

# OFER BUSANI

obusani@ed.ac.uk • ofer659@gmail.com

<https://oferbusani.github.io/>

5321, James Clerk Maxwell Building, Peter Guthrie Tait Road, Edinburgh, EH9 3FD

## Work experience

- 2023 – present      Lecturer (assistant professor) in the school of mathematics, University of Edinburgh.
- 2021 – 2023      Postdoctoral position, Hausdorff Center for Mathematics, Bonn, Germany.
- 2018 – 2021      Postdoctoral position, School of Mathematics, Bristol, UK.

## Education

- 2012 – 2018      **Ph.D. in Mathematics**, Bar Ilan University, Israel (Supervisor: Prof. Ely Merzbach).
- 2010 – 2012      **M.Sc. in Mathematics**, Bar Ilan University, Israel.
- 2006 – 2010      **B.Sc. in Electrical Engineering**, Bar Ilan University, Israel.

## Grants

- 2026      ERC starting grant (€1.5m).
- 2020      Heilbronn Focused Research grant (£8,000).
- 2012 – 2016      Milgat Hanasi scholarship.
- 2012      Selim and Rachel Benin Scholarship Fund.

## Academic activities

- June 2026      Co-Organizer, "Universality in the KPZ class and random matrices", ICMS Edinburgh.
- Nov 2024      Co-Organizer, "Mixing Times in the Kardar-Parisi-Zhang Universality Class", Oberwolfach.
- 2021      Co-Organizer, joint Bristol-Warwick-Queen Mary probability seminar.
- 2018 – 2021      Co-Organizer, Bristol Probability Seminar.
- 2017      Co-Organizer, Young Researchers' Seminar, IHP trimester.

## Professional service

Peer Review	JEMS, Ann. Probab., PTRF, Comm. Math. Phys., Ann. Appl. Probab., IMRN, AIHP, EJP, ECP.
Supervision	Zhicheng Zheng (Ph.D. student).

## Publication list

- [1] G. Amir, C. Bahadoran, O. Busani, and E. Saada. "Invariant measures for multilane exclusion process". *Ann. Inst. Henri Poincaré Probab. Stat.* (to appear).
- [2] O. Busani, T. Seppäläinen, and E. Sorensen. "Scaling limit of the TASEP speed process". *Ann. Inst. Henri Poincaré Probab. Stat.* (2022).
- [3] K. A. Takeuchi, J. De Nardis, O. Busani, P. L. Ferrari, and R. Vasseur. "Partial yet definite emergence of the Kardar–Parisi–Zhang class in isotropic spin chains". *Physical Review Letters* (2024).
- [4] O. Busani, T. Seppäläinen, and E. Sorensen. "Scaling Limit of Multi-Type Invariant Measures via the Directed Landscape". *Int. Math. Res. Not. IMRN* 17 (2024), pp. 12382-12432.
- [5] O. Busani. "Diffusive scaling limit of the Busemann process in last passage percolation". *Ann. Probab.* 52.5 (2024), pp. 1650-1712.
- [6] O. Busani, T. Seppäläinen, and E. Sorensen. "The stationary horizon and semi-infinite geodesics in the directed landscape". *Ann. Probab.* 52.1 (2024), pp. 1-66.
- [7] O. Busani. "Non-existence of three non-coalescing infinite geodesics with the same direction in the directed landscape". *Probability Theory and Related Fields* (Accepted).
- [8] R. Basu, O. Busani, and P. L. Ferrari. "On the exponent governing the correlation decay of the Airy1 process". *Comm. Math. Phys.* 398.3 (2023), pp. 1171-1211.
- [9] O. Busani and P. L. Ferrari. "Universality of the geodesic tree in last passage percolation". *Ann. Probab.* 50.1 (2022), pp. 90-130.
- [10] O. Busani and T. Seppäläinen. "Non-existence of bi-infinite polymer Gibbs measures". *Electron. J. Probab.* 27 (2022).
- [11] O. Busani and T. Seppäläinen. "Bound on the running maximum of a random walk with small drift". *ALEA Lat. Am. J. Probab. Math. Stat.* 19.1 (2022), pp. 51-68.
- [12] G. Amir, O. Busani, P. Gonçalves, and J. B. Martin. "The TAZRP speed process". *Ann. Inst. Henri Poincaré Probab. Stat.* 57.3 (2021), pp. 1281-1305.

