



UNIVERSITÀ DEGLI STUDI  
DI TRENTO

Dipartimento di Ingegneria Civile,  
Ambientale e Meccanica



Instabilities and nonlocal  
multiscale modelling of  
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## AVVISO DI SEMINARIO

Si comunica che **lunedì 22 gennaio 2018 a partire dalle ore 9.00**  
si terrà presso l'aula **R2** (via Mesiano 77) il seguente seminario

### *Coupled Mode Interface and Nested Bloch Waves*

**Dr. Domenico Tallarico**

*University of Liverpool, UK*

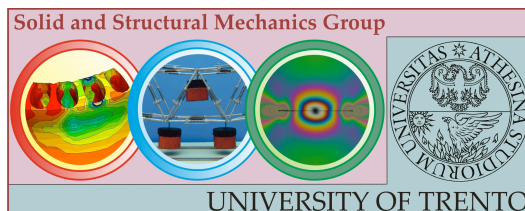
In this talk we present preliminary results on a model of waves through a structured coupled-mode interface. The latter couples flexural and longitudinal modes of deformation of beams, which reveals several resonance phenomena.

The transmission problem, incorporating an “elastica” type interface, includes analysis of a wave incident on a compressed buckled beam. Both linearised time-harmonic and non-linear transient formulations have been considered. Explicit representations are deduced for the transmission and reflection coefficients and a transmission resonance has been identified. Furthermore, a periodic structure containing inertial interfaces, which incorporate configurational forces that couple flexural and longitudinal deformation modes, has been considered. A special type of forced wave called “nested wave” is discussed in detail. The solution has been given in a closed analytical form, and resonance phenomena have been identified.

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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