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Colin PETITJEAN

Curriculum Vitae

Work experience

Since 09/19	**Associate Professor ("Maître de conférences")** Université Gustave Eiffel (LAMA), Paris-Est Marne-la-Vallée.
2018 – 2019	**Temporary assistant of teaching and research (A.T.E.R.)** UFR Sciences et Techniques de Besançon / Laboratoire de Mathématiques de Besançon.

Formation

2015 – 2018	**Ph.D. in Mathematics**, *Université Bourgogne Franche-Comté (Besançon)* Under the supervision of Gilles LANCIEN and Antonin PROCHÁZKA. Thesis : Some aspects of the geometry of Lipschitz free spaces.
2014 – 2015	**Research Master in Mathematics (Functional Analysis)**, *Université de Franche-Comté* Research Master Degree Master thesis : Transfer of property (β) by a uniform quotient map
2014	**"Agrégation de Mathématiques"**
2013 – 2014	**Master Teaching of Mathematics**, *Université de Franche-Comté* Master Degree

Research grants

2025 – 2030	**Member of the ANR project ComOp** "Composition Operators and Banach spaces", coordinated by Frédéric Bayart.
2021 – 2024	**Member of the ANR JCJC project No. ANR-20-CE40-0006**, "Free space isomorphisms and isometries" with Antonin Procházka and Romuald Ernst.
2021	**Member of the INSMI PEPS JCJC project**, "Linear and nonlinear dynamics in Lipschitz-free spaces" with Clément Coine and Arafat Abbar.

Research works

2024	• **On curve-flat Lipschitz functions and their linearizations,** with Gonzalo Flores, Mingu Jung, Gilles Lancien, Antonín Procházka and Andrés Quilis, preprint (2024), arXiv:2411.08369
	• **The set of elementary tensors is weakly closed in projective tensor products,** Bull. Aust. Math. Soc., Published online (2024), 1-8.
	• **A pre-adjoint approach on weighted composition operators between spaces of Lipschitz functions** with Arafat Abbar and Clément Coine, Results Math 79, 85 (2024).
2023	• **A note on the spectrum of Lipschitz operators and composition operators on Lipschitz spaces** with Arafat Abbar and Clément Coine, preprint (2023), arXiv:2310.08965.
	• **Injectivity of Lipschitz operators** with Luis García-Lirola and Antonín Procházka, Bull. Malays. Math. Sci. Soc. 46, 68 (2023).

- **On Kalton's interlaced graphs and nonlinear embeddings into dual Banach spaces**
  with Bruno de Mendonça Braga, Gilles Lancien and Antonín Procházka, Journal of Topology and Analysis, Journal of Topology and Analysis, Vol. 15, No. 2 (2023) 467-494.

2022
- **Purely 1-unrectifiable metric spaces and locally flat Lipschitz functions**
  with Ramon J. Aliaga, Chris Gartland, and Antonín Procházka, Trans. Amer. Math. Soc. 375 (2022), 3529-3567.
- **Compact and weakly compact Lipschitz operators**
  with Arafat Abbar and Clément Coine, Proceedings of the Royal Society of Edinburgh : Section A Mathematics (2022), 1-19.

2021
- **Compact reduction in Lipschitz free spaces**
  with Ramón J. Aliaga and Antonin Procházka, Studia Math. 260 (2021), no. 3, 341–359.
- **Embeddings of Lipschitz-free spaces into ℓ_1**
  with Ramón J. Aliaga and Antonin Procházka, J. Funct. Anal. 280 (2021), no. 6, Paper No. 108916, 26 pp.
- **On the dynamics of Lipschitz operators**
  with Arafat Abbar and Clément Coine, Integral Equations Operator Theory 93 (2021), no. 4, Paper No. 45, 27 pp.
- **On the weak maximizing properties**
  with Luis García-Lirola, Banach J. Math. Anal. 15 (2021), no. 3, Paper No. 55, 29 pp.

