

Java Darleen Villano

✉ javavill@uconn.edu 🌐 javavillano.crd.co

Academic positions

University of Connecticut *Graduate Student* 2019-2025

Education

University of Connecticut *Ph.D. Mathematics* 2019-2025

- **Advisers:** David Reed Solomon and Damir D. Dzhafarov
- **Dissertation Title:** Computable Categoricity, and Topology in Reverse Mathematics

University of California, Berkeley *B.A. Mathematics with Logic Minor* 2015-2019

Research interests

Branches of computability theory, such as computable structure theory, algorithmic randomness, and reverse mathematics

Publications

The Ginsburg–Sands theorem and computability theory May 2024

Benham, H., DeLapo, A., Dzhafarov, D., Solomon, R., Villano, J.D.

Advances in Mathematics [🔗](#)

Preprints

Computable categoricity relative to a c.e. degree January 2024

Villano, J.D.

[arXiv:2401.06641](#) [🔗](#)

Normality, Relativization, and Randomness December 2023

Calvert, W., Gruner, E., Mayordomo, E., Turetsky, D., Villano, J.D.

[arXiv:2312.10204](#) [🔗](#)

Teaching experience

Primary Instructor *Storrs, CT*

University of Connecticut

2023-2024

- **Fall 2024:** Math 1071Q (Calculus for Business and Economics), 2 sections
- **Spring 2024:** Math 1071Q (Calculus for Business and Economics), 1 section
- **Fall 2023:** Math 1071Q (Calculus for Business and Economics), 2 sections
- **Spring 2023:** Math 1071Q (Calculus for Business and Economics), 2 sections

Teacher Assistant

University of Connecticut

Storrs, CT

2019-2022, 2025

- **Spring 2025:** Math 2110Q (Multivariable Calculus), 3 sections
- **Fall 2022:** Math 1132Q (Calculus II), 2 sections
- **Spring 2022:** Math 1132Q (Calculus II), 2 sections
- **Fall 2021:** Math 1131Q (Calculus I), 2 sections
- **Spring 2021:** Math 1132Q (Calculus II), 2 sections
- **Fall 2020:** Math 1132Q (Calculus II), 2 sections
- **Spring 2020:** Math 1132Q (Calculus II), 2 sections
- **Fall 2019:** Math 1131Q (Calculus I), 2 sections

Conference invitations

ASL North American Annual Meeting <i>New Mexico State University</i> Presentation title: Computable categoricity relative to a degree <i>Upcoming on May 13-16</i>	<i>Las Cruces, NM</i> <i>Spring 2025</i>
Dagstuhl Seminar – Weihrauch Complexity: Structuring the Realm of Non-Computability <i>Schloss Dagstuhl</i>	<i>Wadern, Germany</i> <i>Spring 2025</i>
South Eastern Logic Symposium <i>University of Florida</i> Presentation title: Computable categoricity relative to a degree	<i>Gainesville, FL</i> <i>Spring 2025</i>
Graduate Research Forum <i>University of Connecticut</i> Presentation title: Relativizing computable categoricity	<i>Storrs, CT</i> <i>Spring 2025</i>
The New England Recursion and Definability Seminar <i>Dartmouth College</i> Presentation title: Computable categoricity relative to a c.e. degree	<i>Hanover, NH</i> <i>Fall 2024</i>
Computable Structure Theory and Interactions <i>Technische Universität Wien</i> Presentation title: Computable categoricity relative to a degree	<i>Vienna, Austria</i> <i>Summer 2024</i>
Joint Mathematics Meeting – AMS Special Session on Computable Mathematics: A Session Dedicated to Martin D. Davis Presentation title: Computable categoricity relative to a c.e. degree	<i>San Francisco, CA</i> <i>Spring 2024</i>
A Convergence of Computable Structure Theory, Analysis, and Randomness <i>Banff International Research Station</i>	<i>Banff, Alberta, Canada</i> <i>Spring 2023</i>
AMS New England Graduate Student Conference <i>Brown University</i> Presentation title: Priority arguments	<i>Providence, RI</i> <i>Spring 2022</i>

Contributed presentations

ASL North American Annual Meeting <i>Iowa State University</i> Presentation title: Computable categoricity relative to a c.e. degree	<i>Ames, IA</i> <i>Spring 2024</i>
AMS New England Graduate Student Conference <i>Brown University</i> Presentation titles: Topology in the Reverse Math Zoo; Computable categoricity relative to a c.e. degree	<i>Providence, RI</i> <i>Spring 2024</i>
17th International Conference on Computability, Complexity, and Randomness <i>Nagoya University</i> Presentation title: Computable categoricity relative to a c.e. degree	<i>Nagoya, Japan</i> <i>Spring 2024</i>

Conferences and workshops attended

CBMS Conference – Algorithmic Fractal Dimensions <i>Drake University</i>	<i>Des Moines, IA</i> <i>Spring 2024</i>
Computability and Combinatorics Summer School and Conference <i>UConn Hartford</i>	<i>Hartford, CT</i> <i>Spring 2023</i>
ASL Winter Meeting at the Joint Mathematics Meeting	<i>Boston, MA</i> <i>Spring 2023</i>

Seminar presentations

SIGMA Seminar <i>University of Connecticut</i> Presentation title: The Scott Isomorphism Theorem	<i>Storrs, CT</i> <i>Spring 2025</i>
Online Logic Seminar <i>Southern Illinois University</i> Presentation title: Computable categoricity relative to a degree	<i>Online</i> <i>Fall 2024</i>
SIGMA Seminar <i>University of Connecticut</i> Presentation title: The Ginsburg–Sands theorem and computability theory	<i>Storrs, CT</i> <i>Spring 2024</i>
SIGMA Seminar <i>University of Connecticut</i> Presentation title: Normality and Randomness	<i>Storrs, CT</i> <i>Spring 2024</i>
SIGMA Seminar <i>University of Connecticut</i> Presentation title: Randomness and Hausdorff dimension	<i>Storrs, CT</i> <i>Fall 2023</i>
Connecticut Logic Seminar <i>University of Connecticut</i> Presentation title: Computable categoricity relative to a c.e. degree	<i>Storrs, CT</i> <i>Fall 2023</i>
SIGMA Seminar <i>University of Connecticut</i> Presentation title: When does the existence of an isomorphism imply the existence of a computable isomorphism?	<i>Storrs, CT</i> <i>Fall 2022</i>

Grants and funding

Summer Doctoral Dissertation Fellowship \$2,000 USD	<i>Summer 2024</i>
Predoctoral Fellowship \$7,805 USD	<i>Spring 2024</i>

Outreach

President of the Association of Women in Mathematics <i>University of Connecticut</i>	<i>Storrs, CT</i> <i>2022-2024</i>
Speaker at the Mathematics Continued Conference <i>University of Connecticut</i> The Mathematics Continued Conference seeks to give undergraduate students interested in math an opportunity to learn about graduate school and current research done by graduate students and faculty.	<i>Storrs, CT</i> <i>Fall 2022</i>
Course Tutor for SSS Math Program <i>University of Connecticut</i> Student Support Services (SSS) is a federally funded program at UConn which serves incoming students who are first-generation to college and/or come from communities underserved in higher education.	<i>Storrs, CT</i> <i>Summer 2020</i>

Languages

English <i>Advanced proficiency in reading, writing, and speaking</i>	<i>Second language learned,</i> <i>learned in 2003</i>
Tagalog <i>Intermediate proficiency in reading, writing, and speaking</i>	<i>Native language</i>