-type: none">Full four-year scholarship for low-income students from underrepresented backgrounds.1 of 6 studented matched to Caltech in 2019.	