

Richard Medina Rodríguez

PH.D. STUDENT · MATHEMATICS

CEREMADE, Université Paris Dauphine - PSL, FRANCE

✉ richard.medina-rodriguez@dauphine.psl.eu | 🏠 <https://richard-medina.github.io/>

Education

University Paris Dauphine - PSL

Paris, France

PH.D. MATHEMATICS

09/2022 - present

- Thesis: Hypocoercivity and geometric confinement
- Advisors: Kleber Carrapatoso & Stéphane Mischler

University Paris Dauphine - PSL

Paris, France

MASTER DEGREE ON APPLIED AND THEORETICAL MATHEMATICS

09/2021 - 06/2022

University of La Habana

La Habana, Cuba

BS MATHEMATICS

09/2016 - 11/2020

- Thesis: Random Schrödinger operators in a 2D scheme
- Advisors: Rita Roldán Inguanzo & Laure Dumaz
- Awarded with the Scientific Merit Award

Professional Experience

2021 **Master Internship**, CEREMADE, University Paris Dauphine - PSL.

2020 - 2021 **Graduate Teaching Assistant**, Dept. of Mathematics, University of La Habana.

2020 **Internship**, CEREMADE, University Paris Dauphine - PSL.

2017 - 2019 **Undergraduate Teaching Assistant**, Dept. of Mathematics, University of La Habana.

Presentations

Oct. 2024. *Constructive Krein-Rutman result for kinetic Fokker-Planck equations in a domain (joint work with P. Gabriel, K. Carrapatoso and S. Mischler)*. Presentation at the Junior Analysis Seminar at Imperial College London, UK.

Oct. 2024. *The Boltzmann equation on C^1 and cylindrical domains near the hydrodynamic limit*. Presentation at the Partial Differential Equations and their Applications Seminar at the University of Warwick, UK.

Jul. 2024. *Constructive Krein-Rutman result for kinetic Fokker-Planck equations in a domain (joint work with P. Gabriel, K. Carrapatoso and S. Mischler)*. Poster presentation on the summer school “Collective behavior and Pattern formation”, At CIRM, Marseille, France.

Jun. 2024. *Constructive Krein-Rutman result for kinetic Fokker-Planck equations in a domain (joint work with P. Gabriel, K. Carrapatoso and S. Mischler)*. Poster presentation on the summer school “Frontiers in Interacting Particle Systems, Aggregation-Diffusion Equations & Collective Behavior”, At CIRM, Marseille, France.

Jun. 2024. *The Boltzmann equation in a cylinder near the hydrodynamic limit*. Conference “Analysis of PDEs in Mathematical Physics”, At University of Bath, UK.

Nov. 2023. *Introduction to the kinetic Fokker-Planck equation and its long-time behaviour*. Young Researchers Seminar, At University Paris Dauphine - PSL, Paris, France.

May. 2023. *Hypocoercivity estimates for some linearized kinetic operators*. Young Researchers Seminar, At University of Lille, France.

Mar. 2023. *Hypocoercivity estimates for some linearized kinetic operators*. Young Researchers Seminar, At University Paris Dauphine - PSL, Paris, France.

Feb. 2023. *'Cause I'll L-ove you to-infinity estimates for the Boltzmann equation*. MAFRAN Days, At King's College, Cambridge, UK.

Jun. 2019. *Fixed points in non-expansive maps*. International Congress COMPUMAT 2019, At La Habana, Cuba.

Mar. 2019. *Extrapolation Methods for Approximating a Fairness Functional*. International Workshop on Operations Research (IWOR), At La Habana, Cuba.

Mar. 2018. *Restriction-based interpolation with cubic A-splines*. International Conference on Operations Research (ICOR), At La Habana, Cuba.

Participation on Conferences, Workshops and Schools

Jul. 2024 **Summer school - Collective behavior and Pattern formation**, At CIRM, Marseille, France.

Jun. 2024 **Research school - Frontiers in Interacting Particle Systems**, At CIRM, Marseille, France.

Nov. 2022 **Research School on Kinetic Theory**, At CIRM, Marseille, France

Jul. 2022 **Conference When Kinetic Theory Meets Fluid Mechanics**, At FIM, ETH Zürich, Switzerland.

Jun. 2019 **CIMPA Research Summer School**, At University of La Habana, Cuba.

Mar. 2019 **III Winter School in Computer Science**, At University of La Habana, Cuba.

Awards, Fellowships & Grants

2022	MathInParis2020 COFUND Fellowship , Fondation de Sciences Mathématiques de Paris	<i>Ph.D. Grant</i>
2021	PSL PhD Track Grant 2021 , University PSL	<i>€ 10,000</i>
2020	Prize to the Scientific Merit 2020 , University of La Habana	

Teaching Experience

Spring 24	Analyse 2 , Assistant Professor	<i>Univ. Paris IX</i>
Fall 2024	Outils Mathématiques , Assistant Professor	<i>Univ. Paris IX</i>
Spring 2021	Analysis of Complex-Valued Functions , Assistant Professor	<i>Univ. Habana</i>
Fall 2020	Introduction to Mathematics , Assistant Professor	<i>Univ. Habana</i>
Fall 2019	Topology , Undergraduate Teaching Assistant	<i>Univ. Habana</i>
Spring 2019	Representation of functions , Undergraduate Teaching Assistant	<i>Univ. Habana</i>
Fall 2018	Analysis of functions of several variables , Undergraduate Teaching Assistant	<i>Univ. Habana</i>
Spring 2018	Analysis of Functions of one real Variable , Undergraduate Teaching Assistant	<i>Univ. Habana</i>
Fall 2017	Introduction to Mathematics , Undergraduate Teaching Assistant	<i>Univ. Habana</i>

Outreach activities

May 2024 **Salon Culture et Jeux Mathématiques**, Volunteer Stand Animator

March 2024 **Math en Jeans 2024**, Volunteer Judge

Skills

Languages. Español (native), English (bilingual proficiency), Français (bilingual proficiency)

Coding. \LaTeX (intermediate level), C# (beginning level), WOLFRAM MATHEMATICA (intermediate level) and PYTHON (intermediate level)

Hobbies. Camping, cycling, hiking, climbing, reading.