



Institut für Mathematik

Seminar zur Stochastik

Montag, 18. Mai 2026

12:00 Uhr

HS E005 (MINIMUM), Inselplatz 5

Simon Bartolacci

(Institut Élie Cartan de Lorraine Metz/Frankreich)

“Risk-Averse Stochastic Programming with Multivariate Criteria”

Abstract: Stochastic optimization traditionally consists in optimizing the expectation of a function depending on both a decision variable and a random input with unknown distribution. In practice, this distribution is approximated from data, and the quality of the resulting solution improves as the sample size increases. A central question is therefore to characterize the conditions ensuring consistency of the approximation and quantify its convergence rate.

However, relying on expectation alone may fail to capture important aspects of uncertainty, such as variability or extreme events. This has motivated the development of risk-averse stochastic optimization, where expectations are replaced by more general functionals known as risk measures.

In this talk, we introduce a further generalization by considering multivariate risk measures, allowing one to handle criteria expressed in different units. We build on the framework proposed by Ekeland, Galichon, and Henry, and study the associated stochastic optimization problems.

We conclude with an application to the minimization of mixing time in a random network.

Alle Interessierte sind herzlich eingeladen!

Kontakt:

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