Professor Hassen Ait Atmane

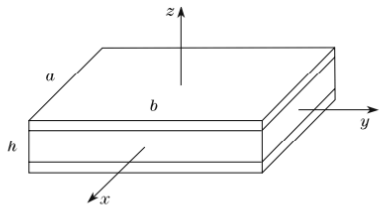
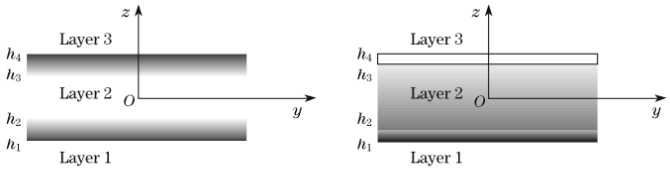


Fig. 1 Geometry of the rectangular FGM sandwich plate with uniform thickness in rectangular Cartesian coordinates



(a) FGM facesheet and homogeneous core (b) Homogeneous facesheet and FGM core

Fig. 2 Material variation along thickness of FGM sandwich plate

From: Hadji, L., Atmane, H. A., Tounsi, A., Mechab, I. and Addabedia, E. A. [2011] "Free vibration of functionally graded sandwich plates using four-variable refined plate theory," Applied Mathematics and Mechanics [English Edition] **32**, 925–942.

See:
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Selected Publications:

H. A. Atmane, A. Tounsi, I. Mechab and E. A. A. Bedia, Free vibration analysis of functionally graded plates resting on Winkler-Pasternak elastic foundations using a new shear deformation theory, Int. J. Mech. Mater. Des. 6 (2010) 113–121.
Ait Atmane, H., Tounsi, A., Meftah, S.A. and Belhadj, H.A. (2010), "Free Vibration Behavior of Exponential Functionally Graded Beams with Varying Cross-section", J. Vib. Control, 17(2), 311–318
S. Benyoucef, I. Mechab, A. Tounsi, A. Fekrar, H. A. Atmane and E. A. A. Bedia, Bending of thick functionally graded plates resting on a Winkler–Pasternak elastic foundation, Mech. Compos. Mater. 46(4) (2010) 425–434
Mechab, I., Atmane, H.A., Tounsi, A., Belhadj, H.A., Adda Bedia, E.A., (2010). A two variable refined plate theory for the bending analysis of functionally graded plates. Acta Mechanica Sinica 26: 941-949.
H.H. Abdelaziz, H.A. Atmane, I. Mechab, L. Boumia, A. Tounsi, E.A. AddaBedia, Static analysis of functionally graded sandwich plates using an efficient and simple refined theory. Chin. J. Aeronaut. 24, 434–448 (2011)
H.A. Atmane, A. Tounsi, N. Ziane, and I. Mechab, "Mathematical solution for free vibration of sigmoid functionally graded beams with va rying cross-section," Steel Compos. Struct., vol. 11, no. 6, pp. 489–504, 2011.
Hadji, L., Atmane, H. A., Tounsi, A., Mechab, I. and Addabedia, E. A. [2011] "Free vibration of functionally graded sandwich plates using four-variable refined plate theory," Applied Mathematics and Mechanics [English Edition] 32, 925–942.
A. Benachour, H. D. Tahar, H. A. Atmane, A. Tounsi and M. S. Ahmed, A four variable refined plate theory for free vibrations of functionally graded plates with arbitrary gradient, Compos. Part B Eng. 42 (2011) 1386–1394
H. Ait Atmane, A. Tounsi and F. Bernard, Effect of thickness stretching and porosity on mechanical response of a functionally graded beams resting on elastic foundations, Int. J. Mech. Mater. Des. 13 (2015) 1–14.

