

Title : On some properties of a class of multivariate Erlang mixtures with insurance applications

Abstract : In this talk, some properties of a class of multivariate mixed Erlang distributions with different scale parameters are discussed. Various distributional properties related to applications in insurance risk theory are given. Some representations involving scale mixtures, generalized Esscher transformations, higher-order equilibrium distributions, and residual lifetime distributions are derived. These results allows for the study of stop-loss moments, premium calculation, and the risk allocation problem. Finally, some results concerning minimum and maximum variables are derived and applied to pricing joint life and last survivor policies. This is a joint work with Gordon E. Willmot.