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TECHNISCHE UNIVERSITÄT
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FORSCHUNGSGRUPPE FÜR FINANZ-
UND VERSICHERUNGSMATHEMATIK

Einladung zur Vortragsreihe aus Finanz- und Versicherungsmathematik

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Modeling Dependence of Non-Continuous Random Variables and Compound Poisson Processes

For continuous random variables, many dependence concepts and measures of association can be expressed in terms of the corresponding copula only and are thus independent of the marginal distributions. This interrelationship generally fails as soon as discontinuities occur. In this talk, we show how an alternative transformation of the marginals leads to a possible copula which captures the dependence structures in an analogous way as the unique copula in the continuous case. In particular, we obtain Kendall's tau and Spearman's rho for non-continuous random variables. Furthermore, we discuss modeling of multivariate discrete distributions and propose some approaches towards modeling and generating of dependent loss processes of compound Poisson type.

Johanna Neslehova holds a Post Doc position within RiskLab, the ETH competence centre for Quantitative Risk Management. Before joining RiskLab in Oktober 2004, she worked as a Research Assistant at the University of Oldenburg (2000 - 2004) where she completed a Ph.D. in Mathematics (2004, Prof. D. Pfeifer) on Dependence of Non-continuous Random Variables. She studied mathematics at the Charles University of Prague and the University of Hamburg, obtaining the Diploma in 2000 at the University of Hamburg. Her main research interests are in dependance modelling in finance and insurance with specific applications to quantitative risk management. She is furthermore involved in a larger scale e-learning project, a topic on which she co-authored a book for Springer in 2004.

Termin: Dienstag, **6. November 2005**, 16:30 Uhr s.t.

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