![Universität Wien — Fakultät für Mathematik]

ANTRITTSVORLESUNG
Mathematisches Kolloquium

Mittwoch, 14. Juni 2023
Sky Lounge

EINLADUNG

Julio Backhoff-Veraguas
(Universität Wien)

"Stochastic Mass Transport"

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Abstract:
In classical optimal transport theory the aim is to find the best way (i.e. with least effort) to couple two given random variables on a common probability space. Over the years this theory has found countless applications throughout pure and applied mathematics. However when we move away from the setting of random variables, and consider stochastic processes instead, the theory proves less insightful. The reason is that stochastic processes have an in-built information structure (the arrow of time) which is completely ignored in optimal transport. The nascent field of causal optimal transport aims to close this gap.

In this talk I will give an overview of causal optimal transport. The focus will be on the motivation and on the very recent applications that this field has already found. The latter include: quantification of model uncertainty in mathematical finance, the study of highly structured stochastic processes with given marginals, and functional inequalities for Brownian motion.

15.45 Uhr: Kaffeejause

16.15 Uhr: Vortrag

Kleines Buffet im Anschluss

Radu Ioan Boţ