

# Yuriy Tumarkin

## Curriculum Vitae

Institut für Mathematik  
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🌐 [yuriytumarkin.github.io](https://yuriytumarkin.github.io)

2022 – present **PhD Student**, *University of Zurich*,  
Supervisor: Corinna Ulcigrai.

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

## Education

- 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] Yuriy Tumarkin. *Invariant sets for the wind-tree model*. 2025. arXiv: 2510.10760. URL: <https://arxiv.org/abs/2510.10760>.

## Publications

- [2] 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.
- [3] (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

- 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*

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## Teaching and supervision

### Supervision

- Feb 2026 – present **Master thesis co-supervisor**, Anastasia Fontana  
Sep 2025 – present **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*

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## Outreach

- Oct 2025 **Teacher training for maths teachers**, *Co-organised a full day teacher training event for maths teachers from across Switzerland, led session on “Programming with Geogebra”*  
Mar 2023 – present **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*

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## Organisation roles

- July 2024 – present **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*

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## 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**

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## Conferences and schools attended

- 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

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## Skills

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

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## References

- Corinna Ulcigrai** [corinna.ulcigrai@math.uzh.ch](mailto:corinna.ulcigrai@math.uzh.ch)  
(University of Zurich)