Call for papers

Special Session on

"IMPRECISE PROBABILITIES: FOUNDATIONS AND APPLICATIONS"
to be held at the
**17th International Conference on Information Processing and Management
of Uncertainty in Knowledge-Based Systems (IPMU 2018)**
http://ipmu2018.uca.es//
Cádiz (Spain), June 11-15, 2018

Session topic and goal

This session is devoted to Imprecise Probability Theory. This theory encompasses all the mathematical models that can be used as more flexible tools than usual Probability Theory when the available information is scarce, vague or incomplete. It includes lower previsions, n- monotone capacities, belief functions and possibility measures, among others.

We would like to attract papers that discuss and solve foundational questions, or clearly demonstrate the usefulness of imprecise probabilistic models in an application. We would particularly welcome papers going from theoretical advances to the solution of an associated applied problem.

Note also that Imprecise Probability Theory is connected to other topics within the scope of IPMU, such as Dempster-Shafer Evidence Theory, Fuzzy Measures and their connections to Game Theory. Papers in these topics emphasizing the role of Imprecise Probabilities are also welcome.

Theoretical topics of interest include (but are not limited to):

- (coherent) uncertainty models
- non-additive set-functions
- qualitative reasoning about uncertainty
- limit laws for imprecise probabilities
- philosophical foundations
- elicitation and inference
- robust statistics
- decision making
- algorithmic issues

Applications include (but are not limited to):

- data mining
- classification and machine learning
- risk and reliability analysis
- finance
- life sciences
- system control and design

Dates

Paper submission: 22 November 2017
Notification of Acceptance: 1 February 2018
Conference: 11-15 June 2018

Organizers

We would be obliged if you would let us know in case you intend to submit a paper to this session, at your earliest convenience. Any questions or remarks can be addressed to:

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