# Curriculum Vitae

# **Javier Martínez Perales**

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# **EMPLOYMENT**

*Feb* 2022 Position: Substitute Teaching Tutor

Where: University of Málaga

Present Brief description:

Teaching basic and multidimensional calculus, vector calculus, probability and differential equations to undergraduate

students in the University of Malaga's bachelor's degree in Chemistry

Sept 2021 Position: Lead Data Scientist

- Where: Student Success

Apr 2022 Brief description:

Data science with data from Google Classroom. Analysis of engagement of students, STEM-HASS profile of students,

prediction of califications...

**Feb 2021** Position: Postdoctoral Visiting Fellow

- Where: Basque Center for Applied Mathematics

Sept 2021 Brief description:

Harmonic Analysis and Differential Equations: New Challenges. In this project we studied multifractality and intermmit-

tency properties of certain stochastic processes coming from physics. We needed ideas from Harmonic Analysis, Number

Theory and Probability theory to study these topics

Sept 2016 Position: Predoctoral Researcher

Where: Basque Center for Applied Mathematics

Dec 2020 Brief description:

During these years I studied different problems on Harmonic Analysis, from singular integral operators to Poincaré-Sobolev inequalities both in Euclidean and abstract metric spaces. This culminated in the development of a new method

to get Poincaré-Sobolev inequalities in different settings. This is collected in my thesis dissertation

# **EDUCATION**

Sept 2016 Degree: PhD degree in Mathematics and Statistics
 Dec 2020 Where: Basque Center for Applied Mathematics

Sept 2015 Degree: Master's degree in Mathematics and Statistics

Jul 2016 Where: Universities of Almería, Cádiz, Granada, Jaén and Málaga

Sept 2011 Degree: Bachelor's degree in Mathematics

Jul 2015 Where: University of Málaga

# RESEARCH

- Ritva Hurri-Syrjänen et al. "On the BBM-phenomenon in fractional Poincare-Sobolev inequalities with weights". In: *International Mathematics Research Notices* (Sept. 2022). rnac246. ISSN: 1073-7928. DOI: 10.1093/imrn/rnac246. URL: https://doi.org/10.1093/imrn/rnac246
- Javier C Martínez-Perales, Ezequiel Rela, and Israel P Rivera-Ríos. "Quantitative John–Nirenberg inequalities at different scales". In: *Revista Matemática Complutense* (2022), pp. 1–35. ISSN: 1139-1138. DOI: 10.1007/s13163-022-00427-0
- Dariusz Kosz et al. "Maximal operators on the infinite-dimensional torus". In: *Mathematische Annalen* (2022), pp. 1–39
- Javier C. Martínez-Perales. "A note on generalized Poincaré-type inequalities with applications to weighted improved Poincaré-type inequalities". In: *Ann. Acad. Sci. Fenn. Math.*, 46 (2021). arXiv: 1907.12435v1 [math.CA]
- Eugenia Cejas, Irene Drelichman, and Javier C. Martínez-Perales. "Improved fractional Poincaré type inequalities on John domains". In: *Ark. Mat.* 57.2 (Oct. 2019), pp. 285–316. arXiv: 1902.10578
- Natalia Accomazzo, Javier C. Martínez-Perales, and Israel P. Rivera Ríos. "On Bloom type estimates for iterated commutators of fractional integrals". In: *Indiana U. Math. J.* 69.4 (2020), pp. 1207–1230

# DISSEMINATION

- 1. Natalia Accomazzo Scotti et al. "Four different approaches to the fractional Laplacian". In: *TEMat: monográficos, 1* (2020), pp. 47–60. Link to the paper
- 2. Javier C. Martínez-Perales. "La integral de Henstock-Kurzweil y el segundo teorema fundamental del cálculo". In: *TEMat*, *1* (2017), pp. 15–23. Link to the paper

#### SKILLS

# TECHNICAL SKILLS:

Proficient with:

Python, Git, LATEX, Adobe Photoshop, Angular, Flask

Familiar with:

HTML, PHP, SQL, Adobe Illustrator, Docker

SOFT SKILLS:

Strong:

Spanish (mother tongue), English (B2 level), Initiative, International Teamwork, Public talks

Basic knowledge:

Italian, Euskera

# ASSOCIATIONS

201 <u>7</u> 201 <u>8</u>	RSME Charge: Chief editor in their weekly bulletin
201 <u>6</u> 201 <u>9</u>	ANEM Charge: Editor in their bulletin
	Research stays and visits
Sept 2019  — Sept 2019	Universidad Nacional del Sur Bahía Blanca, Argentina Host(s): Israel P. Rivera Ríos
Aug 2019 — Oct 2019	Universidad Buenos Aires Buenos Aires, Argentina Host(s): Ezequiel Rela
Nov 2017 — Oct 2017	Universidad Buenos Aires and Universidad Nacional de La Plata Buenos Aires, Argentina $Host(s)$ : Eugenia Cejas and Irene Drelichman
	Talks and posters
Jan 2020	<b>Talk:</b> Self-improving results for Poincaré-type inequalities <b>Where:</b> V Congreso de Jóvenes Investigadores de la RSME, Castellón, Spain Book of abstracts
Dec 2019	Talk: Self-improving properties of Poincaré-Sobolev type inequalities Where: Analysis and PDE seminar, BCAM–UPV/EHU, Bilbao, Spain
Oct 2019	Talk: Automejora en controles de oscilaciones medias de funciones Where: Universidad Málaga, Málaga, Spain
Sept 2019	Talk: Desigualdades de Poincaré-Sobolev mejoradas con pesos Where: Universidad Nacional del Sur, Bahía Blanca, Argentina
Sept 2019	Talk: Desigualdades de Poincaré-Sobolev mejoradas con pesos Where: Universidad de Buenos Aires, Buenos Aires, Argentina
Sept 2019	Talk: Desigualdades de Poincaré-Sobolev mejoradas con pesos Where: Segundo Encuentro Conjunto de la UMA y la SOMACHI, Mendoza, Argentin Abstract
May 2019	Talk: On fractional Poincaré inequalities

Where: II BYMAT Conference, Madrid, Spain

Talk: On fractional Poincaré inequalities

Feb 2019

**Where:** Universidad de Cantabria, Cantabria, Spain List of posters

May 2018 Talk: On fractional Poincaré inequalities

Where: Summer school "Nonlocal Interactions in Partial Differential Equations and Geometry" at

Institut Mittaf-Leffler, Djursholm, Sweden

Webpage of the school

*May* **2018** Talk: Sobolev-Poincaré inequalities for p < 1

Where: I BYMAT Conference, Madrid, Spain

Dec 2017 Talk: Algunas extensiones de la desigualdad de Poincaré

Where: I Encuentro Conjunto RSME-UMA, Buenos Aires, Argentina

<u>Abstract</u>

*Nov 2016* Talk: Sobolev integrability of solutions of the Beltrami equation

Where: Basque Center for Applied Mathematics, Bilbao, Spain

<u>Abstract</u>

# CERTIFIED LINGUISTIC SKILLS

**Spanish:** *Mother tongue* 

**English:** *Medium, CertAcles Certificate level B1* 

Euskera: Basic level, A1

#### **OTHERS**

2016 Editor and reviewer in the dissemination journal TEMat

Webpage of the journal

2018 Co-organiser of the LIGHT seminar at BCAM

**2020** Webpage of the seminar