

UNIVERSITY OF SYDNEY

SCHOOL OF MATHEMATICS AND STATISTICS

Statistics Seminar

Monday December 17, 11.30am., Mathematics Meeting Room 709 (Level 7)

**Inestimability of association parameter based on a
broken sample**

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Abstract

Suppose that $(X_i, Y_i), i = 1, 2, \dots, n$ are iid random vectors with uniform marginals and a certain joint distribution F_ρ , where ρ is a parameter. However, the X 's and Y 's are observed separately so that the pairing information is missing. Can ρ be consistently estimated? This is an extension of the problem considered in DeGroot and Goel (1980) which focused on the bivariate normal distribution with correlation ρ . In this study, we introduce an approach based on the empirical process, as opposed to the likelihood function. We show that this approach leads to easily identifiable conditions which, to some extent, characterize the class of distributions F_ρ for which consistent estimation is not possible.

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