BEYOND BETA
Other Continuous Distribution with
Bounded Support and Applications

Presentation by:

J.R. van Dorp
Engineering Management and Systems Engineering,
School of Engineering and Applied Science,
The George Washington University

Abstract:

Statistical Distributions are fundamental to statistical science and are a prime indespensable tool for its applications. The BEYOND BETA monograph by Kotz and Van Dorp (2004) is the first to examine an important but somewhat neglected area in this field - univariate continuous distributions on a bounded domain, excluding the beta distribution. It provides an elementary but thorough discussion of "novel" contributions developed therein and some of their applications. It contains a comprehensive chapter on the triangular distributions as well as a chapter on earlier extensions of this distribution not emphasized in existing statistical literature. Special attention is given to estimation, in particular, non-standard maximum likelihood procedures. In the presentation we shall concentrate on the properties and estimation of the Two-Sided Power (TSP) distributions and their link to the Generalized Trapezoidal and the Asymmetric Laplace distributions. The different shapes of the TSP pdf's are presented on the book cover and mimic those of the beta distributions. The general framework for Two-Sided distributions will be presented as well. An overview shall be presented on expert judgement elicitation procedures for the TSP distributions and some of its generalizations.