

Giorgio Cialdea

Curriculum Vitae

Personal Informations

Full Name Giorgio Cialdea
Address 251 Mercer St, 610, New York, NY, USA
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Current Position

2022-Current Phd Student in Mathematics, Courant Institute of Mathematical Sciences, NYU.
Advisor: Vlad Vicol

Education

2020-2022 **Master's degree in Mathematics**, *Sapienza University*, Rome, Italy
Graduation Mark: 110/110 cum laude
Thesis Title: Non-uniqueness for the Euler and Navier-Stokes equations
Advisor: Prof. Luca Fanelli and Prof. Emanuele Spadaro

2017-2020 **Bachelor's degree in Mathematics**, *Sapienza University*, Rome, Italy
Graduation Mark: 110/110 cum laude
Thesis Title: The Kakeya conjecture
Advisor: Prof. Luca Fanelli

Publications

3. J. Chen, G. Cialdea, S. Shkoller, and V. Vicol. *A new class of Euler explosions*. arXiv:2606.18152 [math.AP] Submitted, 2026.
2. G. Cialdea, S. Shkoller, and V. Vicol. *Classical Euler flows generate the strong Guderley imploding shockwave*. arXiv:2510.19688[math.AP] Submitted, 2025.
1. J. Chen, G. Cialdea, S. Shkoller, and V. Vicol. *Vorticity blowup in 2D compressible Euler equations*. Duke Mathematical Journal, accepted. arXiv:2407.06455 [math.AP] 2024.

Awards and honors

2026 Peter Lax Fellowship
2025-2027 Simons Dissertation Fellowship
2025 Harold Grad Memorial Prize
2021 International Thesis Scholarship by Sapienza University of Rome to conduct part of my thesis research at BCAM - Basque Center for Applied Mathematics, Bilbao, Spain (Period: February 2022 - May 2022)

- 2020-2021 INdAM fellowship for students enrolled in a Master degree program in Mathematics, by National contest (ranked 2nd)
- 2017-2020 INdAM fellowship for students enrolled in a Bachelor degree program in Mathematics, by National contest (ranked 3rd)
- 2017 Member of the Italian "National Excellence Honour Roll"

Talks

- December 2025 *Classical Euler flows generate the strong Guderley imploding shockwave*, 1° Workshop of young Analysts in Rome, Rome, Italy
- October 2025 *Classical Euler flows generate the strong Guderley imploding shockwave*, Student Analysis Seminar, NYU, New York, USA
- May 2025 *Vorticity blowup in 2D compressible Euler equations*, APDE Seminar, UPV/EHU, Bilbao, Spain
- April 2025 *Vorticity blowup in 2D compressible Euler equations*, Turbulence on the Banks of the Arno, Scuola Normale Superiore, Pisa, Italy
- March 2025 *Vorticity blowup in 2D compressible Euler equations*, Harmonic Analysis and PDE Seminar, CUNY, NY, USA
- January 2025 *Vorticity blowup in 2D compressible Euler equations*, Winter School: Boundary and Singularity in Fluid Mechanics, Simons Center for Geometry and Physics, Stony Brook, NY, USA

Visits

- 2022 **BCAM**, *Internship at BCAM - Basque center for applied Mathematics, Bilbao, Spain (February 21 - May 21)*
- 2021 **UPV/EHU (Universidad del País Vasco, Bilbao, Spain)**, *August 30-September 4*

Teaching Experience

- Spring 2025 **NYU**, *Teaching assistant for Honors II*
- Spring 2025 **NYU**, *Teaching assistant for Honors Analysis II*
- Spring 2024 **NYU**, *Teaching assistant for Analysis*
- Fall 2023 **NYU**, *Teaching assistant for Introduction to Math Analysis*
- 2022 **BCAM**, *10-hours mini course: "Non-uniqueness of weak solutions and existence of dissipative solutions for the Euler equations", 2-6 May*
- 2021 **UPV/EHU (Universidad del País Vasco, Bilbao, Spain)**, *8-hours mini course: "On the implosion of solutions of the Navier-Stokes equations", August 31-September 3*

Languages

- Italian **Mothertongue**
- English **Fluent**