

# January – April 2021



Hausdorff Trimester Program

## The Interplay between High-Dimensional Geometry and Probability

**Organizers:** Ronen Eldan, Assaf Naor, Matthias Reitzner, Christoph Thäle, Elisabeth M. Werner

A central theme of current mathematical research exhibits a merger of ideas and techniques from geometry, probability and analysis, with emphasis on a high dimensional setting. The interplay between these areas addresses geometric and probabilistic properties of finite dimensional objects, studying their characteristic behavior when the dimension, or a number of other relevant free parameters, grows to infinity. Such high-dimensional systems appear naturally and play an essential role in mathematics and applied sciences. It is from the shared need to better understand similar phenomena that many breakthrough results have occurred in the last decade.

The goal of this trimester program is to bring together senior and junior researchers in these areas for mutual exchange of ideas and methods, to intensify the already existing ties and to stimulate substantial progress at the crossroads of these disciplines.

- **Winter School** on the Interplay between High-Dimensional Geometry and Probability (*January 11-15*)
- **Workshop:** High dimensional spatial random systems (*February 22-26*)
- **Workshop:** High dimensional measures: geometric and probabilistic aspects (*March 22-26*)

### Those planning to participate include:

Keith Ball  
Imre Bárány  
Pierre Calka  
Nina Gantert  
Apostolos Giannopoulos  
Olivier Guédon

Daniel Hug  
Zakhar Kabluchko  
Alexander Koldobsky  
Galyna Livshyts  
Alexander Litvak  
Monika Ludwig

Vitali Milman  
Ilya Molchanov  
Grigoris Paouris  
Giovanni Peccati  
Kavita Ramanan  
Mark Rudelson

Dmitry Ryabogin  
Rolf Schneider  
Franz Schuster  
Alina Stancu  
Santosh Vempala  
Gaoyong Zhang



**Call for participation:** The Hausdorff Research Institute offers visiting positions for the whole period of the trimester program (for senior scientists, postdocs and PhD students). The deadline for applications is **June 30, 2020**. Please send applications (including CV and, for postdocs and PhD students, a letter of recommendation) using our online application form at <https://www.him.uni-bonn.de/interplay-high-dimensional-geometry-probability-application/>. In addition numerous fellowships for shorter periods are available.