

Java Darleen Villano

Curriculum vitae

University of Connecticut, Department of Mathematics
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Academic Positions

2019–2025 **University of Connecticut**, *Graduate Student*.

Education

2019–2025 **Ph.D. Mathematics**, *University of Connecticut*, Storrs, CT.

- **Advisors:** David Reed Solomon and Damir D. Dzhamalov
- **Dissertation:** Computable Categoricity, and Topology in Reverse Mathematics

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

Research Interests

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

Publications

The Ginsburg–Sands theorem and computability theory, Benham, H., DeLapo, A., Dzhamalov, D., Solomon, R., Villano, J.D., *Advances in Mathematics*, vol. 444, article no. 109618, 2024.

Preprints

2024 **Computable categoricity relative to a c.e. degree**, Villano, J.D., submitted.

2023 **Normality, relativization, and randomness**, Calvert, W., Gruner, E., Mayordomo, E., Turetsky, D., Villano, J. D., submitted.

Teaching Experience

2023–2024 **Primary Instructor for Math 1071Q (Calculus for Business and Economics)**, *University of Connecticut*, Storrs, CT.

- **Fall 2024:** Math 1071Q, 2 sections
- **Spring 2024:** Math 1071Q, 1 section
- **Fall 2023:** Math 1071Q, 2 sections
- **Spring 2023:** Math 1071Q, 2 sections

2019-2022 **Teacher Assistant**, *University of Connecticut*, Storrs, CT.

- **Fall 2022**: Math 1132Q (Calculus II)
- **Spring 2022**: Math 1132Q (Calculus II)
- **Fall 2021**: Math 1131Q (Calculus I)
- **Spring 2021**: Math 1132Q (Calculus II)
- **Fall 2020**: Math 1132Q (Calculus II)
- **Spring 2020**: Math 1132Q (Calculus II)
- **Fall 2019**: Math 1131Q (Calculus II)

Conference Invitations

Fall 2024 **The New England Recursion and Definability Seminar**, Dartmouth College, Hanover, NH.

Upcoming on November 17th – Presentation title: Computable categoricity relative to a c.e. degree

Summer 2024 **Computable Structure Theory and Interactions**, Technische Universität Wien, Vienna, Austria.

Presentation title: Computable categoricity relative to a degree

Spring 2024 **Joint Mathematics Meeting**, *AMS Special Session on Computable Mathematics: A Special Session Dedicated to Martin D. Davis*, San Francisco, CA.

Presentation title: Computable categoricity relative to a c.e. degree

Spring 2023 **A Convergence of Computable Structure Theory, Analysis, and Randomness**, *BIRS 5-Day Workshop*, Banff International Research Station, Banff, Alberta, Canada.

Spring 2022 **AMS New England Graduate Student Conference**, Brown University, Providence, RI.

Presentation title: Priority arguments

Contributed Presentations

Spring 2024 **ASL North American Annual Meeting**, Iowa State University, Ames, IA.

Presentation title: Computable categoricity relative to a c.e. degree

Spring 2024 **AMS New England Graduate Student Conference**, Brown University, Providence, RI.

Presentation titles: Topology in the Reverse Math Zoo; Computable categoricity relative to a c.e. degree

Spring 2024 **17th International Conference on Computability, Complexity, and Randomness**, Nagoya University, Nagoya, Japan.

Presentation title: Computable categoricity relative to a c.e. degree

Conferences and Workshops Attended

Spring 2024 **CBMS Conference – Algorithmic Fractal Dimensions**, Drake University, Des Moines, IA.

Spring 2023 **Computability and Combinatorics Summer School and Conference**, UConn Hartford, Hartford, CT.

Spring 2023 **ASL Winter Meeting at the Joint Mathematics Meeting**, Boston, MA.

Summer 2022 **IMS Graduate Summer School in Logic**, National University of Singapore, Singapore.

Seminar Presentations

- Spring 2024 **The Ginsburg–Sands theorem and computability theory**, *SIGMA Seminar*, University of Connecticut, Storrs, CT.
- Spring 2024 **Normality and Randomness**, *SIGMA Seminar*, University of Connecticut, Storrs, CT.
- Fall 2023 **Randomness and Hausdorff dimension**, *SIGMA Seminar*, University of Connecticut, Storrs, CT.
- Fall 2023 **Computable categoricity relative to a c.e. degree**, *Connecticut Logic Seminar*, University of Connecticut, Storrs, CT.
- Fall 2022 **When does the existence of an isomorphism imply the existence of a computable isomorphism?**, *SIGMA Seminar*, University of Connecticut, Storrs, CT.

Grants and Funding

- Summer 2024 **Summer Doctoral Dissertation Fellowship**, \$2,000 USD.
- Spring 2024 **Predoctoral Fellowship**, \$7,805 USD.

Outreach

- 2022-2024 **President of the UConn Chapter of the Association of Women in Mathematics**, *University of Connecticut*, Storrs, CT.
- Fall 2022 **Speaker at the Mathematics Continued Conference**, *University of Connecticut*, Storrs, CT.
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.
- Summer 2020 **Course Tutor for SSS Math Program**, *University of Connecticut*, Storrs, CT.
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.

Languages

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