In search of a precise estimator based on imprecise data
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Statistics with interval-valued data are getting less interest from practitioners than it really deserves. This is partly because the solutions it offers are often too conservative and hence do not fully meet the expectations of actual users. Thus it is necessary to develop methods which, despite imprecise input data, will lead to more precise final statistical decisions. In the paper we discuss several refinement-oriented methods that may be useful in estimation based on interval-valued data.

Epistemic bootstrap for fuzzy data
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Fuzzy data applied for modeling imprecise observations cause many problems in statistical reasoning and data analysis. To handle better such observations a new bootstrap technique designed for epistemic fuzzy data is proposed. Our new method is conceptually simple and is not hard computationally. Some simulation results reported in the paper show that the proposed new type of the bootstrap may increase the effectiveness of statistical inferential procedures used so far. Although these results are rather preliminary, they indicate that the epistemic bootstrap might be useful in different fields which is a good prognostic for further research.

IIRTee: An Item Response Theory modeling of fuzzy rating data
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In this contribution we describe a novel procedure to represent uncertainty in rating scales in terms of fuzzy numbers. Following the rationale of fuzzy conversion scale, we adopt a two-step procedure based on a psychometric model (i.e., Item Response Theory-based tree) to represent the process of answer survey questions. This provides a coherent context where fuzzy numbers, and the related fuzziness, can be interpreted in terms of decision uncertainty that usually affects the rater’s response process. We reported results from a simulation study and an empirical application to highlight the characteristics and properties of the proposed approach.

Interactive Decision Making for Multiobjective Binomial Games with Fuzzy Payoffs Based on Possibility Measure
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In this paper, we propose an interactive decision making method for multiobjective binomial games with fuzzy payoffs. Using possibility measure and reference membership values, an equilibrium solution concept is introduced. To circumvent computational difficulties to obtain such a solution, equilibrium conditions in the mem-
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