March 5th, 2018
KAP 414
2:00 P.M. – 3:00 P.M.

COLLOQUIUM DOUBLE HEADER!

Speaker #1: Prof. Francesca Biagini (University of Munich, Germany)

Robust Mean-Variance Hedging via G-Expectation

Abstract: In this paper we study mean-variance hedging under the G-expectation framework. Our analysis is carried out by exploiting the G-martingale representation theorem and the related probabilistic tools, in a continuous financial market with two assets, where the discounted risky one is modeled as a symmetric G-martingale. By tackling progressively larger classes of contingent claims, we are able to explicitly compute the optimal strategy under general assumptions on the form of the contingent claim.

This is a joint work with Jacopo Mancin and Thilo Meyer-Brandis.

Speaker #2: Prof. Thilo Meyer-Brandis (University of Munich, Germany)

Financial Default Contagion in a Generalized Block Model

Abstract: We extend analytic results on default contagion in large financial networks to capture a pronounced block model

structure. This includes as a special case the Core-Periphery network, which played a prominent role in recent research on systemic risk. In the current literature on systemic risk in large random networks one problematic assumption is that the distribution of interbank liabilities only depends on the creditor. Under this assumption a straightforward law of large number argument allows to turn edge related random elements into deterministic vertex properties. We study a more general setting in which this argument breaks down and a direct asymptotic analysis of the edge weighted random graph becomes necessary. Among other applications our results allow us to obtain resilience conditions for the entire network (for example the global financial network) based on sub-network conditions. Contrasting earlier research, we also give an example that demonstrates how reshuffling edge weights to form blocks can in fact impact resilience even for otherwise very homogeneous networks.