

Call for Papers
Special Issue of Decision Support Systems

Cyberinfrastructure for Homeland Security: Advances in Information Sharing, Data Mining, and Collaboration Systems

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Most disaster scenarios faced by agencies entrusted with homeland security require timely access to relevant information that can be sensed and acted upon. However, the required data and information often reside in silos that are isolated from each other due to jurisdictional boundaries or representational incompatibilities. Given the nature of the threat to homeland security, regional, cross-institutional data sharing is a necessary first step towards effective crisis response measures.

Cyberinfrastructure is a key technology enabler that facilitates the federation of distributed information and knowledge resources to reduce constraints of distance and time. Cyberinfrastructure systems have gradually evolved over the last three decades. However, in the wake of the security needs since September 11, 2001, existing approaches to information sharing, data mining and collaboration need to be re-examined and adapted for national security applications.

This special issue encourages research submissions of practical and novel cyberinfrastructure technologies, techniques, methods, practices, and systems that can contribute to knowledge in this important emerging area. Submitted research needs to demonstrate relevance to the domains of information sharing, data mining or collaboration systems, and applicability to the context of security.

Topics include but are not limited to:

Advances in modeling knowledge and information in the security context for

- Information interoperability and sharing
- Knowledge discovery and knowledge management
- Model integration and semantic inter-operability of distributed systems
- Approaches to the development of upper level and domain oriented ontologies
- Failure resistant systems

Advances in Data mining and/or application of data mining techniques to facilitate

- Event detection and surveillance
- Web-based intelligence monitoring and analysis
- Deception detection
- Intrusion detection and information awareness
- Cybercrime detection and analysis
- Bio-terrorism tracking, alerting, and analysis
- Major (natural and man-made) disaster prevention, detection, and management
- Failure analysis and failure identification

Advances in collaboration systems and collaborative environments to facilitate

- Mission critical collaborative decision making
- Intelligent and agent based decision support
- Visualization and situational awareness of rapidly evolving scenarios

SUBMISSION INSTRUCTIONS

Electronic submissions are strongly encouraged. MS Word, Postscript or PDF copies of manuscripts may be emailed to Raghu.Santanam@asu.edu

Manuscripts must conform to the required publication style. To that end, please consult the Instructions for Authors section at <http://www.elsevier.com/homepage/sae/orms/dss/menu.htm> specifically the Section, Guide for Authors.

It is important that the authors DO NOT submit their papers electronically through the Author Gateway. Please email papers to Raghu.Santanam@asu.edu.

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