Vakuutusmatematiikan seminaari

Pe 19.2.2016 klo 11-12. Søren Asmussen (Aarhus University):

Portfolio Value-at-Risk for lognormal sums.

Helsingin yliopiston Kumpulan kampus, Exactum, sali D123 (Gustaf Hällströmin katu 2 B).

Väitös vakuutusmatematiikasta

La 20.2.2016 klo 10. Jaakko Lehtomaa puolustaa väitöskirjaansa

On Heavy-tailed Risks with Applications to Insurance and Finance.

Helsingin yliopiston päärakennus, sali 12 (Fabianinkatu 33).

Abstract of the talk of Asmussen

A standard model for the value $S = X_1 + \cdots + X_n$ of a portfolio of n financial positions $X_1, \ldots, X_n$ is $X_i = e^{Y_1}$ where the vector $(Y_1 \ \ldots \ Y_n)$ is multivariate normal with possibly dependent components. Thus VaR calculations will need tail probabilities, more precisely of the form $P(S > x)$ in the right tail when the X_i are losses or short positions and of the form $P(S \leq x)$ in the left tail when the X_i are asset values or long positions. The calculation is non-trivial already for the i.i.d. case and I survey various approaches and recent asymptotic results. In particular these include Monte Carlo with variance reduction from either conditioning or importance sampling, saddlepoint approximations involving the Lambert W function and orthogonal polynomial expansions. The talk is based on a series of papers with coauthors Leonardo Rojas-Nandayapa, Jens Ledet Jensen, Patrick Laub and Pierre-Olivier Goffard.