

GEOSPATIAL TECHNOLOGIES AND GEOGRAPHIC INFORMATION SCIENCE FOR CRISIS MANAGEMENT (GIS)

With disasters and disaster management being an “inherently spatial” problem, geospatial information and technologies have been widely employed for supporting disaster and crisis management. This includes SDSS and GIS architectures, VGI, spatial databases, spatial-temporal methods, as well as geovisual analytics technologies, which have a great potential to build risk map, estimate damaged areas, define evacuation routes, and plan resource distribution. Collaborative platforms like OSM have been also employed to support disaster management (e.g., near real-time mapping). Nevertheless, all these geospatial big data pose new challenges for not only geospatial data visualization, but also data modeling and analysis; existing technologies, methodologies, and approaches now have to deal with data shared in various formats, different velocities, and uncertainties. Furthermore, new issues have been also emerging in urban computing and smart cities for making communities more resilient against disasters. In line with this year’s conference theme, the GIS Track particularly welcomes submissions addressing aspects of individual-centric geospatial information in disaster risk and crisis research. This includes SDSS, near-real-time mapping, situational awareness, VGI, spatiotemporal modeling, urban computing, and other related aspects. We seek conceptual, theoretical, technological, methodological, empirical contributions, as well as research papers employing different methodologies, e.g., design-oriented research, case studies, and action research. Solid student contributions are welcome.

TRACK TOPICS

Track topics are therefore focused on but not limited to the following list.

- Geospatial data analytics for crisis management
- Location-based services and technologies for crisis management
- Geospatial ontology for crisis management
- Geospatial big data in the context of disaster and crisis management
- Geospatial linked data for crisis management
- Urban computing and geospatial aspects of smart cities for crisis management
- Spatial Decision Support Systems for crisis management
- Individual-centric geospatial information;
- Remote sensing for crisis management
- Geospatial intelligence for crisis management
- Spatial data management for crisis management
- Spatial data infrastructure for crisis management

- Geovisual analytics for crisis management
- Spatial-temporal modeling in disaster and crisis context
- Crisis mapping and geovisualization
- Empirical case studies

TRACK FORMAT

The GIS Track will adopt two presentation formats: a) plenary sessions and poster sessions. Plenary sessions will provide a room for authors of papers briefly present their work. For making these sessions as interactive as possible, chair of a session will recommend that authors of the same sessions prepare in advance a set of questions to the presenters. The main goal is that these questions could raise further questions about the presented works, and thus may lead to interesting discussions. In contrast, poster sessions provide an opportunity to debate on emerging trends of research, as well as insightful ideas in the area. During these sessions, systems demonstrations and preliminary results would be encouraged, as they could make the debates more interactive.

TRACK CO-CHAIRS



João Porto de Albuquerque

UNIVERSITY OF WARWICK, UK

João Porto de Albuquerque is an Associate Professor at the Centre for Interdisciplinary Methodologies of the University of Warwick, UK. He is also a Visiting Professor at the GIScience Chair of the Institute of Geography of Heidelberg University (Germany). João Porto has served as program chair, co-track chair, reviewer and author in the ISCRAM community. His research is situated within an interdisciplinary problem space that intersects sociospatial data science, information management, and science & technology studies.



Alexander Zipf

UNIVERSITY OF HEIDELBERG, GERMANY

Alexander Zipf is chair of GIScience (Geoinformatics) at Heidelberg University (Department of Geography) since late 2009. He is also member of the editorial board of several further journals and organized a set of conferences and workshops. 2012-2015 he was regional editor of the ISI Journal Transactions in GIS (Wiley). Currently he is associated editor of the international journal Geospatial Information Science (GSIS) by Taylor & Francis (open access). Furthermore, he is an active member in ISCRAM community serving as author, reviewer, co-track chair.

Alexander has a widely-known research works in Volunteered Geographic Information (VGI), Crowdsourcing, Citizens As Sensors, Web-based GIS, GeoWeb 2.0, and Integrating new methods from Geoinformatics & GIScience in Geography.



Flávio E. A. Horita

FEDERAL UNIVERSITY OF ABC, BRAZIL

Flávio Horita is an Assistant Professor at the Center for Mathematics, Computation and Cognition of the Federal University of ABC, Brazil. He has been contributing with ISCRAM community as reviewer and author since 2013, and last year, he served as a co-track chair of GIS Track. Furthermore, he is continuously involved with reviewers for several top-tier journals like Decision Support Systems, International Journal of Disaster Risk Reduction, and Natural Hazards. His research interests include spatial decision support systems, system-of-systems, collaborative systems, business process modeling, and disaster management.