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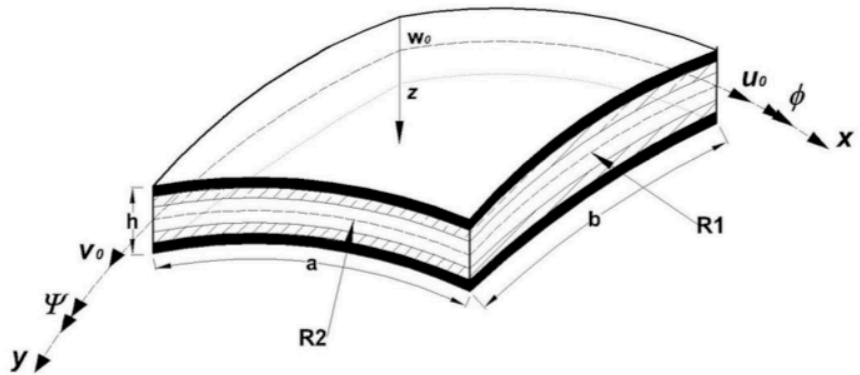


Fig. 1. Doubly-curved shell geometry and coordinate system.

From: Atteshamuddin S. Sayyad and Yuwaraj M. Ghugal, “Static and free vibration analysis of laminated composite and sandwich spherical shells using a generalized higher-order shell theory”, *Composite Structures*, Vol. 219, pp 129-146, 1 July 2019

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Selected Publications:

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, “Effects of nonlinear hygothermomechanical loading on bending of FGM rectangular plates resting on two-parameter elastic foundation using four-unknown plate theory”, *Journal of Thermal Stresses*, Vol. 42, No. 2, pp 213-232, 2019,

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, “Static and free vibration analysis of laminated composite and sandwich spherical shells using a generalized higher-order shell theory”, *Composite Structures*, Vol. 219, pp 129-146, 1 July 2019

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, “An inverse hyperbolic theory for FG beams resting on Winkler-Pasternak elastic foundation”, *Advances in Aircraft and Spacecraft Science*, Vol. 5, No. 6, pp 671-689, 2018

Sayyad, A. S. and Ghugal, Y. M. [2018] “Analytical solutions for bending, buckling, and vibration analyses of exponential functionally graded higher order beams,” *Asian Journal of Civil Engineering* 19, 607–623.

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, “Bending of shear deformable plates resting on Winkler foundations according to trigonometric plate theory”, *Journal of Applied and Computational Mechanics*, Vol. 4, No. 3, pp 187-201, 2018

Sayyad, A. S. and Ghugal, Y. M. [2018] “Modeling and analysis of functionally graded sandwich beams: A review,” *Mechanics of Advanced Materials and Structures* 5, 1–20.

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, “On the free vibration of angle-ply laminated composite and soft core sandwich plates”, *Journal of Sandwich Structures & Materials*, Vol. 19, No. 6, pp 679-711, November 2017

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, "Bending, buckling and free vibration of laminated composite and sandwich beams: A critical review of literature", *Composite Structures*, Vol. 171, pp 486-504, July 2017

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, "A unified shear deformation theory for the bending of isotropic functionally graded, laminated and sandwich beams and plates", *Int. J. Appl. Mechanics* 09(1), 1750007 (2017) [36 pages], January 2017

A. S. Sayyad, Y. M. Ghugal, and B. M. Shinde, "Thermal stress analysis of laminated composite plates using exponential shear deformation theory," *Int. J. Automot. Compos.*, vol. 2, no. 1, pp. 23–40, 2016

Attshamuddin S. Sayyad and Yuwaraj M. Ghugal, "Cylindrical bending of multilayered composite laminates and sandwiches", *Advances in Aircraft and Spacecraft Science*, Vol. 3, No. 2, pp 113-148, 2016

A.S. Sayyad, B.M. Shinde, Y.M. Ghugal, "Bending, Vibration and Buckling of Laminated Composite Plates Using a Simple Four Variable Plate Theory", *Latin Am J Solid Struct*, 13 (2016), pp. 516-535

A. S. Sayyad, Y. M. Ghugal, and B. A. Mhaske, "A four-variable plate theory for thermoelastic bending analysis of laminated composite plates," *J. Therm. Stresses*, vol. 38, no. 8, pp. 904–925, 2015

A.S. Sayyad and Y.M. Ghugal. A nth-order shear deformation theory for composite laminates in cylindrical bending. *Curved and Layered Structures*, 2(1):290-300, 2015.

