Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

Fakultät für
Mathematik, Informatik
und Naturwissenschaften

Kolloquium über Mathematische Statistik und Stochastische Prozesse

Dr. Axel Bücher, Ruhr-Universität Bochum

22.01.2013, 16:15 Uhr, Raum 431

Epi- and hypoconvergence of the empirical copula process

The empirical copula process plays a central role for statistical inference on copulas. Recently, Segers (Bernoulli, 2012) investigated weak convergence of this process with respect to the uniform norm under certain necessary smoothness conditions on the copula. In this talk, it is demonstrated that these conditions are not satisfied for several popular copula models. As a circumvention, we show that a weak convergence result can be obtained under substantially weaker smoothness conditions if the uniform norm is replaced by a suitable, sufficiently strong metric. Convergence with respect to this metric is closely related to epi- and hypoconvergence of functions and implies L_p convergence for any p>0. We also demonstrate some of many possible applications.

Dr. Axel Bücher
Ruhr-Universität Bochum
Fakultät für Mathematik
Lehrstuhl für Stochastik
44780 Bochum
Deutschland
axel.buecher@ruhr-uni-bochum.de

Kontakt: Prof. Dr. NatalieNeumeyer, Universität Hamburg, natalie.neumeyer@math.uni-hamburg.de