Javier Fresán

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Born: September 15, 1987
Nationality: Spanish

Career and education

from 2023	Professor, Institut de Mathématiques de Jussieu–Paris Rive Gauche, Sorbonne Université.
2022	Habilitation in Mathematics, École polytechnique *Exponential motives, E-functions, and exponential sums.*
2017/2023	Monge Professor, École polytechnique.
2014/2017	SNSF Postdoctoral fellow, ETH Zürich.
2013/2014	Postdoctoral fellow, Max-Planck-Institut für Mathematik Bonn.
2010/2013	PhD in Mathematics, supervised by Christophe Soulé and Jörg Wildeshaus, Université Paris 13 *On the periods of Hodge structures with complex multiplication.*

Grants, honors, and awards

2023	Nachdiplomvorlesungen, ETH Zürich.
2023	Frontiers of Science Award, joint with Peter Jossen.
2023	Bronze medal of the CNRS.
2023/2027	Member of the ANR project CYCLADES "Algebraic cycles and periods".
2022	Prize Dargelos of École polytechnique.
2019/2022	PI of the PICS project "Irregular Hodge theory and exponential motives"
2018/2023	PI of the ANR project PERGAMO "Periods in Arithmetic and Motivic Geometry".
2015	Premio Vicent Caselles RSME-Fundación BBVA.
2012	Prize Prismas "Casa de las Ciencias" to the best article of dissemination of science published in the Spanish media in 2011.

Editorial duties

fromm 2023	Editor-in-chief of the collection *Documents Mathématiques*.
from 2023	Member of the editorial board of *Annales scientifiques de l'École normale supérieure* and *Commentarii Mathematici Helvetici*.

Member of the editorial board of La Gazeta de la Real Sociedad Matemática Española.

Member of the editorial board of the *Newsletter of the European Mathematical Society*.

Supervision experience

from 2024   Thomas Serafini. Current M2 student working on G-functions coming from geometry.

from 2022   Quentin Gazda. Hadamard postdoc, currently working on q-deformations of polylogarithms.

from 2022   Stefano Aloé. PhD student working on Frobenius and the irregular Hodge filtration.

from 2020   Gabriel Ribeiro. PhD student since 2020. Working title: *Tannakian groups of perverse sheaves on algebraic groups*. Defence expected in June 2024.

2019/2022   Yichen Qin. PhD student co-supervised with C. Sabbah. Thesis: *L-functions of Kloosterman sheaves*. Currently a postdoc with B. Klingler at HU Berlin.

Organisation of scientific meetings

Conferences and summer schools

2024   *Topology and arithmetic of moduli spaces of curves*, Montpellier (with D. Calaque and C. Dupont).

2023   *Periods*, Nisyros GR (with G. Ancona, B. Klingler, Y. Sakellaridis, and C. Vial).

2023   *E-functions, G-functions and periods*, IHP Paris FR (with A. Bostan and T. Rivoal).

2019   *Wild ramification and irregular singularities*, IMPAN Warsaw PL (with P. Achinger and H. Esnault).

2019   *The arithmetic of connections*, Monte Verità IT (with D. Jetchev, P. Jossen, and E. Kowalski).

2017   *Motives for periods*, Freie Universität Berlin DE (with G. Ancona and S. Pepin-Lehalleur).

2016   *Motives and complex multiplication*, Monte Verità IT (with D. Jetchev, P. Jossen, and R. Pink).

2014   *Arithmetic intersection theory and Shimura varieties*, HIM Bonn DE (with G. Ancona, D. Eriksson, G. Freixas i Montplet, M-H. Nicole, and S. Sankaran).

Regular seminars

from 2022   *Arithmetic geometry preprint seminar*, IMJ–PRG (with Y. André and N. Niziol).

from 2017   *Around algebraic cycles*, IMJ–PRG (with A. Cadoret, F. Charles, and M. Morrow).

2017/2019   *Motives and Feynman integrals*, École polytechnique (with P. Vanhove and F. Zerbini).

Network of Students in Algebraic Geometry

In October 2011, I co-founded (with G. Ancona, Y. Brunebarbe, and M. Maculan) the *Network of Students in Algebraic Geometry*, a monthly meeting for PhD students in algebraic geometry that is still running 12 years and 197 talks after.

As a follow-up, from 2016 to 2021 G. Ancona, M. Maculan and I (and later O. Benoist) organised a series of meetings inspired by the *Arbeitsgemeinschaft* in the island of Tatihou, France:

2021   *Algebraic curves, their moduli, and tropical geometry* (expert: S. Payne).

2019   *Mixed Hodge modules: applications* (expert: C. Sabbah).

2018   *Hodge theory of character varieties and the $P = W$ conjecture* (expert: L. Migliorini).

2017   *Period mappings: from complex to p-adic* (expert: Y. André).

2016   *Algebraization theorems: from GAGA to foliations over number fields* (expert: J-B. Bost).

Institutional responsibilities

from 2024	Head of the group of number theory of the IMJ–PRG.
2020/2023	Member of the hiring committee of the Hadamard Lecturers and Postdocs.
2020/2021	Member of the hiring committee of the Monge Professors at École polytechnique.
2018/2023	Member of the scientific committee of the CMLS.
2017/2021	Member of the CCSU committee of the Orsay mathematics department.
2016/2019	Member of the professional committee of the Royal Spanish Mathematical Society.

Experience as thesis examiner

Referee of the PhD theses of Emil Jacobsen (UZH, 2023) and Riccardo Ferrario (ETH, 2020).

Jury member for the PhD defences of Thomas Mordant (Orsay, 2023), Quentin Gazda (Lyon, 2021), Emiliano Ambrosi (Polytechnique, 2019), Nicolas Martin (Polytechnique, 2018), Margaret Bilu (Orsay, 2017), Ren´e Mboro (Polytechnique, 2017), and Quan Xu (Toulouse, 2014).