



Lecture in the framework of visiting program of the University of Sassari

3 July 2017, 9.00 a.m.

Asilo Sella, All Pb

via Garibaldi 35, Alghero

## On recent developments in the six-parameter shell theory: Rayleigh and Courant variational principles

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The Rayleigh variational principle for eigen-oscillations of the prestressed elastic shells is presented. Using the Rayleigh quotient we shown that influence of initial stresses on the eigen-frequencies are determined by the changes of the elastic moduli tensors due to deformations and by the term depending on initial stress and couple stress tensors only. The latter term may play more important role in the case of flexible thin shells. Some specific examples are considered.

