Curriculum Vitae

Emmanouil Stavrakakis

Contact Information

- **Address**: 43, boulevard du 11 novembre 1918, 69100 Villeurbanne
- **Phone numbers:** +30 6932752462, +33 629929088
- **Personal email:** emmanouil22stavrakakis@gmail.com
- **Academic emails:**
  stavrakakis@math.univ-lyon1.fr
  emmanouil.stavrakakis@ens-lyon.fr
- **Personal Website:** Website

Personal Data

- **Date of birth:** 22 February 2000
- **Nationality:** Greek
- **Marital status:** Unmarried
- **Languages:** Greek, English, French

Education

- **2025-present**: Ph.D. Candidate at ENS de Lyon.
  Laboratory: Institut Camille Jordan
  Supervisor: Professor Guillaume Aubrun
  PhD Thesis: *The fitting problem in normed spaces*
- **2023-2025**: MSc in Pure Mathematics, National and Kapodistrian University of Athens, with a grade of 9.22/10.
  Thesis: *On the structure of Boolean functions* Msc Thesis
  Supervisor: Professor Konstantinos Tyros
- **2018-2023**: BSc in Mathematics, National and Kapodistrian University of Athens, with a grade of 8.4/10.
- **2015-2018**: Graduated from the 2nd Experimental High School of Athens.

Research Projects and presentations during Undergraduate and Postgraduate studies

Master's Thesis (Supervisor: Dr. Konstantinos Tyros)
Title: *On the structure of Boolean functions*
Research conducted on the field of Fourier Analysis, showing results of hypercontractivity on the discrete cube and characterizing phenomena that exhibit sharp thresholds. As part of the work, we examined papers by Jean Bourgain, Ehud Friedgut, Hamed Hatami, Michel Talagrand and Lucio Russo and we provided a slight improvement to an inequality by Jean Bourgain (J. Bourgain, "Walsh subspaces of L^p-product spaces." Séminaire Analyse fonctionnelle (dit "Maurey-Schwartz") (1979–1980): Proposition 6).
Section: Fourier Analysis, Probability Theory, Measure Theory

Research Project (MSc course – Analysis II), with I. Askounis
Title: *The Tsirelson's space and its structural properties*
An example of a reflexive Banach space that doesn't contain any copy of ℓ^p (for $p > 1$) or c_0.
Section: Functional Analysis

Research Project (MSc course – Differential Geometry II)
Title: *Positive and Negative Curvature and the Second Variation of Arc Length*
Study conducted on this field based on the books of Manfredo Do Carmo and John M. Lee.
Section: Riemannian Geometry

Research Project (BSc course – Topics in Analysis)
Title: *Investigation of the Borel hierarchy of intersections of ℓ_p spaces*
Study conducted on the field of Descriptive Set Theory, based on a paper of Dr. Vassilios Gregoriades. The purpose of the project was to show that the intersections of ℓ_p spaces, viewed as a subset of ℓ_q, is neither a G_δ nor F_σ set, but instead appears first in the third level of the Borel Hierarchy.
Section: Descriptive Set Theory

Scientific Awards, Scholarships

- **01/11/2025-01/11/2028** - Awarded a doctoral grant attributed by the graduate plus initiative MathInfI, ENS de Lyon.
- **03/04/2025** – Awarded a €3,300 merit scholarship by the State Scholarships Foundation of Greece (IKY) for academic excellence during the

2021–2022 academic year.
Institution: National Scholarship Foundation of Greece (IKY), Greece

- **03/03/2018** – Qualification to the 35th National Mathematical Olympiad "Archimedes", organized by the Greek Mathematical Society.
Institution: Greek Mathematical Society, Greece

- **11/03/2017** – Second Excellence Award for achieving 32nd place nationwide, in the National Physics Competition "Aristotelis".
Institution: Hellenic Physical Society, Greece

- **10/12/2016** – First excellence award for achieving the 1st place with my team in the qualification phase of the "Panhellenic High School Competition for the 15th European Olympiad of Sciences-EUSO 2017".
Institution: Panhellenic Union of Laboratory Centers for Physical Sciences, Greece

Research interests

- **Functional Analysis**
- **Convex Geometry**
- **High Dimensional Probability**

