

# OFER BUSANI

## PERSONAL INFORMATION

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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

- 2012*                  Selim and Rachel Benin Scholarship Fund.
- 2012-2016*            Milgat Hanasi scholarship.
- 2020*                  Heilbronn Focused Research grant (£8,000).

## ACADEMIC ACTIVITIES

- April-July 2017*       Co-Organizer of the Young Researchers' Seminar at IHP trimester 'Stochastic Dynamics Out of Equilibrium'.
- 2018-2021*            Co-Organizer of Bristol Probability Seminar.
- 2021*                  Co-Organizer of the joint Bristol-Warwick-Queen Mary probability seminar.
- Nov 2024*            Co-Organizer of 'Mini-Workshop: Mixing Times in the Kardar-Parisi-Zhang Universality Class'. Oberwolfach.
- June 2026*            Co-Organizer of 'Universality in the KPZ class and random matrices'. To take place in at the ICMS Edinburgh.

## PEER REVIEW

Journal of the European Mathematical Society, Annals of Probability, Probability theory and Related Fields, Communications in Mathematical Physics, Annals of Applied Probability, International Mathematics Research Notices, AIHP Probabilités et Statistiques, Electronic Journal of probability, Electronic Communications in Probability

## SUPERVISION

- 2024-present*         Zhicheng Zhang - Ph.D.

## PUBLICATION LIST (PUBLISHED AND ACCEPTED)

- [1] G. Amir, C. Bahadoran, O. Busani, and E. Saada. “Invariant measures for multilane exclusion process”. In: *Ann. Inst. Henri Poincaré Probab. Stat.* (to appear).
- [2] O. Busani, T. Seppäläinen, and E. Sorensen. “Scaling Limit of Multi-Type Invariant Measures via the Directed Landscape”. In: *Int. Math. Res. Not. IMRN* 17 (2024), pp. 12382–12432. ISSN: 1073-7928,1687-0247.
- [3] O. Busani. “Diffusive scaling limit of the Busemann process in last passage percolation”. In: *Ann. Probab.* 52.5 (2024), pp. 1650–1712. ISSN: 0091-1798,2168-894X.
- [4] O. Busani, T. Seppäläinen, and E. Sorensen. “The stationary horizon and semi-infinite geodesics in the directed landscape”. In: *Ann. Probab.* 52.1 (2024), pp. 1–66. ISSN: 0091-1798,2168-894X.
- [5] R. Basu, O. Busani, and P. L. Ferrari. “On the exponent governing the correlation decay of the  $\text{Airy}_1$  process”. In: *Comm. Math. Phys.* 398.3 (2023), pp. 1171–1211. ISSN: 0010-3616,1432-0916.
- [6] O. Busani and P. L. Ferrari. “Universality of the geodesic tree in last passage percolation”. In: *Ann. Probab.* 50.1 (2022), pp. 90–130. ISSN: 0091-1798,2168-894X.
- [7] O. Busani and T. Seppäläinen. “Non-existence of bi-infinite polymers”. In: *Electron. J. Probab.* 27 (2022), Paper No. 14, 40. ISSN: 1083-6489.
- [8] O. Busani and T. Seppäläinen. “Bound on the running maximum of a random walk with small drift”. In: *ALEA Lat. Am. J. Probab. Math. Stat.* 19.1 (2022), pp. 51–68. ISSN: 1980-0436.
- [9] G. Amir, O. Busani, P. Gonçalves, and J. B. Martin. “The TAZRP speed process”. In: *Ann. Inst. Henri Poincaré Probab. Stat.* 57.3 (2021), pp. 1281–1305. ISSN: 0246-0203,1778-7017.
- [10] M. Balázs, O. Busani, and T. Seppäläinen. “Local stationarity in exponential last-passage percolation”. In: *Probab. Theory Related Fields* 180.1-2 (2021), pp. 113–162. ISSN: 0178-8051,1432-2064.
- [11] M. Balázs, O. Busani, and T. Seppäläinen. “Non-existence of bi-infinite geodesics in the exponential corner growth model”. In: *Forum Math. Sigma* 8 (2020), Paper No. e46, 34. ISSN: 2050-5094.
- [12] O. Busani. “Finite dimensional Fokker-Planck equations for continuous time random walk limits”. In: *Stochastic Process. Appl.* 127.5 (2017), pp. 1496–1516. ISSN: 0304-4149,1879-209X.
- [13] O. Busani. “Aging uncoupled continuous time random walk limits”. In: *Electron. J. Probab.* 21 (2016), Paper No. 7, 17. ISSN: 1083-6489.

## PREPRINTS

- [14] O. Busani, T. Seppäläinen, and E. Sorensen. “Scaling limit of the TASEP speed process”. In: *arXiv preprint arXiv:2211.04651* (2022).
- [15] 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”. In: *arXiv preprint arXiv:2406.07150* (2024).
- [16] O. Busani. “Non-existence of three non-coalescing infinite geodesics with the same direction in the directed landscape”. In: *arXiv preprint arXiv:2401.00513* (2023).
- [17] O. Busani. “Continuous time random walk as a random walk in a random environment”. In: *arXiv preprint arXiv:1709.02141* (2017).

## INVITED CONFERENCE LECTURES

1. 'Advances in Last Passage Percolation', University of Sussex, June 2019.
2. Israel Mathematical Union meeting 2021, online, July 2021.
3. Encontro Nacional SPM 2021, online, July 2021.
4. 'Rouen Probability Meeting 2021', online, October 2021
5. 'Augsburg-Munich day on exclusion processes', December 2021
6. 'Large Scale Stochastic Dynamics', Oberwolfach, October 2022.
7. 'Random Growth Models and KPZ Universality' Banff, June 2023.
8. 'The totally asymmetric exclusion process', Simon center, October 2023.
9. SPA Lisboa, July 2023.
10. 'UK Research Network in Stochastics', June 2024.
11. PSPDE XII, September 2024.

#### SEMINAR TALKS

1. Bar Ilan probability seminar, 2013.
2. Weizmann Institute of Science Students Probability Seminar 2015.
3. Beer-Sheba University Probability Seminar, 2017.
4. Tel-Aviv University Probability Seminar, 2018.
5. Bristol University Probability Seminar, 2019.
6. Instituto Superior Tecnico Probability Seminar, 2019.
7. Warwick probability seminar, 2020.
8. Bath probability seminar, 2020.
9. Junior Integrable Probability Seminar(JIPS), 2020.
10. Bernoulli-IMS One World Symposium, 2020
11. Purdue probability seminar, 2020.
12. TUM probability seminar, 2021.
13. Imperial College of London probability seminar, 2021.
14. Bristol probability seminar, 2021.
15. KTH RMT probability seminar, 2022.
16. Joint Israeli Probability Seminar (JIPS), 2022.
17. Strasbourg Probability Seminar, 2022.
18. Hebrew university probability seminar, 2022.
19. Durham probability seminar, December 2022.
20. University of Utah probability seminar, February 2023.
21. Cambridge probability seminar, May 2023.
22. Edinburgh probability seminar, September 2023.
23. Lancaster probability seminar, November 2023.
24. Bristol probability seminar, February 2024.
25. Leeds probability seminar, October 2024.