# BELIEF 2014

## 3rd International Conference on Belief Functions

### Oxford, UK, September 26-28 2014

http://cms.brookes.ac.uk/staff/FabioCuzzolin/BELIEF2014/

### Call for Papers



The theory of belief functions, also referred to as evidence theory or Dempster-Shafer theory, was first introduced by Arthur P. Dempster in the context of statistical inference, and was later developed by Glenn Shafer as a general framework for modelling epistemic uncertainty. These early contributions have been the starting points of many important developments, including the Transferable Belief Model and the Theory of Hints.

The theory of belief functions is now well established as a general framework for reasoning with uncertainty, and has well understood connections to other frameworks such as probability, possibility and imprecise probability theories.

In 2012 alone, more than 300 papers on belief functions and their applications have been published worldwide. The ambition of the series of International Conferences on Belief Functions - BELIEF - is to bring together the large and expanding community of mathematicians, statisticians, computer scientists, engineers, economists and practitioners which work on the theoretical foundations of belief calculus or its application to all fields of applied science.

This 3rd edition, in particular, aims at more closely involving in the community the many specialists of other fields which use belief functions in their daily work, improving the overall visibility of the field by pushing towards a more coalesced and tightly connected community, and reaching out towards the sibling fields of uncertainty theory, Bayesian reasoning, imprecise probability and fuzzy theory. The conference will provide opportunities to exchange ideas and present new results on both the theory and applications of belief functions and related areas such as random sets, imprecise probability and possibility theory.

## Topics

Original contributions are solicited on theoretical aspects, including:

- decision making
- combination rules
- conditioning
- continuous belief functions
- independence and graphical models
- statistical inference
- geometry and distance metrics
- mathematical foundations
- computational frameworks,

as well as on applications to various areas including, but not limited to:

- data and information fusion
- pattern recognition
- machine learning and clustering
- tracking and data association
- data mining
- signal and image processing
- computer vision
- medical diagnosis
- business decision
- risk analysis
- engineering and environment
- climatic change.

## Important dates

| | |
|---|---|
| Full paper submission deadline: | ~~April 30th 2014~~ **May 15th, 2014** |
| Notification of acceptance: | June 15, 2014 |
| Final version due: | June 30, 2014 |
| Author registration: | June 30, 2014 |
| Early registration: | July 30, 2014 |
| Conference: | **September 26-28, 2014** |

## Registration fees

Early registration (before July 30th 2014)        350 British Pounds

Regular (after July 30th 2014)                     400 British Pounds

Early student registration                         200 British Pounds

Late student registration                          250 British Pounds

## Submission

Authors are invited to prepare full papers not exceeding 8 pages, including results, figures and references, using the LaTeX style files provided.
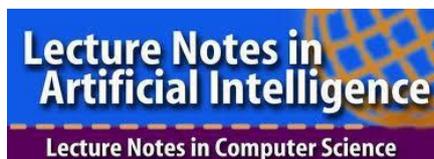
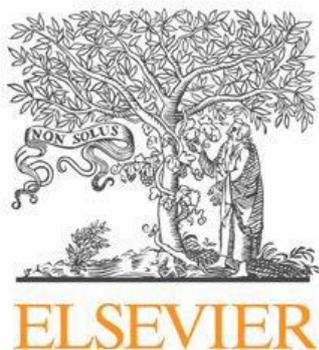PDF files must be submitted using the following EasyChair website:

https://www.easychair.org/conferences/?conf=belief2014



Papers will be presented during the conference in a **single track oral session**.

## Proceedings



All accepted papers will be published by Springer-Verlag in a volume of the **Lecture Notes in Artificial Intelligence (LNCS/LNAI)** series (indexed in ISI Proceedings, DBLP. Ulrich's, EI-Compendex, SCOPUS, Zentralblatt Math, MetaPress, Springerlink).

## Awards

A **Best Paper award**, sponsored by **Elsevier**, **worth 1000 euros** will be assigned to the most outstanding technical contribution based on the reviews received by each accepted paper. The final decision will be made by the Belief Functions and Applications Society (BFAS) board.

A **Best Student Paper** award will be specifically assigned to the best work by a student. This award is sponsored by the **International Society of Information Fusion** (ISIF). The lead student author will receive a free student registration to attend FUSION 2015.

## IJAR Special issue



Authors of selected papers from the BELIEF 2014 conference will be invited to submit an extended version of their papers for possible inclusion in a special issue of the **International Journal of Approximate Reasoning**.

## Organisers



The conference series is organised by the **Belief Functions and Applications Society**: http://www.bfasociety.org/.

The **General Chair** of the 3rd edition is Dr Fabio Cuzzolin, head of the Artificial Intelligence and Vision research group at Oxford Brookes University.

**Honorary Chairs** are Professor Arthur Dempster, Harvard University, and Professor Glenn Shafer, Rutgers University.

## Location and conference venue

The 3rd International Conference on Belief Functions will take place in Oxford, United Kingdom. Oxford is a world-famous university city, home of two major universities. It is conveniently located 60 miles north-west of London, and enjoys direct coach links with all major London airports such as Heathrow, Gatwick, Luton and Stansted.

The Belief 2014 Conference will take place in the beautiful St. Hugh's college, University of Oxford

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# Invited speakers



The invited speaker will be **Professor Thomas Lukasiewicz** and **Professor Nando de Freitas**, from the Computer Science department of Oxford University.

# Sponsors

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