FIM Minicourse

Ruodu Wang (University of Waterloo)

Risk aggregation and Fréchet problems

October 12 - 28, 2015

Mon	October 12	13:15 - 15:00
Wed	October 14	13:15 - 15:00
Fri	October 16	13:15 - 15:00
Mon	October 26	13:15 - 15:00
Wed	October 28	13:15 - 15:00

HG G 19.1, ETH Zürich, Rämistrasse 101

Abstract

Fréchet problems refer to questions related to an aggregation (sum, typically) of several random variables, where the marginal distribution of each individual random variable is known and the joint distribution (copula) is unspecific. Unfortunately (in fact, fortunately), a large number of questions in this field are still mathematically open.

In the modeling of risk aggregation, individual risks and their dependence structure are often modeled separately, leading to uncertainty arising at the level of a joint model. As the dependence structure is typically uncertain, the study on quantitative characteristics (e.g. risk measures) of risk aggregation under model uncertainty leads to a variety of Fréchet problems.

This course covers various topics in this quickly expanding field. The content is mainly based on recent research of the instructor and his collaborators.

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