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Weldon A. Lodwick* (weldon.lodwick@ucdenver.edu), Mathematical and Statistical Sciences, University of Colorado Denver, Denver, CO 80204. *Interval Valued Probability Measures as a Unifying Theory for Optimization Under Generalized Uncertainty.*

This talk uses a new formal definition of interval valued probability measure (IVPM) based on a measure theoretic foundation and shows that generalized uncertainty data occurring in optimization models, in particular, possibilistic optimization, can be formulated in the IVPM framework. We will first develop interval-valued probability measure theory and then look at how it is used in optimization. Interval-valued probability measure integration theory will be presented if there is time.

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