MICHIGAN STATE UNIVERSITY Department of Statistics and Probability

COLLOQUIUM

Winfried Stute University of Giessen, Germany

Empirical Martingale Spaces with Applications

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Abstract

Martingales have interesting applications in statistics. E.g., stopping times techniques may enable one to compute or at least approximate boundary crossing probabilities which then lead to critical regions of tests. Furthermore, in continuous time, their covariances are - modulo a transformation in time – the same as those for a Brownian Motion. In this talk we present a full characterization of martingales based on empiricals. Many of them are highly nonlinear and (modulo a transformation) distribution free. Interestingly enough, the tests can be applied to type-II censored data.

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