

Joint Statistics Seminar

The Hong Kong University of Science and Technology

The Random Integral Representation Conjecture: a quarter of a century later

by

Professor Zbigniew J. Jurek

University of Wrocław, Poland

Date: March 18, 2011 (Friday)

Time: 4:00 p.m. – 5:00 p.m.

Venue: Room 3584 (near Lift 27/28)

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

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

❖ *All interested are welcome!* ❖

For details, please contact ISOM Department.