Lehrstuhl für Finanzmathematik
Fakultät für Mathematik
Technische Universität München

Announcement WiSe 2017/2018

Advanced Seminar
Empirical copula processes and related statistical tests
PD Dr. Aleksey Min, M. Sc. Miriam Jaser

Area: / Modulnr.: Mathematical Finance/ MA6015

Content: This seminar is based upon a list of recent papers on different statistical estimation methods and tests for copulas. Each participant presents one of the selected papers and discusses a particular statistical test problem for copulas. This provides a broad overview to all participants on different statistical tests for copulas, recent aspects, and the historical development of the topic.

Continued next Semester: No

Audience: max. 6 master students

Prerequisite: Advanced knowledge of probability and statistics is recommended, provided e.g. by lectures like "Stochastic Analysis", "Financial Engineering with Copulas", "Quantitative Risk Management", "Copula: Foundations and Applications", "Multivariate Statistics", "Vine copulas and their application".

Literature:

1. Kosorok (2008). *Introduction to empirical processes and semiparametric inference*. Springer
2. Remillard and Scaillet (2012). *Testing for equality between two copulas*. Journal of Multivariate Analysis, 100, pp.377-386.
3. Genest et al. (1995). *A semiparametric estimation procedure of dependence parameters in multivariate families of distributions*. Biometrika, 82, pp. 543-552.
4. Segers (2012). *Asymptotics of empirical copula processes under non-restrictive smoothness assumptions.* Bernoulli, 18, pp. 764-782.
5. Genest and Neslehova (2014). *Tests of symmetry for bivariate copulas*. Ann Inst Stat Math, 64, pp. 811-834.
6. Genest and Neslehova (2014). *On tests of radial symmetry for bivariate copulas*. Stat Papers, 55 pp. 1107-1119.

Certificate: 3 CP

Seminar Information: The preliminary meeting to the Seminar (Seminarvorbesprechung) takes place on **Thursday, July,13 2017 at 15:00** in room 2.02.11, Parkring 11, Garching-Hochbrück