

# Davide RAVOTTI

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Savigliano (CN), Italy | 02 August 1989  
ADDRESS: Faculty of Mathematics, Universität Wien  
9 Oskar Morgenstern-Platz 1, 1090 Wien Austria  
NATIONALITY: Italian  
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## SCIENTIFIC INTERESTS

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Dynamical Systems and Ergodic Theory.

## EDUCATION

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| 2018 | Ph.D. degree at the University of Bristol (Bristol, UK).<br>Supervisor: prof. Corinna Ulcigrai.<br>Thesis title: <i>Mixing via shearing in some parabolic flows</i> .<br>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).<br>Final mark: 110/110 <i>cum laude</i> .  |
| 2013 | Master degree in Mathematics, University of Udine (Udine, Italy).<br>Final mark: 110/110 <i>cum laude</i> .  |
| 2011 | Bachelor degree in Mathematics, University of Udine (Udine, Italy).<br>Final mark: 110/110 <i>cum laude</i> .  |

## ACADEMIC POSITIONS

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| 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

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### PREPRINTS:

- [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](https://arxiv.org/abs/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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|--------------|--|
| 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

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### AT THE UNIVERSITY OF VIENNA:

- 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* (lecture recording is available online).

### 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*.

## PARTICIPATION IN SCHOOLS AND CONFERENCES

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- 31 JAN.-04 FEB. 2022 Workshop “Dynamics, Foliations, and Geometry II” (Regensburg, Germany).
- 02-06 AUG. 2021 School “Modern Aspects of Dynamical Systems” (Cetraro, Italy).
- 03-06 DEC. 2019 Conference “AustMS 2019” (Melbourne, Australia).
- 23 SEP.-04 OCT. 2019 Conference “Smooth and Homogeneous Dynamics” (Bangalore, India).
- 01-05 JUL. 2019 Conference “Dynamics of Parabolic Flows” (Zürich, Switzerland).
- 21 DEC. 2018 “Giornata DinAmica” (Rome, Italy).
- 03-07 SEP. 2018 Conference “Dynamics Days Europe” (Loughborough, UK).
- 10-16 JUN. 2018 Conference “Ergodic aspects of modern dynamics” (Bedlewo, Poland).
- 19-23 MAR. 2018 Symposium “Teichmüller Dynamics” (Warwick, UK).
- 21-25 AUG. 2017 Conference “Dynamics in Number Theory and Geometry” (Kingston, Canada).
- 05-09 JUN. 2017 Workshop “Modern Trends in the Ergodic Theory of Dynamical Systems” (Rome, Italy).
- 01-04 AUG. 2016 Conference “Young Researchers in Mathematics” (St. Andrews, UK).
- 27 JUN.-2 JUL. 2016 Workshop “Analytical Methods in Classical and Quantum Dynamical Systems” (Pisa, Italy).
- 21-24 MAR. 2016 Conference “BMC” (Bristol, UK).
- 22-28 NOV. 2015 Simons semester workshop “Ergodic Theory of Dynamical Systems” (Bedlewo, Poland).
- 29 JUN.-3 JUL. 2015 Workshop “Group representations in Dynamics and Geometry” (Luminy, France).
- 22-25 JUN. 2015 Workshop “DinAmici – Italian people in Dynamics” (Corinaldo, Italy).
- 13-17 APR. 2015 LMS-CMI Research School “Statistical Properties of Dynamical Systems” (Loughborough, UK).
- 4-14 JUN. 2014 ICTP-NLAGA School “Dynamical Systems and Ergodic Theory” (Mbour, Senegal).

## SERVICE TO THE COMMUNITY

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

## LANGUAGE SKILLS

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ITALIAN (native language).  
ENGLISH (full professional proficiency).  
FRENCH (basic).  
GERMAN (basic).  
SPANISH (basic).  
JAPANESE (basic).