April 22nd, 2019
KAP 414
2:00 P.M. – 3:00 P.M.

Professor Stephan Sturm

(Worcester Polytechnic Institute)

"Sensitivity Analysis of the Long-Term Expected Utility of Optimal Portfolios"

Abstract: We study the sensitivity of the long-term expected utility of optimal portfolios. In an incomplete market given by a factor model, we calculate the extent to which the optimal expected utility is affected in the long run by small changes of the underlying factor model. The long-term behavior of the optimal expected utility can be characterized by a solution pair of an ergodic HJB equation, and we show that this solution pair determines the long-term sensitivities. As example, explicit results for several market models such as the Kim-Omberg model for stochastic excess returns and the Heston stochastic volatility model are presented.

This is joint work with Hyungbin Park (Seoul National University).