

ANALYTICAL MODELING AND SIMULATION

The aim of this track is to discuss the development and application of analytic problem-solving techniques, including simulation, optimization, and statistical analysis, which can help improve decision making in the context of disaster operations management (DOM). The development of such techniques is critical as part of an integrated approach that combines the various aspects of DOM to support informed and effective decision making. Such analytic tools are useful not only for organizations but also for the individuals who are responsible for making time-critical emergency management decisions under conditions of great uncertainty. They can also be useful in support of more effective, personalized emergency response systems for those who are directly affected by a disaster.

This track invites both theoretical and applied research papers discussing topics relevant to the concepts of modeling and simulation. Its overall purpose is to provide a dedicated venue for such research to be shared and discussed, and thus to highlight the breadth and depth of efforts to improve the effectiveness and efficiency of managing disaster operations. In honor of this year's conference theme, submissions which explicitly consider Individual-Centric Emergency Management Systems will be particularly welcome.

TRACK FORMAT

Both standard paper presentations and table-top demonstrations of interactive models and simulation exercises will be considered. The preference would be to have several sessions with multiple interactive components, rather than splitting sessions between the two types of content delivery.

TRACK TOPICS

Possible topics of interest for this track include the following:

- Quantitative modeling and process optimization associated with mitigation, preparedness, response, or recovery
- Modeling and analysis of disaster resilience
- Simulation modeling and analysis
- Stochastic optimization and modeling
- Data mining and information analysis

TRACK CO-CHAIRS



Christopher Zobel

VIRGINIA TECH, USA

Christopher Zobel (Chair) is a professor of Business Information Technology at Virginia Tech, and a past member of the Board for the ISCRAM Association. He has been one of the Track chairs for the Analytical Modeling and Simulation track at ISCRAM since 2011, and he was one of the editors for the 2010 ISCRAM Proceedings, along with Simon French and Brian Tomaszewski. Dr. Zobel's research on disaster operations management modeling and simulation has been published in a number of different academic journals, including Decision Sciences, Decision Support Systems, and the Journal of Humanitarian Logistics and Supply Chain Management. He is currently serving as an Associate Editor for the International Journal of Information Systems for Crisis Response and Management (IJISCRAM).



Josey Chacko

MOUNT ST. MARY'S UNIVERSITY, USA

Josey Chacko (Co-chair) is an assistant professor at Mount St. Mary's University. He has been one of the Track chairs for the Analytical Modeling and Simulation track since 2015. Dr. Chacko's research, which has been published in Decision Support Systems, addresses disaster operations management and policy analysis with a focus on stakeholder-based, values-driven modeling and simulation. Prior to his doctoral work in the US he served as a department head for a manufacturing firm in Kenya.