Call for Papers

Emergency management is the creation of plans through which communities decrease the impact of disasters and prevent from unexpected events (i.e., human or natural disasters). By quick response and rescue, it saves human lives from the secondary disasters and enhances the stability of communities after disasters. Emergency management concerns acts of terrorism, industrial sabotage, fire, natural disasters (such as earthquakes, hurricanes, etc.), public disorder, industrial accidents, communication failures and public health issues.

Emergency management involves four stages: Planning and Mitigation, Preparedness, Response and Recovery. Geospatial applications (including GIS) have been extensively used in each stage of emergency management. Decision-makers can utilize the geospatial information to develop planning and mitigation strategies. GIS models and simulation capabilities are used to exercise response and recovery plans during non-disaster times. They help the decision-makers understand near real-time possibilities during an event. Once disaster occurs, GIS will take effect in real time response and recovery activities. For example, in the Great Earthquake of Nepal in April 2015, the DigitalGlobe supplied plenty of remote sensing and geographic data for rescue.

GIS provides reliable support for spatial analysis and decision-making in emergency management. However, the incorporation of spatial dimension or spatio-temporal dimension adds to difficulties of the analysis. How to integrate data and models with spatial structures, such as the integration of the GIS data layers and dangerous chemicals diffusion data, appears as a big issue faced by emergency management. Furthermore, emergency management requires abilities to make quick response to real-time situations. To meet the requirement, it is challenging and promising to appliy lots of new geospatial technologies to support the quick response and recovery and the integrating of location-based wireless information streams. With the advances of GIS technologies, the improvement of emergency management research becomes possible.

The ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems 2019 (ACM SIGSPATIAL 2019), the twenty seventh edition, will be held in Chicago, November 5-8, 2019. All workshops will be held on November 5, 2019 at the conference hotel. The purpose of the EM-GIS 2019 workshop is to provide a forum for researchers and practitioners to exchange ideas and progress in related areas. This workshop in the ACM SIGSPATIAL conference addresses the challenges of emergency management based on advanced GIS

technologies. This workshop will bring together researchers and practitioners in massive spatio-temporal data management, spatial database, spatial data analysis, spatial data visualization, data integration, model integration, cloud computing, parallel algorithms, internet of things, complex event detection, optimization theory, intelligent transportation systems and social networks to support better public policy through disaster detection, response and rescue.

Topics of Interest

The EM-GIS 2019 workshop welcomes papers that address fundamental research issues in this challenging area, with emphasis on GIS applications associated with emergency management. We also encourage papers to report on system level research related to new technologies in GIS, data integration, model integration, disaster detection, response and rescue. A number of invited papers will also be solicited.

Topics of interest include, but are not limited to:

- Spatial data and models for safety and resilience
- Research related to new technologies in GIS, data integration, model integration, disaster detection, response and rescue
- Data integration in safety and resilience
- Model integration in safety and resilience
- Geospatial data mining applications in safety and resilience
- Decision support based on GIS for safety and resilience
- Statistical analysis on massive spatio-temporal data for safety and resilience
- Spatial data analytics in safety and resilience
- Spatial agent-based modeling for safety and resilience
- Event detection techniques based on GIS in safety and resilience
- Opinion mining and sentiment analysis based on GIS for safety and resilience
- Prediction and decision based on GIS in safety and resilience
- Location based rescue resource management in safety and resilience
- Resource planning and scheduling base on GIS
- Cloud computing based on GIS in safety and resilience
- Web spatial data analysis in safety and resilience
- Web spatial data processing in safety and resilience
- Web of things based on GIS in safety and resilience
- Spatiotemporal intelligence for spontaneous planning
- Blockchain Applications in Safety and Resilience

Publications

All accepted papers will be embodied in ACM SIGSPATIAL proceeding. Selected papers will be recommended to Data Science Journal (http://datascience.codata.org/)

and Journal of Safety Science and Management for possible publication. The authors should be responsible for the possible additional journal publication fee.

Award

The workshop will offer two Best Paper awards. Each winner will be awarded a certificate with signatures of the workshop co-chairs.

Paper Submission

We invite two types of submissions in the workshop:

1. **Long Paper**: presenting completed work including a complete description of methods, results and validation **(4,000-6,000 words references included, 6 pages at most)**.
2. **Short Paper**: presenting work in earlier stages, outlining and discussing concepts and methods and presenting first results **(2,000-3,500 words references included, 4 pages at most)**.

Manuscripts should be submitted in PDF format according to the ACM camera-ready templates available at

http://www.acm.org/publications/proceedings-template.

Papers must be electronically submitted at the following address:

https://easychair.org/conferences/?conf=emgis2019.

Each paper will be reviewed by at least 3 referees. The workshop proceedings will also be part of the ACM Digital Library. At least one of the authors per accepted workshop paper should register for both the main SIGSPATIAL conference and the workshop, and present the paper in the workshop in order to have the paper included in the workshop proceedings.

Important Dates

- Open Submission Date: **June 15, 2019**
- Full Paper Due: **August 15, 2019**
- Acceptance Notification: **August 31, 2019**
- Workshop Date: **November 5, 2019**
- Conference Dates: **November 5-8, 2019**

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