

Andreas Wieser

Institute of Advanced Study
1 Einstein Drive
Princeton, NJ 08540
Homepage: <https://awieser1.github.io/>

awieser (at) ias.edu
or
andreaslwieser (at) gmail.com

EDUCATION	PhD in Mathematics , ETH Zurich <i>Advisors: Menny Aka, Manfred Einsiedler</i>	2016 – 2021
	MSc in Mathematics , ETH Zurich <i>Graduated with distinction, GPA 6/6</i> Thesis: <i>Linnik's problems: An ergodic theoretic proof of two equidistribution results</i> supervised by Manfred Einsiedler	2016
	BSc in Physics and Mathematics , ETH Zurich <i>GPA: 5.04/6 resp. 5.57/6</i>	2013/2014
POSITIONS	Member at the IAS , Princeton	Spring 2025
	Visitor at the IAS , Princeton	Fall 2024
	Visiting Scholar , University of California at San Diego	Fall 2024
	Postdoctoral Fellow , Jerusalem <i>Einstein Institute of Mathematics, Hebrew University, with Elon Lindenstrauss</i>	2021–2024
RESEARCH VISITS	Northwestern University , Evanston <i>Visiting Predoctoral Fellow, invited by Ilya Khayutin.</i>	Oct. 2020 – March 2021
	Hausdorff Institute of Mathematics , Bonn <i>Attending the program 'Dynamics: Topology and Numbers'.</i>	Jan. 2020 – March 2020
PAPERS	<ol style="list-style-type: none">1. A. Wieser, <i>Linnik's problems and maximal entropy methods</i>. Monatsh. Math. 190(1):153-208, 2019. Link.2. M. Aka, M. Einsiedler, A. Wieser, <i>Planes in four space and four associated CM points</i>, Duke Math. J. 171(7) 1469-1529, 2022. Link.3. M. Aka, M. Luethi, Ph. Michel, A. Wieser, <i>Simultaneous supersingular reductions of CM elliptic curves</i>. J. Reine Angew. Math 2022(786) 1-43, 2022. Link.4. M. Aka, A. Musso, A. Wieser, <i>Equidistribution of rational subspaces and their shapes</i>. Ergod. Theory Dyn. Syst. 44(8) 2009-2062, 2024. Link5. A. Wieser, P. Yang, <i>A uniform Linnik basic lemma and entropy bounds</i>, submitted. arXiv:2201.05380, 2022. Link6. O. Solan, A. Wieser, <i>Birkhoff genericity for points on curves in expanded horospheres</i>, submitted. arXiv:2301.10671, 2023. Link7. M. Aka, P. Feller, A.B. Miller, A. Wieser, <i>Seifert surfaces in the four-ball and composition of binary quadratic forms</i>, submitted. arXiv:2311.17746, 2023. Link8. A. Wieser, <i>Effective equidistribution of orbits under semisimple groups on congruence quotients</i>. arXiv:2407.12760, 2024. Link9. E. Lindenstrauss, G. Margulis, A. Mohammadi, N. Shah, A. Wieser, <i>An effective closing lemma for unipotent flows</i>. arXiv:2410.19305, 2024. Link	

AWARDS

- *SNSF* Postdoc.mobility fellowship, Swiss National Science Foundation, 136'000 CHF 2024–2026
- *SNSF* Doc.mobility fellowship, Swiss National Science Foundation, 41'042 CHF 2020–2021
- *ETH medal* for outstanding master thesis, ETH Zurich. 2016
- *Willi Studer prize* for best graduate in 2016, ETH Zurich. 2016

REFEREE

IMRN, Commentarii Mathematici Helvetici, Journal of the London Mathematical Society, Proceedings of the London Mathematical Society, Pure and Applied Mathematics Quarterly, Quarterly Journal of Mathematics, Journal of Modern Dynamics, Forum Mathematicum.

