

# 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 **Masters of Science, Mathematics**, *University of California, Davis*.  
2018 **Bachelor of Arts, 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.

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## Mentoring Experience

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

- **DRP Mentor**, Lead two undergraduate students through 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.

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## Fellowships, Awards, and Nominations

2018-2020 Eugene Cota Robles Graduate Fellowship, UC Davis

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## 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).

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## Skills

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

Languages Fluency: English and Spanish. Proficiency: French.