

Séminaire conjoint CIRRELT, Département OSD et La Chaire de recherche en apprentissage statistique

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GEOINFORMATICS AND GEOSPATIAL DATA ANALYSIS FOR EXTREME EVENTS AND CLIMATE CHANGE RELATED VULNERABILITIES

Abstract: Scholars agree that extreme events are increasing in frequency, duration, and severity all over the world. The increasing number of extreme events shows evidence for a changing climate, which results from natural and human systems' interplay on several levels. Since the beginning of the millennium, more than 2.3 billion people have been directly affected by natural disasters - an escalating phenomenon that imposes profound material, environmental, and economic challenges on societies worldwide. Geographical quantitative and data-driven approaches offer powerful means to explain some of the complex interactions between human and physical environments under these changing conditions. Focus is given on developing better and more efficient preparedness strategies to help local communities to cope with climate change related hazards, reducing their vulnerabilities while improving community resilience to climate risks.

During this talk, I will give an overview of multiple ongoing projects on extreme events and climate change related vulnerabilities, including weather compound events in Norway, identification of glacial lake outburst floods, resilience to climate risks of fishing communities in Northern Norway, and tracking of Arctic maritime activities and their environmental impact.

Biography: Martina Calovi is an Associate Professor in Geography at the Department of Geography and Social Anthropology at the Norwegian University of Science and Technology, in Trondheim. She earned a PhD in Management, specifically in Health Care Management at the Sant'Anna School of Advanced Studies in Pisa, Italy. She then spent three years at the Pennsylvania State University as a Postdoctoral scholar. She conducts multidisciplinary research in the area of Geographical Information Science, investigating the interactions and coexistence of human and physical environments under climate change conditions, analyzing large, high-dimensional and spatially distributed data. Her research, shaped by data driven approaches, focuses on spatio-temporal analyses. It links environmental hazards exposure and vulnerability, the study of climate change effects and adaptation, and the managerial implications of geographical analyses within the decision-making process.

MERCREDI
10 DÉCEMBRE 2025
10 h

Université Laval
Pavillon Palasis-Prince
Salle 3316

Ouvert à tous

Café et viennoiseries

Responsable :
Marzia Cremona