INVITED TALKS

- *PU/IAS number theory seminar*, Princeton, 14. November 2024.
- *Colloquium*, University of Bonn, 8. November 2024.
- *Dynamics Seminar*, University of Illinois at Chicago, 30. October 2024.
- *Dynamical Systems Seminar*, Penn State, 28. October 2024.
- *Recent Trends in Homogeneous and Teichmüller Dynamics*, Brin Center, University of Maryland, September 2024.
- *Ergodic Theory Seminar*, Ohio State University, 04. Sept. 2024.
- *Distribution of orbits: Arithmetics and Dynamics*, Flüeli-Ranft, 10. July 2024.
- *Dynamics Seminar*, Hebrew University of Jerusalem, 25. June 2024.
- *Morningside Center of Mathematics*, Beijing, 30. April 2024.
- *N-cube days XIX*, Copenhagen, 17. Nov. 2023. [Link](#)
- *Topology & Geometry*, NUS, Singapore, 06. Nov. 2023.
- *2023 RTG Summer School*, Evanston, 26. June 2023.
- *Diophantine Analysis, Dynamics and Related Topics*, Technion, 05. February 2023.
- *Crosscurrents in number theory, analysis and geometry*, Paris, 08. December 2022. [Link](#)
- *Dynamics Seminar*, Academy of Mathematics and Systems Sciences, CAS, 10. November 2022.
- *Ergodic Theory and Dynamical Systems Seminar*, Zurich, 10. October 2022.
- *Dynamics Seminar*, Hebrew University, 22. March 2022.
- *PET Seminar*, Ben-Gurion University, 16. December 2021.
- *Midrasha on Groups*, Weizmann Institute, 13. December 2021.
- *Groups and Dynamics*, Tel Aviv, 18. November 2021.
- *Expanding Dynamics X*, Zoom, 23. March 2021. [Link](#)
- *Zoom Dynamical Systems Seminar*, Penn State, 23. February 2021. [Abstract](#)
- *Midwest Dynamics and Group Actions Seminar*, Zoom, 23. November 2020.
- *Geometry Graduate Colloquium*, Zürich, 08. October, 2020.
- *ICTS conference – Smooth and homogeneous dynamics*, Bangalore, 30. September 2019. [Video](#).
- *Zurich graduate colloquium*, Zürich, 06. November 2018.
- *ETDS morning seminar*, Zürich, 25. October 2018.
- *5th Workshop on Operator Theoretic Aspects of Ergodic Theory*, Tübingen, 17. November 2017.

ATTENDED CONFERENCES AND WORKSHOPS

- *Dynamics week in Jerusalem*. Hebrew University, July 2022.
- *Ergodic geometry, number theory and Margulis legacy: the next generation*. University of Chicago, June 2022.
- *Arithmetic, geometry, and modular forms: a conference in honor of Bill Duke*. ETH Zurich, June 2019.
- *Number Theory and Dynamics*. University of Cambridge, March 2019.
- *Dynamics: Topology and Numbers*. Max Planck Institute for Mathematics (Bonn), July 2018. [Link](#).
- *New Methods for Zimmer's Conjecture*. IPAM (UCLA), January 2018. [Link](#).
- *Ergodic Theory: Numbers, Fractals, and Geometry*. Clay research workshop, Clay Mathematics Institute (Oxford), September 2017. [Link](#).
- *4th Workshop on Operator Theoretic Aspects of Ergodic Theory*. Feldkirch, May 2017.
- *Distinguished Lectures in Dynamics*. Tata Institute of Fundamental Research (Mumbai), April 2017. [Link](#).
- *Applications of Ergodic Theory in Number Theory*. CIRM doctoral school (Luminy), October 2016.

LECTURE NOTES

Analysis I/II with Manfred Einsiedler, in German, available [here](#).
 These are extensive lecture notes for the first year course in analysis at ETH Zurich. They were written during the academic years 2016-2017 and 2017-2018, and also used by Peter Jossen and Alessio Figalli thereafter.

TEACHING

- Organizing student seminars:
 - *Functional Analysis III, Unitary Representations*, with M. Einsiedler, Fall 2019.
 - *Primes of the form $x^2 + ny^2$* , with M. Aka and M. Lüthi, Spring 2019.
 - *Counting problems and homogeneous dynamics*, with M. Einsiedler and M. Lüthi, Spring 2018. [Link](#).

The teaching concept for this seminar is described in detail in the article
 M. Luethi, A. Wieser, Self-assessment in undergraduate student seminars in mathematics, *ETH Learning and Teaching Journal* 2(1):49-57, 2020. [Link](#).

 - *Arithmetic of quadratic forms*, with M. Aka, Spring 2017. [Link](#).
- Teaching assistant:
 - *Functional Analysis II*, taught by M. Einsiedler, Spring 2019. [Link](#).
 - *Functional Analysis I*, taught by M. Einsiedler, Fall 2018. [Link](#).
- Exercise classes: Commutative Algebra (Fall 2019). As an undergraduate: Complex Analysis, Topology, Linear Algebra II, Methods of Mathematical Physics.

SUPERVISED STUDENTS

Andrea Musso, *Equidistribution of rational subspaces and their shapes*
 Master thesis advised jointly with M. Aka,
 A.M. received Willi Studer prize 2020

René Pfitscher, *Lattices, quantitative non-divergence, and some finiteness properties of adèle groups*
 Bachelor thesis advised jointly with M. Einsiedler 2020

Horace Chaix, *Eskin, Rudnick and Sarnak's proof of Siegel's weight formula*
 Master thesis advised jointly with M. Einsiedler 2020

Muriel Egli, *Equidistribution of planes in the matrix algebra*
Master thesis advised jointly with M. Aka

2019

LANGUAGES

German – native speaker
Italian – native speaker
English – fluent
French – intermediate