Special Issue on Decision Making under uncertainty and imprecision

Description

The choice between several alternatives in a decision-making problem can be rendered difficult by the existence of uncertainty in the consequences of these alternatives. The standard approach to this issue is to model this alternative by means of probability theory, and to consider then a stochastic order, such as expected utility or stochastic dominance.

However, when the probabilistic information available is vague or scarce, the elicitation of a precise probability model can be difficult, and its use, questionable. In that case, it is possible to make use of tools from Imprecise Probability Theory, such as fuzzy measures, belief functions, possibility measures or lower/upper previsions, to model our uncertainty. Moreover, in some cases the incomplete information about the consequences of the alternatives can be tackled by means of the Theory of Fuzzy Sets.

This Special Issue aims at gathering significant advances in decision making problems with partial information. We encourage both theoretical and practically oriented papers. High-quality papers introducing novel approaches, improved methods or outstanding applications are welcome.

Topics of interest

Topics of interest include, (but are not limited to):

-Decision making with imprecise probabilities.

-Connections between game theory, fuzzy measures and imprecise probabilities.

-Stochastic orderings with imprecise information.

-Multivariate modelling with imprecise probabilities.

-Choice functions.

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Instructions for submission

The submission of papers should be made through the EVISE system of IJAR:

http://www.evise.com/evise/jrnl/IJA

When submitting the paper, authors should select this special issue as article type. All the submitted papers will be subjected to a peer review by experts in the topic. In order to guarantee an efficient review process, papers will enter in the revision process as soon as they are submitted.

Although there is not a fixed length for the submissions to this special issue, we suggest submissions with a length of 20-40 pages in the IJAR format. Submissions should comply with the usual quality standards of IJAR; papers that do not reach these standards will not be taken into consideration. Finally, authors are encouraged to make an effort to point out the relevance of the paper into the topic of the special issue.

Important dates

Submission deadline: November 30, 2018.

Notification of the decision: January 31, 2019.

Final decision: July 30, 2019.

Publication date (estimate): October 31, 2019.

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