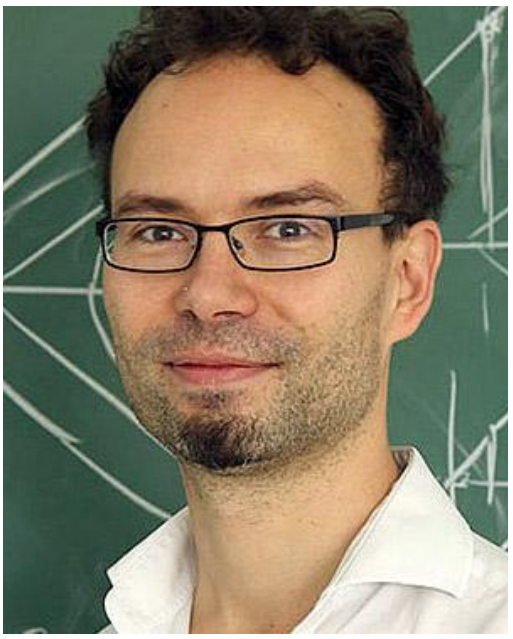
universität innsbruck

Department of Mathematics

Mathematics Colloquium



Prof. Mathias Beiglböck

University of Vienna

Optimal Transport and its Time-Dependent Version

In this talk we present a concise introduction to optimal transport and its time-dependent extension. We outline the fundamental ideas of classical optimal transport, emphasizing its geometric interpretation. We discuss the formulation of time-dependent optimal transport, which allows for the analysis of dynamical couplings and the evolution of probability measures over multiple stages. We illustrate how this dynamic framework provides a natural language for multistage optimization problems and describe applications in stochastic control and mathematical finance. Finally we explain how the Brenier theorem, a cornerstone of modern optimal transport theory, can be adapted to the time-dependent setting.

December 10, 2025, Bauingenieurgebäude, HSB9

15:30 – 16:30 Technikerstraße 13a