

Corentin Le Bihan

27/11/1996

In Post-doctoral position at ULB

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Research Subject

- Analysis of systems of particles in low density limit
- Long time behaviour of system of particle in the mean-field scaling
- Boltzmann equation, Landau equation, Lenard--Balescu equation

Publications

- **2022** *On essential-selfadjointness of differential operators on closed manifolds*, with Y. Colin de Verdière (Annales de la faculté des sciences de Toulouse, Math. (6) 31, No. 5, 1287-1302 (2022), arxiv.org/pdf/2004.06937.pdf)
- **2022** *Boltzmann-Grad limit of a hard sphere system in a box with isotropic boundary conditions*, (Discrete and Continuous Dynamical Systems 42, No. 4, 1903-1932, arxiv.org/pdf/2104.04354.pdf)
- **2022** *Long time validity of the linearized Boltzmann equation for hard spheres: a proof without billiard theory*, (arxiv.org/pdf/2212.04392.pdf, accepted in Archive for Rational Mechanics and Analysis)
- **2023** *The grazing collisions limit from the linearized Boltzmann equation to the Landau equation for short-range potentials*, with R. Winter (Kinetic and Related Models, 16, No. 5, 654-675 (2023), arxiv.org/pdf/2208.14918.pdf)
- **2024** *Long time validity of the linearized Boltzmann uncut-off and the linearized Landau equations from the Newton Law*, (<https://arxiv.org/pdf/2408.03597>)

Research talks

- **March 2023**
Conference "Scaling limits and generalized hydrodynamics", (GSSI, L'Aquila)
- **January 2023**
Seminario di Fisica Matematica (Sapienza Università di Roma)
- **November 2022**
Oberseminar Analysis (University of Bonn)
- **June 2022**
PhD Students Seminar, (ENS Lyon)
- **June 2021**
Team seminar at Basel University
- **October 2020**
Séminaire compréhensible, Institut Fourier (Grenoble)

Position

- **Since 2024**
In post-doctoral position at Université Libre de Bruxelles, under the supervision of Mitia Duerinx (ERC, PASTIS, Grant Agreement n°101075879)

Study

- **2020-2023**
PhD student in mathematic directed by Sergio Simonella
- **2020**
Mathematical Agregation (French national teaching national competition, rank 30)
- **2019-2020**
Long term intership (with Sergio Simonella ENS Lyon and Yves Colin de Verdière at Grenoble)
- **2017-2018**
MS in Mathematics, PDE track at ENS Lyon
- **2016-2017**

- BS in Mathematics at ENS Lyon
- **2016**
Admitted at ENS Lyon
- **2014-2015**
Preparatory classes at Lycée Hoche (Versailles)
- **2014**
Baccalauréat S SI, spé math

Teaching

- **Autumn 2022**
Analysis courses for preparation of the "Agregation" in mathematics, (French teaching national competition)
- **2020-2022**
Oral examination for first year Bachelor students at ENS Lyon
- **Autumn 2020 and 2021**
Exercices tutor in functional analysis
- **2019-2020**
Oral examination for students in first year of preparatory classes (at Lycée du Parc)
- **2015-2016**
Private tutoring for a high school student

Organisational responsibility

- **Autumn 2024**
Coorganisation of the Analysis and PDE seminar of the ULB
- **June 2022**
Organisation of the Very young PDE-ist seminar (one day meeting of PhD students in PDE of UMPA)
- **2019-2023**
Co-organisation of Séminaire de la Détente Mathématique

Summer schools and conferences attended

- **March 2023**
Scaling limits and generalized hydrodynamics, GSSI (L'Aquila)
- **November 2022**
Kinetic theory, CIRM (Marseille)
- **August 2022**
When Kinetic Theory meets Fluid Mechanics, ETH (Zurich)
- **June 2022**
Summer School on fluids and turbulence, ICJ (Lyon)
- **April 2022**
Interactions EDP/Probabilités : interfaces et systèmes de particules, CIRM (Marseille)
- **March 2022**
Journées Jeunes EDPistes, l'ICJ (Lyon)
- **December 2021**
Journées EDP Rhône-Alpes-Auvergne, at St Étienne
- **September 2021**
Large-scale limits of interacting particle systems, IHES (Bures-sur-Yvettes)
- **August 2021**
Mathematical Fluid Dynamics, Cargèse
- **June 2021**
JDR EDP, Obernai

- **November 2019**
Journées EDP Rhône-Alpes-Auvergne, at LAMA (Bourget du Lac)
- **October 2019**
Scaling limits and Kinetic theory, at l'ENS de Lyon

Popularisation activity

- **2019-2023**
Co-organisation of Séminaire de la Détente Mathématique
- **May 2019**
Comity session of Lyon of TFJM²
- **May 2018**
Participation to Math α Lyon exhibition at Lycée Jean-Paul Sartre (near Lyon)

Langages

- French
- English (B2 level, CAE)