Conferences and Seminars Attended

1. Participation in the 7th NTUA Summer School in "Mathematical Analysis" in honor of Spiros Argyros.
National Technical University of Athens, 27/06/2024–03/07/2024

2. Participation in the "COMbinatorics & PRobability in Athens".
National and Kapodistrian University of Athens, 21/12/2024–22/12/2024

3. Participation in the 16th Panhellenic Conference of Geometry.
National and Kapodistrian University of Athens, 27/09/2024–29/09/2024

4. Participation in the annual seminar of "Functional Analysis and Operator Algebras", organized by the Section of Analysis, Department of Mathematics, University of Athens.
National and Kapodistrian University of Athens, 11/10/2024–30/05/2025

5. Workshop in Memory of Dimitris Gatzouras.
National and Kapodistrian University of Athens, 12/03/2022–14/03/2022

6. Second Congress of Greek Mathematicians: Session in Mathematical Analysis, organized by the Hellenic Mathematical Society.
National and Kapodistrian University of Athens, 04/07/2022–08/07/2022

7. Participation in the weekly seminars of the "Mathematical Graduate Student Club", organized by the Postgraduate students of the Department of Mathematics, University of Athens.
National and Kapodistrian University of Athens, 07/10/2024–27/05/2025

8. Participation in the "10th Athens Probability Colloquium".
School of Philosophy, National and Kapodistrian University of Athens, 17/05/2025

9. Participation in the annual "General Seminar of Mathematics", organized by the Department of Mathematics, University of Athens.
National and Kapodistrian University of Athens, 03/10/2024–05/06/2025

10. Participation in the annual "SAMPS" Analysis Seminar, organized by the Department of Mathematics, National Technical University of Athens.

11. Participation in the Summer Research Conference "Festum-pi" in Chania, Greece.
Université Paris-Saclay, Sorbonne Université, Conservatoire de Paris, University of Athens, MAICH 14/07/2025–27/07/2025

12. Participation in the annual Probability Seminar, Lyon, France.
Université Claube Bernard Lyon 1, ENS de Lyon, 18/09/2025-01/07/2026

13. Participation in the 2-day PGMO lectures by Bo'az Klartag on Isoperimetry and Convex Geometry in High Dimensions.
Institut de Mathématique d'Orsay, February 2026

14. Participation in the Summer Research Conference "Festum-pi" in Chania, Greece.
Université Paris-Saclay, Sorbonne Université, Conservatoire de Paris, University of Athens, MAICH July-August 2026

Publications/Preprints

1. Fitting Gaussian clouds in normed spaces. (Preprint)

Computer Skills

- Proficient LaTeX for typesetting mathematical documents and presentations.
- Proficient in Matlab for numerical computations and simulations.
- Proficient in Python for both general-purpose programming and mathematical applications.

Interships and Volunteering

- **01/03/2025-01/06/2025**: Intership as a mathematical advisor, focusing on data analysis, statistical modeling, and the quantitative assessment of construction timelines and financial projections at the "Loupakis Nikolaos Private Capital Company", Athens, Greece.
- **01/09/2023-01/06/2024**: Voluntary work as a mathematics and physics teacher to refugee children and unaccompanied minors, as a member of the non-profit organization HumanRights360, Athens, Greece.

Other activities and personal interests

1. Participant in the "Literature and Mathematics" Club of the 2nd Experimental High School of Athens from 2016 to 2018.
2. Participant in the Cinematography Club of the 2nd Experimental High School of Athens from 2016 to 2018, where I took part in the making of two short movies.
3. Member of the Mathematics Graduate Student Club at the Department of Mathematics, University of Athens, organized by Postgraduate students of the Department of Mathematics, with active participation in weekly seminars on topics in pure and applied mathematics.
4. Five-year experience in teaching mathematics to students of all ages who face learning difficulties (2020–2025).
5. I have already prepared three final-year high school students in mathematics for their university entrance exams, all with complete success.
6. I have been playing the piano for the past eight years, having studied both theory and performance, with a particular emphasis on Greek traditional music.
7. Active participation in amateur sports academies of basketball and swimming for the last 15 years.