Edgar Jaramillo Rodriguez

Curriculum Vitae

University of California, Davis
Department of Mathematics
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Education

In progress	**Ph.D., Mathematics**, *University of California, Davis*, Advisor: Dr. Jesus De Loera.
2021	**M.S., Mathematics**, *University of California, Davis*.
2018	**B.A., Applied Mathematics**, *University of California, Berkeley*.

Publications

Journal Articles
[1] N. Benjamin, G. Fickes, E. Fiorini, **E. Jaramillo Rodriguez**, E. Jovinelly, and T.W.H. Wong, "Primes and Perfect Powers in the Catalan Triangle," Journal of Integer Sequences, Vol. 22 (2019), Issue 7, Paper 6

Pre-Prints   TBA

Conference Papers
[1] S. D. Han, **E. Jaramillo Rodriguez** and J. Yu, "SEAR: A Polynomial- Time Multi-Robot Path Planning Algorithm with Expected Constant-Factor Optimality Guarantee," 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2018, pp. 1-9.

Professional Experience

2020	**NSF Mathematical Sciences Graduate Research Internship** , *Lawrence Berkeley National Lab*, Mentor: Dr. Nicole Sanderson.
2017	**Research Experience for Undergraduates**, *Center for Discrete Math and Theoretical Computer Science at Rutgers University*, Mentor: Dr. Jingjin Yu.
2016	**Research Experience for Undergraduates**, *Muhlenberg College*, Mentor: Dr. Eugene Fiorini.

Teaching Experience

Teaching Assistant
Math 21B: Integral Calculus, Spring 2021, UC Davis. Lead Instructor: Dr. Ben Morris.

Math 22A: Linear Algebra, Winter 2021, UC Davis. Lead Instructor: Dr. David Marsico.

Math 21A: Differential Calculus, Fall 2020, UC Davis. Lead Instructor: Dr. Daniel Martin.

Math 54: Linear Algebra, Fall 2017, UC Berkeley. Lead Instructor: Dr. Michael Hutchings.

Classroom Aid
Martin Luther King Jr Middle School, Fall 2015, Berkeley, CA. Lead Instructor: Jay Cohen.

Mentoring Experience

2021   **Directed Reading Program Mentor**, *UC Davis.*

- **DRP Mentor**, *Led two undergraduate students in a directed reading program in mathematical optimization. I was responsible for creating the syllabus, compiling reading materials, producing exercises to guide readings, and facilitating discussions. Topics covered: Linear Regression/ Ordinary Least Squares, Ridge Regression, LASSO regression, Singular Value Decomposition/ Principle Component Analysis, and implementations of these methods in Python for applications to predicting home prices and image compression.*

2015-2017   **Bridging Berkeley Program Director**, *UC Berkeley Public Service Center.*

- **Program Director**, *Bridging Berkeley is a math mentoring program that matches UC Berkeley work-study students and volunteers with Berkeley middle school youth, especially those who will be first-generation college students. As director, I oversaw a team of roughly 30 mentors and 100 mentees while also mentoring a number of students myself.*

Fellowships, Awards, and Nominations

2018-2020   Eugene Cota Robles Graduate Fellowship, UC Davis

Presentations

2021   Seminar Speaker, "Coupon Collecting, Bird Watching, and other Chronological Sampling Activities: A Random Interval Graph Model", **Graduate Student Research Seminar**, UC Davis Mathematics (April 1, 2021).

2016   Poster Presentation, "Unique Integers on the Catalan Triangle", **Young Mathematicians Conference 2016**, The Ohio State University (August 20, 2016).

Skills

Computer Skills   Expertise in Python, SQL, Git, Microsoft Office, LaTeX. Proficiency in Sage, Matlab, GDScript.

Languages   Fluency: English and Spanish. Proficieny: French.