

Contact Information

Mailing Address: Institute of Mathematics
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Personal Data

Date of Birth: November 5, 1980.
Place of Birth: Budapest, Hungary
Nationality: Hungarian
Marital status: married
Children: Vince, 2013.11.14

Education

1999–2005 MSc Mathematics, BME
2005–2010 PhD Mathematics, BME

PhD Dissertation Adviser: Prof. Bálint Tóth

PhD Dissertation Title:

Asymptotic behavior of random graphs evolving in time

Postdoc Jobs and Scholarships

2010–2012 ETH Zürich (Research Postdoc)
2012–2014 University of British Columbia (Research Postdoc)
2014–2016 Postdoc of MTA (Hungarian Academy of Sciences)
MTA-BME Stochastics Research Group
2014–2017 Bolyai Research Scholarship of MTA
2016–2019 Postdoc of NKFI
(National Research, Development and Innovation Office)
2016 – Associate Prof. of BME (on unpaid leave)

Recent Conferences and Workshops

- *2011, June*: Florence, Italy: 4th La Pietra week in Probability at Finaly (1 week)
- *2012, March*: Toulouse Mathematics Institute (Toulouse, France): Workshop on Forest Fires (3 days)
- *2013, June*: Rényi Institute (Budapest, Hungary): Random Walks: Crossroads and Perspectives (1 week)
- *2013, July*: University of British Columbia (Vancouver, Canada): Recent Trends in Stochastic Analysis (1 week)
- *2013, August*: University of Colorado Boulder (Boulder, USA): 36th Conference on Stochastic Processes and Their Applications (1 week)
- *2014, July*: Australian Technology Park (Sydney, Australia): ASC/IMS 2014 Conference (1 week)
- *2015, May*: Indiana University (Bloomington, USA): Seymour Sherman Memorial Lecture Series (3 days)
- *2015, July*: University of Oxford (Oxford, UK): 38th Conference on Stochastic Processes and their Applications (1 week)
- *2016, April*: Texas A&M University (College Station, USA): Workshop on Random Spatial Processes and Dynamics (1 week)
- *2016, November*: Mathematisches Forschungsinstitut Oberwolfach: Workshop on Large Scale Stochastic Dynamics (1 week)

Recent Conference and Seminar talks

- *2013, July:* University of Colorado Boulder, 36th Conference on Stochastic Processes and Their Applications
- *2013, October:* University of Washington, Pacific Northwest Probability Seminar
- *2014, July:* Australian Technology Park (Sydney), ASC/IMS 2014 Conference
- *2014, October:* University of Gröningen, Mathematics Colloquium
- *2014, December:* University of Bristol, Probability and Statistics Seminar
- *2015 April:* Technical University of Eindhoven, TU/e Stochastics Colloquium
- *2015 May:* Indiana University Bloomington, Seymour Sherman Memorial Lecture Series
- *2015 July:* 38th Conference on Stochastic Processes and their Applications (Oxford, UK)
- *2015 August:* Weizmann Institute, Rehovot, Izrael, Geometric Functional Analysis and Probability Seminar
- *2015 November:* Koç University (Istanbul, TR) Mathematics Colloquium
- *2016 March:* University of Warwick (UK) Midlands Probability Theory Seminars
- *2016 April:* Texas A&M University (College Station, USA): Workshop on Random Spatial Processes and Dynamics

Teaching Experience

- *2005-2010*: I was a teaching assistant at the Budapest University of Technology (BME) conducting problem solving sessions for engineer undergraduates for the following courses: Calculus, Linear Algebra, Multivariate Calculus, ODE.
- *2007-2009*: I was a teaching assistant conducting problem solving sessions for mathematics students of BME for the following courses: Probability I, Probability II, Stochastic processes.
- *2011-2012*: At ETH Zürich I assisted in the supervision of the BSc thesis project of undergraduate students in mathematics. My duties involved weekly meetings, preparation of student for talks, providing them with help writing the thesis.
- *2012 Spring*: At ETH, jointly with my colleagues Artem Sapozhnikov and Alexander Drewitz, we gave a graduate course on *random interlacements*.
- *2013-2014*: At University of British Columbia (UBC) I gave two BSc courses on Integral Calculus (MATH101, MATH105) and one BSc course on Probability (MATH302)
- *2012-2014*: At UBC I participated in the supervision of the PhD student Qingsan Zhu, the principal supervisor being Omer Angel.
- *2014-2015*: At BME I was the instructor of the MSc course on Stochastic Analysis and multiple Calculus courses for civil engineer BSc students.
- *2015-2016*: I was the MSc thesis advisor of two mathematics Master students at BME

Major areas of research interest

My research field is probability theory.

- The topic of my MSc thesis was the conformal invariance of critical percolation on the triangular lattice.
- Some of my research is related to notion of convergence of dense graph sequences: my main tool here is the connection between the theory of *graph limits* and that of exchangeable random arrays.
- The main topic of my PhD is self-organized criticality of the *mean field forest fire model*, a modification of the dynamical Erdős-Rényi random graph model where large components are destroyed. The model is related to the Smoluchowski coagulation equations and in the proofs we use methods from the theory of nonlinear PDE.
- My postdoc research topic at ETH Zürich was *random interlacements*, i.e., the investigation of the percolation properties of the set of sites not visited by a Poissonian soup of random walk trajectories on \mathbb{Z}^d using renormalization techniques and discrete potential theory.
- At UBC and BME I continue working on percolation models with long-range correlations and mean field models of self-organized criticality.

Spoken languages

- Cambridge Certificate in Advanced English
- Intermediate exam in French