

# Audrey Fovelle

## Curriculum Vitae

Institute of Mathematics (IMAG) and Department of Mathematical Analysis  
University of Granada  
18 071 GRANADA, SPAIN  
✉ [audrey.fovelle@ugr.es](mailto:audrey.fovelle@ugr.es)

### Current Position

10/23– **Postdoctoral Fellow**, *Universidad de Granada*, Granada, Spain

### Education

- 2020–2023 **Ph.D. student in Mathematics**, *Université de Franche-Comté*, Besançon, France  
Linear and nonlinear aspects in asymptotic geometry of Banach spaces, prepared under the supervision of Prof. Gilles Lancien
- 2017–2020 **M.Sc. degree in Mathematics**, *Université de Franche-Comté*, Besançon, France  
M.Sc. thesis: Asymptotic and local aspects in nonlinear geometry of Banach spaces, prepared under the supervision of Prof. Gilles Lancien  
**Project of Master 2 : Geometry at small and big scale of Banach spaces**, *Under the supervision of G. Lancien*  
**Project of Master 2 : Fourier multipliers on the torus and the real line**, *Under the supervision of A. Nou*
- 2018–2019 **Agrégation de mathématiques preparation**, *Université de Franche-Comté*, Besançon, France  
**Project of Master 1 : A probabilistic proof of Dvoretzky's Theorem**, *Under the supervision of G. Lancien*
- 2016-2017 **B.Sc. degree in Mathematics**, *Université de Franche-Comté*, Besançon, France  
Studies for a "Licence de Mathématiques"  
**Project of "Licence 3" :  $L_p$  spaces and convolution product**, *Under the supervision of N. Boussaïd*, prepared with C. Duquet et K. Frieden
- 2014–2016 **Classes préparatoires aux Grandes Écoles**, *Lycée Henri Poincaré*, Nancy, France

### Research stays

- Fall 2021 **Three months stay in Texas A&M**, *College Station*, USA  
Invitation from Florent Baudier
- October 2024 **Ten days stay at LmB**, *Besançon*, France  
Invitation from Gilles Lancien

### Research works (ORCID identifier: 0009-0000-5454-9726)

Published articles

- 2022 **Asymptotic Smoothness in Banach spaces, three-space properties and applications**, (with R. Causey et G. Lancien), Transactions of the American Mathematical Society, DOI : <https://doi.org/10.1090/tran/8818> (electronic version)  
arXiv:2110.06710
- 2022 **Hamming graphs and concentration properties in non-quasi-reflexive Banach spaces**, Houston Journal of Mathematics, preprint (2021)  
arXiv:2106.04297v2
- 2024 **Norm attaining operators into locally asymptotically midpoint uniformly convex Banach spaces**, Proceedings of the American Mathematical Society, <https://doi.org/10.1090/proc/16971> (electronic version)  
arXiv:2402.19067
- 2024 **Asymptotic smoothness, concentration properties in Banach spaces and applications**, Journal of Functional Analysis, <https://doi.org/10.1016/j.jfa.2024.110763> (electronic version)  
arXiv:2311.15900

#### Preprints submitted for publication

- 2024 **On asymptotic B-convexity and infratype**, (with F. Baudier), preprint (2024),  
arXiv:2405.15910

#### Editorial work

- Referee **Indagationes Mathematicae**  
**Banach Journal of Mathematical Analysis**

### Presentations during conferences or seminars

- November **First days of the “Réseau Thématique ANALyse et InteractionS”**, *Marne-la-Vallée*, 40 minutes  
Main speaker
- October **Seminar of functional analysis**, *Granada*, 60 minutes
- July 2024 **New perspectives in Banach spaces and Banach lattices**, *Castro-Urdiales*, 50 minutes  
Main speaker
- June 2024 **Methods in Banach spaces**, *Badajoz*, 20 minutes
- April **Seminar of functional analysis**, *Lille*, 50 minutes
- April **Seminar of functional analysis**, *Besançon*, 50 minutes
- March 2024 **IMAG Days**, *Granada*, 20 minutes
- February **Days Murcia-Valencia-Granada**, *Murcia*, 25 minutes
- December 2023 **Seminar of analysis, PDEs et probabilities**, *Korea Institute for Advanced Study*, (online), 50 minutes
- November 2023 **Young researchers seminar**, *Granada*, 50 minutes
- December 2022 **PhD seminar**, *Besançon*, 50 minutes
- November **Séminaire de la détente mathématique**, *ENS Lyon*, Talk about “An introduction to the nonlinear geometry of Banach spaces”, 50 minutes

- October **Journées du GDR AFHP**, *Corte*, 25 minutes
- September **Seminar of Functional analysis**, *Besançon*, 50 minutes
- June 2022 **Functional Analysis in Lille - Conference in honor of Gilles Godefroy**, *Lille*, 25 minutes
- October 2021 **Working group**, *Texas A&M*, College Station, Talk on the notion of “Asymptotic Uniform Smoothness”
- September **Texas A&M seminar, and “Banach spaces” Webinar**, College Station, 50 minutes
- June 2021 **Journées Neuchâtel-Besançon**, *Neuchâtel*, 50 minutes
- June 2021 **PhD seminar**, *Besançon*, 50 minutes

## Teaching Experience

### Undergraduate level

- 2024 **Basic Analysis and Functional Analysis**, *Universidad de Granada*, Granada, Classes in Spanish  
Standing in for coworkers (6h)
- 2023 **Function spaces for 3<sup>rd</sup> year undergraduate math students, exercise sessions (13h)**, *Université de Franche-Comté*, Besançon
- 2023 **Creative Challenge “MADE in Campus”**, *Université de Franche-Comté*, Besançon, Supervision of a team of first year students preparing a creative arts degree
- 2022 **Basic Algebra for 1<sup>st</sup> year undergraduate students, exercise sessions (38h)**, *Université de Franche-Comté*, Besançon
- 2019–2023 **Practice oral examinations of “Agrégation de mathématiques” for five year students**, *Université de Franche-Comté*, Besançon
- 2022 **Elementary probabilities for 2<sup>nd</sup> year undergraduate math students, exercise sessions (39h)**, *Université de Franche-Comté*, Besançon
- 2020–2022 **Analysis for 1<sup>st</sup> year undergraduate biology students (80h)**, *Université de Franche-Comté*, Besançon
- 2019–2020 **PCSI section (physics-chemistry first year students)**, *Lycée Victor Hugo*, Besançon, France, Spring and Fall  
oral examiner
- 2017–2019 **Math tutoring**, *Université de Franche-Comté*, Besançon, France  
Weekly sessions for all volunteer first year students

## Responsibilities

- 2024-2025 **Co-organization of a BIRS workshop “Geometric Nonlinear Functional Analysis” in Oaxaca in May 2025** (<https://www.birs.ca/events/2025/5-day-workshops/25w5355>)
- 2022-2023 **Co-organization of the “Seminar for PhD students of the LmB”**
- 2021-2023 **Member of the Commission “Life quality at work and ecoresponsability”**

## Popularization

Avril 2024 **Popularization congress “MATH.en.JEANS”**, *Congress of Calais*, Université du Littoral Côte d’Opale, Closing presentation  
55 minutes

October **Participation to “Fête de la science”**, *Université de Franche-Comté*, Besançon  
2022 Preparation of a poster on the notion of mathematical distance and animation of group activities

2022-2023 **Activity “The infinity in Mathematics”**, *High Schools*  
Several presentations

## Languages

French	Mother tongue	●●●●●
English	Proficient	●●●●●
Spanish	Proficient	●●●●●