
Joint Statistics Seminar

The Hong Kong University of Science and Technology

Characterization of LIL behavior in Banach space

by

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Time: 3:00 p.m. - 4:00 p.m.

Venue: Room 3408 (Lift 17 & 18)

Abstract

In a previous joint paper with Deli Li (Lakehead University, Thunder Bay, Canada) we have shown that the classical Hartman-Wintner LIL can be extended to a "law of a very slowly function". Our proof of this result was based on some classical results for real-valued random variables. We now look into the corresponding problem in the general setting of Banach space valued random variables. Using some recent work on Bernstein type potential inequalities we obtain a new Fuk-Nagaev type exponential inequality for sums of independent B-valued random variables. This inequality immediately implies the infinite-dimensional version of the law of a very slowly varying function, but should have other applications as well. As a by-product of our work we can also report some progress on the problem of finding the precise value of the lim sup in the bounded Ledoux-Talagrand LIL (1988).

❖ **All interested are welcome!** ❖

For details, please contact ISMT Department.