KEN SENG TAN, University of Waterloo, Dept. of Statistics and Actuarial Science
CTE and Capital Allocation under the Skew Elliptical Distributions

In recent years, there has been a growing interest among actuaries and finance experts on adopting the Conditional Tail Expectation (CTE) as a "coherent" risk measure for risk management. More recently CTE has been proposed in the context of capital allocation in which CTE provides a convenient way of determining the capital requirement for individual lines of business among correlated business units. Analytic results are derived in Panjer (2002) in the case of multivariate Normal risks. Landsman and Valdez (2003) extend the results of Panjer (2002) to elliptical distributions. In this paper, we further generalize these results by considering a relatively new class of distributions known as the skew elliptical distributions. These distributions have the desirable properties that they need not be symmetric and there is an additional parameter which regulates the skewness.

This is joint work with Jun Cai.