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. Dzhafarov
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. et al*, *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. et al*, submitted.

Grants and Funding

Summer 2024 **Summer Doctoral Dissertation Fellowship**, $2,000.

Spring 2024 **Predoctoral Fellowship**, $7,805.

Conferences Invited To

Summer 2024 **Computable Structure Theory and Interactions**, Technische Universität Wien, Vienna, Austria.
Upcoming – Presentation title: Computable categoricity relative to a degree

Spring 2024 **The New England Recursion and Definability Seminar**, Dartmouth College, Hanover, NH.
Canceled – Presentation title: Computable categoricity relative to a c.e. 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
I received support from the AMS (American Mathematical Society) to attend.

Spring 2023   **A Convergence of Computable Structure Theory, Analysis, and Randomness**, *BIRS 5-Day Workshop*, Banff International Research Station, Banff, Alberta, Canada.
I received support from BIRS (Banff International Research Station) to attend.

Spring 2022   **AMS New England Graduate Student Conference**, Brown University, Providence, RI.
Presentation title: Priority arguments

▬▬▬▬ Conferences Attended

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

Spring 2024   **ASL North American Annual Meeting**, Iowa State University, Ames, IA.
Upcoming – 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
I received support from the organizers to attend.

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

Spring 2023   **Association of Symbolic Logic Winter Meeting at the Joint Mathematics Meeting**, Boston, MA.
I received support from the ASL (Association of Symbolic Logic) to attend.

Summer 2022   **IMS Graduate Summer School in Logic**, National University of Singapore, Singapore.
I received support from the National University of Singapore to attend.

▬▬▬▬ 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.

Teaching Experience

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

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)

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	*Second language learned, learned in 2003*
Tagalog	Intermediate proficiency in reading, writing, and speaking	*Native language*