

# Antonio J. Torres

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## Personal Details

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## Education

- 2019-2023 **PhD in Mathematics**, Universidad Nacional Autónoma de México (UNAM), Juriquilla, Mexico.  
*Advisor:* Dr. Deborah Oliveros.  
*Thesis:* Ramsey Type Theorems on Simplicial Complex Nerves.
- 2015-2018 **Master in Applied Mathematics**, Universidad Autónoma de San Luis Potosí (UASLP), Mexico.  
*Advisor:* Dr. Gelasio Salazar Anaya.  
*Thesis:* Blowing Circular Sequences to Search for Drawings with Few Crossings.
- 2008-2013 **Bachelor in Applied Mathematics**, Universidad Autónoma de Querétaro (UAQ), Mexico.  
*Advisor:* Dr. Deborah Oliveros.  
*Thesis:* A  $(p, q)$ -problem for Linear and Cyclical Orders.

## Research

- 2021 A Model for Birdwatching and Other Chronological Sampling Activities. *De Loera J.A., Jaramillo-Rodriguez E., Oliveros D., Torres A., The American Mathematical Monthly* (2023), ISSN: 19300972.
- 2021 From Word-Representable Graphs to Altered Tverberg-Type Theorems. *Oliveros D., Torres A., Discret and Computational Geometry*, pending for publication, arXiv preprint, arXiv.2310.08563.
- 2023 On Tverberg Partition Graphs. *Oliveros D., Roldan E., Soberón P., Torres A., SIAM Journal on Discrete Mathematics*, pending for publication, arXiv preprint, arXiv:2111.10038.
- 2024 Counting Vertices on Hyperplane Slices of Polytopes. *De Loera J.A., López-Campos G., Torres A., Soon to be submitted to arXiv.*

## Professional Experience

### Teaching Experience

- 2024-present **Instructor**, University of California Davis, USA  
*Courses:* Mathematics and Computers.
- 2022-2024 **Instructor**, Mexican Mathematics Olympiad, Querétaro Delegation.  
*Courses:* Combinatorics, Geometry (high school level).
- 2018 - 2019 **Instructor**, Universidad Politécnica de Querétaro (UPQ), Mexico.  
*Courses:* Calculus, Mathematical Functions, Linear Algebra.
- 2014 **Instructor**, Universidad Autónoma de Querétaro (UAQ), Mexico.  
*Role:* Advisor for university admission tests.

## Industry Experience

2017 - 2018 **Data Analyst**, Out Helping (Recruiting company), Mexico.  
*Role:* Administration and management of the company's database.

## Visiting Positions

Oct-Dec 2022 **Max Planck Institute**, Leipzig, Germany.  
*Collaborator:* Dr. Erika Roldan Roa.

## Professional Service and Community Outreach

- 2022-2024 Volunteer to prepare participants from the state of Querétaro for the Mexican Mathematics Olympiad.
- 2019-2023 Participant in various outreach events and fairs organized by the National Autonomous University of Mexico (UNAM).
- 2016-2023 Volunteer work to assist senior citizens in obtaining their high school diplomas.
- 2014 Volunteer teaching students of all levels in the community of Loma Bonita, Oaxaca, Mexico, during the teachers' strike.

## Awards

- 2023-2025 Chancellor's Fellows Award.
- 2019-2023 National Scholarship for Graduate Studies, CONAHCYT.

## Conferences and Workshops

### Invited Research Conferences

- Jun 2023 **New Trends from Classical Theorems in Geometry**, CMO Oaxaca and Banff International Research Station, Oaxaca, Mexico
- Jun 2023 **Interplay Between Geometric Analysis and Discrete Geometry**, CMO Oaxaca and Banff International Research Station, Oaxaca, Mexico
- Oct 2019 **Helly and Tverberg Type Theorems, workshop**, CMO Oaxaca and Banff International Research Station, Oaxaca, Mexico

### Speaker

- Jul 2024 **9th Postdoctoral Research Symposium**, UC Davis, Davis, USA
- Apr 2023 **AMS Spring Central Sectional Meeting**, Ohio, USA
- Jul 2022 **Latinx in the Mathematical Sciences Conference**, session chair, Los Angeles, USA
- Oct 2019 **LII National Congress of the Mexican Mathematical Society**, Monterrey, Mexico
- Mar 2018 **XXXIII Víctor Neumann-Lara Colloquium on Graph Theory**, Havana, Cuba
- Oct 2013 **XLV National Congress of the Mexican Mathematical Society**, Mérida, Mexico
- Oct 2012 **XLV National Congress of the Mexican Mathematical Society**, Mexico

### Participant

- Jun 2024 **Recent Progress on Optimal Point Distributions**, ICERM, Providence, USA
- Apr 2022 **XXXVI Víctor Neumann-Lara Colloquium on Graph Theory**, online
- Aug 2021 **Encuentro Nacional de Computación 2021**, online
- Jun 2021 **Latinx Mathematicians Research Community (LMRC)**, online

- Mar 2017 **XXXIII Víctor Neumann-Lara Colloquium on Graph Theory**, San Luis Potosí, Mexico
- Oct 2016 **XLV National Congress of the Mexican Mathematical Society**, Aguascalientes, Mexico
- Nov 2016 **II Winter School in Mathematics**, Oaxaca, Mexico
- Jun 2016 **III Summer School in Combinatorics**, Juriquilla, Querétaro, Mexico
- Oct 2015 **XLV National Congress of the Mexican Mathematical Society**, Hermosillo, Mexico
- Mar 2015 **XXVIII Víctor Neumann-Lara Colloquium on Graph Theory**, Oaxaca, Mexico
- Mar 2013 **XXVIII Víctor Neumann-Lara Colloquium on Graph Theory**, Morelia, Michoacán, Mexico
- Mar 2012 **XXVII Víctor Neumann-Lara Colloquium on Graph Theory**, Tlaxcala, Mexico
- Oct 2011 **XLIV National Congress of the Mexican Mathematical Society**, San Luis Potosí, Mexico
- Mar 2011 **XXVI Víctor Neumann-Lara Colloquium on Graph Theory**, Pachuca, Mexico
- Oct 2009 **XLII National Congress of the Mexican Mathematical Society**, Zacatecas, Mexico

## — Technical Skills

Programming: C++, Python, R, Mathematica

Math editors: LaTeX

O.S: Windows, Linux, macOS

## — Languages

- Spanish
- English