

Ana Emilia de Orellana

<https://anadeore.github.io>

University of St Andrews

St Andrews \diamond KY16 9SS \diamond Room: 103

EDUCATION

St Andrews University

September 2023 - Present

Ph.D. in Pure Mathematics (funded by the University of St Andrews)

Supervisor: Dr. Jonathan Fraser.

Co-supervisor: Dr. Kenneth Falconer.

Universidad Nacional del Litoral (UNL)

January 2018 - March 2023

Licentiate Degree in Mathematics (equivalent to M.Sc.)

GPA: 8.68 (on a 10 point scale), part of the honour board.

Degree Dissertation Title: *Homogeneous Type Spaces and Metrisation.*

Supervisor: Dr. Marisa Toschi.

Co-supervisor: Dr. Mauricio Ramseyer.

Dissertation date: March 2023.

Keywords: Muckenhoupt weights, Spaces of homogeneous type, Hardy-Littlewood maximal operator.

TEACHING EXPERIENCE

University of St Andrews

2023 - 2024

- Tutor for MT1003 Analysis (two groups), Spring.
- Tutor for MT2502 Analysis (two groups), Autumn.

Chemical Engineering School (UNL)

February 2023

- Mathematics Tutor for Chemistry Engineering and Food Engineering entrants.

Chemical Engineering School (UNL)¹

- Teaching assistant in Mathematics A. *2023*
- Teaching assistant in Basic Mathematics. *2023*
- Teaching assistant in Calculus 1. *2022*
- Teaching assistant in Discrete Mathematics 1. *2022*

Chemical Engineering School (UNL)

March 2017 - December 2018

- Took part on the extracurricular activity “Pedagogical care in mathematics for people without access to education”.

PUBLICATIONS

2. A Fourier analytic approach to exceptional set estimates for orthogonal projections, with J. M. Fraser. 2024. 19 pages. [arXiv: 2404.11179](https://arxiv.org/abs/2404.11179)
1. Obtaining the Fourier spectrum via Fourier coefficients, with M. Carnovale and J. M. Fraser. 2024. 13 pages. [arXiv: 2403.12603](https://arxiv.org/abs/2403.12603)

¹The position was granted after a competition among several candidates

TALKS

- The Fourier spectrum under orthogonal projections. St Andrews Analysis Seminar. *2024*
- Knot Theory. Before Graduating Seminar. *2019*

AWARDS

- University of St Andrews - Fee scholarship for Ph.D. in Mathematics. *2023*
- University of Minnesota - Fully funded scholarship for M.Sc. in Mathematics. *2023*
- CONICET Scholarship - Doctorate in Mathematics at UNL. *2023*
- Monograph competition held by the Argentinian Mathematical Union, “Knot Theory” – Second place. *2019*

LANGUAGES

Spanish

Native.

English

TOEFL IBT Home Edition. Overall: 107; R: 28; L: 29; S: 27; W: 23. *2022*

TOEFL IBT Home Edition. Overall: 94; R: 22; L: 26; S: 21; W: 25. *2022*

Grade A in the Certificate of Advanced English (CAE). *2016*

Grade A in the First Certificate in English (FCE). *2015*

German

Course: Approximation to the German language from a cultural and professional perspective. *2021*

PROGRAMMING LANGUAGES

JavaScript/ReactJS/NextJS

Advanced.

R/Shiny-r

Advanced.

Python

Basic.

MatLab

Basic.