



UNIVERSITÀ DEGLI STUDI  
DI TRENTO

Dipartimento di Ingegneria Civile,  
Ambientale e Meccanica



Instabilities and nonlocal  
multiscale modelling of  
materials

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## AVVISO DI SEMINARIO

Si comunica che **martedì 20 dicembre 2016 a partire dalle ore 11.30**  
si terrà presso l'aula D1 (via Mesiano 77) il seguente seminario

### Some ideas on waves in parabolic metamaterials

**Prof. Alexander B. Movchan**

*University of Liverpool, UK*

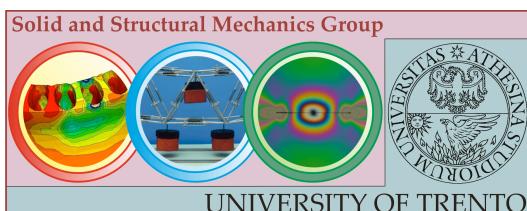
In the Physics community the term “hyperbolic metamaterials” is primarily used to describe dynamic micro-structures, which provide a hyperbolic response in the framework of the high-frequency homogenisation. Graphene is one of the examples, where saddle points are observed on high-order dispersion surfaces and hence hyperbolic regimes are detected.

The notion of “parabolic” materials is less conventional. Such materials have an extreme anisotropy and provide a uni-directional dynamic response, and in particular channeling waves along a preferred axis. High-frequency parabolic regimes have been observed in lattice systems, such as flexural rectangular lattices, for example.

The talk will include a discussion of low frequency parabolic regimes as well.  
This will be a blackboard lecture, and the ideas will be illustrated by simple examples.

Tutti gli interessati sono invitati a partecipare.

Il seminario è organizzato dal gruppo di Scienza delle Costruzioni  
(D. Bigoni, L. Deseri, N. Pugno, A. Piccolroaz, F. Dal Corso, M.F. Pantano, R. Springhetti, D. Misseroni)



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