

Yuriy Tumarkin

Curriculum Vitae

Laboratoire AGM
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Employment

2026 – present **Postdoctoral researcher**, CY Cergy Paris Université, Mentor: Giovanni Forni.

Research interests: Teichmüller dynamics, translation surfaces, interval exchange transformations, infinite surfaces, non-orientable surfaces.

Education

- 2022–2026 **PhD**, *University of Zurich*, Supervisor: Corinna Ulcigrai.
Thesis title: “On the ergodic theory of linear flows on abelian covers of translation surfaces”
- 2021–2022 **MMath**, *Part III of the Mathematical Tripos, University of Cambridge*,
Distinction, 86%.
- 2018–2021 **Mathematics B.A.**, *Trinity College, University of Cambridge*,
Third year: First Class Honours, 78%.

Pre-prints

- [1] Mauro Artigiani, Roberto Castorrini, Davide Ravotti, and Yuriy Tumarkin. *Maharam-Pollicott-Ruelle resonances and self-similar translation flows on abelian covers*. 2026. arXiv: 2607.11482. URL: <https://arxiv.org/abs/2607.11482>.
- [2] Yuriy Tumarkin. *Invariant sets for the wind-tree model*. 2025. arXiv: 2510.10760. URL: <https://arxiv.org/abs/2510.10760>.

Publications

- [3] Yuriy Tumarkin. “Ergodic measures for periodic type $\mathbb{Z}^m$ -skew-products over Interval Exchange Transformations.” *Journal d'Analyse Mathématique* 155.2 (2025), pp. 699–741. arXiv: 2312.13165.
- [4] (With Misha Schmalian and Yuri B. Suris). “How one can repair non-integrable Kahan discretizations. II. A planar system with invariant curves of degree 6.” *Mathematical Physics, Analysis and Geometry* 24 (2021). arXiv: 2106.14301.

Talks

- Sep 2026 **Ergodic theory and dynamical systems seminar, Zurich, Switzerland**, *Invariant sets for the wind-tree model*
- Mar 2026 **Statistics, Hyperbolicity, and Related Problems, University of Warwick, UK**, *Self-similar straight-line flows on abelian covers of translation surfaces*
- Jan 2026 **GGT seminar, Heidelberg, Germany**, *Invariant sets for the wind-tree model*
- Dec 2025 **Christmas workshop on geometry and number theory, Karlsruhe, Germany**, *Invariant sets for the wind-tree model*
- Dec 2025 **Geometry seminar, MPI MiS Leipzig, Germany**, *Invariant sets for the wind-tree model*

- Nov 2025 **Séminaire Rauzy, Aix-Marseille Université, France**, *Invariant sets for the wind-tree model*
- Oct 2024 **Wandering seminar in dynamics, Torun, Poland**, *Invariant measures for periodic type skew-products over IETs*
- Sep 2024 **Workshop on geometric infinite surfaces, Leipzig, Germany**, *Invariant measures for the linear flow on infinite translation surfaces*
- Apr 2024 **Zurich Graduate Colloquium**, *What is ... a translation surface?*
- Oct 2023 **Zurich Dynamics Talks**, *Invariant measures for periodic type skew-products over IETs*
- Dec 2018 **Talk at Durham Johnston School mathematical society**, *Cutting Sequences and Beatty's Theorem*

Teaching and supervision

Supervision

- Feb 2026 – Aug 2026 **Master thesis co-supervisor**, *Truchet tilings on the torus*, Anastasia Fontana
- Sep 2025 – Mar 2026 **Master thesis co-supervisor**, *Platonic surfaces*, Colin Meckes
- Oct 2024 – Jan 2026 **Master thesis co-supervisor**, *Infinite translation surfaces*, Mathäus Nguyen
- Feb – Oct 2024 **Master thesis co-supervisor**, *Tiling Billiards*, Sabrina Robbiani

Teaching

- Spring 2026 **Teaching assistant**, *Dynamical Systems and Ergodic Theory*
- Autumn 2025 **Teaching assistant**, *Foundations of Mathematics*
- Spring 2025 **Teaching assistant**, *Billiard Dynamics*
- Autumn 2024 **Student seminar instructor**, *Combinatorics and Geometry*
- Spring 2024 **Teaching assistant**, *Analysis II*
- Autumn 2023 **Student seminar instructor**, *Hyperbolic Geometry*
- Spring 2023 **Teaching assistant**, *Elements of Geometry*
- Autumn 2022 **Teaching assistant**, *Elements of Topology*