2020
- **Supports in Lipschitz-free spaces and applications to extremal structure**
  with Ramón J. Aliaga, Eva Pernecká and Antonin Procházka, J. Math. Anal. Appl. 489 (2020), no. 1, 124128, 14 pp.
- **On the coarse geometry of James spaces**
  with Gilles Lancien and Antonin Procházka, Canad. Math. Bull. 63 (2020), no. 1, 77–93.

2018
- **Extremal structure and duality of Lipschitz free spaces**
  with Luis García-Lirola, Antonin Procházka and Abraham Rueda Zoca, Mediterr. J. Math. 15 (2018), no. 2, 15–69.
- **A partial answer to the Demyanov-Ryabova conjecture**
  with Aris Daniilidis, Set-Valued Var. Anal (2018), no. 1, 26–143.
- **On exposed points of Lipschitz free spaces**
  with Antonin Procházka, Preprint, arXiv:1810.12031.

2017
- **On the structure of vector-valued Lipschitz functions spaces**
  with Luis García-Lirola and Abraham Rueda Zoca, Studia Math. 239 (2017), no. 3, 249–271.
- **Schur properties over some Lipschitz-free spaces**
  J. Math. Anal. Appl. 453 (2017), no. 2, 894–907.

2016 - 2023 **Reviewer of 12 articles in various journals.**

Responsabilities

Since 2022 **International relations coordinator : responsible for the students (in Mathematics) doing a mobility program**

Since 2021 **Member of two boards from my university : "La commission informatique" and "La commission permanente"**

Since 2020 **Member of the "Conseil du Laboratoire (LAMA)"**

2018–2019 **Member of the "Conseil de la Fédération Bourgogne Franche-Comté de Mathématiques"**
The aim of this council is to coordonate, strengthen and promote the join actions of the laboratory in Besançon and in Dijon.

Conferences/Seminars organized

Since 2023 **Co-organisation of the seminar called "Séminaire informel d'analyse" (LAMA, UGE)**

October 2023	**Creation of the Website for the "Journées du GDR AFHP" - Porquerolles (France)** This conference gather mainly french researchers working on Functional Analysis, Harmonic Analysis et Probability.
October 2022	**Co-organisation of the "Journées du GDR AFHP" - Corte (France)** Website, booking, preparation and reception.
September 2021	**Co-organisation of the "Journées du GDR AFHP" - Besançon (France)** Website, booking, preparation and reception.
June 2019	**Co-organisation of the "Journées Besançon-Neuchâtel d'Analyse Fonctionnelle"** Booking, preparation and reception. This conference gather the Functional Analysis team of Besançon and the Group theory team of Neuchâtel.
2018–2019	**Member of the "Conseil de la Fédération Bourgogne Franche-Comté de Mathématiques"** The aim of this council is to coordonate, strengthen and promote the join actions of the laboratory in Besançon and in Dijon.
June 2017	**"Journées Besançon-Neuchâtel d'Analyse Fonctionnelle"** Preparation and reception
June 2017	**School trip for American students** Visit of Franche-Comté
May 2017	**"La Quatrième Journée des Jeunes Chercheurs de l'UBFC"** Web page : https ://lmb.univ-fcomte.fr/Quatrieme-Journee-des-Jeunes ?lang=fr
2016–2017	**Seminar for PhD students of the LMB** Web page : https ://lmb.univ-fcomte.fr/Seminaires-doctorant ?lang=fr

Presentations during conferences or seminars

2015 – 2022	**International conferences** 13 talks (France, Brazil, Spain, Switzerland and Czech Republic).
2015 – 2018	**Ph.D. conferences** 4 presentations.
2015 – 2022	**Seminars and Workshops** 2 presentations in Santiago de Chile, 5 in Besançon, 3 in Marne-la-Vallée, 2 in Lille, 1 in Kraków (online) and 1 in Paris.

Languages

French	**Mother tongue**
English	**Fluent**
Spanish	**Notion**