



5<sup>th</sup> International Conference on  
Information Systems for  
Crisis Response and Management

Washington, DC, USA  
May 4-7, 2008  
<http://www.iscram.org>

**CALL FOR PAPERS**

**FOR A SPECIAL ACADEMIC RESEARCH SESSION ON**

**ONTOLOGIES FOR CRISIS MANAGEMENT**

**Session ID: INT-04**

**Motivation**

What is a crisis? When does a crisis begin, and when does it end? What factors are likely to aggravate or alleviate a crisis? How is a crisis different from an emergency, or a disaster? Who are the players, stakeholders, actors and agents responsible for action during a global emergency and what are their roles? What and whose procedures are to be followed? What protocols are in place to support coordination and communication among the various agents? What infrastructures are in place? How can community "resilience" fit into the picture? Where are the bottlenecks? How can information systems be deployed and used to improve crisis management and support the optimization of resources and relief operations when the need arises? How can transparency and collaboration be balanced with security and privacy measures during a crisis? How feasible is a common shared ontology for emergency management? Will such an ontology scale to international levels and who will drive this process and manage its evolution?

These, and many more, are "ontological challenges" that pertain to the emergency management functions across all levels of government, non-government organisations, industry, and community groups. During a crisis incident, they all need to collaborate and cooperate and share information and resources to respond and recovery from the disaster. Under these conditions, it is critical that they share a common ontology to support their crisis functions and decision making roles.

This session aims to provide an opportunity to allow researchers and practitioners to present their views, and to stimulate experts to further investigate the underlying "ontological challenges" that are at the heart of technical information cooperation during an international crisis.

**Research Area**

Ontologies are critical to the design and management of complex and sustainable information systems and are central to information flow in crisis management. The

need to improve and open up knowledge and research in the area for “ontologies for crisis management” is becoming compelling and relevant to real-world requirements.

Ontological challenges relating to crisis management need to be asked, and answered, in order to provide mechanism to widen adoption, interoperability, usefulness, efficiency, robustness, reliability, availability and accountability of information systems, during emergencies.

The ontologies need to represent a wide cross section of dynamic emergency functions and to support dynamically adaptive real time scenarios as changes occur quickly and need to be propagated widely. Reasoning and decision making must be transparent and flexible with the support of crisis ontologies. The boundaries of this emerging research area is vast and still be determined.

Ontology research has been increasing over the past years with the Semantic Web providing new technologies to solve ontological needs across disciplines and domains. Ontology management still faces many challenges when taken at the broader level – in particular at an international level - across many different stakeholder areas. How can ontologies support the many agencies and groups involved in a crisis?

Ontology research is needed to address the information needs of emergency management. Conceptual analysis is need to build ontologies based on a sound framework. The ontologies need to represent a wide cross section of dynamic functions.

In this session we invite qualified scientists, researchers, observers and stakeholders to make their case and help shape the future role of ontology-based information systems in support of crisis management.

### **Topics**

Topic areas for this session include, but are not limited to:

- Frameworks, concepts, and models for crisis ontologies
- Methods and tools for defining semantics of crisis ontologies
- Managing the evolution of crisis ontologies
- Interoperation and integration of crisis ontologies
- Knowledge representation and reasoning with crisis ontologies
- Systems, services, and infrastructures for crisis ontologies
- Standards and languages of crisis ontologies

### **Type of contributions:**

- **Academic Research Session:** we invite researchers from academia, research labs, and industry to present their research or research-in-progress papers. Prospective presenters submit a regular research (or research-in-progress) paper.

### **Important Notice:**

- All submissions must be formatted according to the ISCRAM 2008 formatting guidelines. Templates and instructions are published on [www.iscram.org](http://www.iscram.org).
- All submissions must be submitted through the ISCRAM 2008 conference paper submission web page at [www.conftool.com/iscram2008](http://www.conftool.com/iscram2008). Instructions for the ConfTool system can be found on [www.iscram.org](http://www.iscram.org).

- All papers and presentations will go through a double-blind review process, leading to a decision of (conditional) acceptance or rejection.
- Accepted papers will be included in the ISCRAM 2008 program and published in the official proceedings if and only if
  - (1) the paper is formatted according to the instructions,
  - (2) the authors sign the copyright transfer form and
  - (3) one of the authors registers for the conference and pays the registration fee before the cut-off date for early registration.
- Authors who have multiple papers accepted can only register for and present one paper at the conference; co-authors need to register separately.

#### Session Chairs:



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#### Important ISCRAM 2008 Dates:

- December 21, 2007: Paper submission deadline
- February 10, 2008: Notification of (conditional) acceptance
- February 22, 2008: Early registration deadline
- March 1, 2008: Final camera-ready paper submission deadline
- May 4-7, 2008: ISCRAM 2008

**About ISCRAM:**

The ISCRAM Community is a worldwide community of researchers, scholars, teachers, students, practitioners and policy makers interested or actively involved in the subject of Information Systems for Crisis Response and Management. At its annual international conference alternating between the US and Europe, the ISCRAM Community gathers to present and discuss the latest research and developments in this growing area during an interactive and stimulating 3 day program. The ISCRAM Community also organizes an International Summer School for PhD students and ISCRAM-CHINA, an annual conference for ISCRAM research in China. All information on ISCRAM can be found at <http://www.iscram.org>

ISCRAM 2008 will be held from 4-7 May at the George Washington University (GWU) located in Washington, DC, USA. The conference will be hosted by GWU's Institute for Crisis, Disaster, and Risk Management (ICDRM). All details on this conference will be made available via the ISCRAM website mentioned above.