

Marc Nualart Batalla

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731 Huxley Building, Imperial College London, SW7 2AZ, London

Education

- 2020 – Present **PhD in Mathematics**
Imperial College London, UK
Supervised by Dr. Michele Coti Zelati.
- 2019 – 2020 **M.S. in Advanced Mathematics and Mathematical Engineering**
Universitat Politècnica de Catalunya, Spain
- 2015 – 2019 **B.S. in Mathematics**
Universitat Politècnica de Catalunya, Spain

Honors and Awards

- 2023 **Doris Chen Mobility Award**, Imperial College London
Funding to cover a research visit to Prof. Theo Drivas in Stony Brook University
- Évariste Galois Prize**, Catalan Mathematical Society
Award to the best research work in Mathematics for recent MSc graduates in Catalonia
- 2022 **SIAM Student Travel Award**, Society for Industrial and Applied Mathematics
Registration waiver for the 2022 SIAM Conference on Analysis of Partial Differential Equations PD22
- 2020 **Roth Scholarship**, Imperial College London
Competitive scholarship to fund doctoral students during their research
- 2019 **Collaboration Grants Program**
Awarded by Spanish Ministerio de Educación y Formación Profesional to fund young researchers

Publications

4. M. Coti Zelati and M. Nualart. *Limiting absorption principles and linear inviscid damping in the Euler-Boussinesq system in the periodic channel*, submitted (2023).
3. M. Coti Zelati and M. Nualart. *Explicit solutions and linear inviscid damping in the Euler-Boussinesq equation near a stratified Couette flow in the periodic strip*, submitted (2023).

2. M. Nualart. *On zonal steady solutions to the 2D Euler equations on the rotating unit sphere*, *Nonlinearity* **36** (2023), 4981-5006.
1. M. Nualart. *Distributional solutions for damped wave equations*, *Electron. J. Differential Equations* 131 (2020).

Talks at University Seminars

- 2024 University of Cambridge (*Junior Analysis and PDE Seminar*)
- 2023 University of Basel (*Analysis Seminar*)
Stony Brook University (*Analysis Seminar*)
- 2022 University of Cambridge (*Junior Analysis and PDE Seminar*)
Imperial College London (*Junior Analysis Seminar*)

Talks at Conferences

- 2024 Turbulence on the Banks of the Arno (Scuola Normale Superiore Pisa)
- 2023 Fluid Dynamics Summer School (Brin Mathematics Research Center, University of Maryland)
Recent Advances in Mathematical Fluid Mechanics (Duke University)
- 2022 Small scale dynamics in fluid motion (Simons Center for Geometry and Physics, Stony Brook)

Professional Service

- 2023 Co-organizer of the summer school and conference “Stability and dynamics in fluid mechanics and kinetic theory”, Imperial College, London
- 2022 – Present Co-organizer of the Junior Analysis Seminar, Imperial College, London

Research Visits

- 2023 Department of Mathematics, Stony Brook University, USA
Hosted by Theodore D. Drivas (2 weeks)

Teaching experience

2020-Present **Teaching assistant**, Imperial College London
MATH60019 - Theory of Partial Differential Equations
MATH50008 - Partial Differential Equations in Action
MATH50004 - Multivariable Calculus and Differential Equations
MATH500001 - Analysis 2
MATH40004 - Calculus and Applications
MATH40002 - Analysis 1

2019-2020 **Teaching assistant**, Universitat Politècnica de Catalunya
200004 - Differential Calculus
200003 - Fundamentals of Mathematics

Technical skills

Languages

English (fluent), Catalan (mother tongue), Spanish (mother tongue)