

Diego Antonio Rojas

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Education

- Ph.D. Major in Mathematics, Minor in Computer Science, Iowa State University, Ames, IA, May 2022.
Dissertation Title: *Effective convergence in computable measure theory*.
- B.S. Major in Mathematics and Physics, *summa cum laude*, University of Florida, Gainesville, FL, May 2017.

Appointments, Awards, Fellowships, and Honors

- Visiting Assistant Professor, Sam Houston State University, 2024-2025
Postdoctoral Instructor of Mathematics, University of Dallas, 2022-2024
Iowa State University Teaching Excellence Award, 2021
Wolfe Summer Research Fellow, 2021
National Science Foundation Graduate Research Fellow, 2017-2022

Publications

- D. Rojas, *Effective weak and vague convergence of measures on the real line*, Archive for Mathematical Logic, **63** (2024), no. 1, pp. 225-238
- T. McNicholl and D. Rojas, *Effective notions of weak convergence of measures on the real line*, Information and Computation, **290** (2023), p. 104997
- D. Cenzer and D. Rojas, *Online computability and differentiation in the Cantor space*, Sailing Routes in the World of Computation: Proceedings of the 14th Conference on Computability in Europe, Lecture Notes in Computer Science, **10936** (2018), Springer, pp. 136-145.

Works in Progress

- D. Rojas, *Effective weak convergence and tightness of measures in computable Polish spaces*, preprint available at <https://arxiv.org/abs/2410.21609>

Refereed Presentations

- Effective tightness of measures and Prokhorov's Theorem*, International Conference on Computability, Complexity and Randomness, Nagoya, Japan, March 2024.
- Computability of weak convergence of measures on the real line*, Computability and Complexity in Analysis, Munich, Germany (Virtual), July 2021.
- Online computability and differentiation in the Cantor space*, Computability in Europe, Kiel, Germany, August 2018.

Invited Presentations

- How strong is Prokhorov's theorem in probability theory?*, Pennsylvania State University Logic Seminar, University Park, PA (Virtual), October 2024.
- Effective weak convergence in computable metric spaces*, Iowa Colloquium on Information, Complexity, and Logic, Des Moines, IA, May 2023.
- Effective vague convergence of measures on the real line*, Southeastern Logic Symposium, Gainesville, FL, March 2022.
- Effective vague convergence of measures on the real line*, Midwest Computability Seminar, Chicago, IL (Virtual), October 2021.
- Effective notions of weak convergence of measures on the real line*, Joint Annual Conference of the German and Austrian Mathematical Societies, Passau, Germany (Virtual), September 2021.
- Toward an effective theory of weak convergence of measures*, Southeastern Logic Symposium, Gainesville, FL (Virtual), February 2021.
- Online computability and differentiation in the Cantor space*, Southeastern Logic Symposium, Gainesville, FL, March 2018.

Conferences Attended

- Joint Mathematics Meetings, Seattle, WA, January 2025
- American Mathematical Society Fall Central Sectional Meeting, San Antonio, TX, September 2024
- CBMS Conference on Algorithmic Fractal Dimensions, Des Moines, IA, May 2024
- Association for Symbolic Logic North American Annual Meeting, Ames, IA, May 2024
- Iowa Colloquium on Information, Complexity, and Logic Summer Research Conference, Des Moines, IA, May 2024
- International Conference on Computability, Complexity and Randomness, Nagoya, Japan, March 2024
- Iowa Colloquium on Information, Complexity, and Logic Summer Research Conference, Des Moines, IA, May 2023
- Association for Symbolic Logic North American Meeting, Ithaca, NY, April 2022
- Southeastern Logic Symposium, Gainesville, FL, March 2022
- Midwest Computability Seminar, Chicago, IL (Virtual), October 2021
- Joint Annual Conference of the German and Austrian Mathematical Societies, Passau, Germany (Virtual), September 2021
- Computability and Complexity in Analysis, Munich, Germany (Virtual), July 2021
- Southeastern Logic Symposium, Gainesville, FL (Virtual), February 2021
- Association for Symbolic Logic North American Meeting, Irvine, CA (Virtual), May 2020
- Joint Mathematics Meetings, Baltimore, MD, January 2019
- Computability in Europe, Kiel, Germany, August 2018
- Association for Symbolic Logic North American Meeting, Macomb, IL, May 2018
- Southeastern Logic Symposium, Gainesville, FL, March 2018

Research Workshops Attended

- Broadening Participation: MPS Workshop for New Investigators, National Science Foundation (Laura Blecha, University of Florida Content Organizer), July 2024.
- A Convergence of Computable Structure Theory, Analysis, and Randomness Workshop, Banff International Research Station (Johanna Franklin, Hofstra University Facilitator), March 2023.

Teaching Experience

Visiting Assistant Professor, Sam Houston State University, Huntsville, TX

Taught the following courses:

- *Mathematics for Managerial Decision Making*, Fall 2024;
- *Precalculus Algebra*, Fall 2024

Fully responsible for all instruction and grading in these courses.

Postdoctoral Instructor of Mathematics, University of Dallas, Irving, TX

Taught the following courses:

- *Calculus I*, Fall 2022 and Spring 2023;
- *Calculus II*, Fall 2023 and Spring 2024;
- *Euclidean and Non-Euclidean Geometry*, Fall 2022, Spring 2023, Fall 2023, and Spring 2024;
- *Linear Algebra*, Fall 2022;
- *Topology*, Spring 2023;
- *Probability*, Fall 2023;
- *Theory of Computation*, Spring 2024.

Fully responsible for all instruction and grading in these courses.

Teaching Assistant, Iowa State University, Ames, IA

Led recitation sections for the following courses:

- *Calculus II*, Spring 2022;
- *Calculus III*, Fall 2021;
- *Differential Equations with Laplace Transforms*, Spring 2021.

Responsible for grading in these courses and help students understand material covered in lecture. Also responsible for designing quizzes for *Differential Equations with Laplace Transforms*.

Instructor, Iowa State University, Ames, IA

Taught the following courses:

- *Survey of Calculus*, Fall 2020;
- *Discrete Mathematics for Business and Social Sciences*, Summer 2020.

Fully responsible for all instruction and grading in these courses.

Teaching Workshops Attended

Pathways Precalculus Workshop, Iowa State University (Marilyn Carlson, Arizona State University Facilitator), August 2019.

Service

2024–2025

Lead Coordinator, Sam Houston State Discrete Mathematics Seminar
Peer Reviewer, *Theoretical Computer Science*

2023–2024

Undergraduate Research Mentor (Student: Lucas Rodriguez), University of Dallas
Assistant Coach, University of Dallas Rugby Football Club

2022–2023

Assistant Coach, University of Dallas Rugby Football Club

2021–2022

Graduate Peer Mentor

Technology Coordinator, Iowa State Logic Seminar

2020–2021

Graduate Peer Mentor

2019–2020

Graduate Peer Mentor

2018–2019

Graduate Peer Mentor

Judge, MAA Undergraduate Poster Session at the Joint Mathematics Meetings.

2017–2018

Panelist, *Funding Your Graduate Education* Webinar, University of Florida.

Languages

English, C2

Spanish, C2

Portuguese, C1

French, B2

Professional and Honor Societies

American Mathematical Society

Association for Symbolic Logic

Pi Mu Epsilon