

# OFER BUSANI

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## 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.