



# Fourth international conference on

Soft methods

in

probability and statistics

Toulouse France    September 8-10, 2008

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H. Prade (Toulouse, France)

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Probability theory has been the only well-founded theory of uncertainty for a long time. It was viewed either as a powerful tool for modelling random phenomena, or as a rational approach to the notion of degree of belief. During the last thirty years, in areas centered around decision theory, artificial intelligence and information processing, numerous approaches extending or orthogonal to the existing theory of probability and mathematical statistics have come to the front. The common feature of those attempts is to allow for softer or wider frameworks for representing uncertain information. Various approaches have appeared, either on their own like fuzzy set theory, possibility theory, rough sets, or having their origin in probability theory itself, like imprecise probability, belief functions, fuzzy random variables. Many of the latter come down to blending interval or fuzzy interval analysis with probabilistic methods. The aim of this conference is to serve as a forum for discussing such new trends that enlarge the statistical and uncertainty modeling traditions, towards the handling of incomplete or subjective information. This conference will also highlight the 30th anniversary of possibility theory

This conference takes place after several similar events in Warsaw in 2002, Oviedo in 2004, and Bristol in 2006. Contributions that exploit the potential of non-classical uncertainty theories or propose hybrid probabilistic, fuzzy set or interval analysis techniques are welcome. Papers will be selected on the basis of appropriateness of their scope, their technical quality and their potentiality to solve real problems.

## Local Organization

F. Boué

S. Destercke

D. Dubois

H. Prade

M. Serrurier



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## Topics:

- Fuzzy data analysis
- Fuzzy extensions or counterparts of Bayes nets
- Fuzzy random variables
- Fuzzy regression methods
- Fuzzy learning and data mining methods
- Hybrid fuzzy/probabilistic fuzzy interval-based uncertainty propagation
- Imprecise and fuzzy probabilities
- Quantitative and qualitative possibility theory
- Statistics with fuzzy data
- Triangular norms and copulas
- Probabilistic semantics of fuzzy sets
- Applications to risk analysis

## Timetable (deadlines)

Registration and submission of papers  
Notification of acceptance  
Submission of the camera-ready typescripts of paper

**February 1, 2008**  
**March 15, 2008**  
**May 1, 2008**  
**(tentative)**

<http://www.irit.fr/smps08/>

