**Joonas Turunen**
ENS de Lyon
Citizenship: Finnish

**CV**
15 November 2021

## POSITIONS

**Postdoctoral researcher, École Normale Supérieure de Lyon, Laboratoire de Physique, 10/2020-09/2022**
Postdoctoral research in mathematics/mathematical physics funded by a personal fellowship of LABEX MILYON centre of excellence (ANR-10-LABX-0070) and mentored by Jérémie Bouttier.

**Researcher (since 8/2020 postdoctoral), University of Iceland, Science Institute, Mathematics division, 2/2020-9/2020**
Postdoctoral research sponsored by Sigurður Örn Stefánsson within the project "Scaling limits of random enriched trees" funded by the Icelandic Research Fund (grant number:185233-051).

**Doctoral student, University of Helsinki, Department of Mathematics and Statistics, 1/2015-1/2020**
PhD research and studies under the supervision of Antti Kupiainen and Konstantin Izyurov in the mathematical physics group. Funded by the Academy of Finland via the CoE AnDy (project No. 271983), as well as the ERC Advanced Grant 741487 (QFPROBA), where Kupiainen was the PI.

**Scientist in residence, Institut Henri Poincaré**, **1/2017-3/2017**
Participation in the trimester *Combinatorics and Interactions,* 13 January – 31 March 2017

## EDUCATION

**Doctor of Philosophy (PhD), University of Helsinki, 2015-2020**
*Programme:* Doctoral Programme of Mathematics and Statistics (DOMAST); *thesis:* "On Ising Model Coupled to Random Planar Triangulations", defended on 30 June 2020 with grade *Pass with Distinction*. Degree conferred on 8 September 2020.

**Master of Science (MSc), University of Helsinki, 2013-2014**
*Major:* mathematics; *master's thesis: "*On random planar maps and their scaling limits".

**Bachelor of Science (BSc), University of Helsinki, 2010-2013**
*Major:* mathematics; *minors:* theoretical physics, computer science.

## ARTICLES

**Interfaces in the vertex-decorated Ising model on random triangulations of the disk**, 2020. *Preprint.* arXiv:2003.11012.

**Ising model on random triangulations of the disk: phase transition** (with Linxiao Chen), 2020. *Preprint.* arXiv:2003.09343.

**Critical Ising model on random triangulations of the disk: enumeration and local limits** (with Linxiao Chen), 2019. *Commun. Math. Phys.* **374**, 1577–1643 (2020). DOI: 10.1007/s00220-019-03672-5, arXiv:1806.06668.

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## ORGANIZATION OF SCIENTIFIC EVENTS

**Journée CombiTop (Journée Cartes, Maps Day),** ENS de Lyon, 14 September 2021 *(co-organizer)*

## SELECTED TALKS

**Scaling limits of random planar maps with large faces and a causal structure,** Mathematical physics seminar, Department of Mathematics and Statistics, University of Helsinki, 27 October 2021 *(invited talk)*

**Ising model on random triangulations with a boundary,** Rentrée de l'ANR DIMERS, Sorbonne Université, 28 September 2021 *(invited talk)*

**Ising model on random half-planar triangulations: critical behavior, interfaces and phase transition,** Journées Cartes, CIRM, 18 January 2021 *(invited talk)*

**Ising model on random triangulations of the half-plane: critical behavior and phase transition,** Integrable probability and related fields from a safe distance, Department of Mathematics, MIT, 29 October 2020 *(invited online talk)*

**Ising model on random triangulations with a boundary: from combinatorics to geometry,** Journée Cartes, Institut de Mathématiques d'Orsay, Université Paris-Saclay, 16 October 2020 *(invited talk)*

**Critical Ising model on infinite random triangulation of the half-plane,** Young Researchers Symposium at ICMP 2018, McGill University, 20 July 2018 *(contributed talk)*

**Critical Ising model on random triangulations of the disk: enumeration and limits,** RGM follow up, Isaac Newton Institute, Cambridge, 13 July 2018 *(contributed talk)*

**Critical Ising model on infinite random triangulation of the half-plane,** Mathematical physics seminar, University of Geneva, 16 October 2017 *(invited talk)*

**Boltzmann triangulations with Ising model on faces**, Stochastics and statistics seminar, Department of Mathematics and Systems Analysis, Aalto University, 3 October 2016 *(invited talk)*

**Boltzmann triangulations with Ising model on faces,** Mathematical physics seminar, Department of Mathematics and Statistics, University of Helsinki, 13 April 2016 *(invited talk)*

**Introduction to analytic combinatorics**, Students' seminar, Department of Mathematics and Statistics, University of Helsinki, 11 February 2016 *(invited talk)*

**A bijection between labelled plane trees and rooted and pointed planar quadrangulations**, Seminar on stochastic models, Department of Mathematics and Statistics, University of Helsinki, 5 March 2015 *(invited talk)*

**Full list of talks: http://perso.ens-lyon.fr/joonas.turunen/#talks**

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## TEACHING

**Pedagogical training:** University Pedagogy 2.1 Constructive Alignment in Course Design, University of Helsinki, 5 ECTS credits, 2/2018, grade 5/5.

**Selected teaching:**

**Functional analysis,** Department of Mathematics and Statistics, University of Helsinki, fall 2019 (teaching assistant)

**Probability theory I-II,** Department of Mathematics and Statistics, University of Helsinki, fall 2018 (teaching assistant & substitute lecturer)

**Stochastic methods,** Department of Mathematics and Statistics, University of Helsinki, fall 2017 (teaching assistant & substitute lecturer, active participation in exercises design)

**Stochastic methods in physics and biology**, Department of Mathematics and Statistics, University of Helsinki, spring 2016 (teaching assistant, fully charge of exercises design)

**Thesis supervision:**

**Marcus Leivo,** bachelor's thesis *Counting binary trees*, spring 2017

## LANGUAGES

**Finnish:** mother tongue **English:** excellent **German:** fluent **Swedish:** fluent
**French:** intermediate

## IT SKILLS

**Programming:** Matlab, Java
**Computer algebra:** Maple, Mathematica

## COMPETITION SUCCESS, AWARDS AND GRANTS

**Competitive grant of Mathematics and Science Fund of University of Helsinki for undergraduate students,** 2013
**National physics competition (Finland, high school)**, contestant in the finals (top 20), 2009

## POSITIONS OF TRUST

**Deputy member of the Department Council,** Department of Mathematics and Statistics, University of Helsinki, 2014

## OTHER RESEARCH EXPERIENCE

**Intern, Finnish Meteorological Institute, 6-8/2013 (3 months)**
I participated in a project on the interaction of carbon dioxide between the sea and the atmosphere. My main task was to collect, control and combine the weather data of a research journey with turbulence measurements conducted on board, using Matlab.