

TABLES AND FORMULAS OF BILATERAL CONSUMER RISK FOR GENERAL MEASURAND AND MEASUREMENT SYSTEM DISTRIBUTIONS

Speaker/Author: Ricardo Nicholas
Boeing Defense & Space Group
Seattle, WA 98124-2499
ricardo.a.nicholas@boeing.com
Phone: (206) 544-0569; FAX: (206) 544-5907

Abstract

Numerous technical papers have treated bilateral consumer risk for unbiased Gaussian distributions, but there is a scant supply of references treating biased distribution consumer risk. A calibration or measurement comprised of unbiased measurand and measurement system distributions is often an ideal that is not realized in many, if not most, situations. Significant errors will result if the distribution biases are not taken into account. This paper describes the basic theory and calculation of consumer risk for biased Gaussian distributions as an extension of principles presented earlier [1]. The results are compared to unbiased bilateral consumer risk values to both show the tabular magnitudes and differences from unbiased distribution consumer risk.