



ISCRAM 2023

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

TRACK: Infrastructure Health Monitoring During Crises and Disasters

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 27th, 2023

Conference May 28th-31th, 2023

Omaha, Nebraska - USA

The University of Nebraska at Omaha (UNO)

<http://ISCRAM2023.NET>

INTRODUCTION TO THE TRACK

Recent approaches allow for the intelligent monitoring of critical infrastructure. These infrastructure under man-made or natural hazards, and even under normal service conditions which are aging can be under crisis conditions. Can monitoring the health of infrastructure provide crucial information before, during, or after a disaster or crisis event? What sensors, devices, databases, and AI algorithms should be necessarily designed to deal with the challenges associated with such disaster or crisis?

TRACK TOPICS

- *Sensors During Crises*
- *Data Processing During Crises*
- *Artificial Intelligence/Machine Learning on Infrastructure*
- *Real-time Data Processing During Crisis Management*


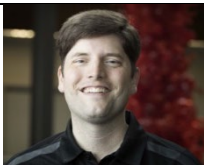

AUTHORS

During the 2019 Nebraska Flooding Event, a 96-year-old reinforced concrete dam (Spencer Dam) collapsed due to a major storm event combined with snowmelt and debris of ice run. This collapse impacted several communities near the dam failure. The Spencer Dam Failure Investigation Report published in 2020 by the Association of State Dam Safety Officials indicated if there are critical infrastructures or dams on the river which can eventually observe ice runs, there should be a monitoring or warning system established which can prevent such crisis events. This is just one example of a real-world natural hazard event that impacted the community in Nebraska a few years ago but there could be many other natural or man-made events similar to this crisis that could be better managed through infrastructure health monitoring. And the following would be a list of few research questions that we would like to discuss with the authors in this track: What sensors or devices could potentially help monitor disaster or crisis of critical infrastructure? Could there be a real-time data processing and warning system developed during such crisis events? What AI algorithms and data processing would be required in such efforts?

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