

Juan Carlos Ortiz

Education

Fall 2019 - Present

Stanford University, PhD in Mathematics, Stanford, CA.

Expected Completion Date: 2024. I passed my qualifying exams in April 2020.

Selected CS Courses.

Machine Learning (CS 229), Artificial Intelligence (CS 221), The Modern Algorithmic Toolbox (CS 168), Design and Analysis of Algorithms (CS 161).

Selected Math Courses.

Algebraic Geometry 1 and 2 (MATH 216A and B), Symplectic Topology (MATH 257A), Real Analysis 1 and 2 (MATH 205A and B).

Fall 2015 - Spring 2019

Massachusetts Institute of Technology, Bachelor of Science in Mathematics, Cambridge, MA.

GPA: 4.8/5.0. Graduation Date: June 2019.

Selected CS Courses.

Theory of Computation (6.840).

Selected Math Courses.

Theory of Probability (18.175), Graduate Topology Seminar (18.919), Riemann Surfaces (18.116).

Selected Honors

Summer 2015

International Mathematics Olympiad (IMO), Chiang Mai, Thailand.

2015 - Gold Medal. Third ever Mexican participant to achieve this recognition.

Work Experience

Summer 2021

Jane Street - Quantitative Trading Intern, New York City, NY.

Quantitative trading summer intern at Jane Street Capital.

Fall 2019-Present

Teaching Assistant, Stanford, CA.

- Teaching Assistant for Linear Algebra and Multi-Variable Calculus (MATH 51, Winter 2021).
- Course Assistant for Applied Number Theory (MATH 110, Spring 2020).
- Course Assistant for Single-Variable Calculus (MATH 20, Fall 2019)

Skills

Software

Python, C++, L^AT_EX

Languages

Spanish: Native. English: Native level. German: Beginner.

Mathematics Research

Fall 2018

UROP program at MIT, Cambridge, MA.

Mentor: Dr. Matthew Stoffregen.

- Conducted research on the Heegaard-Floer and Lagrangian-Floer homology theories, and their applications to the study of the infinite cobordism group.

Summer 2018

UROP+ program at MIT, Cambridge, MA.

Mentors: Piotr Suwara, Dr. Matthew Stoffregen.

- Conducted research on the Steenrod Square on Khovanov-like knot homologies. The final paper can be found at: <https://math.mit.edu/research/undergraduate/urop-plus/documents/2018/Ortiz.pdf>.

Summer 2017

SPUR program at MIT, Cambridge, MA.

Mentor: Jackson Hance.

- Conducted research in algebraic topology and geometric topology. The final paper can be found at: <https://math.mit.edu/research/undergraduate/spur/documents/2017Ortiz.pdf>.

Summer 2016

REU program at Williams College, Williamstown, MA.

Mentor: Prof. Cesar Silva. **Collaborators:** Madeleine Elyze, Alexander Kastner, Vadim Semenov.

- Conducted research on Ergodic multiplier problems. The final paper can be found at: <https://arxiv.org/pdf/1610.01438.pdf>.