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„Reliable Computing and Fuzzy Information”

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Abstract: In engineering computations there exist different kinds of uncertainty. The most important are variability, imprecision of data, model uncertainty, and uncertainty of a-priori information. Whereas variability is modeled since a long time by probability models, the quantitative mathematical description of imprecision by so-called fuzzy models was done more recently. Especially in reliability calculations in the Bayesian context also a-priori information is best modeled by so-called fuzzy probability distributions. Examples of non-precise data and related fuzzy models and relationships to stochastic models will be given in the contribution.

Reference: R. Viertl: Statistical Methods for Fuzzy Data, Wiley, Chichester, 2011