



Call for Papers: SPECIAL ISSUE ON

*“DISASTER MANAGEMENT AND INFORMATION SYSTEMS:
insights for emerging challenges”*

INTRODUCTION

Disaster Management (DM) is a complex set of interrelated activities. The activities are often knowledge intensive and time sensitive. The information systems (IS) community continues to make a significant contribution to enhancing the use of technologies to support disaster management by identifying and extending the relevant theories and paradigms that can be brought to bear on the adoption and diffusion of IS for disaster management. An earlier special issue of Information Systems Frontiers in 2010 made significant contributions in this space, highlighting the need for extending coordination theory (Janssen et al 2010), exposing the limits of several organizational theories (Bharosa et al 2010) and setting the scene to extend diffusion theories for DM Inter-organizational information systems (Fedorowick et al 2010). Lack of data standardization and semantics continue to hinder the interoperability of such systems. With the recent developments in semantic technologies, social media, big data technologies and related modeling frameworks, interoperability challenges can be tackled with new and added vigor. Ontologies and the metadata from multiple communities can be used to share and integrate information, providing enhanced interoperability between the multiple community networks and facilitating broader collaboration in disaster settings.

The objective of this special issue is to encourage and renew research in IS and DM with a fresh perspective of suitable semantic enrichment of interactions between various stakeholders across different IS platforms including social media and web based services. The IS research community is poised to address a number of new emerging data and information sharing challenges. For example, using the service oriented paradigm, one can create data and knowledge services that can promote adaptability, reusability and interoperability of services from a variety of sources. The purpose of this issue is to provide a forum for IS academics and DM practitioners to identify and share the issues, opportunities, and solutions that improve disaster management systems. A particular focus is on the view point of increased use of semantics to enhance information exchange services. We seek to provide a forum to disseminate work aiming to enhance disaster management systems from the perspective of combining semantics with services and with social media, and work that enhance the theoretical understanding of such systems and their use.

TOPICS

This special issue solicits the submission of high quality research papers concerning (but are not limited to) the following areas:

- DM Knowledge Diffusion
- Modelling DM Knowledge
- Decision Modelling Frameworks in DM
- End user and interface issues of Emergency Management IS services
- Emergency Management requirements analysis, modeling and design
- Modelling Emergency Management services
- Semantic technologies for Disaster Management services interoperability
- Regulatory aspects of Disaster Management and IS
- Social Media and Emergency Warning Systems/Services
- Granularity and complexity of Emergency Management services
- Modelling Human behavior in Emergency Management
- Agent based modeling for DM
- Prevention, Preparation, Response and Recovery

We invite high quality research papers which neither have been published previously nor under consideration currently for publication in any other journal or conference. Survey papers with superior quality are also invited in this area.

SUBMISSION INSTRUCTION

Paper submissions must conform to the format guidelines of Information Systems Frontiers available at: <http://www.springer.com/business/business+information+systems/journal>.

Submissions should be approximately 32 pages double spaced including references.

IMPORTANT DATES

Call for papers: May 15, 2016

Submission deadline: December 1, 2016

Notification of first round reviews: February 15, 2017

Revised Manuscripts due: April 15, 2017

Second Round Notification: June 15, 2017

Final Version Due: July 15, 2017

Final Acceptance Notification: July 31, 2017

SPECIAL ISSUE EDITORS

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BIOS OF SPECIAL ISSUE EDITORS

Ghassan Beydoun is an Associate Professor at the School of Computing and IT Information Systems at University of Wollongong, where he is also Director of Software Design Science Research Centre at the University of Wollongong. He is also an adjunct senior research fellow at the School of Information Systems, Management and Technology at the University of New South Wales, an associate editor of the International Journal of Intelligent Information Technologies (IJIT) and an Editorial member of the Journal of Software. He received a degree in computer science and a PhD degree in knowledge systems from the University of New South Wales. His research interests include distributed decision support systems, knowledge acquisition and systems modelling. He has been applying his results in developing decision support systems for disaster management since 2008. He is currently working on a project sponsored by an Australian Research Council Discovery Grant to investigate the best uses of domain knowledge in developing methodologies for complex systems and at the same time working on decision support systems with SES on exploring the use of ontologies for flood management decision support. He has authored more than 100 journal and conference papers in these areas over the past 15 years. His most recent publication appeared in Information and Management, Information Systems Frontiers, IEEE Transactions of Software Engineering, Information Systems journal, International Journal of Human Computer Studies, Information Processing and management and others.

