31 May - 03 June 2016
at
ISEG- Lisbon School of Economics and Management

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Name: **SCHMIDT Klaus D.** **Company: Technische Universität Dresden**

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Title of Paper / Presentation / Session to appear in program: On Order Statistics and Their Copulas / *Copulas: theory and applications*

Author/s:
1. Markus Dietz **2. Sebastian Fuchs**

3. Klaus D. Schmidt **4.**

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IAP: Instituto dos Atuários Portugueses
Campo Grande 28, 8 C 1700-093 Lisboa
Portugal
TEL: + 351 21 846 38 82
Email: astincolloquium2016@gmail.com
http://www.actuaries.org/lisbon2016/

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ABSTRACT

(TITLE OF PAPER / PRESENTATION TO APPEAR IN PROGRAM)
(Markus Dietz, Sebastian Fuchs, Klaus D. Schmidt) **On Order Statistics and Their Copulas**

Key words: Copulas, order statistic, transformations of copulas

Purpose of your paper: For an arbitrary random vector, we provide formulas for a copula and the univariate marginal distribution functions of its order statistic. The results are applicable in joint life insurance or largest claims reinsurance.

Abstract: In the present paper we study the problem of how to transform a copula for the distribution function of a random vector into a copula for the distribution function of its order statistic. This problem has been addressed by Navarro and Spizzichino [2010] in the case where the univariate marginal distribution functions are continuous such that both copulas are uniquely determined. We extend their main results by dropping the continuity assumption, and we also provide some formulas for the univariate marginal distribution functions of the order statistic.

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