Javier Martínez Perales

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EMPLOYMENT

Aug 2024 Position: Lecturer in Mathematics

Where: Guangdong Technion Israel Institute of Technology

Present Brief description:

I am in charge of the lectures of the Preparatory course in Mathematics of the MCS program of GTIIT, while coordinating and preparing the future lecture notes for the course in the form of a book. Also, I am teaching as a lecturer in the Ordinary of Grant Program of Grant Progr

nary Differential Equations course of GTIIT.

Oct 2023 Position: Substitute Teaching Tutor

— Where: University of Málaga

Feb 2024 Brief description:

Teaching discrete mathematics and linear algebra to undergraduate students in the University of Málaga's bachelor's degrees in Computer Science and Health Engineering, respectively. See the program of the courses here and here, respec-

tively.

Jul 2023 Position: Lecturer in Mathematics

Where: Guangdong Technion Israel Institute of Technology

Oct 2023 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 SuccessApr 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

Nov 2023 Degree: Fulltime Student
Present Where: 42 School Málaga

Sept 2016 Degree: PhD degree in Mathematics and StatisticsDec 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

TECHNICAL SKILLS:

Proficient with:

C, Python, Git, LATEX, Adobe Photoshop, Adobe Illustrator, Angular, Typescript, Flask

Familiar with:

Bash, WordPress, 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 ANEM

2019 Charge: Editor in their bulletin

RESEARCH STAYS AND VISITS

Sept 2019 Universidad Nacional del Sur

Bahía Blanca, ArgentinaSept 2019 Host(s): Israel P. Rivera Ríos

Aug 2019 Universidad Buenos Aires

Buenos Aires, ArgentinaOct 2019 Host(s): Ezequiel Rela

Nov 2017 Universidad Buenos Aires and Universidad Nacional de La Plata

— Buenos Aires, Argentina

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

Feb 2022 Talk: Lectures on Poincaré inequalities

Where: BCAM-Severo Ochoa Course: Harmonic Analysis, Bilbao, Spain

Jan 2020 Talk: Self-improving results for Poincaré-type inequalities

Where: 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, Argentina <u>Abstract</u>
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" 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 Abstract
Nov 2016	Talk: Sobolev integrability of solutions of the Beltrami equation Where: Basque Center for Applied Mathematics, Bilbao, Spain Abstract

CERTIFIED LINGUISTIC SKILLS

Spanish: Mother tongue **English:** Medium, CertAcles Certificate level B1

Euskera: Basic level, A1

OTHERS

2022	Frontend and backend developer of an entire own web application called Appasarlista
Present	(To be published)
2022	Certified as Profesor Ayudante Doctor by the ANECA
2016	Editor and reviewer in the dissemination journal TEMat
2022	Webpage of the journal
2018	Co-organiser of the LIGHT seminar at BCAM
	Webpage of the seminar