

Request of sponsorship of the 3rd International Conference on Belief Functions

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

Description

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.

Topics of interest

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.

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 in 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.

Targeted audience

The intended audience is formed by:

- the core community of scientists working on the theory of belief functions;
- scientists and practitioners (including companies) applying the methodology to the various application fields listed above, and more;
- scientists belonging to the closely related communities of uncertainty theory (UAI and ECSQARU conference series), imprecise probability (ISIPTA conference series), information processing (IPMU conference series), artificial intelligence (ECAI, AAAI and IJCAI, PRICAI, AISTATS conference series), information fusion (FUSION series), fuzzy theory (FUZZ-IEEE conference series), cybernetics (SMC conference series).

Location: Oxford, UK

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 university. 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 city is known worldwide as a university town and home of the University of Oxford, the oldest university in the country and in the English-speaking world. Buildings in Oxford demonstrate examples of every English architectural period since the arrival of the Saxons, including the iconic, mid-18th-century Radcliffe Camera. Oxford is known as the "city of dreaming spires", a term coined by poet Matthew Arnold in his poem *Thyrsis*, referring to the harmonious architecture of Oxford's university buildings.

Venue: St. Hugh's College, University of Oxford

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



All Oxford colleges can boast of their distinguished history and St Hugh's is no exception. Founded in 1886, the College is now one of the largest in Oxford, with a total of around 600 undergraduate and graduate students and around 50 Fellows working in a wide range of subjects. St Hugh's was established to offer an Oxford education to women and the first students at St Hugh's had to fight hard for their education. Things are different now, but the College still has a strong sense of its radical tradition, and of the importance of opening Oxford up to all who would do well here.



The College boasts a lecture theatre able to host up to 200 delegates, and a number of boardrooms for poster sessions.

Organisation

The conference series is organised by the Belief Functions and Applications Society



<http://www.bfasociety.org/>

devoted to the development and application of the theory of belief functions to any area of society. Both commercial and academics alike are welcomed to contribute to the society.

General Chair

The General Chair of the 3rd edition will be Dr Fabio Cuzzolin, head of the Artificial Intelligence research group at Oxford Brookes University:

<http://cms.brookes.ac.uk/staff/FabioCuzzolin/>

Honorary Chairs

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

Program Committee (to date, but in the process of expanding further)

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Michèle Rombaut (France)
Johan Schubert (Sweden)
Prakash Shenoy (USA)
Rajendra P. Srivastava (USA)

Invited speakers

Professor Thomas Lukasiewicz, Oxford University

Professor Nando de Freitas, Oxford University



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Professor Lukasiewicz's bio

Thomas Lukasiewicz received the Dipl.-Inf. degree (M.Sc.) in Computer Science in 1993 from the Clausthal University of Technology, Germany, the Doctorate (Ph.D.) in Computer Science in 1996 from the University of Augsburg, Germany, and the Dozent degree (venia docendi) in Practical and Theoretical Computer Science in 2001 from the Vienna University of Technology, Austria. From 1993 to 1996, he was Research Assistant at the Institute of Computer Science of the University of Augsburg. From 1997 to 1999, he was Assistant Professor at the Institute of Computer Science of the University of Giessen. From 1999 to 2001, he was holding a Habilitation Fellowship by the German Research Foundation (DFG) at the Institute of Information Systems of the Vienna University of Technology. From 2001 to 2004, he was holding a Marie Curie Individual Fellowship by the European Union at the Department of Computer and System Sciences of the University of Rome "La Sapienza", Italy. From 2004 to 2009, he was holding a prestigious Heisenberg Fellowship (which is equivalent to an Associate Professorship) by the German Research Foundation (DFG): from 2004 to 2007 affiliated both at the Department of Computer and System Sciences of the University of Rome "La Sapienza" and at the Institute of Information Systems of the Vienna University of Technology, and from 2007 to 2009 affiliated both at the Department of Computer Science of the University of Oxford, UK, and at the Institute of Information Systems of the Vienna University of Technology. Since 2010, he is Professor of Computer Science and Yahoo! Research Fellow at the Department of Computer Science of the University of Oxford. He received the IJCAI-01 Distinguished Paper Award (best paper of 796 submitted and 197 accepted papers at the 17th International Joint Conference on Artificial Intelligence, Seattle, Washington, USA, August 4-10, 2001) for the paper Complexity Results for Structure-Based Causality (joint with Thomas Eiter) and the AIJ Prominent Paper Award 2013 (best paper published not more than five years ago in the Artificial Intelligence Journal (AIJ)) for the paper Combining Answer Set Programming with Description Logics for the Semantic Web (joint with Thomas Eiter, Giovambattista Ianni, Roman Schindlauer, and Hans Tompits).



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Professor de Freitas' bio

I am a Professor of Computer Science at the University of Oxford. I was previously a full professor in machine learning and artificial intelligence at the department of computer science of the University of British Columbia. There, I was also an adjunct professor of statistics, and cognitive systems. I received my PhD from [Trinity College](#), Cambridge University in 2000 on Bayesian methods for neural networks. From 1999 to 2001, I was a postdoctoral fellow at UC Berkeley in the artificial intelligence group of [Stuart Russell](#). I am a fellow of the Canadian Institute For Advanced Research (CIFAR) in the successful [Neural Computation and Adaptive Perception](#) program. I am an occasional entrepreneur: [Zite](#), a big-data spin-off from my previous lab, has won numerous awards and was sold to [CNN](#) in 2011. Among my recent awards are a *Distinguished Paper Award at the International Joint Conference on Artificial intelligence (IJCAI 2013)*, the *2012 Charles A. McDowell Award for Excellence in Research*, and the *2010 Mathematics of Information Technology and Complex Systems (MITACS) Young Researcher Award*.

Publication

All accepted papers will be published in indexed conference proceedings. We are currently negotiating with Springer's LNCS, LNAI and Soft Computing series to that purpose.

Special Issue of IJAR

Authors of selected papers from the BELIEF 2012 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.

Sponsorship options

Gold Level (£5000 or more)

- 2 free registrations
- sponsorship of best paper award and gala dinner
- recognition during opening and closing ceremonies
- complimentary exhibit space
- logo on the BELIEF website, the conference proceedings and the handbook/program booklet
- link to your society's/company's/conference web site from the home page of BELIEF 2014

Silver Level (£1000 to £2500)

- 1 free registration
- naming at gala dinner, sponsorship of best poster or runner up best paper award
- logo on the BELIEF website, the conference proceedings and the handbook/program booklet
- link to your society's/company's/conference web site from the home page of BELIEF 2014

Bronze Level (up to £1000)

- logo on the BELIEF website, the conference proceedings and the handbook/program booklet
- link to your society's/company's/conference web site from the home page of BELIEF 2014

We can direct your donation to student travel grants or towards the invited speakers' expenses and token, as you prefer.

We can tailor sponsorship options based on your request as well.

In case of scientific societies organising conferences and possessing a web site, we are interested in you publicising the BELIEF 2014 event on your web site and announcing it at any upcoming international conference you plan to organise.

Sponsorship of the awards will be recognized during the conference and we will invite the sponsoring party to present the award.

Sponsor logos will appear as soon as the support is confirmed. Logos will be listed with respect to the donation amounts and sign-up dates.

If you are interested in sponsoring BELIEF 2014, please contact the General Chair Fabio Cuzzolin (Fabio.cuzzolin@brookes.ac.uk).