



## Invitation to Seminar Talk

# Gaussian noise stability and Gaussian isoperimetric inequality

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**Host: Jan Maas**

In this talk, we give an introduction to the Gaussian isoperimetric inequality and a generalization in form of the Gaussian noise stability.

The Gaussian isoperimetric inequality arises naturally as an infinite dimensional version of the Euclidean isoperimetric inequality where the optimizers for a fixed Gaussian measure are half-spaces instead of balls.

The Gaussian noise stability of a measurable set is the probability that two standard Gaussian vectors with correlation  $\rho$  both belong to this set. Fixing the Gaussian measure of the set half-spaces maximize this probability which we prove by applying techniques from stochastic calculus. This statement contains the Gaussian isoperimetric inequality as special case in the limit  $\rho \rightarrow 1$ .

**Wednesday, 13 May, 2015, 1:45pm**

**Mondi 2, Central Building, ground floor**



2015-05-13

This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage (note that the IST Shuttle times are highlighted in dark green):

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