

Curriculum Vitae

Contact Information

Name: Sigurður Örn Stefánsson.
Date of birth: August 12, 1982.
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Education

- University of Iceland: Ph. D. in physics, June 2010.
The research project was on a model of randomly growing trees and statistical mechanical tree models, supervised by Thordur Jonsson.
- University of Iceland: M. S. in physics, June 2007.
Exchange student at Niels Bohr Institute, Copenhagen in 2005-2006.
The research project was on random brushes and nongeneric trees, supervised by Thordur Jonsson.
- University of Iceland: B. S. in physics, June 2005.
- Matriculation from The Akureyri Junior College in the spring of 2002.

Work experience (since 2003)

- Assistant professor in Mathematics at the University of Iceland. July 2014 - present.
- Post-doc at the University of Uppsala. September 2012 - July 2014.
- Fellow at the Nordic Institute for Theoretical Physics (Nordita). September 2010 - August 2012. Post doctoral research.
- Iceland Geosurvey Reykjavík (ÍSOR) summer 2005.
Among projects were seismic measurements between Landeyjar and Vestmannaeyjar and in Fljótsdalsheiði and transient electromagnetic measurements (TEM) in Hveravellir.

- Iceland Geosurvey Akureyri summer 2004.
Among projects were seismic measurements in Krafla and TEM in Öxarfjörður.
- Icelandic Radiation Safety Authority, summer 2003.
Assessment and improvement of methods in gamma spectroscopy.
- Teaching assistant in physics and mathematics at the University of Iceland.
 - Spring 2004 Lab teaching in Physics 2 (eðlisfræði 2).
 - Autumn 2004 Problem sessions in Classical Mechanics (Aflfræði).
 - Autumn 2006 Problem sessions in Statistical Mechanics (Safneðlisfræði).
 - Spring 2007 Problem sessions in Mathematical Physics (Stærðfræðilegri eðlisfræði).
 - Spring 2008 Problem sessions in Analysis 2B (Stærðfræðigreiningu 2B)
and Analysis 4 (Stærðfræðigreiningu 4).
 - Autumn 2008 Problem sessions in Analysis 1B (Stærðfræðigreiningu 1B).

Published scientific papers

- J. E. Björnberg and S. Ö. Stefánsson *On site percolation in random quadrangulations of the half-plane.* (2014), (preprint). arXiv:1402.5819
- J. E. Björnberg and S. Ö. Stefánsson *Random walk on random infinite looptrees.* (2014), (preprint). arXiv:1402.5819
- J. E. Björnberg and S. Ö. Stefánsson *Recurrence of bipartite planar maps.* Electron. J. Probab. 19 (2014), no. 31, 40 pp. (electronic).
- S. Janson and S. Ö. Stefánsson. *Scaling limits of random planar maps with a unique large face.* (2012) To appear in Ann. Probab. arXiv:1212.5072
- S. Ö. Stefánsson and S. Zohren. *Spectral dimension of trees with a unique infinite spine.* Journal of Statistical Physics: Volume 147, Issue 5 (2012), 942-962.
- S. Janson, T. Jonsson and S. Ö. Stefánsson. *Random trees with super-exponential branching weights.* J. Phys. A: Math. Theor. 44 (2011) 485002.
- S. Ö. Stefánsson. *Markov branching in the vertex splitting model.* Journal of Statistical Mechanics (2012), no. 4, P04018.

- T. Jonsson and S. Ö. Stefánsson. *Condensation in nongeneric trees*. Journal of Statistical Physics: 142, 2 (2011), 277.
- T. Jonsson and S. Ö. Stefánsson. *Appearance of vertices of infinite order in a model of random trees*. J. Phys. A: Math. Theor. 42 (2009) 485006.
- F. David, M. Dukes, T. Jonsson and S. Ö. Stefánsson. *Random tree growth by vertex splitting*. Journal of Statistical Mechanics (2009), no. 4, P04009.
- T. Jonsson and S. Ö. Stefánsson. *The spectral dimension of random brushes*. J. Phys. A: Math. Theor. 41 (2008) 045005.

Other documents and reports

- S. Ö. Stefánsson. *Topics in random tree theory*. Ph.D. thesis, University of Iceland 2010, available at: <http://raunvis.hi.is/~sigurdurorn/files/PHDSOS.pdf>.
- S. Ö. Stefánsson. *The infinite volume limit of Ford's alpha model*. Conference proceedings from the 49th Cracow School on Theoretical Physics, May 31 - June 10, 2009. Acta Physica Polonica B Proc. Suppl. vol.2, no.3 page 555 (2009).
- S. Ö. Stefánsson. *Random brushes and non-generic trees*. MS thesis, University of Iceland 2007, available at: <http://raunvis.hi.is/~sigurdurorn/files/MSSOS.pdf>.
- (Report in Icelandic) K. Gunnarsson et. al. 2005: *Berggrunnskönnun á hugsanlegri jarðgangaleið milli lands og Eyja. Bylgjubrots- og flugsegulmælingar og athugun á gögnum úr borholum*. (Title in English: Bedrock mapping for a possible road tunnel to the island of Heimaey. Seismic refraction, aeromagnetic survey and evidence from boreholes.) Unnið fyrir Vegagerðina. ISOR-2005/033.

