Teo Gil Moreno de Mora Sardà

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Professional Experience

2025 – 2026	**Attaché Temporaire d'Enseignement et de Recherche**, *Université Paris-Est Créteil*
2022 – 2025	**PhD student and Teaching Assistant**, *Université Paris-Est Créteil, Universitat Autònoma de Barcelona*

Education

2022 – 2025 PhD in Mathematics, *Université Paris-Est Créteil, Universitat Autònoma de Barcelona*, (cotutelle)
Thesis: A metric approach to the study of manifolds of positive scalar curvature.
Supervisors: Stéphane Sabourau, Florent Balacheff
Defense date: 29 September 2025

2021 – 2022 Master in Fundamental Mathematics, *Sorbonne Université, Université Paris Cité, Université Sorbonne Paris Nord, France*
Thesis: Filling volume minimality for metrics close to the Euclidean metric.
Supervisor: Stéphane Sabourau

2017 – 2021 BSc in Mathematics, *Universitat Autònoma de Barcelona, Spain*
Thesis: Generalizations of the first Minkowski's theorem from a systolic geometry perspective.
Supervisor: Florent Balacheff

2015 – 2021 BSc in Physics, *Universitat Autònoma de Barcelona, Spain*
Thesis: Dynamical Superfluid-Insulator Transition of Bose–Einstein condensates in optical lattices.
Supervisor: Verònica Ahufinger

Publications

Preprints   T. Gil Moreno de Mora Sardà, *Urysohn width of hypersurfaces and positive macroscopic scalar curvature*. arXiv:2504.06737 (2025)

[2]   F. Balacheff, T. Gil Moreno de Mora Sardà and S. Sabourau, *Complete 3-manifolds of positive scalar curvature with quadratic decay*. Math. Ann. 392, 4361–4389 (2025)

[1]   F. Balacheff and T. Gil Moreno de Mora Sardà, *Isosystolic inequalities on two-dimensional Finsler tori*. EMS Surv. Math. Sci. 11, no. 2, 205–233 (2024)

Talks

Talks in conferences

Jul 2025	Convergence of Scalar Curvature 2025 Summer Workshop, *Online*
Jun 2025	Flows and Singular Spaces, *Centre Henri Lebesgue*, Nantes, France
Apr 2025	Rencontre de l'ANR OrbiScaR, *Université Paris-Est Créteil*, France
Mar 2025	Systolic and Diastolic Geometry, *Instituto de Matemática Pura e Aplicada*, Rio de Janeiro, Brazil
Nov 2024	Reunión de investigadores jóvenes de la REAG, *Universidade de Santiago de Compostela*, Spain

Oct 2024	Math SOMMa Junior Meeting, *Centre de Recerca Matemàtica*, Barcelona, Spain
Nov 2023	Forum des jeunes mathématicien·nes, *Université Libre de Bruxelles*, Belgium
May 2023	Journées des Doctorants du LAMA, *Université Gustave Eiffel and Université Paris-Est Créteil*, France
Mar 2020	Bernardo Cascales Functional Analysis School, *Universidad de La Laguna*, Spain

Seminar talks

Jul 2025	Geometry Seminar, *University of Göttingen*, Germany
Jul 2025	Geometry Seminar, *Max Planck Institute*, Leipzig, Germany
Apr 2025	Séminaire de Théorie Spectrale et Géométrie, *Institut Fourier*, Grenoble, France
Feb 2025	Séminaire des Doctorants, *Institut Élie Cartan de Lorraine*, Nancy, France
Dec 2024	Séminaire Gaston Darboux, *Institut Montpelliérain Alexander Grothendieck*, Montpellier, France
Dec 2024	Geometry and Topology Seminar, *Université du Luxembourg*, Luxembourg
Dec 2024	Hodge Club, *University of Edinburgh*, United Kingdom
Oct 2024	Séminaire de Géométrie, *Institut de Mathématiques de Bordeaux*, France
Jun 2024	Seminari de Geometria, *Universitat Autònoma de Barcelona*, Spain
May 2024	Séminaire de Géométrie, *Institut de Mathématiques de Jussieu - Paris Rive Gauche*, France
Apr 2024	Colloque de Géométrie, *Université Paris-Est Créteil*, France
Apr 2024	Séminaire des doctorants du LAMA, *Université Paris-Est Créteil*, France
Jun 2023	Seminari Informal de Matemàtiques de Barcelona, *Universitat de Barcelona*, Spain
Mar 2023	Seminari de Geometria, *Universitat Autònoma de Barcelona*, Spain

Poster presentations

Nov 2024	Curvature and Geometric Analysis in Rome, *Sapienza Università di Roma*, Italy
Jun 2024	European Doctorate School of Differential Geometry, *Instituto de Matemáticas de la Universidad de Granada*, Spain

