



universität  
wien



## DK Seminar

December 16, 2015, 14:15 - 15:45  
Vienna University of Technology,  
Freihaus, green area, 4th floor, 101C

**Anastasiia Zalashko**

University of Vienna

### Causal Transport in Discrete Time and Applications

In this talk we shall examine causal transports and the associated optimal transportation problem under the causality constraint (Pc). Loosely speaking, causal transport plans are a relaxation of adapted processes in the same sense as Kantorovich transport plans are the extension of Monge-type transport maps. We provide a dynamic programming principle for (Pc) which allows us to identify an optimal bicausal transport under given conditions, and prove that sometimes this solution is also optimal causal. Finally, applications to some functional inequalities will be given.