Odile **Plattard**

(Laboratoire PACTE, Université Grenoble Alpes)

Simulation model STEP

(Earthquake Tsunami Evacuation)

Thursday, April 8th 2021 – 9:00 am
40 mn.
Webinar Zoom
Registration

Presentation

The pedestrian evacuation of a coastal population in an urban environment in case of tsunami and earthquake is questioned through the implementation of the STEP model.
The urban space is at the heart of the questioning: First, through the influence that the legibility of the urban environment can have on a pedestrian evacuation. Secondly, through the consideration of the multi-risk context and the damage of a precursor earthquake on the constructions, by questioning the practicability of the evacuation routes in urban environment.
The STEP model is a hybrid model combining multi-agents and cellular automata and implemented on the commune of Saint-Laurent-du-Var. Three main scenarios have been set up, based on reference events and explored by varying the parameters related to the agents and refuge zones; these three main scenarios vary the legibility (height of the refuge zones) and the practicability (collapse related to the earthquake).
The variation of the location of refuge areas as well as the consideration of the multi-hazard context in an urban environment have an important influence on the results from the STEP simulations. This research highlights the importance of considering the specificity of an evacuation in an urban environment as well as the multi-hazard context for the implementation of population evacuation strategies in case of a tsunami.

Odile Plattard

State Architect - HMONP, specialized in the prevention of major risks.
She studied architecture at the Ecole Nationale Supérieure d'Architecture de Paris La Villette, worked in agencies in Paris and Japan, before specializing a few years later in Architecture and Major Risks by taking a DSA at the Ecole Nationale Supérieure d'Architecture de Paris Belleville.
She defended a thesis in October 2019, carried out at the University of Paris I - Panthéon-Sorbonne, at the UMR 8504 Géographie-cités and at the UMR 8591 LGP under the direction of Arnaud Banos and Franck Lavigne. His thesis focuses on pedestrian evacuation in an urban context of coastal populations in a multi-risk context (earthquake and tsunami).
Her research topics combine modeling (multi-agent, participatory), risk prevention (information and public policies), earthquake-resistant construction, flood management, in the French, Japanese and Mediterranean context.
more...