

COLLOQUIUM
UNIVERSITY OF PITTSBURGH
FRIDAY, OCTOBER 17, 2008
704 THACKERAY HALL
4:00 P.M.

PROFESSOR RICHARD BRADLEY
DEPARTMENT OF MATHEMATICS
INDIANA UNIVERSITY, BLOOMINGTON

A STRICTLY STATIONARY, N -TUPLEWISE
INDEPENDENT COUNTEREXAMPLE TO THE
CENTRAL LIMIT THEOREM

ABSTRACT: Perhaps the most important classic “law of averages” in probability theory is the Central Limit Theorem (CLT, involving the bell curve) for sequences of independent, identically distributed (non-degenerate, square-integrable) random variables. Svante Janson (1988) constructed some “strictly stationary” (probabilities are “time-invariant”) sequences of “pairwise independent” random variables for which the CLT fails to hold. In this talk, for an arbitrary fixed positive integer N , an outline will be given for the construction of a strictly stationary, “ N -tuplewise independent” (every N of the random variables are independent) sequence of random variables for which the CLT fails to hold. This is joint work with Alexander Pruss. The talk will be aimed at a general audience.

Refreshments served at 3:30 p.m.
in the Math Dept. COMMON ROOM, Thackeray 705