CV of Ágnes Backhausz

Place of birth	Budapest, Hungary
Citizenship	Hungarian

Employment

Sept 2010 –	ELTE Eötvös Loránd University, Budapest, Hungary Institute of Mathematics, Faculty of Science Department of Probability Theory and Statistics 2015 – assistant professor 2013 – 2015 on leave 2010 – 2013 teaching assistant
Aug 2013 – 2020	MTA Alfréd Rényi Institute of Mathematics Limits of Structures Research Group 2015 – 2020 researcher (part-time) 2013 – 2015 post-doctoral researcher (full-time)

Education

2013	PhD in Mathematics at ELTE Eötvös Loránd University, Budapest, Hungary
2008 – 2010	ELTE Eötvös Loránd University, Budapest, Hungary PhD student in Mathematics Supervisor: Tamás Móri
2003 – 2008	ELTE Eötvös Loránd University, Budapest, Hungary MSc in Mathematics

Activities

2016 – 2019	Bolyai János Research Grant of the Hungarian Academy of Sciences
2016 –	PhD supervision (Bence Rozner)
2015 –	Seminar talks in Toronto, Prague, Warwick, Lancaster, Marseille, Leipzig
2014	Organizer of the Graph limits, groups and stochastic processes summer school and workshop at Rényi Institute (with Miklós Abért, Balázs Szegedy, László Lovász and Bálint Virág)
2010 –	Speaker at 6 conferences, 16 workshops (e.g. Oberwolfach, Banff, Luminy, Vienna, Lyon, Zürich) and 3 summer schools
2010 –	Supervising 7 bachelor's theses and 5 master's theses
2010 –	Organizer of the seminar of the Deparment of Probability Theory and Statistics at Eötvös Loránd University
2007-	Teaching: probability theory, statistics, stochastic processes, Markov chains

Publications

1. Ágnes Backhausz, Bence Rozner, Barabási-Albert random graph with multiple type edges with perturbation. *Acta Mathematica Hungarica*. **161** (1), 212-229 (2020).

2. Ágnes Backhausz, Balázs Szegedy, Action convergence of operators and graphs. To appear in the *Canadian Journal of Mathematics*. [arXiv:1811.00626]

3. Ágnes Backhausz, Bence Rozner, Asymptotic degree distribution in preferential attachment graph models with multiple type edges. *Stochastic Models*. **35** (4), 496-522 (2019).

4. Ágnes Backhausz, Balázs Gerencsér, Viktor Harangi, Entropy inequalities for factors of IID. To appear in *Groups, Geometry, and Dynamics*. DOI: 10.4171/GGD/492

5. Ágnes Backhausz, Dávid Kunszenti-Kovács, On the dense Preferential Attachment Graph models and their graphon induced counterpart. *Journal of Applied Probability.* **56** (2), 590-601 (2019).

6. Ágnes Backhausz, Balázs Szegedy, On the almost eigenvectors of random regular graphs. To appear in *The Annals of Probability*. **47** (3) 1677-1725 (2019) [Presented at the Bourbaki seminar at Institute Henri Poincaré, Paris]

7. Ágnes Backhausz, Balázs Gerencsér, Viktor Harangi, Máté Vizer. Correlation bound for distant parts of factor of IID processes. *Combinatorics, Probability and Computing* **27** (1) 1-20, 2018.

8. Ágnes Backhausz, Balázs Szegedy. On large girth regular graphs and random processes on trees. *Random Structures and Algorithms* **53** (3), 389-416, 2018.

9. Ágnes Backhausz, Bálint Virág. Spectral measures of factor of i.i.d. processes on vertex-transitive graphs. *Annales de l'Institute Henri Poincaré - Probabilités et Statistiques* **53** (4), 2260-2278, 2017.

10. Ágnes Backhausz, Tamás F. Móri. Further properties of a random graph with duplications and deletions. *Stochastic Models* **32** (1), 99-120, 2016.

11. Ágnes Backhausz, Tamás F. Móri. Asymptotic properties of a random graph with duplications. *Journal of Applied Probability* **52** (2), 375-390, 2015.

12. Ágnes Backhausz, Balázs Szegedy, Bálint Virág. Ramanujan graphings and correlation decay in local algorithms. *Random Structures and Algorithms* **47** (3), 424-435, 2015.

13. Ágnes Backhausz, Tamás F. Móri. Asymptotics of a renewal-like recursion and an integral equation. *Applicable Analysis and Discrete Mathematic*s **8,** 200-223, 2014.

14. Ágnes Backhausz, Tamás F. Móri. Weights and degrees in a random graph model based on 3-interactions. *Acta Mathematica Hungarica* **143** (1), 23-43, 2014.

15. Ágnes Backhausz, Tamás F. Móri. A random model of publication activity.

Discrete Applied Mathematics **162,** 78-89, 2014.

16. Ágnes Backhausz, Tamás F. Móri, Degree distribution in the lower levels of the uniform recursive tree. *Annales Univ. Sci. Budapest., Sect. Comp.* **36,** 53-62, 2012.

17. Ágnes Backhausz, Tamás F. Móri, A random graph model based on 3-interactions. *Annales Univ. Sci. Budapest., Sect. Comp.* **36**, 41-52, 2012.

18. Ágnes Backhausz, Tamás F. Móri, Local degree distribution in scale free random graphs. *Electronic Journal of Probability* **16** (54), 1465-1488, 2011.

19. Ágnes Backhausz, Limit distribution of degrees in random family trees. *Electronic Communications in Probability* **16**, 27-37, 2011.

20. Ágnes Backhausz, Local degree distributions: examples and counterexamples. *Periodica Mathematica Hungarica* **63** (2), 153-171, 2011.

21. Ágnes M. Backhausz, Vilmos Komornik, Tivadar Szilágyi, A simplified multidimensional integral. *Czechoslovak Mathematical Journal* **59** (3), 721-739, 2009.

Preprints

1. Ágnes Backhausz, Edit Bognár, Virus spread and voter model on random graphs with multiple type nodes, [arXiv:2002.06926], submitted.