EM-GIS2020 Workshop Report
The 6th ACM SIGSPATIAL International
Workshop Emergency Management
using GIS 2020

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Safety refers to the stable external environment and orders wherein society and citizens need to engage in and conduct normal life, work, study, entertainment, and communication. Resilience in public safety refers to the ability to withstand the shocks and pressures of emergencies. Emergency management is the creation of plans through which communities decrease the impact of disasters and prevent from unexpected events. 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. For example, while global communities are trying to respond to the COVID-19 pandemic, GIS tools are widely used by health departments, safety and emergency management authorities and wider professionals around the world for gathering and analyzing data to support informed decisions.

EM-GIS 2020(https://em-gis2020.github.io/CallForPaper/) was held in conjunction with the 28th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2020) on November 3th, 2020 in Seattle, Washington, USA. The purpose of the EM-GIS 2020 Workshop is to provide a forum for researchers and practitioners to exchange ideas and progress in related areas. 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.

In light of on-going developments with COVID-19 and the unpredictable implications on both health and travel restrictions. EM-GIS 2020 was converted to a virtual conference. The virtual conference was run one-day with 7 researchers and practitioners registered via Zoom webinars. Overall, 7 research papers were presented and discussed (15 minutes for each paper). The presentations were divided into two sections:

(1) Firstly, invited expert *Prof. Danhuai Guo* presented his research in *How China Fast Controls the Second Waves of COVID-19 Outbreaks: A Case Study of Beijing Xinfadi Market Outbreak with Agent-Based Model*. And then, the authors discussed their topic in GIS technology (*Research on the LBS Applied in COVID-19: integrating GIS technology and personal information and The Study of Colleges Students Returning to Campus under the Epidemic Situation Based on GIS*), urban air quality sensing (*A cost aware crowdsensing approach for urban air quality sensing and computing*).

(2) In the second part, authors presented their research in Contact Network in a Research Institute (*Structural statistics of a Human Contact Network in a Research Institute*), Sentiment Analysis (*Sentiment Analysis for News and Social Media in COVID-19*), Trends for COVID 19 Pandemic (*Typical Patterns of Government Response Measures and Trends for COVID 19 Pandemic∗*).

We would also like to thank the authors for publishing and presenting their papers in EM-GIS 2020, and the program committee members and external reviewers for their professional evaluation and help in the paper review process. We hope that the proceedings of EM-GIS 2020 will inspire new research ideas, and that you will enjoy reading them.