

ROIG SANCHIS

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I am a postdoc researcher at the Max Planck Institute for Mathematics in Leipzig. My mathematical interests lie in the geometry and topology of low dimensional hyperbolic manifolds, studying them through probabilistic techniques. In particular, my PhD thesis focused on the study of typical behaviours of geometric invariants of random hyperbolic 3-manifolds.

- Post-doctoral researcher**
Max Plack Institute for Mathematics | Leipzig
Nov 2024 - current
- Teaching assistant**
Sorbonne Université | Paris
Sept 2022 - Feb 2024
- PhD student**
Sorbonne Université | Paris
Oct 2021 - Oct 2024

PhD in Mathematics <i>Sorbonne Université Advisor: Bram Petri</i>	Oct 2021 - Oct 2024
Master in teaching in secondary schools (specialization in Mathematics) <i>Universitat Autònoma de Barcelona (UAB)</i>	Sept 2020 - July 2021
Master in advanced Mathematics <i>Universitat de Barcelona (UB)</i>	Sept 2019 - July 2020
Bachelor in Mathematics <i>Universitat de Barcelona (UB)</i>	Sept 2015 - July 2019

TEACHING
EXPERIENCE

Teaching assistant	2022 - 2024
<i>Sorbonne Université</i> (To BSc and MSc students in Mathematics)	
• Topology and Differential Calculus I	Sept 2022 - Jan 2023
• Introduction to Probability	Jan 2023 - May 2023
• Topology and Differential Calculus I	Sept 2023 - Jan 2024
• Master course: Introduction to Teichmüller theory	Jan 2024 - Feb 2024

PUBLICATIONS

Articles	"The length spectrum of random hyperbolic 3-manifolds" (2023). In: arXiv: 2311.04785.
	"The systole of random hyperbolic 3-manifolds" (2024). In: arXiv: 2406.11783.

TALKS

Séminaire Analyse	Oct 3, 2024
<i>Institut de recherche mathématique avancée (IRMA) Strasbourg, France</i>	
Seminaire de Géométrie	June 13, 2024
<i>Aix-Marseille Université Marseille, France</i>	
Conference: "Manifolds and groups in Bologna II"	April 18, 2024
<i>Università di Bologna Bologna, Italy</i>	
Conference: "Knot Theory Informed by Random Models and Experimental Data"	April 2, 2024
<i>Banff International Research Station Banff, Canada</i>	
Conference: "Surfaces, Manifolds and Related Topics"	March 20, 2024
<i>University of Luxembourg Luxembourg</i>	
Graduate geometry colloquium	March 7, 2024
<i>ETH Zurich, Switzerland</i>	
Spectra and Moduli seminar	Feb 26, 2024
<i>Durham University Durham, UK</i>	
Conference: "Discrete Mathematics and Probability"	Jan 29, 2024
<i>Alfréd Rényi Institute of Mathematics Budapest, Hungary</i>	

Conference: KAIST Geometric Topology Fair <i>University of Busan Busan, Corea</i>	Jan 19, 2024
Geometry seminar <i>Universitat Autònoma de Barcelona Barcelona, Spain</i>	Dec 5, 2023
Seminaire: "Les Probabilités de Demain" <i>Institut Henri Poincaré (IHP) Paris, France</i>	Nov 15, 2023
Conference: "Geometry and Probability in, on and at non-Euclidean spaces" <i>C.I.R.M Marseille, France</i>	Oct 3, 2023
Colloque de Géométrie <i>Université de Paris Est-Créteil Créteil, France</i>	April 14, 2023
Geometry seminar <i>University of Luxemburg Luxemburg</i>	March 28, 2023
Working group: Thin groups <i>Sorbonne Université Paris, France</i>	March 24 2023
Séminaire de Géométrie et Combinatoire <i>Sorbonne Université Paris, France</i>	Feb 21, 2023
Conference: "Combinatorics of finite-index sub-groups" <i>Institut Henri Poincaré (IHP) Paris, France</i>	Nov 2, 2022
Conference: TSW2022 <i>Georgia Tech Atlanta, UE</i>	July 28, 2022
Journée d'équipe ACG <i>Sorbonne Université Paris, France</i>	June 16, 2022

ATTENDED CONFERENCES

2025

- **Hyperbolic manifolds, their submanifolds and fundamental groups**
IMPA | Rio de Janeiro, Brasil Jan 6-17

2024

- **Random hyperbolic surfaces and random graphs**
CIRM | Marseille, France Nov 25-29

2023

- **GRAZP: Groups and Rigidity Around the Zimmer Program**
Ventotene, Italy Sept 11-16
- **Durham Symposium 2023: Spectral gaps**
Durham University | Durham, England Aug 7-11
- **IMJ Summer school: Microlocal and probabilistic methods in geometry and dynamics**
IMJ-PRG | Paris, France July 3-7
- **Groups and Dynamics in Geometry**
Ascona, Switzerland May 29 - June 2
- **1,2,3: Curves, Surfaces and 3-Manifolds**
Haifa, Israel May 7 - 11
- **Geometry, Probability and their Synergies**
Les Diablerets, Switzerland March 13-17
- **Winter School: Geometry of Locally Symmetric Spaces**
Montevideo, Uruguay Feb 28 - March 9

2022

- **ANR ADYCT**
Strasbourg, France Nov 7-8
- **Graduate School on Random walks**
Göttingen, Germany Oct 17-21
- **Graduate school on Geometric Group Theory and Low Dimensional Topology,**
ICMAT | Madrid, Spain May 16-27
- **Structures on Surfaces**
CIRM | Marseille, France May 2-6
- **Winter School on Billiards**
Autrans, France Jan 17-21

2021

- **GDR Platon**
CIRM | Marseille, France Nov 15-17

SKILLS

Digital

C++, Sagemath

Languages

- Catalan (native)
- Spanish (native)
- English (Proficient)
- French (Advanced)
- Portuguese (Basic)