KLINGLER
College of Arts & Sciences
MARQUETTE UNIVERSITY

Department of Mathematical and Statistical Sciences

COLLOQUIUM ANNOUNCEMENT

Assessing and forecasting hazards in an uncertain future

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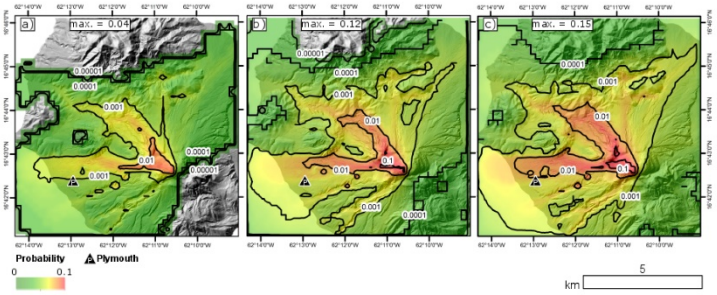
2:00 p.m., Friday, February 28, 2020

Cudahy Hall, Room 401

Abstract

Geophysical natural hazards — storm surge, post-fire debris flows, volcanic flows and ash fall, etc. — impact thousands to millions of people annually. Yet the most devastating hazards, those resulting in loss of life and property, are often both geographically and temporally localized. Thus they are effectively rare events to those impacted.

We will present methodology to produce probabilistic hazard maps that can rapidly be updated to account for various aleatoric scenarios and epistemic uncertainties. This hazard analysis utilizes statistical emulators to combine computationally expensive simulations of the underlying geophysical processes with probabilistic descriptions of uncertain scenarios and model parameters. The end goal is not a map, but a family of maps that represent how a hazard threat evolves under different assumptions or different potential future scenarios. Further, this approach allows us to rapidly update hazard maps as new data or precursor information arrives.



1313 W. Wisconsin Avenue, Cudahy Hall, Room 401, Milwaukee, WI 53201-1881.

For further information https://www.marquette.edu/mathematical-and-statistical-sciences/colloquium.php
or contact Dr. Sarah Hamilton at #414-288-6343, sarah.hamilton@marquette.edu

Post-Colloquium refreshments served in Room 342 after 3:00 p.m.