TECHNISCHE UNIVERSITÄT DARMSTADT

Multiplicative chaos and cascades

Spring School, February 19-23, 2024, TU Darmstadt

Fachbereich Mathematik

The Meeting

Multiplicative chaos is a theory developed by Kahane in the eighties. It is based on the lognormal multiplicative chaos proposed by Mandelbrot to model turbulence, as well as on the theory of random multiplicative cascade measures, which again was introduced by B. Mandelbrot as a simple model exhibiting fractal and statistical features similar to those observed experimentally in velocity fluctuations of fully developed turbulence.
The mathematical study of the latter model was initiated by Kahane and Peyrière.

The aim of this school is to introduce PhD students and young post-docs to these fields highlighting some recent developments.

The core of the school consists of two mini courses, each with

five 90-minute lectures by

Julien Barral (Paris):
Geometric and dynamical aspects of Mandelbrot multiplicative cascades.

Eero Saksman (Helsinki):
Introduction to multiplicative chaos.

There will also be some invited talks in the general topic area of the school. In addition, participants, in particular PhD students, are encouraged to deliver short talks of 10min to introduce themselves and their research interests.

The venue is building S2 04, Hochschulstraße 8, 64289 Darmstadt (map).

Here is the programme booklet of the spring school
(you will receive a printed copy at your registration):

Confirmed speakers

Julien Barral	*Université Paris 13*
Eero Saksman	*Helsinki*
Xiong Jin	*Manchester*
Janne Junnila	*Helsinki*
Sebastian Mentemeier	*Hildesheim*

Target Audience

The spring school is primarily aimed at PhD studens and postdocs, but everybody

is welcome to attend. Participants will be given the opportunity to deliver contributed talks.

Previous schools

The school is a continuation of the Spring schools

"Probabilistic methods in population biology"	March 27-31, 2023
"Random geometric graphs"	March 28-April 1, 2022
"Complex Networks"	March 2-6, 2020
"Selected topics in stochastic geometry "	February 25 - March 1, 2019
"Spin Systems: Discrete and Continuous "	March 19-23, 2018
"Probability in mathematics and physics "	March 27-31, 2017
"Geometric models in probability"	April 4 - 8, 2016
"Stochastic Analysis of Spatially Extended Models"	March 23 - 27, 2015
"Spatial Models in Statistical Mechanics"	February 24 - 28, 2014

held at TU Darmstadt.

Organizers

Frank Aurzada (Darmstadt)
Volker Betz (Darmstadt)
Matthias Meiners (Gießen)
Christian Mönch (Mainz)

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