

Kathryn Blackmond Laskey

Biography

Kathryn Blackmond Laskey is Professor in the Systems Engineering and Operations Research Department, Director of the Center for Resilient and Sustainable Communities, and Associate Director of the C4I and Cyber Center at George Mason University. She teaches and performs research in information fusion, decision theoretic knowledge representation and reasoning methodology, Bayesian statistics, decision support, and semantically rich probabilistic knowledge representation. A major focus of her research has been knowledge representation and inference for higher level multi-source fusion to support situation awareness and decision support. She developed multi-entity Bayesian networks (MEBN), a language and logic that extends classical first-order logic to support probability. She was a key contributor to the development of the PR-OWL language for representing uncertainty in OWL ontologies. She co-chaired the W3C's Uncertainty Reasoning for the World Wide Web Experimental Group (URW3-XG), which investigated aspects of uncertainty that need to be standardized for web-based applications. She was chair of the Board of Directors of the Association for Uncertainty in Artificial Intelligence and serves on the Board of the Washington Metropolitan Area chapter of INCOSE. She currently serves on the board of Directors of ISIF, is a regular contributor to the Fusion conference, and Co-Chaired the Fusion 2015 conference. She has organized numerous workshops and conferences, and has served on boards and committees of the National Academy of Sciences.



Position Statement

We live in the age of intelligent systems. Computers recommend movies and restaurants, provide coupons tailored to our personal tastes, guide us along the fastest and most traffic-free routes, filter spam from legitimate email, alert us to cyber-attacks, recognize when a traveler's face matches a face on a terrorist watch list, and pervade nearly every aspect of our lives. These capabilities come to us courtesy of information fusion. Our increasingly interconnected world requires interoperability not only at the level of syntax (process each other's data formats), but also at the level of semantics (interpret data in accordance with its intended meaning). Today's fusion systems must work with a plethora of input types: hard and soft, structured and unstructured, human and sensor, and must cope with pervasive uncertainty. Increasingly, systems are required to process previously unheard-of volumes of data, often in real time, and must have privacy and security protections built in at the foundation. The challenge is to achieve the benefits of improved decision-making, enhanced quality of life, and improved functioning of society while mitigating the risks of technology misuse.

If elected to the ISIF Board, I pledge to support ISIF's mission by:

- Promoting a vigorous and flourishing research community in all aspects of information fusion, bridging the gap from low to high level, spanning the spectrum from hard to soft information
- Encouraging a broad spectrum of applications covering the diverse range of areas in which information fusion technology can enhance our lives
- Encouraging technical interchange between the Fusion community and other communities with which we have common interest, such as artificial intelligence, machine learning, image processing, multi-agent systems, robotics, and many others
- Sustaining and enhancing the Fusion conference as the premier forum for exchange of cutting-edge advances in information fusion
- Enhancing the Journal of Advances in Information Fusion as a vehicle for disseminating top-tier peer-reviewed research contributions
- Enhancing the role of ISIF in building and sustaining a worldwide community in information fusion