Corentin LE BIHAN corentin.le.bihan@ulb.be
27/11/1996 +33 6 81 65 91 31
Post-doctorant à l'ULB

1. Sujet de recherche

- Analysis of the long time behavior of particle systems in the mean-field regime,
- Analysis of particle systems in the low density scaling,
- Boltzmann equation, Landau–Fokker–Planck equation, de Lenard–Balescu equation,
- Hydrodynamical limit toward solution with shock wave.

2. Positions

- **10/2023-09/2026** Post-doctoral position at Université Libre de Bruxelles, under the supervision of Mitia Duerinckx (ERC, PASTIS, Grant Agreement n°101075879),
- **09/2020-09/2023** PhD student at ENS de Lyon.

Visiting position

- **01/2023–03/2023** Mathematical departement of Sapienza Università di Roma.

3. Publications

- **2025** Around the Quantum Lenard–Balescu equation, *Submitted for publication*,
- **2024** Long time validity of the uncutoff linearized Boltzmann and the linearized Landau equations from the Newton Law, *Submitted for publication*,
- **2022** Long time validity of the linearized Boltzmann equation for hard spheres : a proof without billiard theory, *Arch. Ration. Mech. Anal. 249, No. 4, Paper No. 40, 72 p. (2025)*,
- **2022** (with R. Winter) : The grazing collisions limit from the linearized Boltzmann equation to the Landau equation for short-range potentials, *Kinetic and Related Models 16, No. 5, 654-675 (2023)*,
- **2021** 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 (2022)*,
- **2020** (with Y.Colin de Verdière) On essential-selfadjointness of differential operators on closed manifolds, *Annales de la faculté des sciences de Toulouse, Math. (6) 31, No. 5, 1287-1302 (2022)*.

4. Research talks

- **10/2025** Analysis Seminar of (LMJL),
- **01/2025** Analysis and PDEs seminar of ULB (Bruxelles),
- **03/2023** Conference "Scaling limits and generalized hydrodynamics" (GSSI, L'Aquila),
- **01/2023** Seminario di Fisica Matematica (Sapienza Università di Roma),
- **11/2022** Oberseminar Analysis (University of Bonn),
- **06/2022** PhD Students Seminar, (ENS Lyon),
- **06/2021** Team seminar (Basel University),
- **10/2020** Séminaire compréhensible (Institut Fourier, Grenoble)

5. Organisational responsability

- **2024-2026** Coorganisation of the Analysis and PDE seminar of the ULB,
- **06/2022** Organistion of the Very young PDE-ist seminar (one day meeting of PhD students in PDE of UMPA),
- **2019–2023** Co-orgarnisation of Séminaire de la Détente Mathématique.

6. Enseignement

- **Automne 2025** Exercises tutor in intégration and mesure (BA3, 30h)
- **Automne 2025** Exercises tutor in functional analysis (M1, 12h)
- **Automne 2022** Analysis courses for preparation of the "Agregation" in mathematics, (French teaching national competition, 20h),
- **Automne 2020-2021** Exercises tutor in functional analysise (M1, 24h),
- **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.

7. Study

- **18/09/2023** PhD defense
- **09/2020-09/2023** Preparation of the PhD under the supervision of Sergio Simonella and Laure Saint-Raymond at ENS de Lyon,
- **2020** Mathematical Agregation (French national teaching national competition),
- **03/2020-07/2020** Long term intership (with Sergio Simonella, ENS Lyon),
- **09/2019-03/2020** Long term intership (with Yves Colin de Verdière, Université de Grenoble Alpes),
- **09/2017-07/2019** MS in Mathematics, PDE track at ENS Lyon,
- **09/2016-07/2017** BS in Mathematics at ENS Lyon,
- **09/2014-06/2016** Preparatory classes at Lycée Hoche (Versailles),
- **2014** Baccalauréat S.

8. Popularisation activity

- **2019-2023** Co-orgarnisation of Séminaire de la Détente Mathématique
- **05/2019 and 05/2023** Comity session of Lyon of TFJM^2,
- **05/2018** Participation to MathαLyon exibition at Lycée Jean-Paul Sartre (near Lyon).

9. Langages

- French,
- English (B2 level, CAE).