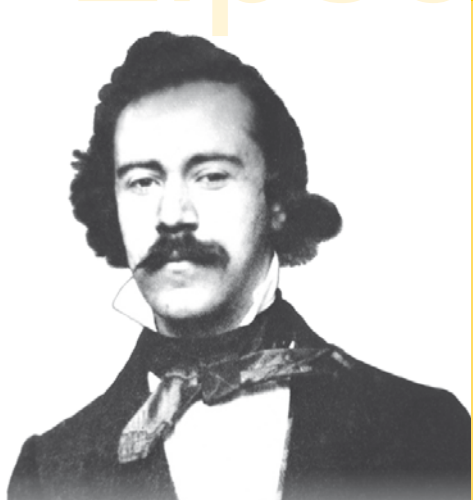


## Lipschitz Lectures 2017/18



# Anomalous dynamics and disordered systems

## G erard Ben Arous

Courant Institute (NYU)

Monday  
**November 20, 2017**  
4 - 6 p.m.

Gro er H rsaal  
Wegelerstr. 10, 53115 Bonn

Friday  
**November 24, 2017**  
2 - 4 p.m.

Kleiner H rsaal  
Wegelerstr. 10, 53115 Bonn

Monday  
**January 8, 2018 &**  
Thursday  
**January 11, 2018**  
2 - 4 p.m.

Lipschitz-Saal  
Endericher Allee 60, 53115 Bonn

### Abstract

The central limit theorem, and its avatars, is the best example of a broad universality class. For a very wide class of systems, random or not, dynamics are governed by Brownian motion, or normal diffusion. This is the core of homogenization theory and of a large part of probability theory. We are interested here in mechanisms of anomalous diffusion, where this fails. We will mainly insist on mechanisms for anomalously slow dynamics, only mentioning in passing those for anomalously fast ones. These slow dynamics are usually induced by trapping regions, themselves created by strong disorder of the random landscapes in which the dynamics evolve. We will give a broad picture of the known mechanisms in a few of the most important examples.

