

Call for papers

SIPTA Special Session on

"IMPRECISE PROBABILITIES: FROM FOUNDATIONS TO APPLICATIONS"

to be held at the

International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU 2014)

<http://www.ipmu2014.univ-montp2.fr/>

Montpellier, 15.07.2014 - 19.07.2014

Session topic and goal

This session concerns imprecise probability in the wide sense. It is used as a generic term for uncertainty models, both qualitative and quantitative not using sharp numerical probabilities (comparative probabilities, belief functions, possibilities, lower previsions, etc.).

Such models address inference problems where the relevant information is scarce, vague or conflicting, and decision problems where preferences may be incomplete.

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

We encourage submissions of papers from future attendees of the SIPTA summer school 2014, in which discussions can be pursued. Submissions from young researchers or about promising preliminary results are therefore welcomed.

Dates

Expression of interest: 15 November 2013

Paper submission: 9 December 2013

Acceptance: 24 February 2013

Conference: 15-19 July 2013

Organizers :

Enrique Miranda: University of Oviedo (mirandaenrique@uniovi.es)

Sébastien Destercke: CNRS, Heudiasyc Lab. (sebastien.destercke@hds.utc.fr)

Kevin Loquin: LIRMM - IMNC Labs. (kevin.loquin@gmail.com)

Scope of the session

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
- physical models of imprecise probability
- 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 (biology, agronomy)
- system control and design, ...

Notes

The special session will be organized only if enough expressions of interest have been collected by November 15th 2013.

SIPTA school 2014 will be held in Montpellier on July 21-25, 2014.

<http://www.lirmm.fr/SIPTASchool2014>