COLLOQUIUM

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The Random Integral Representation Conjecture

a quarter of a century later

Tuesday, November 30, 2010
A405 Wells Hall
10:20 a.m. - 11:10 a.m.
Refreshments: 10:00 a.m.

Abstract

In the *Annals of Probability vol. 13 (1985) No. 2 on page 607* and later on in *Probability Theory and Related Fields vol. 78 (1988), on page 474,* I stated the conjecure that:

Each class of limit distributions, derived from sequences of independent random variables, is the image of some subset of ID by some mapping defined as a random integral.

More explicitely, it claims that each class of limit laws coincide with a collection of random integrals of the form $\int_{(a,b]} h(t) dY_v(r(t))$, for some deterministic functions h, r (that represent space and time change, respectively) and some Lévy process $Y_v(t)$, t$\geq$ 0.

In a lecture we will review situations where a such claim indeed holds true (among others, generalized self-decomposability, infinite divisibility in free-probability), give some historical comments and present open questions.

To request an interpretor or other accomodations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.