AVVISO DI CORSO
Si comunica che mercoledì 09 aprile 2014 a partire dalle ore 11.15 si terrà presso l’aula R2 (via Mesiano 77) il seguente corso

Wrinkling of soft matter under large deformation

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Half a century ago, Maurice Biot predicted that when a semi-infinite soft solid is subject to a large compression, its surface eventually buckles and witnesses the formation of small-amplitude wrinkles. The Biot surface instability phenomenon is the bedrock of countless stability analyses and has been linked in particular to the appearance of wrinkles in tissue growth, hydrogel swelling, tubular organs expansion or constriction, brain sulci, etc.

Here we present theoretical, numerical and experimental studies of incremental wrinkles, such as those that appear on the compressed side of bent (or conversely, straightened) blocks and sectors, on the face of compressed tubes or twisted cylinders, or on the surface of gelatin blocks subjected to simple shear. In the latter case we investigate the possibility of ‘oblique’ wrinkles.
Tutti gli interessati sono invitati a partecipare.

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

Twisting a gel in a rheometer until it wrinkles
[Mora et al. 2011]

Potential twisting modes of wrinkling for a soft cylinder [Ciarletta & MD, 2014]

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