# NÉSTOR FERNANDO DÍAZ MORERA

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## ACADEMIC INTERESTS

Representation Theory: Combinatorics and Algebraic Groups

### **EDUCATION**

## Tulane University, New Orleans, USA

- Ph.D., in Mathematics (expected graduation: 2023).
- Dissertation Topic: Ding Varieties of complexity one and Spherical varieties
- Advisor: Prof. Mahir Bilen Can
  - mcan@tulane.edu

#### Instituto Politécnico Nacional, Ciudad de México, México

- M.S., in Mathematics (2018).
- $\bullet$  Dissertation Topic:  $Q_p$  spaces on hyperbolic Riemann Surfaces
- Advisor: Prof. Luis M. Tovar Sánchez
  - tovar@esfm.ipn.edu

#### Universidad Sergio Arboleda, Bogotá, Colombia

- B.S., in mathematics (2015).
- Dissertation Topic: Complex Structures on Compact Surfaces
- Advisor: Prof. Leonardo A. Cano García
  - lcanog@unal.edu.co

#### Publications and Preprints

1. On Schubert and Ding Varieties of Complexity One (joint with Mahir Can). (in preparation).

## Conferences and Contributed Talks

- 2. Ding and Schubert Varieties. Congreso Nacional Sociedad Matemática Mexicana, Gaudalajara-México, Octubre, 2022 (hybrid-video).
- 1.  $Q_p$  Spaces on Hyperbolic Riemann Surfaces. Encuentro Sociedades de Matemáticas de Colombia y México, Barranquilla, Colombia, June 1, 2018.

<sup>&</sup>lt;sup>1</sup>Updated November 14, 2022

### **Participant**

- 7. Texas Algebraic Geometry Symposium (TAGS). Texas A&M University, College Station, Texas, USA, September-2022.
- 6. Southern Regional Algebra Conference (SRAC). Georgia College & State University, Milledgeville, Georgia, USA, March-2022.
- 5. Combina Texas. Texas A&M University, College Station, Texas, USA, March-2022.
- 4. PRIMA congress. Casa Matemática Oaxaca, Oaxaca, México, August-2017.
- 3. Seminario Interinstitucional "Análisis: Norte-Sur". CINVESTAV-IPN, CDMX-México, November-2016.
- 2. Congreso Nacional de la Sociedad Matemática Mexicana. La Sociedad Matemática Mexicana, Aguascalientes, México, October-2016.
- 1. XIX Congreso Colombiano de Matemáticas. La Sociedad Matemática Colombiana, Barranquillla, Colombia, Juy-2013.

## SEMINAR PRESENTATIONS (EXPOSITORY)

- 5. Ding and Schubert Varieties. Graduate Student Colloquium at Tulane university, USA, Spring 2022.
- 4. A naive Introduction to Affine Schemes. Graduate Student Colloquium at Tulane university, USA, Fall 2021.
- 3. From Differential Geometry to Lie Theory. Graduate Student Colloquium at Tulane university, USA, Fall 2020 (virtual).
- 2. Contar nos hace la vida más fácil. COCITEI, Oaxaca-México, Summer 2020 (virtual-video).
- 1. Manifold and their Applications. Graduate student Seminar at IPN, México, Fall 2018.

#### TEACHING EXPERIENCE

#### Tulane University

- Teaching Assistant, Math 1311 Consolidated Calculus I (Fall 2022)
- Instructor, Math 1100 Probability & Statistic I (Summer 2022)
- Instructor, Math 1150 Long Calculus I (Spring 2022).
- Teaching Assistant, Math 3090 Linear Algebra (Fall 2021).
- Teaching Assistant, Math 1230 Statistics for Scientist (Fall 2019, Spring 2020, Fall 2020, Spring 2021).
- Teaching Assistant, Math 1210 Calculus I (Fall 2018).

### Outreach & Service

- Volunteer in Math For All, a conference on Math Education and Research, NOLA (2021 & 2022).
- President of AMS Student Chapter (2021-2022).

## AWARDS

- Travel Grant for Mathematical Sciences Research Institute (MSRI): Gauge Theory in Geometry and Topology (Virtual School) (2021)
- Summer Research Support from the department of Mathematics, Tulane university (2019-2021)
- The National Council for Science and Technology (CONACYT) scholarship: Master's studies at IPN-México (2016-2018)

#### **SKILLS**

- Languages: Spanish (native), English (proficient).
- **Programming:** Familiar with Python and Sage.
- Formatting: LATEX and Microsoft Office.