# Anya Katsevich

Ph.D. Candidate

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## Education

**Courant Institute, New York University**, Ph.D. in Mathematics, expected June 2022.
Advisors: Afonso Bandeira and Jonathan Weare

**University of North Carolina at Chapel Hill**, B.S. in Mathematics with Highest Honors, May 2017.
*Thesis Project*: The hydrodynamic limit of a crystal surface jump diffusion with Metropolis-type rates
*Thesis Advisor*: Jeremy Marzuola.

## Awards

- Department of Energy Computational Sciences Graduate Fellowship (DOE CSGF), 2017-2021
- NSF Graduate Research Fellowship (declined for DOE CSGF)
- Barry Goldwater Scholarship, 2015-2017
- Archibald Henderson Medal, awarded by UNC math dept. for "high degree of mathematical ability and the greatest promise of originality in the field", 2015
- Phi Beta Kappa invitee, 2015
- University of Central Florida Advanced Calculus Award for best performance in advanced calculus sequence, 2013 (classes taken while in high school)

## Research Interests

Applied probability, stochastic analysis, math of data science.

## Preprints

[1] **A. Katsevich.** From local equilibrium to numerical PDE: Metropolis crystal surface dynamics in the rough scaling limit. *Submitted.* Available on arXiv.

[2] **A. Katsevich.** The Local Equilibrium State of a Crystal Surface Jump Process in the Rough Scaling Regime. *Submitted.* Available on arXiv.

# Publications

[1] **A. Katsevich**, A. Bandeira. Likelihood Maximization and Moment Matching in Low SNR Gaussian Mixture Models. *Communications on Pure and Applied Mathematics*, 2021 (to appear). Available on arXiv.

[2] Y. Gao, **A. Katsevich**, J. Liu, J. Lu, J. Marzuola Analysis of a fourth order exponential PDE arising from a crystal surface jump process with Metropolis-type transition rates. *Pure and Applied Analysis*, 2020 (to appear) Available on arXiv.

[3] **A. Katsevich**, P. Mikusiński. On De Graaf spaces of pseudoquotients. *Rocky Mountain J. Math* 45 (5): pp. 1445-1455 (2015). Available on Project Euclid.

[4] **A. Katsevich**, P. Mikusiński. Order in Spaces of Pseudoquotients. *Topology Proceedings* 44: pp. 21-31 (2014). Available from journal.

# Presentations

## *Contributed talks*

- *The Connection between EM and the Method of Moments in Low SNR Gaussian Mixtures.*
  National Meeting of the Sociedade Portuguesa de Matemática (ENSPM), July 12–16, 2021, held virtually.

## *Poster Presentations*

- *Microgrid Reliability under Uncertainty: Static and Dynamic Analysis*
  DOE CSGF Annual Program Review, July 14–18, 2019, in Arlington, VA

Last updated: August 10, 2021