V: Università
degli Studi
della Campania
Luigi Vanvitelli

AVVISO DI SEMINARIO

Lunedì 11 luglio, alle ore 14:00, in aula E, il Professore Roberto Paroni della Università degli Studi di Pisa, terrà un seminario dal titolo

Microscopically piece-wise rigid plates inspired by graphene

Abstract:

In this talk we present an atomistic to continuum model for a graphene sheet undergoing bending, within the small displacements approximation framework. Under the assumption that the atomic interactions are governed by a harmonic approximation of the 2nd-generation Brenner REBO (reactive empirical bond-order) potential, we determine the variational limit of the energy functionals. If some specific contributions in the atomic interaction are neglected, the variational limit is non-local.

We then analyze the results and by making a connection with the classical theory of plates we will be lead to introduce a new material property: the bending Poisson coefficient. Finally, we consider some extreme cases of our model and this will bring us to microscopically piece-wise rigid plates. The talk is based on joint works with C. Davini, A. Favata, and A. Micheletti.

(*) Sarà possibile seguire il seminario anche su Microsoft Teams al seguente link:

https://teams.microsoft.com/l/meetup-join/19%3a168ba8c448f04e398891ae6f20162356%40thread.tacv2/1654085088567?context=%7b%22Tid%22%3a%228f547aef-14d7-49ca-a4d4-51a6c5cb92c1%22%2c%22Oid%22%3a%22664791f3-b506-4b96-b321-ebbe8431882b%22%7d

Proponente

Il gruppo di Analisi Matematica