

# Davide RAVOTTI

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Savigliano (CN), Italy | 02 August 1989  
ADDRESS: School of Mathematical Sciences, Monash University  
9 Rainforest Walk, Clayton Campus, Victoria 3800 Australia  
NATIONALITY: Italian  
EMAIL: [davide.ravotti@gmail.com](mailto:davide.ravotti@gmail.com)  
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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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MAR. 2019-PRESENT	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:

- [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](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.*, to appear ([arXiv:1905.11628](https://arxiv.org/abs/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 UNIVERISTY 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).