Javier Martínez Perales

javicemarpe(at)gmail.com https://ckdvk.github.io/cv.github.io/

EMPLOYMENT

Jul 2023 Position: Lecturer in Mathematics

Where: Guangdong Technion Israel Institute of Technology

Present Brief description:

I am in charge of the tutorial lectures of the intensive summer semester for two courses on Differential and Integral Cal-

culus and also for the Prep course for the Mathematics and Computer Science program of the GTIIT.

Feb 2022 Position: Substitute Teaching Tutor

— Where: University of Málaga

Jul 2023 Brief description:

Teaching differential and integral calculus, vector calculus, differential equations and probability to undergraduate students in the University of Málaga's bachelor's degree in Chemistry. See the program of the current courses here and here.

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 intermittency 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 Weighted Inequality Between the Gagliardo and Sobolev Seminorms. 2023
- Javier Martínez-Perales and Carlos Pérez. "Remarks on vector-valued Gagliardo and Poincaré-Sobolev type inequalities with weights". In: *Potentials and Partial Differential Equations. The Legacy of David R. Adams* (2023)
- 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. In: Ann. Acad. Sci. Fenn. Math. 46 (). 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, Adobe Illustrator, Angular, Typescript, Flask Familiar with:

HTML, PHP, MySQL, Docker, PostgreSQL, CSS

SOFT SKILLS:

Strong:

Spanish (mother tongue), English (B2 level), Initiative, International Teamwork, Experience with public talks **Basic knowledge:**

Italian, Euskera

Associations

2017	RSME
2018	Charge: Chief editor in their weekly bulletin
2016 2019	ANEM Charge: Editor in their bulletin
	Research stays and visits
Sept 2019	Universidad Nacional del Sur
_	Bahía Blanca, Argentina
Sept 2019	Host(s): Israel P. Rivera Ríos
Aug 2019	Universidad Buenos Aires
	Buenos Aires, Argentina
Oct 2019	Host(s): Ezequiel Rela
Nov 2017	Universidad Buenos Aires and Universidad Nacional de La Plata
— Oct 2017	Buenos Aires, Argentina Heat(s): Fugania Coine and Irona Dralishman
Oct 2017	Host(s): Eugenia Cejas and Irene Drelichman
	Talks and posters
Mar 2023	Talk: Un problema de operadores maximales en el toro infinito-dimensional Where: Seminario SARCTO-UMA, Málaga, Spain
Mar 2023 Feb 2022	Talk: Un problema de operadores maximales en el toro infinito-dimensional Where: Seminario SARCTO-UMA, Málaga, Spain
	Talk: Un problema de operadores maximales en el toro infinito-dimensional
Feb 2022	Talk: Un problema de operadores maximales en el toro infinito-dimensional Where: Seminario SARCTO-UMA, Málaga, Spain Talk: Lectures on Poincaré inequalities Where: BCAM-Severo Ochoa Course: Harmonic Analysis, Bilbao, Spain
	Talk: Un problema de operadores maximales en el toro infinito-dimensional Where: Seminario SARCTO-UMA, Málaga, Spain Talk: Lectures on Poincaré inequalities Where: BCAM-Severo Ochoa Course: Harmonic Analysis, Bilbao, Spain Talk: Self-improving results for Poincaré-type inequalities
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Talk: Desigualdades de Poincaré-Sobolev mejoradas con pesos

Where: Segundo Encuentro Conjunto de la UMA y la SOMACHI, Mendoza, Argentina

Sept 2019

May 2019	Talk: On fractional Poincaré inequalities Where: II BYMAT Conference, Madrid, Spain
Feb 2019	Talk: On fractional Poincaré inequalities 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" 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
	Certified Linguistic skills Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1
	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1
2022	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1
2022 — Present	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1 Others
_	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1 OTHERS Frontend and backend developer of an entire own web application called Appasarlista
— Present	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1 OTHERS Frontend and backend developer of an entire own web application called Appasarlista (To be published)
— Present	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1 OTHERS Frontend and backend developer of an entire own web application called Appasarlista (To be published)
Present 2022 —	Spanish: Mother tongue English: Medium, CertAcles Certificate level B1 Euskera: Basic level, A1 OTHERS Frontend and backend developer of an entire own web application called Appasarlista (To be published) Certified as Profesor Ayudante Doctor by the ANECA
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<u>Abstract</u>