



ISCRAM 2023

University of Nebraska at Omaha's College
of Information Science & Technology
Omaha, Nebraska, USA

Geospatial Technologies, Location Analytics, and Geographic Information Science for Crisis Management (GIS)

20th International Conference on
INFORMATION SYSTEMS FOR CRISIS RESPONSE AND
MANAGEMENT

*Theme: "Building Humanitarian Technologies
for our Emerging Future + Building Resilient
Societies"*

Workshops and Doctoral Symposium May 28th, 2023
Conference May 28th-31th, 2023

Omaha, Nebraska - USA
The University of Nebraska at Omaha (UNO)
<https://iscram2023.net/>

INTRODUCTION TO THE TRACK

With crisis and hazardous events being an "inherently spatial" problem, geospatial information and technologies frequently support disaster and crisis management. Therefore, geospatial methods and tools - such as Spatial Decision Support Systems (SDSS), Geographic Information Systems (GIS) architectures, Volunteered Geographic Information (VGI), spatial databases, spatial-temporal methods, as well as geovisual analytics technologies - have a great potential to contribute to understanding the geospatial characteristics of a crisis, such as to estimate damaged areas, define evacuation routes, and plan resource distribution. New forms of data such as sensor data, social

media, and OpenStreetMap (OSM) are employed to support disaster management (e.g., near real-time mapping). These big geospatial data pose new challenges for geospatial data visualization and data modeling and analysis. Existing technologies, methodologies, and approaches now deal with data shared in various formats, velocities, and uncertainties.

In line with this year's conference theme, the GIS Track welcomes submissions that tackle approaches toward building relevant humanitarian technologies and resilient societies. We believe that geospatial data, tools, and methods will be essential to addressing such wicked problems.

The GIS Track is one of the longest-running ISCRAM tracks. The track co-chairs are active members of the ISCRAM and the international GIScience community. In addition to supporting the ISCRAM community, this is an opportunity to involve the broader GIS community in ISCRAM, which traditionally publishes considerable work in disaster and crisis management.

TRACK TOPICS

Authors are encouraged to submit works related to the following topics. Topics are not limited to the following list.

- *Building resilient societies using geospatial tools and techniques*
- *Location analytics and geospatial artificial intelligence for crisis management*
- *Spatially explicit machine learning and artificial intelligence for crisis management*
- *Location-based services and technologies for crisis management*
- *Geospatial ontology and linked data for crisis management*
- *Geospatial big data in the context of disaster and crisis management*
- *Urban computing and geospatial aspects of smart cities for crisis management*
- *Spatial decision support systems for crisis management*
- *Remote sensing and geospatial data collection for crisis management*
- *Geospatial intelligence for crisis management*
- *Spatial data management and infrastructure for crisis management*
- *Geovisual analytics, mapping, and geovisualization for crisis management*
- *Spatial-temporal modeling in disaster and crisis context*
- *Collaborative and participatory disaster mapping, citizen participation*
- *Geoethics, privacy, and spatial justice in crisis management and disaster risk reduction*
- *Public policies and governance for geospatial information*
- *Case studies of geospatial analysis/tools*
- *Teaching cases using geospatial approaches*

TRACK CHAIR AND CO-CHAIR

	<p>João Porto de Albuquerque, Professor <i>Joao.Porto@glasgow.ac.uk</i> <i>University of Glasgow</i></p>
	<p>Michael A. Erskine*, Assistant Professor <i>michael.erskine@mtsu.edu</i> <i>Middle Tennessee State University</i></p>
	<p>Andrés Díaz López, Clinical Assistant Professor <i>andres.diaz.lopez@asu.edu</i> <i>Arizona State University</i></p>

João is a Professor in Urban Analytics at Urban Studies in the School of Social and Political Sciences at the University of Glasgow, and he is a Deputy Director of the Urban Big Data Centre (UBDC), where he leads the "Urban Sustainability and Participation" theme. He is also a Fellow of the Alan Turing Institute (UK). João is a geographer and computer scientist with an interdisciplinary background. His research is situated within an interdisciplinary problem space that intersects urban geography, data science, information management, and science & technology studies. He works in the fields of Digital Geography, Geographic Information Science and Global Sustainable Development. João has served as program co-chair, co-track chair, reviewer and author in the ISCRAM community since 2015. His interests span a wide range of research topics, including GIS, citizen science, urban analytics, smart cities, crowdsourced and volunteered geographic information, decision support systems, disaster studies, urban resilience, and information technology for development.

Michael is an Assistant Professor in the Department of Information Systems and Analytics of the Jones College of Business at Middle Tennessee State University. Michael received his Ph.D. in Computer Science and Information Systems from the University of Colorado Denver. His research interests include the societal impacts of technology, decision-making using geospatial data, technology governance, and technology workforce competencies. He has presented his research at international, national, and regional conferences. Michael has been co-track chair, reviewer and author in the ISCRAM community since 2020. Michael plans to be in Omaha to contribute to the conversation regarding geospatial technologies, location analytics, and geographic information science for crisis management.

Andrés is a Clinical Assistant Professor at Arizona State University (ASU) with teaching experience in several other universities in the U.S., China, and Colombia. He has professional experience as a marketing engineer, consultant, and IT project manager. He teaches location analytics courses, is a member of the Association for Information Systems (AIS) interest group on Geographic Information Systems (SIGGIS), and serves as a mini-track co-chair

	within the Location Intelligence track at the Hawaii International Conference on Systems Sciences. Andrés is interested in solving wicked problems using location analytics tools and techniques.
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**Corresponding Chair*

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