

Nestor Guillen

Department of Mathematics
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[\[Google Scholar link\]](#)

Appoinments

Texas State University

Associate Professor
Assistant Professor

2022 - present
2019 - 2022

University of Massachusetts at Amherst

Associate Professor (on leave)
Assistant Professor

2019 - 2020
2014 - 2019

University of California at Los Angeles

E.R. Hedrick Assistant Adjunct Professor

2011 - 2014

Education

Ph.D. in Mathematics

University of Texas at Austin. Advisor: Luis Caffarelli

December 2010

Licenciado en Matemáticas

Universidad Simón Bolívar (Sartenejas, Venezuela). Advisor: Lázaro Recht

July 2006

Fellowships, grants and awards

NSF CAREER Grant DMS-2144232. Award: \$498,969.00
NSF Research Grant DMS-1700307. Award: \$135,000.00
Visiting Researcher at the *Fields Institute* in Toronto, Canada.
NSF Research Grant DMS-1201413. Award: \$102,000.00
Mathematical Sciences Research Institute, Postdoctoral fellow.
Lefevre Fellowship.
Frank Sid Richardson Foundation Regents Fellowship.

2022-present.
2017-2020.
Fall 2014.
2012-2016.
Spring 2011.
Spring 2009.
Spring 2007.

Editorial

Electronic Journal of Differential Equations

2022-present

Doctoral students

René Cabrera (PhD 2022).
Michaael Boratko (PhD 2018, co-advised with Andrea Nahmod).

UT Austin (postdoc)
Google Deepmind

Selected publications

A complete list of preprints and journal articles can be found in my homepage www.ndguillen.com.

1. **The Landau equation does not blow up**, with L. Silvestre. *Acta Mathematica* (accepted for publication)
2. **A Convex Optimization Framework for Regularized Geodesic Distances**, with M. Edelstein, J. Solomon, and M. Ben-Chen. *SIGGRAPH Conference* (2023).
3. **Pointwise estimates and regularity in geometric optics and other Generated Jacobian Equations**, with J. Kitagawa. *Communications on Pure and Applied Mathematics* (2017).
4. **Estimates for radial solutions of the homogeneous Landau equation with Coulomb potential**, with M. Gualdani. *Analysis and PDE* (2016).
5. **Aleksandrov-Bakelman-Pucci Type Estimates For Integro-Differential Equations**, with R. Schwab. *Archive for Rational Mechanics and Analysis* (2012).

Selected talks (2016-present)

- Computational and Applied Mathematics Colloquium. Pennsylvania State University, February 2025.
- Convexity Seminar. Courant Institute, February 2025.
- Nonlinear Analysis seminar. Rutgers University, February 2025.
- Analysis Seminar. University of Pennsylvania, February 2025.
- Analysis Seminar. Columbia University, October 2024.
- Harmonic Analysis and PDE seminar. CUNY Graduate Center, September 2024.
- Colloquium. University of Texas at San Antonio, March 2024.
- Analysis Seminar. Courant Institute, March 2024.
- Colloquium. University of Arizona, February 2024.
- *ICERM workshop: Optimal Transport in Data Science*. May 2023.
- Partial Differential Equations Seminar. Arizona State University, February 2023.
- Analysis Seminar. UT Austin, January 2023.
- V Escuela sobre Análisis Funcional y Geometría, October 2022.
- *Midwest Geometry Conference*. Plenary speaker. Wichita State University. March 2022.
- *Congreso Latinoamericano de Matemáticos*. (Análisis Funcional y Geometría). September 2021.
- Online Analysis and PDE Seminar¹. Universidad de Sevilla. March 2021.
- Applied Mathematics Seminar. Brown University. February 2019.
- Colloquium. Texas State University. January 2019.
- *Mathematical Congress of the Americas*. Session on Nonlocal variational problems. July 2017.
- Metric Geometry Group Seminar. Tufts University, May 2017.

¹<https://sites.google.com/view/analysis-pde-seminar/main-page>

- Analysis seminar. Massachusetts Institute of Technology, March 2017.
- Analysis Seminar. University of Chicago. October 2016.
- Geometric PDE. University of Wisconsin. March 2016, Madison.

Minicourses taught

- 1st San Marcos Winter School, Texas State University, January 2024.
- Minicourse on Stochastic Homogenization. 2016 Gene Golub Summer School, Philadelphia, July 2016.

Organization of scientific meetings and schools.

- [AIM workshop on kinetic equations](#). Co-organized with Maria Gualdani, Russell Schwab, and Maja Taskovic. To take place April 2025.
- [Texas State and UT Austin Summer School and Workshop on Algorithms and PDE](#). Co-organized with Maria Gualdani, May 2024.
- [San Marcos Winter School](#), mini school held annually at Texas State since January 2024.
- [Recent Progress in Kinetic and Integro-Differential Equations](#), November 2022, Banff International Research Station. Co-organized with Maria Gualdani, Russell Schwab, and Maja Taskovic.
- [Workshop on Free Boundary Problems](#), May 2019, Columbia University. Co-organized with Daniela De Silva, Ovidiu Savin, and Hui Yu.
- [Workshop on Nonlinear PDEs](#), December 2018, Columbia University. Co-organized with Daniela De Silva, Ovidiu Savin, and Hui Yu.
- [Generated Jacobian Equations: from Geometric Optics to Economics](#), April 2017, Banff International Research Station. Co-organized with Jun Kitagawa and Robert McCann.
- [Optimal Transport School, Lake Arrowhead \(October 2013\)](#). Co-organized with Dima Shlyakhtenko and Christoph Thiele.
- SIAM Conference on Analysis of PDE 2011. *Non-local equations: perspectives from Probability and PDEs*. Co-organized with Russell Schwab.
- SIAM Conference on Analysis of PDE 2009. *Topics in fractional and geometric PDE*. Co-organized with Luis Caffarelli.

Selected Service

- (at Texas State) Head writer, proposal for a new mathematics PhD at Texas State. This proposal was submitted to the Texas Higher Education Coordinating Board and the new doctoral program has been approved with a start date of Fall 2025 This was a multiple year effort involving job market analysis, obtaining letters of support from academia and industry, and coordinating curriculum.
- (at Texas State) New PhD Proposal Committee, Chair.
- (at Texas State) Member of: Hiring Committee, Graduate Program Committee, the COVID 2019 pandemic Student Listening Committee, and Committee on Committees.

- (at UMass Amherst) Hiring Committee member (3 searches total between 2014 and 2019), Colloquium committee co-chair, Graduate admissions committee (3 years).
- Editor at the Electronic Journal of Differential Equations.