

Davide RAVOTTI

PERSONAL DATA

ADDRESS: Faculty of Mathematics, Universität Wien
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SCIENTIFIC INTERESTS

Dynamical Systems and Ergodic Theory.

EDUCATION

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| 2018 | Ph.D. degree at the University of Bristol (Bristol, UK).
Supervisor: prof. Corinna Ulcigrai.
Thesis title: <i>Mixing via shearing in some parabolic flows</i> .
This thesis received a <i>Faculty of Science Commendation</i> . |
| 2014 | Diploma di Licenza of the Scuola Superiore of the University of Udine (Udine, Italy).
Final mark: 110/110 <i>cum laude</i> . |
| 2013 | Master degree in Mathematics, University of Udine (Udine, Italy).
Final mark: 110/110 <i>cum laude</i> . |
| 2011 | Bachelor degree in Mathematics, University of Udine (Udine, Italy).
Final mark: 110/110 <i>cum laude</i> . |

ACADEMIC POSITIONS

JUN. 2021-PRESENT	Postdoctoral Assistant, Universität Wien (Wien, Austria).
MAR. 2019-MAY 2021	Research Fellow, Monash University (Melbourne, Australia).
SEP. 2018-MAR. 2019	Postdoctoral Assistant, University of Zürich (Zürich, Switzerland).
APR. 2018-AUG. 2018	Research Associate, University of Bristol (Bristol, UK).

PUBLICATIONS AND PREPRINTS

PREPRINTS:

- [13] M. Artigiani, L. Flaminio, D. Ravotti. On rigidity properties of time-changes of unipotent flows. Preprint, 2022 ([arxiv:2209.01253](https://arxiv.org/abs/2209.01253)).
- [12] E. Corso, D. Ravotti. Large hyperbolic circles. Submitted, 2022 ([arxiv:2208.07771](https://arxiv.org/abs/2208.07771)).
- [11] L. Flaminio, D. Ravotti. Abelian covers of hyperbolic surfaces: equidistribution of spectra and infinite mixing asymptotics for horocycle flows. Submitted, 2022 ([arxiv:2207.08263](https://arxiv.org/abs/2207.08263)).
- [10] D. Ravotti. Asymptotics and limit theorems for horocycle ergodic integrals à la Ratner (with an appendix by Emilio Corso). Submitted, 2021 ([arxiv:2107.02090](https://arxiv.org/abs/2107.02090)).

PUBLISHED/ACCEPTED:

- [9] P. Giulietti, A. Hammerlindl, D. Ravotti. Quantitative global-local mixing for accessible skew products. *Ann. Henri Poincaré*, 23(3):923–971, 2022.
- [8] D. Ravotti. Polynomial mixing for time-changes of unipotent flows. *Ann. Sc. Norm. Super. Pisa Cl. Sci. (5)*, to appear ([arXiv:2011.11213](#)).
- [7] A. Avila, G. Forni, D. Ravotti, C. Ulcigrai. Mixing for smooth time-changes of general nilflows. *Adv. Math.*, 385, 107759, 2021.
- [6] D. Ravotti. Quantitative equidistribution of horocycle push-forwards of transverse arcs. *Enseign. Math.*, 66(1-2):135–150, 2020.
- [5] A. Kanigowski, D. Ravotti. Polynomial 3-mixing for smooth time-changes of horocycle flows. *Discrete Contin. Dyn. Syst.*, 40(9):5347–5371, 2020.
- [4] D. Ravotti. Parabolic perturbations of unipotent flows on compact quotients of $SL(3, \mathbb{R})$. *Comm. Math. Phys.*, 371(1):331–351, 2019.
- [3] D. Ravotti. Mixing for suspension flows over skew-translations and time-changes of quasi-abelian filiform nilflows. *Ergod. Theory Dyn. Syst.*, 39(12):3407–3436, 2019.
- [2] D. Ravotti. Quantitative mixing for locally Hamiltonian flows with saddle loops on compact surfaces. *Ann. Henri Poincaré*, 18(12):3815–3861, 2017.
- [1] G. Panti, D. Ravotti. Measures induced by units. *J. Symb. Log.*, 78(3):886–910, 2013.

OTHERS:

- [a] D. Ravotti. Mixing via shearing in some parabolic flows. Ph.D. thesis (*Faculty of Science Commendation*), University of Bristol, 2018.