Teaching

Sep 25–Dec 25	Analyse (L2 Économie et Gestion) *Université Paris-Est Créteil*, 36h Lectures and Tutorials
Sep 25–Dec 25	Calculus 1 (L1 Physique) *Université Paris-Est Créteil*, 30h Lectures and Tutorials
Jan 25–Apr 25	Analyse Réelle (L1 Mathématiques) *Université Paris-Est Créteil*, 36h Tutorials
Jan 24–Apr 24	Analyse Réelle (L1 Mathématiques) *Université Paris-Est Créteil*, 36h Tutorials
Sep 22–Dec 22	Calculus 1 (L1 Chimie) *Université Paris-Est Créteil*, 30h Lectures and Tutorials

Organization of Scientific Activities

May 2024	Journées des Jeunes Chercheurs·ses du LAMA, *Institut Henri Poincaré*, France (22-24 May 2024)
2022 – 2024	Séminaire des doctorants, *Laboratoire d'Analyse et Mathématiques Appliquées, Université Paris-Est Créteil*, France

Awards and Scholarships

2021 – 2022	**PGSM Master Scholarship**, granted by the *Fondation Sciences Mathématiques de Paris*.
2020 – 2021	**Beca de Colaboración grant BDNS 512590** by the *Spanish MEFP*
2015 – 2021	Academic Merit State Scholarship, funded 33% of my undergraduate degrees.
2015	Extraordinary University Entrance Examination Award, awarded by the *Generalitat de Catalunya*.
2015	University Entrance Scholarship, awarded by the *Fundació Catalunya La Pedrera*.

Languages

Catalan	Native	**Spanish**	Native
English	Fluent	**French**	Fluent
	C2 Level - Cambridge Certificate		*DELF B2*
Japanese	Intermediate		
	B1 Level - JLPT N3		

Computer skills

Programming Languages Python, C, R   **Other** SageMath, LaTeX

Undergraduate Research Experience

Sep 20 –Jul 21 **Research Assistant, Mathematics department UAB**, *Barcelona, Spain*
Supervisor: Florent Balacheff
Research project in systolic geometry, with further development of my BSc thesis.

Jul 20 –Sep 20 **ICMAT Introduction to Research Program**, *Madrid, Spain*
Supervisor: Francisco Presas
Project on contact geometry and Legendrian submanifolds, and their application to the space of light geodesics of a Lorentz manifold.

Jul 2019 **IFISC Summer Undergraduate Research Internship**, *Palma de Mallorca, Spain*
Supervisor: David Sánchez
Project on the analysis of language variation in the United Kingdom using Twitter data and Big Data techniques.

Jul 18 – Oct 18 **ICFO Summer Fellows Program**, *Barcelona, Spain*
Supervisor: Leticia Tarruell – Ultracold Quantum Gases Group
Project on the development of an active stabilization system in order to stabilize the magnetic field fluctuations in the experimental set-up of the group.

Jul 2016 **ICFO Introductory internship**, *Barcelona, Spain*
Supervisor: Miguel Ángel García – Quantum Optics Theory Group
Programming based experience on the study of random walks on different geometrical settings.

Attended conferences and schools

Oct 2025 Géométrie: échanges et perspectives, *Institut Henri Poincaré*, Paris, France

Jun 2025 Flows and Singular Spaces, *Centre Henri Lebesgue*, Nantes, France

Apr 2025 Rencontre de l'ANR OrbiScaR, *Université Paris-Est Créteil*, France

Mar 2025 Systolic and Diastolic Geometry, *Instituto de Matemática Pura e Aplicada*, Rio de Janeiro, Brazil

Jan 2025 Analysis and Geometry on Groups and Spaces Winter School, *Hausdorff Research Institute for Mathematics*, Bonn, Germany

Nov 2024 Reunión de investigadores jóvenes de la REAG, *Universidade de Santiago de Compostela*, Spain

Nov 2024 Curvature and Geometric Analysis in Rome, *Sapienza Università di Roma*, Italy

Oct 2024 Math SOMMa Junior Meeting, *Centre de Recerca Matemàtica*, Barcelona, Spain

Aug 2024 Metric Geometry and Geometric Measure Theory, *Université de Fribourg*, Switzerland

Jun 2024 European Doctorate School of Differential Geometry, *Instituto de Matemáticas de la Universidad de Granada*, Spain

Mar 2024 Surfaces, Manifolds and Related Topics, *Université du Luxembourg*, Luxembourg

Nov 2023 Forum des jeunes mathématicien·nes, *Université Libre de Bruxelles*, Belgium

Oct 2023 Probability and Geometry in, on and of non-Euclidian spaces, *Centre International de Rencontres Mathématiques*, Marseille, France

Jun 2023 Interactions between geometry and topology, *Banyuls de la Marenda*, France

Mar 2023 Geometry, probability and their synergies, *Les Diablerets*, Switzerland

Nov 2022   Paroles aux jeunes chercheuses et chercheurs en géométrie et dynamique, *Institut Mathématique d'Orsay*, France

 Sep 2022   Workshop on Topological Methods in Geometry, *Centre de Recerca Matemàtica*, Barcelona, Spain

Mar 2020   Bernardo Cascales Functional Analysis School, *Universidad de La Laguna*, Spain