Mingkun LIU

Curriculum Vitae

Employment

2022 - present Postdoctoral researcher, University of Luxembourg

Education

- 2019 2022 Ph.D. in Mathematics, IMJ-PRG, Paris Cité University
- 2018 2019 M.Sc. in Fundamental Mathematics, Sorbonne University
- 2015 2019 Ingénieur Polytechnicien Program, École polytechnique
- 2011 2015 B.Sc. (Hons) in Mathematical Science, Hong Kong Baptist University

(Pre)Publications

April 2024 Word-length curve counting on the once-punctured torus, with DAVID FISAC, eprint arXiv:2404.09372

- December 2023 Random surfaces with large systoles, with BRAM PETRI, eprint arXiv:2312.11428
- December 2023 Length spectrum of large genus random metric maps, with SIMON BARAZER and ALESSANDRO GIACCHETTO, eprint arXiv:2312.10517
- November 2023 Low-lying geodesics on the modular surface and necklaces, with ARA BASMAJIAN, eprint arXiv:2311.16041
- February 2022 Length partition of random multicurves on large genus hyperbolic surfaces, with VINCENT DELECROIX, accepted for publication in JEMS, eprint arXiv:2202.10255
- December 2019 Length statistics of random multicurves on closed hyperbolic surfaces, eprint arXiv:1912.11155, Groups Geom. Dyn. 16 (2022), no. 2, pp. 437–459

Teaching

January 2024	Weil–Petersson random hyperbolic surfaces for PhD students, University of Rennes
•	Analysis for applications for first-year students in Computer Science, <i>University of Luxembourg</i>
•	Analysis and applications 2 for first-year students in Physics, <i>University of Luxembourg</i>

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•	Math Forge for first-year students, University of Luxembourg
•	Introduction to programming 2 for first-year students in Computer Science, <i>Paris Cité University</i>
•	Interaction between Mathematics and Physics for first-year students, <i>Paris Cité University</i>
•	Elementary Mathematics for first-year students, Paris Cité University
•	Oral exam for second-year students in Mathematics, <i>Paris Cité University</i>
•	Probabilities for second-year students in Mathematics, <i>Paris Cité University</i>
•	Mathematics Projects for first-year students in Computer Science, Paris Cité University
5	Oral exam for second-year students in Mathematics, <i>Paris Cité University</i>
•	Elementary Mathematics for first-year students in Physics, <i>Paris Cité University</i>

Supervision

March 2024 present	Master student project, University of Luxembourg.
September 2023 January 2024	Experimental Mathematics Lab project, University of Luxembourg.
February 2023 June 2023	Bachelor thesis, University of Luxembourg.

Talks

November 2024	Random	hyperbolic	surfaces a	and random g	graphs, <i>CIRM</i> ,	Marseille, France
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- September 2024 Riemann Surfaces: Random, Flat, and Hyperbolic Geometry, MFO, Oberwolfach, Germany
 - July 2024 AMS-UMI International Joint Meeting, University of Palermo, Palermo, Italy
 - June 2024 Workshop on Stochastic Geometry and Point Processes, *Ruhr University* Bochum, Bochum, Germany
 - April 2024 Séminaire Analyse, University of Strasbourg, Strasbourg, France
 - March 2024 Séminaire de Théorie Ergodique et Systèmes Dynamiques, Sorbonne Paris North University, Paris, France
- November 2023 Séminaire Compréhensible, *University of Grenoble*, Grenoble, France July 2023 Geometry & Topology Seminar, *ShanghaiTech University*, Shanghai, China

