

ON NONSTANDARD PRODUCT MEASURE SPACES AND DUALITY FOR MARTINGALE PROPERTY

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Topic #5: Nonstandard methods in measure theory, stochastic analysis, probability and statistics.

In this talk, we will give a brief account of the richness of Loeb product space of probability measure spaces. Then we will demonstrate that on the Loeb product space framework, a large collection of stochastic processes are martingales essentially if and only if so are the empirical processes. The talk is based on the two joint works with J. Berger, H. Osswald and Y. Sun, and with S. Albeverio and Y. Sun.

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