H.A. Atmane, A. Tounsi, F. Bernard, and S.R. Mahmoud, “A computational shear displacement model for vibrational analysis of functionally graded beams with porosities,” Steel Compos. Struct., vol. 19, no. 2, pp. 369–384, 2015.
R. Bennai, H.A. Atmane, and A. Tounsi, “A new higher-order shear and normal deformation theory for functionally graded sandwich beams,” Steel Compos. Struct., vol. 19, no. 3, pp. 521–546, 2015.
S. A. Yahia, H. A. Atmane, M. S. A. Houari and A. Tounsi, Wave propagation in functionally graded plates with porosities using various higher-order shear deformation plate theories, Struct. Eng. Mech. 53 (2015) 1143–1165.
Mouaici, F., Benyoucef, S., AitAtmane, H. and Tounsi, A. (2016), "Effect of porosity on vibrational characteristics of nonhomogeneous plates using hyperbolic shear deformation theory", Wind Struct., 22(4), 429-454.
Boukhari, A., Ait Atmane, H., Houari, M.S.A., Tounsi, A., Adda Bedia, E.A. and Mahmoud, S.R. (2016), “An efficient shear deformation theory for wave propagation of functionally graded material plates”, Struct. Eng. Mech., 57(5), 837-859.
H.A. Atmane, A. Tounsi, and F. Bernard, “Effect of thickness stretching and porosity on mechanical response of a functionally graded beams resting on elastic foundations,” Int. J. Mech. Mater. Des., vol. 13, no. 1, pp. 71–84, 2017.
Benadouda, M., Ait Atmane, H., Tounsi, A., Bernard, F. and Mahmoud, S.R. (2017), “An efficient shear deformation theory for wave propagation in functionally graded material beams with porosities”, Earthq. Struct., 13(3), 255-265.
Fourn, H., Atmane, H.A., Bourada, M., Bousahla, A.A., Tounsi, A. and Mahmoud, S.R. (2018), "A novel four variable refined plate theory for wave propagation in functionally graded material plates", Steel Compos. Struct., 27(1), 109-122.
Yousfi, M., Atmane, H.A., Meradjah, M., Tounsi, A. and Bennai, R. (2018), "Free vibration of FGM plates with porosity by a shear deformation theory with four variables", Struct. Eng. Mech., 66(3), 353-368
Ayache, B., Bennai, R., Fahsi, B., Fourn, H., Atmane, H.A. and Tounsi, A. (2018), "Analysis of wave propagation and free vibration of functionally graded porous material beam with a novel four variable refined theory", Earthq. Struct., 15(4), 369-382.
Tounsi, A., Ait Atmane, H., Khiloun, M., Sekkal, M., Taleb, O., Bousahla, A.A. (2019), “On buckling behavior of thick advanced composite sandwich plates”, Compos. Mater. Eng., 1(1), 1-19
Bouanati, S., Benrahou, K.H., Ait Atmane, H., Ait Yahia, S., Bernard, F., Tounsi, A., Adda Bedia, E.A. (2019), “Investigation of wave propagation in anisotropic plates via quasi 3D HSDT”, Geomech. Eng., 18(1), 85-96.
Mokhtar Hebab, Hassen Ait Atmane, Riadh Bennai and Benabdallah Tahar, “Effect of nonlinear elastic foundations on dynamic behavior of FG plates using four-unknown plate theory”, Earthquakes and Structures, Vol. 17, No. 5, pp 447-462, 2019
Mokhtar Nebab, Hassen Ait Atmane, Riadh Bennai, Abdelouahed Tounsi and E.A. Adda Bedia, “Vibration response and wave propagation in FG plates resting on elastic foundations using HSDT”, Structural Engineering and Mechanics, Volume 69, Number 5, March 10, 2019, pages 511-525
Belaid Batou, Mokhtar Nebab, Riadh Bennai, Hassen Ait Atmane, Abdeldjebbar Tounsi and Mohammed Bouremane, “Wave dispersion properties in imperfect sigmoid plates using various HSDTs”, Steel and Composite Structures, Vol. 33, No. 5, pp 699-716, 2019