- [13] M. Balázs, O. Busani, and T. Seppäläinen. "Local stationarity in exponential last-passage percolation". *Probab. Theory Related Fields* 180.1-2 (2021), pp. 113-162.
- [14] M. Balázs, O. Busani, and T. Seppäläinen. "Non-existence of bi-infinite geodesics in the exponential corner growth model". *Forum Math. Sigma* 8 (2020).
- [15] O. Busani. "Finite dimensional Fokker-Planck equations for continuous time random walk limits". *Stochastic Process. Appl.* 127.5 (2017), pp. 1496-1516.
- [16] O. Busani. "Aging uncoupled continuous time random walk limits". *Electron. J. Probab.* 21 (2016).

### Preprints

- [18] S. Bhattacharjee, O. Busani, and E. Sorensen. "Exceptional force, uncountably many solutions in the KPZ fixed point". *arXiv:2505.09604* (2025).
- [19] G. Amir, C. Bahadoran, O. Busani, and E. Saada. "Hydrodynamics and relaxation limit for multilane exclusion process". *arXiv:2501.19355* (2025).
- [20] O. Busani. "Continuous time random walk as a random walk in a random environment". *arXiv:1709.02141* (2017).

### Invited lectures

- July 2025 (IP)<sup>3</sup>, Angers.
- July 2025 Invited talk at SPA, Wroclaw.
- May 2025 "Statistical Physics Out of Equilibrium", MFO Oberwolfach.
- March 2025 "All roads to the KPZ universality class", AIMS.
- Sept 2024 PSPDE XII.
- June 2024 UK Research Network in Stochastics.
- Oct 2023 The totally asymmetric exclusion process, Simon center.
- July 2023 Invited talk at SPA Lisboa.
- June 2023 Random Growth Models and KPZ Universality, Banff.
- Oct 2022 Large Scale Stochastic Dynamics, Oberwolfach.
- Dec 2021 Ausgburg-Munich day on exclusion processes.

Oct 2021	Rouen Probability Meeting 2021.
July 2021	Israel Mathematical Union meeting 2021.
July 2021	Encontro National SPM 2021.
June 2019	Advances in Last Passage Percolation, University of Sussex.

### Seminar talks

Feb 2025	Manchester probability seminar.
Oct 2024	Leeds probability seminar.
Feb 2024	Bristol probability seminar.
Nov 2023	Lancaster probability seminar.
Sept 2023	Edinburgh probability seminar.
May 2023	Cambridge probability seminar.
Feb 2023	University of Utah probability seminar.
Dec 2022	Durham probability seminar.
2022	Hebrew university probability seminar.
2022	Strasbourg Probability Seminar.
2022	Joint Israeli Probability Seminar (JIPS).
2022	KTH RMT probability seminar.
2021	Bristol probability seminar.
2021	Imperial College of London probability seminar.
2021	TUM probability seminar.
2020	Purdue probability seminar.
2020	Bernoulli-IMS One World Symposium.
2020	Junior Integrable Probability Seminar (JIPS).
2020	Bath probability seminar.
2020	Warwick probability seminar.
2019	Instituto Superior Tecnico Probability Seminar.

- 2019 Bristol University Probability Seminar.
- 2018 Tel-Aviv University Probability Seminar.
- 2017 Beer-Sheba University Probability Seminar.
- 2015 Weizmann Institute Students Probability Seminar.
- 2013 Bar Ilan probability seminar.