Outreach

- Nov 2026 **Teacher training for maths teachers**, *Co-organising a full day teacher training event for maths teachers from across Switzerland on the topic "Programming with Geogebra"*
- Oct 2025 **Teacher training for maths teachers**, *Co-organised a full day teacher training event for maths teachers from across Switzerland on the topic "Slow chaos", led session on "Programming with Geogebra"*
- Mar 2023 – Jun 2026 **Slow Chaos Exhibition at Science Pavilion UZH**, *Member of team giving regular public tours and workshops for school classes about billiards and slow chaos (in English and German).*
- Oct – Nov 2019 **STIMULUS**, *I taught six year 5 students (10 years old) introductory combinatorics, Cambridge, UK.*
- July 2019 **Team Guide at IMO**, *Bath, UK*

Organisation roles

- Jul 2024 – Jun 2026 **Co-organiser of the Geometry Graduate Colloquium**, *Zurich.*

- Apr 2020 – Mar 2021 **External secretary of Cambridge University Mathematical Society**,
Responsible for organising weekly talks by invited speakers
- 2016–2018 **Organiser of school mathematical society**, *Compiled problem sheets (available [here](#)) and led weekly sessions, Durham Johnston School*

Awards and prizes

- 2021 **Rouse Ball Mathematics Prize**, *For the essay “Groups acting on trees”*
- 2021–22 **Trinity College Senior Scholarship**
- 2019–20 **Trinity College Junior Scholarship**
- 2019, 2021, 2022 **Trinity College Examination Prizes**

Conferences and schools attended

- Sep 2026 Lille dynamics and geometry conference, Lille, France
- Jun 2026 Geometry, Dynamics, and Computer-Assisted Proofs, Heidelberg, Germany
- Mar 2026 Statistics, Hyperbolicity, and Related Problems, University of Warwick, UK
- Dec 2025 Christmas Workshop on Geometry and Number Theory, Karlsruhe, Germany
- Jun 2025 Dynamics and Rigidity: a Celebration of the Mathematics of Alex Eskin, Cetraro, Italy
- Jun 2025 Summer School on Dynamics and geometry in dimension 1, 2 and 3, CIRM, Luminy, France
- Apr 2025 Translation, Dilation, Affine and other Structures on Surfaces, Toulouse, France
- Oct 2024 Wandering seminar in dynamics, Torun, Poland
- Sep 2024 Workshop on geometric infinite surfaces, Leipzig, Germany
- Jul 2024 Hengstberger Symposium: Geometry and dynamics of surfaces beyond finite-type, Heidelberg, Germany
- Jun 2024 New Frontiers in Parabolic Dynamics and Renormalization, Bologna, Italy
- Jun 2024 British Mathematical Colloquium, Manchester, UK
- Mar 2024 School on flat surfaces and interactions, Le Teich, France
- Dec 2023 Renormalization and Visualization in Geometry, Dynamics and Number Theory, CIRM, Luminy, France
- Oct 2023 Conference on Dynamics and Finance: from KAM Tori to ETFs, Trieste, Italy
- Jul 2023 School on Renormalization and Visualization for packing, Billiards and Surfaces, CIRM, Luminy, France
- Jul 2023 IMJ-PRG Summer school 2023: Microlocal and probabilistic methods in geometry and dynamics, Paris, France
- Jun 2023 Zurich Dynamics Conference, Zurich, Switzerland
- Jun 2023 Zurich Dynamics School, Zurich, Switzerland
- May 2023 Groups and Dynamics in Geometry, Ascona, Switzerland
- May 2023 Master Class: Low dimensional dynamical systems, Stockholm, Sweden
- Sep 2022 Combinatorics, Dynamics and Geometry on Moduli Spaces, CIRM, Luminy, France
- Sep 2022 Mini-workshop Dynamics and Groups, Zurich, Switzerland
- 2017 Modern Mathematics International Summer School for Students, Bremen, Germany
- 2016 Contemporary Mathematics Summer School, Dubna, Russia

Skills

Languages English, Russian (Native), German (C1/C2), French (B2/C1), Italian (B2/C1)
Programming and software Sage, Python, Geogebra

References

Corinna Ulcigrai corinna.ulcigrai@math.uzh.ch.
(University of Zurich)