

NICOLÒ PAVIATO

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Faculty of Mathematics and Computer Science, Weizmann Institute of Science, Rehovot, Israel

I am a postdoctoral researcher in dynamical systems and ergodic theory, working under the mentorship of Prof. Omri Sarig.

My research focuses on statistical properties of hyperbolic and expanding dynamical systems, with a particular emphasis on the central limit theorem and its relative functional version. More recently, I have also worked on typical behaviours of random sequences of independently drawn digits, in connection with Poisson genericity.



EDUCATION

University of Warwick, UK	<i>2019 - 2022</i>
Ph.D. in Mathematics & Statistics	
University of Warwick, UK	<i>2018 - 2019</i>
M.Sc. in Mathematics & Statistics	
University of Pavia, Italy	<i>2015 - 2018</i>
M.Sc. in Mathematics	
University of Pavia, Italy	<i>2011- 2015</i>
B.Sc. in Mathematics	

PUBLICATIONS AND PREPRINTS

Decay in norm of transfer operators for semiflows	<i>2022</i>
with I. Melbourne and D. Terhesiu - <i>Studia Math.</i> – arxiv.org/abs/2102.00026	
Nonexistence of spectral gaps in Hölder spaces for continuous time dynamical systems”	<i>2022</i>
with I. Melbourne and D. Terhesiu – <i>Israel. J. Math</i> – arxiv.org/abs/2104.04608	
Rates for maps and flows in a deterministic multidimensional weak invariance principle – <i>Preprint</i> – arxiv.org/abs/2406.06123	<i>2025</i>
A threshold for Poisson behavior of non-stationary product measures.	<i>2025</i>
with M. Hochman – <i>Ergodic Theory Dyn. Syst., to appear.</i>	
Limiting behaviour of pattern counts in biased binary strings.	<i>2025</i>
with J.V. Kogan – <i>Preprint</i> – arxiv.org/abs/2509.24654	

TEACHING

Teaching Assistant

- Ergodic Theory - 4th year maths Warwick, 2022
- Mathematical Analysis - 1st year non-maths " , 2021
- Stochastic Analysis - 4th year maths " , 2020
- Stochastic Processes - 2nd year statistics " , 2020
- Mathematical Analysis 3 - 2nd year non-maths " , 2019-2020
- Mathematics and Statistics - 1st year pharmacology Pavia, 2016

Supervisions

- I supervised two small groups of 2nd year maths students for ten weeks. Warwick, 2019

SELECTED TALKS

- Methods In Nonlinear D. S. and E. T.**(University of Warwick) December 2024
"A threshold for Poisson behavior of non-stationary product measures"
- Dynamical systems seminar** (Hebrew University of Jerusalem) December 2023
"Rates for a multidimensional weak invariance principle"
- Lunch seminar** (Hebrew University of Jerusalem) June 2023
"Martingales and CLT in Dynamics"
- 2nd Jangada Dinâmica** (Universidade Federal do Ceará, Fortaleza) November 2022
"Rates of convergence for a deterministic Weak Invariance Principle"
- Junior Ergodic Theory Meeting** (ICMS, Edinburgh) March 2022
"Absence of a spectral gap for flows"
- Ergodic theory and dynamical system seminar** (University of Warwick) October 2021
"Rates of convergence for a functional CLT"
- iPOD seminar** (Leiden University) October 2021
"Rates of convergence for a functional CLT"
- Cambridge joint CDT conference** (University of Cambridge, online) December 2020
"A family of continuous-time dynamical systems with a trivial CLT"

CONFERENCES/SCHOOLS

- Beyond Uniform Hyperbolicity** June 2025
(ICTP, Trieste)
- Methods In Nonlinear Dynamical Systems and Ergodic Theory** December 2024
(University of Warwick, Coventry)
- Workshop on statistical properties of
chaotic dynamics in and out of equilibrium** August 2024
(Erdős Center, Budapest)
- School on probabilistic aspects of hyperbolic dynamical systems** August 2024
(Erdős Center, Budapest)
- Dynamical Systems: Geometric and Statistical Properties** July 2024
(University of Warwick, Coventry)

Zurich Dynamic Conference (University of Zurich, Zurich)	<i>June 2023</i>
Zurich Dynamic School (University of Zurich, Zurich)	<i>June 2023</i>
Probabilistic methods in dynamics (Centro di Ricerca Matematica Ennio De Giorgi, Pisa)	<i>May 2023</i>
The Lorentz Gas (Lorentz Center, Leiden)	<i>December 2022</i>
2nd Jangada Dinâmica (Universidade Federal do Ceará, Fortaleza)	<i>November 2022</i>
International Conference on Dynamical Systems (IMPA, Rio de Janeiro)	<i>October 2022</i>
Confererence celebrating the 100th anniversary of Rényi's birth (Hungarian academy of sciences, Budapest)	<i>June 2022</i>
Limit Theorems for Slowly Mixing Systems (ICMS, Edinburgh)	<i>June 2022</i>
Junior Ergodic Theory Meeting (ICMS, Edinburgh)	<i>March 2022</i>
Expanding dynamics: the school (Centro de modelamiento matematico, University of Chile, online)	<i>June 2021</i>
Spring school on transfer operators (classical and modern techniques) (Bernoulli center, Lausanne, online)	<i>March 2021</i>
Statistical aspects of geodesic flows in nonpositive curvature (University of Warwick, Coventry)	<i>January 2020</i>
One day ergodic theory meeting (Queen Mary University, London)	<i>November 2019</i>
Thermodynamic formalism: ergodic theory and geometry (University of Warwick, Coventry)	<i>July 2019</i>
Summer course in mathematics (Scuola matematica interuniversitaria, Cortona, Italy)	<i>July 2018</i>

OTHER

Aside from Mathematics, I'm a sociable person who enjoys hanging out and appreciating my surroundings. I value diversity in both people and food, and I always enjoy a good conversation, especially when accompanied by good wine. My hobbies include running, playing music, and going to the gym. In my downtime, I dedicate myself to learning Hebrew.