

EDUCATION

- **M.S. in Mathematics (in progress)** 2023-2025
Center for Research in Mathematics (CIMAT)
- **B.S. in Mathematics** 2019-2023
Autonomous University of Chiapas (UNACH)

RESEARCH INTERESTS

- **Algebraic Geometry and Commutative Algebra**, with emphasis on positive characteristic and singularities.
- **Master's Thesis** Supervised by Prof. Luis Núñez-Betancourt and Prof. Javier Carvajal-Rojas.
Title: The Divisor Class Group of Locally Acyclic Cluster Algebras.
 We obtain a description of the divisor class group of locally acyclic cluster algebras over fields of positive characteristic, extending results previously known in characteristic zero. In particular, we show that the torsion coefficients of these algebras are powers of the characteristic of the base field. We also study strong F-regularity under suitable conditions on the base field.
- **Undergraduate Thesis** Supervised by Prof. Aarón Quiñones-Estrella.
Title: Un teorema sobre ideales n -absorbentes.
 The notion of n -absorbing ideals generalizes that of prime ideals, since prime ideals correspond exactly to the case $n = 1$. Several classical properties of prime ideals extend naturally to n -absorbing ideals. In this work, we examine a theorem asserting that the radical of an n -absorbing ideal is contained in the ideal itself.

RESEARCH EXPERIENCE

- **Participant, PASCA 2.0, CIMAT** (May 2026)
 Pan-American School in Commutative Algebra
- **Participant, Notions of Singularity in Different Characteristics, BIRS** (October 2025)
 Research workshop hosted by the Banff International Research Station for Mathematical Innovation and Discovery.
- **Participant, Singularities in Algebra and Geometry, CIMAT** (June 2025)
 Conference honoring Karen E. Smith, with research sessions led by international experts.
- **Participant, Seminario Chichimeca de Álgebra, UA-Zacatecas** (May 2025)
- **Participant, Escuela de Álgebra y Singularidades, CIMAT** (November 2024)
- **Participant, Primera Escuela Temática en Álgebra y Geometría Algebraica, CIMAT** (December 2022)
- **Participant, VII Jornada de Álgebra, UA-Yucatán** (June 2022)

PRIZES AND FELLOWSHIPS

- **Honorable Mention for Undergraduate Thesis**
 Awarded for outstanding undergraduate thesis work.
- **Silver medal, Mathematics Olympiad of Chiapas** (2017)

TEACHING ACTIVITIES

- **Teaching Assistant, Autonomous University of Chiapas** (2021–2022)
 Prepared and graded assignments for undergraduate courses in calculus and algebra.
- **Mathematics Olympiad Coach** (2019–present)
 Coach for secondary and high school students preparing for the Mexican Mathematical Olympiad.