Presentations

- *Convergence of random planar maps to the Brownian tree*. University of Iceland, Math Colloquium, October 27, 2014.

- *Condensation in planar maps*. Stockholm university, seminar, November 5, 2013.
- *Randomly growing trees: Folding, splitting and Markov branching*. Uppsala university, seminar, October 10, 2013.
- *Local limits of random planar trees and maps* Workshop on Discrete Random Geometry 2013. Varberg, August 18-22, 2013.
- *Scaling limits of planar maps with a unique large face*. 26th Nordic and 1st European-Nordic Congress of Mathematicians. Lund, June, 2013.
- *Convergence of planar maps to a continuum tree*. Complex systems and Biological physics seminar. Nordita, Stockholm, February 5, 2013.
- *Random planar maps, simply generated trees and condensation*. Uppsala university, seminar, November 29, 2012.
- *Dimensions of trees with a unique infinite spine*. University of Bielefeld, seminar, May 3, 2012.
- *Growing, Markov branching trees*. Math seminar, University of Iceland, February 14, 2012.
- *An exactly solvable special case of the vertex splitting model*. Complex systems and Biological physics seminar. Nordita, Stockholm, January 18, 2011.
- *Emergence of a vertex of infinite degree in non-generic trees*. Random Geometry and Applications, workshop. Nordita, Stockholm, November 3, 2010.
- *Two models of random trees*. Nordita seminar, Stockholm, October 12, 2010.
- *Topics in random tree theory*. Ph.D. defence, University of Iceland, June 16, 2010.
- *Relation between Ford's alpha-model and a model of random tree growth by vertex splitting*. ENRAGE's Topical School on Nonperturbative Gravity and Quantum Chromodynamics. The 49th Cracow School of Theoretical Physics. Zakopane, Poland, May 31 - June 10, 2009.

- *Random tree growth by vertex splitting*. Math seminar, University of Iceland, February 9, 2009.
- *Random tree growth by vertex splitting*. Young ENRAGE Quantum Gravity Meeting. Imperial College, London, January 9, 2009.
- *Equilibrium statistical mechanical model of caterpillar graphs*. ENRAGE’s Second Network Conference-cum-Workshop. Oxford, Sept. 15 - 19, 2008.
- *Splitting-vertex tree growth*. Natural Science Symposium, University of Iceland 2008.
- *Random brushes and non-generic trees*. M.S. defence, University of Iceland, spring, 2007.

Conferences and schools attended

- Workshop on Discrete Random Geometry 2013. Varberg, August 18-22, 2013.
- 26th Nordic and 1st European-Nordic Congress of Mathematicians. Lund, June, 2013.
- Statistical Mechanics and Computation of DNA self-assembly, Mariehamn, May 25 - 28, 2011.
- The 2nd Nordic Workshop on Statistical Physics: Biological, Complex and Non-equilibrium Systems. Nordita, Stockholm, February 23 - 25, 2011.
- Random Geometry and Applications. Nordita, Stockholm, November 1 to December 10, 2010.
- Statistical physics, combinatorics and probability: from discrete to continuous models. Institut Henri Poincare, Paris, September 7 - 20, 2009.
- ENRAGE’s (European Network on Random Geometry) Topical School on Nonperturbative Gravity and Quantum Chromodynamics. The 49th Cracow School of Theoretical Physics. Zakopane, Poland, May 31 - June 10, 2009.

- ENRAGE’s Network School on Random Geometry and Random Matrices: From Quantum Gravity to Econophysics. Max-Planck Institute for the Physics of Complex Systems, Dresden, May 18 - 22, 2009.
- Young ENRAGE Quantum Gravity Meeting. Imperial College, London, January 9, 2009.
- ENRAGE’s Second Network Conference-cum-Workshop. Oxford, Sept. 15 - 19 , 2008.
- ENRAGE’s Fourth Topical School on Growth and Shapes. Institut Henri Poincare, Paris, June 2 - 6, 2008.
- ENRAGE’s Second Topical School on Random Trees. University of Iceland, August 20 - 24, 2007.
- ENRAGE ’s Network School on Random Matrices and Random Geometry. Universitat de Barcelona, April 16 - 24, 2007.
- First Topical School on Causal Sets, Imperial College, London, Sept. 18 - 22, 2006. Organized by ENRAGE.
- NORDITA Master Class in Physics, August 2005, Copenhagen. A one week school on statistical mechanics, cosmology, biophysics and astrobiology.

Honours and awards

- A grant for Ph. D. studies 2007-2010, from the Eimskip Research Fund at the University of Iceland.
- A prize from the fund of Guðmundur P. Bjarnason from Akranes 2005, awarded for academic achievement in B.S. studies.
- The Freshman Prize of the Icelandic Physical Society 2003, awarded for academic achievement in first year physics courses at the University of Iceland.
- Dux Scholae Akureyri Junior College 2002.
- First place in the Icelandic Physics Olympiad, 2002 and participation in the 33rd International Physics Olympiad in Bali, Indonesia, 2002. In Bali I was awarded an Honorable Mention.

Extracurricular activities

- A member of Ursus Kammarkör (choir), 2011–2013.
- A member of Söngsveitin Fílharmónía (choir), 2009 – 2010.
- A member of the University Choir (Iceland), 2002 – 2007.