

Seminario



Marco Miniaci, PhD

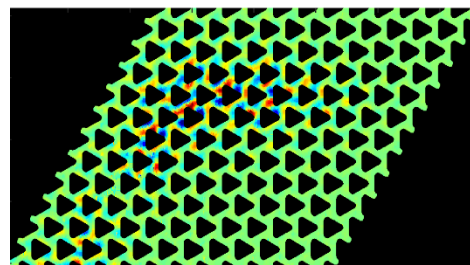
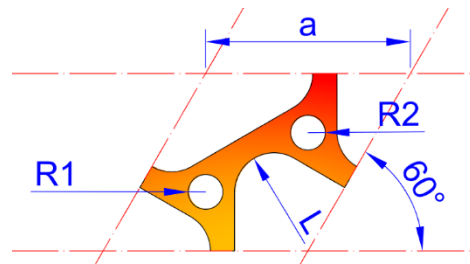
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“Controlling elastic waves via topological metamaterials”

Lunedì 2 maggio, ore 10:15

Online, Teams ([link](#))

Achieving the control of elastic waves has always been of interest in many engineering applications, ranging from non-destructive evaluation to shielding of buildings from seismic hazard, or energy harvesting and sound / vibration control.



In this seminar I will show how it is possible to guide elastic waves through predefined paths with sharp bending via a new class of (meta)materials called “topological insulators”. This approach, totally based on passive systems, relies on a proper breaking / preservation of specific classes of symmetries.

In the second part of the talk, I will provide active methods (based on prestress and photo-responsivity) to realize one-way elastic energy transport (paving the way to the realization of an elastic diode).