Dale Dominey-Howes is an Associate Professor at the Faculty of Science at the University of Sydney. He completed a BSc (Hons) in Geography and Archaeology at London University and completed his PhD in geohazards (tsunamis, volcanic eruptions and earthquakes) in Greece at Coventry University, UK under the supervision of Professors David Smith and Alistair Dawson. His PhD was funded by an EU grant enabling him to be based at the National Observatory of Athens under the guidance of Professor Gerassimos Papadopoulos. Dale's interests and expertise are in natural hazards, hazard, risk and vulnerability assessment, disaster and emergency management. He is particularly interested in the interconnections between biophysical systems and the socio-economic contexts in which disasters unfold and considers 'natural hazards' in terms of coupled human-environment systems and policy. He has worked on natural hazards such as earthquakes, river floods, tropical cyclones, tsunami, volcanic eruptions, bushfires and epidemics/pandemic risks in places as diverse as Australia, New Zealand, Bangladesh, India, Greece, Turkey, Ireland, Papua New Guinea, Fiji, Thailand, Iceland and the Maldives. At the present time, he is involved in a variety of research projects focusing on hazards and risk in the Australasian and Indo-Pacific regions. Dale has completed research projects and consultancies for organisations as diverse as the United Nations, The World Bank, major insurance and reinsurance companies, State and Federal government departments and risk/disaster management agencies. He currently serves as an advisor to disaster management agencies and policy branches at a range of domestic levels in Australia and was Chairman of the United Nations UNESCO-IOC Post-disaster Policy and Protocols Working Group (2010 – 2014). Dale is also an Editorial Board member of Nature's Scientific Reports and The Anthropocene.

Sergiu Dascalu is a Professor in the Computer Science and Engineering Department at the University of Nevada, Reno (UNR), United States of America. He received a Master's degree in Automated Control and Computers from the Polytechnic University of Bucharest, Romania in 1982 and a PhD in Computer Science from Dalhousie University, Halifax, Nova Scotia, Canada in 2001. His main research interests are in software engineering and human-computer interaction, in particular in software approaches and tools for scientific research, simulation environments, virtual reality, and interaction design. Sergiu is the Director of the Software Engineering Laboratory (SOELA) at UNR and serves as leader of the Nevada cyber-infrastructure team in a 5-year \$24-million NSF EPSCoR project aimed at improving the understanding of the linkages (or nexus) among solar energy production, related water consumption, and their effects on the environment. In addition, he is the Nevada lead for model and data interoperability in another NSF-funded project that involves watershed research for the US Western Consortium of Idaho, Nevada, and New Mexico. He has served as investigator or co-investigator on several other projects funded by US federal agencies such as NASA, NSF, ONR, as well as by industry organizations such as General Electric and Bally

Technologies. Sergiu Dascalu has over 150 peer-reviewed publications and has been involved in the organization of many international conferences and workshops. Furthermore, he was an invited speaker at various universities and events in the US and abroad. Since joining UNR in 2002 he has advised over 10 PhD and 40 Master students. He is the recipient of several professional awards and recognitions, including the 2009 Nevada Center of Entrepreneurship and Technology Faculty Award, the 2011 UNR Distinguished Teacher of the Year Award, and the 2014 UNR College of Engineering's Faculty Excellence Award.

Andrew Sheehan is an emergency management specialist with particular expertise in disaster risk reduction, emergency management planning, intelligence, flood intelligence, flood warning, policy and aid work - Water, Sanitation and Hygiene (WASH). As an aid worker with Australian Red Cross Andy has led international deployments to Hue, Vietnam (Typhoon Ketsana, October 2009), Ambrym, Vanuatu (WASH project, 2011), Honiara, Solomon Islands (WASH in emergencies training, 2014), Apia, Samoa (Regional Disaster Response Team Training, 2015) and Suva, Fiji (Pacific Readiness Workshop, 2015). Andy has experience working in remote indigenous communities in Australia and also worked in Kiribati in 2007-2008 on a World Bank climate change adaptation program and a NZAid Sustainable Towns Program. In the Victorian emergency management sector Andy led the development and delivery of the inaugural Intelligence Officer training package first delivered in 2015 to emergency managers in Victoria. He has led the development of a number of policies within the flood management sphere and implemented a number of business improvement strategies including enhancing organisational capacity and capability in flood emergency planning, flood warning, flood mapping and information systems relating to flood intelligence. Andy has authored a number of publications and has led peer reviews for publications for the Australian Water Association. In 2014 Andy was awarded most outstanding presentation at the Floodplain Management Association Conference.

BIOS OF SPECIAL ISSUE ASSOCIATE EDITORS

Deborah Bunker is a Professor at the University of Sydney Business School and a globally recognized research leader in technology diffusion and adoption, as well as systems interoperability. She leads the Interoperability in Extreme Events Research Group (IEERG) at the University of Sydney, which focuses on practical, problem-solving approaches to interoperability issues through the application of socio-technical innovations. Prior to her academic career Professor Bunker was an experienced senior consultant, product manager, project manager and Human Resource manager within the Information Technology, Banking & Finance and Insurance sectors. Her research has appeared in MISQ, JIT, CAIS and ISF.

Stephen Smith is a Lecturer in the School of Computing at Macquarie University, Sydney Australia. He has published in IS and related areas of Strategy, IS Security, IT Innovation, Emergency Management, Collaboration and GreenIS. Stephen has extensive industry experience in Wireless Data Communications, Emergency Management, ICT and collaboration at Government (Federal and State) sectors. He has gained 22 years industry/commercial experience as an IT/BIS Manager for NSW government and have in-depth experience across most NSW Government agencies and have a comprehensive knowledge of government business processes and ICT use. Projects within these agencies have required a significant amount of interaction with both business and information technology staff and management, and a unique practical insight into the functions of the government. The majority of the projects have involved the adoption of ICT and Business Process re-engineering of existing government business practices.

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