

# 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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WEBSITE: <https://davideravotti.github.io/>

## 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)).
- [9] P. Giulietti, A. Hammerlindl, D. Ravotti. Quantitative global-local mixing for accessible skew products. Submitted, 2020 ([arXiv:2006.06539](https://arxiv.org/abs/2006.06539)).

PUBLISHED/ACCEPTED:

- [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.*, to appear ([arXiv:1905.11628](#)).
- [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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- 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 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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| 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*, *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 (intermediate).  
SPANISH (basic).  
JAPANESE (basic).