

Hao WU

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➤ Personal Informations:

Sex: Male. Date of Birth: January 20, 1996.
Nationality: Chinese.
Professional address: Universität Zürich, Institut für mathematik,
Winterthurerstrasse 190, Zürich, Switzerland.
Orcid ID: [0009-0007-3635-4387](https://orcid.org/0009-0007-3635-4387)
arXiv ID: HaoWU#96

➤ Academic Positions:

2026-2028: **Postdoctoral researcher**, Graz University of Technology, Graz, Austria.
Working with Prof. [Christoph Aistleitner](#).

2022-2025: **Postdoctoral researcher**, University of Zürich, Zürich, Switzerland.
Working with Prof. [Corinna Ulcigrai](#).

2020-2022: **Temporary teaching and researching position (ATER)**,
Université Paris Cité, Paris, France.

➤ Education:

2017 Oct. - 2022 Nov. **Mathematics Ph.D.** at Université Paris Cité, Paris, France.
Advisor: Prof. [Bassam Fayad](#).
Thesis title:
On the deviations of ergodic averages on the torus and their applications.

2016 Sep. - 2017 Sep. **Mathematics M.S.** at Université Pierre-et-Marie-Curie, Paris, France.
Scholarship from: Fondation Sciences Mathématiques de Paris (FSMP).

2012 Sep. - 2016 Jun. **Mathematics B.S.** (Ranking: 1/21) at Nankai University, Tianjin, China.

➤ List of Publications:

Published:

1. F. Abdedou, H. Wu. *Examples of Ergodic Cylindrical Cascades over 2-dimensional torus*, 2025. *Ergodic Theory and Dynamical Systems*. <http://dx.doi.org/10.1017/etds.2024.130>.
2. P. Berk, F. Trujillo, H. Wu. *Ergodic properties of infinite extension of symmetric interval exchange transformations*, 2025. *Journal de l'École polytechnique — Mathématiques*, Volume 12 pp. 853-880. doi : [10.5802/jep.302](https://doi.org/10.5802/jep.302).

Submitted/Preprints:

3. H. Wu. *Absolute bounds for ergodic deviations of linear form sequences relative to intervals in $\mathbb{T}^1$* , 2021. [arXiv:2111.14981](https://arxiv.org/abs/2111.14981)
4. J. J. P. Veerman, D. Ralston, F. M. Tangerman, H. Wu, *Birkhoff Measures, Birkhoff Sums, and Discrepancies*, 2024. ([pdf version](#))
5. H. Wu. *Absolute bounds for ergodic deviations of toral translations relative to triangles in $\mathbb{T}^2$* , 2021. [arXiv:2112.00003](https://arxiv.org/abs/2112.00003)

6. H. Wu. *Ergodic deviations of degenerate multidimensional actions – symmetric convex bodies*, 2022. [arXiv:2112.06131](https://arxiv.org/abs/2112.06131)

In Preparation:

7. C. Ulcigrai, M. Bromberg, H. Wu. *A Temporal central limit theorem for real valued cocycles of generic intervals over irrational rotations*. (Soon available on arXiv)

➤ **Invited Talks:**

- Seminar in Dynamical Systems, Shanghai Center of Mathematical Science, Fudan University, Shanghai, China, Jan. 2026.
- Seminar in Dynamical Systems, Soochow University, Soochow, China, Jan. 2026.
- Workshop on Dynamical Systems, Chern Institute of Mathematics, Nankai University, Tianjin, China, Aug. 2025.
- Workshop on Dynamical Systems and Related Topics, University of Maryland, College Park, USA, Apr. 2025.
- Seminar of Analysis and Dynamics, Université Côte d’Azur, Nice, France, Feb. 2025.
- Seminar in Topology, Geometry and Dynamics, National University of Singapore, Singapore, Jan. 2025.
- Ergodic Theory and Dynamical Systems Seminar, Nanjing University, Nanjing, China, Jan. 2025.
- Young Scholar Forum, Nanjing University, Nanjing, China, Dec. 2024.
- Dynamical Systems Seminar, Shanghai Jiao Tong University, Shanghai, China, Aug. 2024.
- Workshop of Dynamics and Number Theory, Jagellonian University, Kraków, Poland. May 2024.
- Ergodic Theory and Dynamical Systems Seminar, University of Zurich, Switzerland, Mar. 2024.
- Toruń ergodic theory and dynamical systems seminar, Uniwersytet Mikołaja Kopernika, Poland, Dec. 2023.

➤ **(Co)Organisations of seminars and reading groups:**

- [Ergodic Theory and Dynamical Systems Seminar](#) in Zürich, 2024.
- [Working Seminar in Dynamics](#), Zürich, 2024 Fall.
- Reading group on local limit theorems of Markov chains, University of Zürich, 2023/2024.

➤ **Supervising and mentoring:**

- 01/11/2022-10/07/2023 **Master thesis co-supervisor** of Elisa Destefani at University of Zurich.
- 01/11/2023-01/12/2024 **Master thesis co-supervisor** of Martina Nasca at University of Zurich.

➤ **Teaching experience:**

- **Lecturer**, Foundations of Mathematics, University of Zurich, 2024.
- **Teaching assistant**, Complex Analysis, University of Zurich, 2024.
- **Lecturer**, Foundations of Mathematics, University of Zurich, 2023.
- **Teaching assistant**, Topology, University of Zurich, 2022.
- **Teaching assistant**, Elementary Analysis and Linear Algebra, Université Paris Cité, 2022.
- **Teaching assistant**, Advanced Analysis and Differential Equations for Engineering School, Université Paris Cité, 2021.
- **Lecturer**, Calculus I, Université Paris Cité, 2020.
- **Lecturer**, Calculus I, Université Paris Cité, 2019.

- **Teaching assistant**, Elementary Analysis and Linear Algebra, Université Paris Cité, 2018.

➤ **Prizes, Awards, Scholarships:**

- The Scholarship of Fondation Sciences Mathématiques de Paris (FSMP), 2016-2017.
- Tsang Hin-Chi Scholarship (equivalent to The First Prize Scholarship), 2015.
- The First Prize in the “100 Projects” of Creative Research for the Undergraduates of Nankai University, 2015.
- The National Scholarship (offered by Ministry of Education, China), 2014.
- The First Prize in the Sixth National College Mathematics Contest (Tianjin City Section), 2014.
- The First Prize Scholarship (top 3% in Nankai University), 2013.

➤ **Languages:**

- Chinese: Mother tongue.
- English: Fluent.
- French: From intermediate to fluent.

➤ **Research Interests:**

- Stochastic properties of dynamical systems of zero entropy, such as (higher dimensional) irrational rotations and interval exchange transformations.
- Applications of homogeneous dynamics and harmonic analysis to number theory, in particular Diophantine approximations.
- Ergodic theory of infinite measure dynamical systems, such as skew products over irrational rotations and interval exchange transformations.