

LLEDOS Benjamin, Maître de conférences, Université de Nîmes

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Working experience

- September 2020 – August 2023 📌 **PhD, IMT, Université de Toulouse, Toulouse, France.** PhD thesis under the supervision of Pierre Bousquet. Subject : "Propriétés qualitatives de solutions de problèmes dégénérés et singuliers en Calcul des Variations".
- September 2023 – August 2024 📌 **Post-Doc, IRMP, UC Louvain, Louvain-la-Neuve, Belgium.** Post-doc under the supervision of Heiner Olbermann: "Variational problems for curved surfaces". Subject: Gamma convergence, currents.
- September 2024 – Today 📌 **Associate professor, Nîmes University, Nîmes, France.** Currently working at MIPA.

Education

- 2020 – 2023 📌 **Ph.D., Université de Toulouse 3, Toulouse, France**
Thesis title: *Qualitative properties for solutions of degenerate and/or singular problems in calculus of variations.*
- 2019 – 2020 📌 **Second year of master's, Université de Toulouse 3, Toulouse, France** in Research and Innovation, graduated with high Honors.
- 2018 – 2019 📌 **Preparation of the French Agregation (highest french teaching degree), Université de Toulouse 3, Toulouse, France** Major : scientific calculus.
- 2017 – 2018 📌 **First year of master's, Université de Toulouse 3, Toulouse, France** in "Enseignement supérieur et recherche" graduated with Honors.
- 2014 – 2017 📌 **Bachelor's degree, Université de Toulouse 3, Toulouse, France** graduated with Honors.

Research Publications

Journal Articles

- 1 B. Lledos, "Continuity and uniqueness for bv minimisers," *with Pierre Bousquet, Ann Univ Ferrara* 72, 3., 2026.
- 2 B. Lledos, "Homogenization of multiparameter integrals in the space of functions of bounded variation," *with Jean-Philippe Mandallena, submitted*, 2026.
- 3 B. Lledos, "A uniqueness result for a two-dimensional variational problem," *Annales de l'institut Fourier, Online first*, 33 p., 2025.
- 4 B. Lledos, "Interacting phase fields yielding phase separation on surfaces," *with Marziani, R. and Olbermann, H., SIAM Journal on Mathematical Analysis*, vol. 57, no. 3, 2025.
- 5 B. Lledos, "Study of minimizers of problems with linear growth under bounded slope condition," *submitted*, 2025.
- 6 B. Lledos, "Discarding Lavrentiev's gap in non-autonomous and non-convex variational problems," *with Michał Borowski, Pierre Bousquet, Iwona Chlebicka and Błażej Miasojedow, submitted*, 2024.

- 7 B. Lledos, "Regularity of the stress field for degenerate and/or singular elliptic problems," *Annales mathématiques Blaise Pascal*, vol. 31, no. 1, pp. 83–135, 2024.
- 8 B. Lledos, "A uniqueness result for a translation invariant problem in the calculus of variations," *J. Convex Anal.*, vol. 31, no. 1, pp. 121–130, 2024.
- 9 B. Lledos, "A uniqueness result for a non-strictly convex problem in the calculus of variations," *ESAIM Control Optim. Calc. Var.*, vol. 29, Paper No. 87, 32, 2023.

Talks and conferences

Conferences

- 2024-2025  **Nîmes Université**, Nîmes, France: Presentation at "Journées de la fédération Occimath".
- 2023-2024  **Polytech Lille**, Lille, France: Presentation at "Conference on Calculus of Variations in Lille - 4th edition".
- 2021-2022  **Université de Lorraine**, Nancy, France : Presentation at "Rencontre en calcul des variations".
- 2020-2021  **CIRM**, Marseille, France : Open questions at the virtual research school "Shape optimization, spectral geometry and calculus of variations".

Seminars

- 2024-2025  **TU Dortmund**, Dortmund, Germany : Presentation at Oberseminar Angewandte Analysis.
-  **LJK**, Grenoble, France : Presentation at AMAC Seminar.
-  **Frumam**, Marseille, France : Presentation at GT TOP.
-  **IMT**, Toulouse, France : Presentation at the analysis seminar.
- 2023-2024  **Laboratoire de mathématiques d'Orsay**, Orsay, France : Presentation at Gdr CalVa.
-  **IRMP**, Louvain-la-Neuve, Belgium : Presentation at the Analysis-PDE seminar.
- 2022-2023  **IMT**, Toulouse, France : Presentation at the Phd-PDE seminar.
-  **University of Warsaw**, Warsaw, Poland : Presentation at the seminar of mathematical physics equations group.
-  **IMT**, Toulouse, France : Presentation at the Analysis seminar.
- 2020-2021  **IMT**, Toulouse, France : Presentation at the Phd-PDE seminar.

Teaching

Université de Nîmes, Nîmes, France

- 2025-2026  **Linear algebra**: Lectures and tutorials, first year of Bsc.
-  **Complementary courses**: Lectures and tutorials, second year of Bsc.
-  **Differential calculus**: Tutorials, second year of Bsc.
-  **Internship**: Supervision of G. Cortes, third year of Bsc.

Teaching (continued)

- 2024-2025  **Linear algebra:** Lectures and tutorials, first year of Bsc.
  **Complementary courses:** Lectures and tutorials, second year of Bsc.

Université de Toulouse, Toulouse, France

- 2022-2023  **Analysis:** Tutorials, first year of Bsc.
  **Linear algebra:** Practical works (Python), first year of Bsc.
- 2021-2022  **Analysis:** Tutorials, first year of Bsc.
  **Oral exams:** third year of Bsc.
- 2020-2021  **Analysis:** Tutorials, first year of Bsc.

Miscellaneous Experience

Responsibilities

- 2024-  **Organizer of the Mathematical seminar in Université de Nimes.**

Awards and Achievements

- 2019  **Agrégation externe de mathématiques.**

Internships

- 2020  **IMT, Toulouse, France.** Internship under the supervision of Pierre Bousquet : "Introduction to the calculus of variations"
- 2018  **IMT, Toulouse, France.** Internship under the supervision of Jean-Pierre Otał on the Beltrami equation.
- 2017  **IMT, Toulouse, France.** Internship under the supervision of Grégory Faye on ODEs.