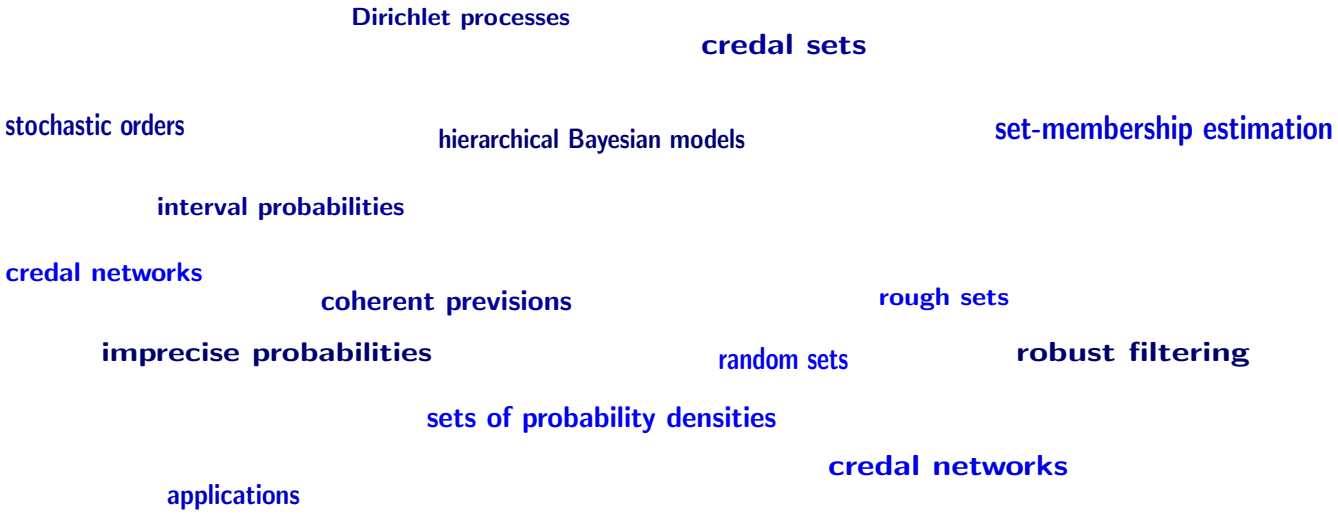
Call for Papers:
Beyond Bayesian State Estimation
Special Session at FUSION 2014

One of the main goals in information fusion (IF) is to reduce uncertainty about a phenomenon under consideration by utilizing multiple sources of information for improving the decision making process.

This problem is generally discussed in the framework of the Bayesian theory of probability, which nowadays represents one of the most popular and successful approaches to IF. Yet, in situations where the epistemic uncertainty (due to lack of knowledge and not to the intrinsic randomness of the phenomenon) is too pervasive, inference and decision making based on Bayesian approaches can be too dependent on the modeling assumptions and, thus, be less reliable. The requirement to define precise probabilities can then be too restrictive, and a more systematic approach to estimation can be obtained by means of imprecise probabilities.

This special session addresses state estimation and information fusion problems where uncertainties are difficult to be characterized in terms of precise probabilities. With imprecise probabilities and related approaches, many problems can be treated in an easier and more systematic fashion. This session gives opportunity to share ideas on these topics and to develop, evaluate, and apply novel robust/reliable methods for information fusion that go beyond the classical Bayesian approach.

Contributions to this special session are expected from the following research fields:



This Special Session is intended to be part of the *17th International Conference on Information Fusion* (www.fusion2014.org) in Salamanca, Spain, on 7 - 10 July 2014.

The session is co-organized by Benjamin Noack and Uwe D. Hanebeck from the Intelligent Sensor-Actuator-Systems Laboratory (isas.uka.de) at the Karlsruhe Institute of Technology (KIT) and Alessio Benavoli and Alessandro Antonucci from the Dalle Molle Institute for Artificial Intelligence (www.idsia.ch).

Please contact us (noack@kit.edu) if you wish to submit a paper and participate at the Special Session. In order to ease planning, please respond early, preferably until **1 February 2014**.

Submission of full–length papers (6 to 8 pages) is due **5 March 2014**. Accepted papers will be included in the regular proceedings of the conference. Please visit www.fusion2014.org for details.