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April 2023	Work in Progress seminar in probability, <i>University of Luxembourg</i> , Esch- sur-Alzette, Luxembourg
January 2023	Séminaire de théorie ergodique, University of Rennes, Rennes, France
January 2023	Séminaire Gaston Darboux, University of Montpellier, Montpellier, France
November 2022	Geometry and Topology Seminar, University of Bristol, Bristol, UK
October 2022	Séminaire de géométrie différentielle, University of Lorraine, Nancy, France
September 2022	Colloque de Géométrie, Paris-East Créteil University, Créteil, France
May 2022	Conference Structures on Surfaces, CIRM, Marseille, France
April 2022	Workshop on Quantum Geometry, IHES, Bures-sur-Yvette, France
April 2022	Séminaire Plat, Institut Henri Poincaré, Paris, France
February 2022	Séminaire des Thésards, IMJ-PRG, Paris, France
February 2022	Séminaire Géométrie et Topologie, IMJ-PRG, Paris, France
October 2020	Rencontre Surfaces Aléatoires, University of Bordeaux, Bordeaux, France

Conferences

November 2024 Random hyperbolic surfaces and random graphs, CIRM, Marseille, France

- September 2024 Riemann Surfaces: Random, Flat, and Hyperbolic Geometry, MFO, Oberwolfach, Germany
 - July 2024 AMS-UMI International Joint Meeting, University of Palermo, Palermo, Italy
 - June 2024 Workshop on Stochastic Geometry and Point Processes, *Ruhr University* Bochum, Bochum, Germany
 - March 2024 School on flat surfaces and interactions, Le Teich, France
 - January 2024 Sage Days 125: combinatorics, number theory, dynamical systems and geometry, Le Teich, France
- December 2023 Renormalization and Visualization in Geometry, Dynamics and Number Theory, CIRM, Marseille, France
- November 2023 GDR Platon : Paroles aux jeunes chercheuses et chercheurs en géométrie et dynamique, *University of Grenoble*, Grenoble, France
 - October 2023 **Probability and Geometry in, on and of non-Euclidian spaces**, *CIRM*, Marseille, France
 - July 2023 IMJ-PRG Summer School: Microlocal and probabilistic methods in geometry and dynamics, IMJ-PRG, Paris, France
 - May 2023 Groups and Dynamics in Geometry: Celebrating the mathematics of Ursula Hamenstädt, Monte Verità, Ascona, Switzerland
 - March 2023 Random Geometry in Math & Physics, Radboud University, Nijmegen, Netherlands
 - March 2023 École de Printemps en Géométrie et Dynamique, Lille, France

March 2023	Geometry, Probability and their Synergies Workshop , Les Diablerets, Switzerland
November 2022	GDR Platon : Paroles aux jeunes chercheuses et chercheurs en géométrie et dynamique, <i>Paris-Saclay University</i> , Orsay, France
October 2022	Random walks and related random topics, University of Göttingen, Göttingen, Germany
September 2022	Combinatorics, Dynamics and Geometry on Moduli Spaces , <i>CIRM</i> , Marseille, France
September 2022	TR Salento 2022, Otranto, Italy
July 2022	Journées Nancéiennes de Géométrie, University of Lorraine, Nancy, France
May 2022	Structures on Surfaces, CIRM, Marseille, France
April 2022	Workshop on Quantum Geometry, IHES, Bures-sur-Yvette, France
April 2022	Mini-rencontre ANR MoDiff, University of Bordeaux, Bordeaux, France
January 2022	Billards, Autrans, France
September 2021	Counting problems, Ventotene, Italy
October 2020	Rencontre Surfaces Aléatoires, University of Bordeaux, Bordeaux, France
September 2019	Summer School Around Moduli Spaces, Saarland University, Saarbrücken, Germany
June 2019	Rencontre Surfaces Plates, University of Bordeaux, Bordeaux, France
June 2019	New Perspectives in Gromov–Witten Theory IMJ-PRG, Paris, France
January 2019	Thematic Month: Complex Geometry CIRM, Marseille, France

Organization

- 2024 Co-organiser of the workshop "Surfaces, Manifolds and Related Topics" at the University of Luxembourg
- 2023 present Co-organiser of the Geometry and Topology seminar at the University of Luxembourg

Administration

- 2019 2022 Member of the Bureau des Doctorants at the IMJ-PRG
- 2019 2022 Member of the Laboratory Council at the IMJ-PRG

Languages

- Chinese Native speaker
- English Fluent

French Fluent

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