- Contrôle de forme d'une plaque sur appuis simples déformée par une charge uniformément répartie de 200 N.m^{-2}.

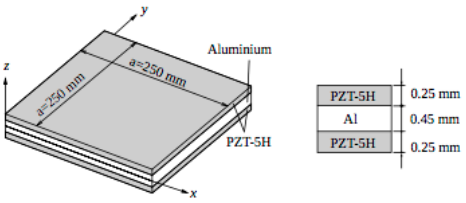


Fig 1. Plaque sandwich sur appuis simples.

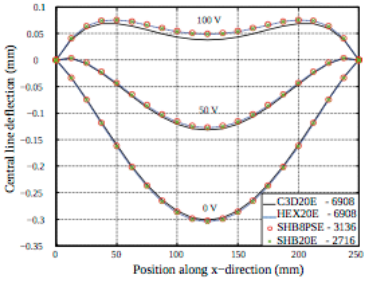
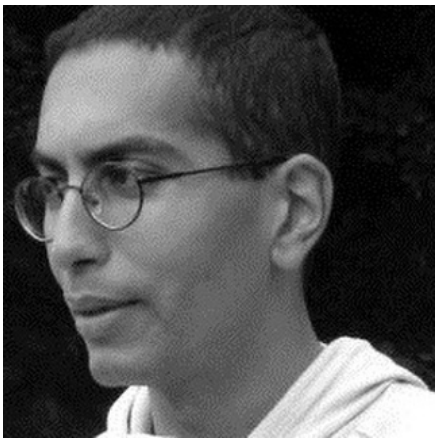


Fig 2. Flèche de la ligne médiane de la plaque articulée sous une pression de 200 N.m^{-2} et différentes tensions.



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- Réponse fréquentielle d'une plaque sur appuis simples à 5 couches piézoélectrique/élastique/viscoélastique/élastique/piézoélectrique sous une charge de 1000 N appliquée au centre.

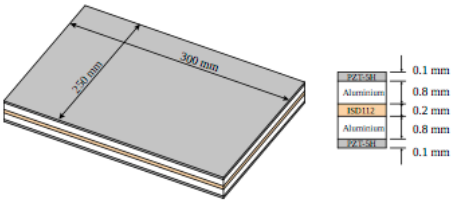

Fig 3. Plaque sur appuis simples à 5 couches.

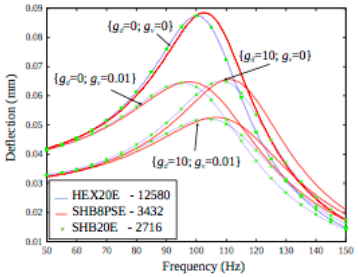

Fig 4. Réponse fréquentielle autour du 1er mode de flexion évaluée au centre de la plaque

From: F. Kpeky, H. Boudaoud, F. Abed-Meraim and E.M. Daya, "Modélisation par éléments finis de type solide-coque de structures piézoélectriques", 22nd French Congress of Mechanics, Lyon, April 24-28, 2015

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Selected Publications:

H. Boudaoud, E.M. Daya, S. Belouettar, L. Duigou, and M. Potier-Ferry, Damping analysis of beams submitted to passive and active control, Eng. Struct., vol. 31, pp. 322–331, 2009

A. Lejeune, H. Boudaoud, M. Potier-Ferry, I. Charpentier, H. Zahrouni, Automatic solver for non-linear partial differential equations with implicit local laws: application to unilateral contact, Int. J. Numer. Methods Eng. 94 (2013) 850–867.

F. Kpeky, H. Boudaoud, H. Chalal, F. Abed-Meraim and E.M. Daya, "Vibration modeling of sandwich structures using solid-shell finite elements", 11th World Congress on Computational Mechanics (WCCM XI), 5TH European Conference on Computational Mechanics (ECCM V), 6th European Conference on Computational Fluid Dynamics (ECFD VI), April 2014

F. Kpeky, H. Boudaoud, H. Chalal, F. Abed-Meraim and E.M. Daya, “Dynamic response of viscoelastic multilayer structures using solid-shell finite elements”, XIXth Symposium on Vibrations, Shocks and Noise (VISHNO), Aix en Provence, France, June 2014
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