SEMINARS

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|--------------|---|
| 06 OCT. 2022 | KTH (online seminar). |
| 18 JUL. 2022 | Conference “Summer Topology Conference” (Vienna, Austria). |
| 29 JUN. 2022 | Workshop “Ruelle Resonances in Parabolic Dynamics” (Zürich, Switzerland). |
| 13 MAY 2022 | Jagiellonian University in Krakow (online seminar). |
| 29 APR. 2022 | Université de Lille (Lille, France). |
| 25 APR. 2022 | IST Austria (Klosteneuburg, Austria). |
| 04 FEB. 2022 | Workshop “Dynamics, Foliations, and Geometry II” (Regensburg, Germany). |
| 30 JAN. 2022 | Budapest-Wien Seminar (Wien, Austria). |
| 04 OCT. 2021 | University of Zürich (Zürich, Switzerland). |
| 09 MAR. 2021 | UNSW Pure Math Seminar (online seminar). |
| 08 OCT. 2020 | Vienna Ergodic Seminar (online seminar). |
| 02 JUL. 2020 | Sydney Dynamics Group (online seminar). |
| 23 APR. 2020 | University of Maryland (online seminar). |
| 22 APR. 2020 | Monash University (online seminar). |
| 05 DEC. 2019 | Conference “AustMS 2019” (Melbourne, Australia). |
| 23 SEP. 2019 | Conference “Smooth and Homogeneous Dynamics” (Bangalore, India). |
| 01 JUL. 2019 | Conference “Dynamics of Parabolic Flows” (Zürich, Switzerland). |
| 27 MAR. 2019 | Monash University (Melbourne, Australia). |
| 05 DEC. 2018 | Scuola Normale Superiore (Pisa, Italy). |
| 03 SEP. 2018 | Conference “Dynamics Days Europe” (Loughborough, UK). |
| 16 JAN. 2018 | Queen Mary University (London, UK). |
| 02 NOV. 2017 | Scuola Normale Superiore (Pisa, Italy). |
| 17 OCT. 2017 | University of Warwick (Coventry, UK). |
| 12 OCT. 2017 | University of Manchester (Manchester, UK). |
| 24 AUG. 2017 | Conference “Dynamics in Number Theory and Geometry” (Kingston, |

- Canada).
- 06 JUN. 2017 Workshop “Modern Trends in the Ergodic Theory of Dynamical Systems” (Rome, Italy).
- 23 MAR. 2017 University of Bristol (Bristol, UK).
- 11 JAN. 2017 One-day Workshop on Dynamical Systems, ICTP (Trieste, Italy).
- 10 JAN. 2017 University of Udine (Udine, Italy).

TEACHING AND OTHER ACTIVITIES

AT THE UNIVERSITY OF VIENNA:

- W2022 Co-lecturer and tutor for the course *Measure and Integration Theory*.
- S2022 Lecturer for the course *Homogeneous Dynamics*.
- W2021 Exercise classes for the course *Basic concepts of Topology*.

AT MONASH UNIVERSITY:

- 2020/21 Co-lecturer and tutor for the course *Metric spaces, Banach spaces, Hilbert spaces*.
- 2019/20 Tutor at the *Mathematics Learning Center*.

AT THE UNIVERSITY OF ZÜRICH:

- 2019/20 Tutor for the course *Dynamical Systems and Ergodic Theory*.

AT THE ICTP SUMMER SCHOOL IN DYNAMICS:

- JUL. 2018 Lecturer and tutor at the *ICTP Summer School in Dynamics*

AT THE UNIVERSITY OF BRISTOL:

- 2017/18 Tutor for the courses *Analysis 1* and *Foundations and Proof*.
Organiser of the Reading group in *Representation Theory of Semisimple Lie Groups*.
- 2016/17 Tutor for the courses *Analysis 1*, *Foundations and Proof*, and *Introduction to Geometry*.
Organiser of the *Pure postgraduates seminars*.
Organiser of the *ChaParDyn Reading group*.
- 2015/16 Tutor for the courses *Analysis 1* and *Linear Algebra and Geometry*.
Organiser of the *Pure postgraduates seminars*.
Organiser of the Reading group in *Teichmüller Theory*.
- 2014/15 Marker for the courses *Ergodic Theory and Dynamical Systems* and *Algebra II*.

SERVICE TO THE COMMUNITY

Referee for: *Inventiones Mathematicae*, *Journal of Modern Dynamics*, *Ergodic Theory and Dynamical Systems*, *Discrete and Continuous Dynamical Systems*.

Reviewer for MathSciNet.

LANGUAGE SKILLS

ITALIAN (native language).

ENGLISH (full professional proficiency).

FRENCH (basic).

GERMAN (basic).

SPANISH (basic).

JAPANESE (basic).