Andreas Wieser

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EDUCATION

PhD in Mathematics, ETH Zurich 2016 – 2021
Advisors: Menny Aka, Manfred Einsiedler

MSc in Mathematics, ETH Zurich 2016
Graduated with distinction, GPA 6/6
Thesis: *Linnik's problems: An ergodic theoretic proof of two equidistribution results* supervised by Manfred Einsiedler

BSc in Mathematics, ETH Zurich 2014
GPA: 5.57/6

BSc in Physics, ETH Zurich 2013
GPA: 5.04/6

POSITIONS

Postdoctoral Fellow, Jerusalem 2021–2023
Einstein Institute of Mathematics, Hebrew University, with Elon Lindenstrauss

RESEARCH VISITS

Northwestern University, Evanston Oct. 2020 – March 2021
Visiting Predoctoral Fellow, invited by Ilya Khayutin.

Hausdorff Institute of Mathematics, Bonn Jan. 2020 – March 2020
Attending the program 'Dynamics: Topology and Numbers'.

PAPERS

1. A. Wieser, *Linnik's problems and maximal entropy methods.* Monatsh. Math. 190(1):153-208, 2019. Link.
2. M. Aka, M. Einsiedler, A. Wieser, *Planes in four space and four associated CM points*, Duke Math. J. 171(7) 1469-1529, 2022. Link.
3. M. Aka, M. Luethi, Ph. Michel, A. Wieser, *Simultaneous supersingular reductions of CM elliptic curves.* J. Reine Angew. Math 2022(786) 1-43, 2022. Link.
4. M. Aka, A. Musso, A. Wieser, *Equidistribution of rational subspaces and their shapes*, submitted. arXiv:2103.05163, 2021. Link
5. A. Wieser, P. Yang, *A uniform Linnik basic lemma and entropy bounds*, submitted. arXiv:2201.05380, 2022. Link
6. O. Solan, A. Wieser, *Birkhoff genericity for points on curves in expanded horospheres.* In preparation.

AWARDS

- *SNSF* mobility fellowship, Swiss National Science Foundation 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, Pure and Applied Mathematics Quarterly, Quarterly Journal of Mathematics

TALKS

- *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 and used in the academic years 2016-2017 and 2017-2018.

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 adele 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