1078-60-196   **Tom Lindstrøm*** (`lindstro@math.uio.no`), Department of Mathematics, University of Oslo, Box 1053 Blindern, N-0316 Oslo, Norway. *Stochastic analysis on hyperfinite products of hyperfinite spaces.*

In his 1984 AMS Memoir "An infinitesimal approach to stochastic analysis", H. J. Keisler showed how the theory of diffusion processes can be based on hyperfinite products of the simplest probability spaces conceivable, i.e. those with only two elements. It has since been shown that in theory Keisler's space are sufficiently rich to carry all kinds of probabilistic behavior, but in practice it often more convenient to use spaces tailored to the phenomenon one wants to model; if, e.g., one wants to model stochastic processes with jumps, it is an advantage to use models where the atoms reflect the size and frequency of the jumps.

In this talk, I shall look at stochastic analysis and Malliavin calculus on more general products of hyperfinite probability spaces. (Received December 07, 2011)