

# Einladung zum Würzburger Mathematischen Kolloquium

Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

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Antrittsvorlesung

## Probabilistic interpretations of classical objects in analysis

Mittwoch, der 4. Dec. 2019 • 16:15 Uhr

Raum SE 40, Mathematik Ost, Emil-Fischer-Str. 40, Campus Hubland-Nord

### Inhaltsangabe:

To mathematicians, the Hilbert transform is a singular integral operator that gives access to harmonic conjugate functions via a convolution of boundary values. To others, it appears in the calculation of the trajectories of charged particles in an electric potential.

The concept of martingales on the other hand, is often associated with old betting strategies in so-called fair games.

In part of this lecture we focus on connections between the Hilbert transform and transforms on systems of martingales.

We give an idea of various results that were obtained using this connection between analysis and probability. Applications include characterisations of certain Banach spaces, norm estimates in high dimensions and so called weighted estimates with applications to PDE and multivariate stationary stochastic processes.



<https://www.mathematik.uni-wuerzburg.de/de/aktuelles/kolloquium/>

Zu diesem Vortrag laden wir Sie herzlich ein.  
Im Anschluss an den Vortrag stehen Tee und Kaffee im Foyer vor dem SE 40 bereit.

Die Dozentinnen und Dozenten der Mathematik

