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Selected Publications:

Zenkour AM, Sobhy M. Thermal buckling of various types of FGM sandwich plates. *Compos Struct* 2010;93(1):93–102.

- A.M. Zenkour, M.N.M. Allam, M. Sobhy: Bending analysis of FG viscoelastic sandwich beams with elastic cores resting on Pasternak’s elastic foundations. *Acta Mech.*, 212: 233–252, 2010.
- A.M. Zenkour, M.N.M. Allam, M. Sobhy: Bending of a fiber-reinforced viscoelastic composite plate resting on elastic foundations. *Arch. Appl. Mech.*, 81: 77–96, 2011.
- A. M. Zenkour and M. Sobhy, Thermal Buckling of Functionally Graded Plates Resting on Elastic Foundations Using the Trigonometric Theory, *J Therm Stresses*, vol. 34, pp. 1119–1138, 2011.
- Zenkour, A.M., Sobhy, M.: Elastic foundation analysis of uniformly loaded functionally graded viscoelastic sandwich plates. *J. Mech.* 28(3), 439–452 (2012)
- A.M. Zenkour and Mohammed Sobhy, “Dynamic bending response of thermoelastic functionally graded plates resting on elastic foundations”, *Aerospace Science and Technology*, Vol. 29, No. 1, pp 7-17, August 2013
- Sobhy M.: Buckling and free vibration of exponentially graded sandwich plates resting on elastic foundations under various boundary conditions. *Compos. Struct.* 99, 76–87 (2013)
- Alzahrani, E. O., Zenkour, A. M. and Sobhy, M. [2013] “ Small scale effect on hygro-thermo-mechanical bending of nanoplates embedded in an elastic medium,” *Composite Structures* 105, 163–172
- Zenkour AM, Sobhy M (2013) Nonlocal elasticity theory for thermal buckling of nanoplates lying on Winkler-Pasternak elastic substrate medium. *Phys E* 53:251–259
- Sobhy, M. [2014] “ Generalized two-variable plate theory for multi-layered graphene sheets with arbitrary boundary conditions,” *Acta Mechanica* 225, 2521–2538.
- Sobhy, M. [2014] “ Natural frequency and buckling of orthotropic nanoplates resting on two-parameter elastic foundations,” *Journal of Mechanics* 30(5), 443–453.

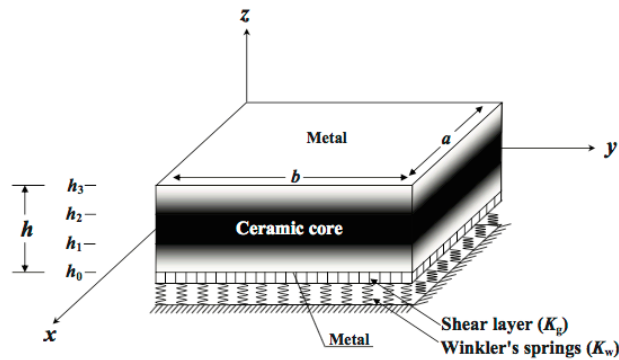


Figure 1: Geometry of the FGM sandwich plate resting on two parameter elastic foundations.

From: Sobhy, M., Zenkour, A.M.: Thermodynamical bending of FGM sandwich plates resting on Pasternak’s elastic foundations. *Adv. Appl. Math. Mech.* 7(1), 1–19 (2015)

- Sobhy, M.: Thermomechanical bending and free vibration of single-layered graphene sheets embedded in an elastic medium. *Phys. E* 56, 400–409 (2014)
- Sobhy M (2015) A comprehensive study on FGM nanoplates embedded in an elastic medium. *Compo Struct.*
- Sobhy, M., Zenkour, A.M.: Thermodynamical bending of FGM sandwich plates resting on Pasternak's elastic foundations. *Adv. Appl. Math. Mech.* 7(1), 1–19 (2015)
- Zenkour, A.M., Sobhy, M.: A simplified shear and normal deformations nonlocal theory for bending of nanobeams in thermal environment. *Phys. E* 70, 121–128 (2015)
- Sobhy, M.: Levy-type solution for bending of single-layered graphene sheets in thermal environment using the two-variable plate theory. *Int. J. Mech. Sci.* 90, 171–178 (2015)
- M. Sobhy, *Hygrothermal Deformation of Orthotropic Nanoplates Based on the State-Space Concept*, *Compos. Part B*, vol. 79, 224–235, 2015.
- Mohammed Sobhy, “An accurate shear deformation theory for vibration and buckling of FGM sandwich plates in hygrothermal environment”, *International Journal of Mechanical Sciences*, Vol. 110, pp 62-77, May 2016
- Sobhy, M. [2016] “Hygrothermal vibration of orthotropic double-layered graphene sheets embedded in an elastic medium using the two-variable plate theory,” *Applied Mathematical Model* 40(1), 85–99.
- Mohammed Sobhy and Ahmed F. Radwan, “A new quasi 3D nonlocal plate theory for vibration and buckling of FGM nanoplates”, *Int. J. Appl. Mechanics* 09(1), 1750008 (2017) [29 pages], January 2017
- Mohammed Sobhy, “Hygro-thermo-mechanical vibration and buckling of exponentially graded nanoplates resting on elastic foundations via nonlocal elasticity theory”, *Structural Engineering and Mechanics*, Vol. 63, No. 3, pp 401-415, 2017
- Zenkour, A. M. and Sobhy, M. [2018] “Nonlocal piezo-hygrothermal analysis for vibration characteristics of a piezoelectric Kelvin–Voigt viscoelastic nanoplate embedded in a viscoelastic medium,” *Acta Mechanica* 229(1), 3–19.
- Sobhy, M. and Zenkour, A. M. [2018] “Thermal buckling of double-layered graphene system in humid environment,” *Materials Research Express* 5(1), 015028.
- Mohammad Alakel Abazid, Muneerah S. Alotebi and Mohammed Sobhy, “A novel shear and normal deformation theory for hygrothermal bending response of FGM sandwich plates on Pasternak elastic foundation”, *Structural Engineering and Mechanics*, Vol. 67, No. 3, pp 219-232, August 2018
- Mohammed Sobhy and Ashraf M. Zenkour, “Nonlocal thermal and mechanical buckling of nonlinear orthotropic viscoelastic nanoplates embedded in a visco-Pasternak medium”, *International Journal of Applied Mechanics*, Vol. 10, No. 8, 1850086, September 2018
- Mohammed Sobhy and Ashraf M. Zenkour, “Magnetic field effect on thermomechanical buckling and vibration of viscoelastic sandwich nanobeams with CNT reinforced face sheets on a viscoelastic substrate”, *Composites Part B: Engineering*, Vol. 154, pp 492-506, 1 December 2018