

# Physik-Kolloquium



**Dienstag, den 16.12.2014, 16.00 Uhr**

**Prof. Dr. Joachim Krug**

Universität Köln, Institut für Theoretische Physik

## **Records in a changing world: From global warming to financial markets**

Record-breaking events of all kinds generate considerable attention in the media, and affect the public perception of phenomena such as climate change and financial crises. The mathematical theory of records makes universal and sometimes counter-intuitive predictions about the temporal statistics of record events, but it is largely restricted to series of independent, identically distributed random variables. In this talk we extend the theory to time series with a trend, and use it to analyze daily temperature records and stock market data. We show that the trend of increasing mean temperature has affected the occurrence of heat records in a significant way, and that the record statistics of stock prices can be approximately described by a biased random walk.

**Ort: Hörsaal für Theoretische Physik, Linnéstraße 5**

**Alle Teilnehmer sind ab 15.30 Uhr zu Kaffee vor dem Hörsaal eingeladen.**