

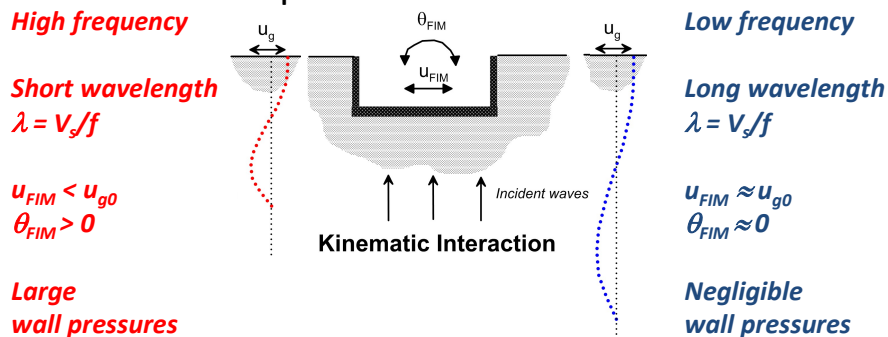
# MSCA-IF-RI-2020 Project: *ReStructure 2.0* - A novel physics-based methodology for the seismic analysis of retaining structures leveraging machine learning techniques

HORIZON 2020



*ReStructure 2.0* will release the main limitations of M-O methods based on a century-old theory, using an approach built upon SSI principles to compute seismic earth pressure increments on retaining structures.

Horizontal acceleration **must** cause seismic earth pressure...is it true?



**Horizontal stresses have no fundamental association with PGA!**

### *Project objectives:*

- Extensive parametric analysis of 2D numerical models of typical retaining structures and accurate literature review;
- Application of ML techniques to obtain frequency-dependent elastodynamic models;
- A simplified single-frequency solution that includes the effect of all the variables considered in the extensive numerical experimentation.

*Methodology:* The novel approach adopted is based on the combination of computational simulations (using HPC capabilities), experimental and field data, relational databases, and machine learning techniques.

Call: H2020-MSCA-IF-2020  
Type of Action: MSCA-IF-EF-RI  
Acronym: ReStructure 2.0  
Duration: 24 months  
Start Date: 01 Sep 2021

Estimated Project Cost: €183,473.28  
Requested EU Contribution: €183,473.28

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<https://cordis.europa.eu/project/id/101029903>