Sayyad, A. S., Ghugal, Y. M. and Naik, N. S. [2015] " Bending analysis of laminated composite and sandwich beams according to refined trigonometric beam theory," *Curved and Layered Structures* 2, 279–289.

A.S. Sayyad, Y.M. Ghugal, On the free vibration analysis of laminated composite and sandwich plates: a review of recent literature with some numerical results, *Compos. Struct.* 129 (2015) 177–201.

Sayyad, A. S. and Ghugal, Y. M. [2015] " Static flexure of soft core sandwich beams using trigonometric shear deformation theory," *Mechanics of Advanced Composite Structures* 2, 45–53.

Sayyad, A. S., Ghugal, Y. M. and Shinde, P. N. [2015] " Stress analysis of laminated composite and soft core sandwich beams using a simple higher order shear deformation theory," *Journal of Serbian Society of Computational Mechanics* 9(1), 15–35.

Ghugal YM, Shikhare GU. Bending analysis of sandwich beams according to refined trigonometric beam theory. *J Aero Eng Technol* 2015;5(3):27–37.

A. S. Sayyad, and Y. M. Ghugal, On the Buckling of Isotropic, Transversely Isotropic and Laminated Composite Rectangular Plates, *Int. J. Struct. Stab. Dyn.*, vol. 14, no. 07, pp. 1450020-1–1450020-32, 2014.

A.S. Sayyad, Y.M. Ghugal and R.R. Borker, "Flexural analysis of fibrous composite beams under various mechanical loadings using refined shear deformation theories", *Composites: Mechanics, Computations, Applications. An International Journal*, Vol. 5, No. 1, pp 1-19, 2014

Sayyad, A.S. and Ghugal, Y.M. (2014), "Flexure of cross-ply laminated plates using equivalent single layer trigonometric shear deformation theory", *Struct. Eng. Mech.*, 51(5), 867-891.

Sayyad, A.S., Ghugal, Y.M.: Buckling and free vibration analysis of orthotropic plates by using exponential shear deformation theory. *Latin Am. J. Solids Struct.* 11, 1298–1314 (2014)

Sayyad A. S. and Ghugal Y. M., "Effect of Local Stress Concentration on Laminated Plates" *Journal of Mechanics*, 2013, 29, pp. 241-252.

Ghugal YM, Shinde SB. Flexural analysis of cross-ply laminated beams using layerwise trigonometric shear deformation theory. *Lat Am J Solids Struct* 2013;10:675–705.

Ghugal Y. M. and Sayyad A. S., "Static Flexure of Thick Orthotropic Plates Using Trigonometric Shear Deformation Theory", *Journal of Structural Engineering*, 2013, 39(5), pp. 512-521.

Ghugal Y. M. and Sayyad A. S., "Static Flexure of Thick Laminated Plates using Trigonometric Shear Deformation Theory", *International Journal of Applied Mechanics*, 2013, 5(1) doi: 10.1142/S1758825113500038.

Dahake AG, Ghugal YM. A trigonometric shear deformation theory for flexure of thick beams. Proc Eng 2013;51:1–7.

Ghugal YM, Dahake AG. Flexure of cantilever thick beams using trigonometric shear deformation theory. Int J Mech, Aerosp Ind Mech Manuf Eng 2013;7 (5):380–9.

Ghugal YM, Dahake AG. Flexural analysis of deep beam subjected to parabolic load using refined shear deformation theory. Appl Comput Mech 2012;6:163–72.

Sayyad A. S. and Ghugal Y. M., “Bending and free vibration of thick isotropic plates by using exponential shear deformation theory,” Applied and Computational Mechanics, 2012, 6, pp.65-82

Sayyad A. S. and Ghugal Y. M., “Buckling analysis of thick isotropic plates by using exponential shear deformation theory,” Applied and Computational Mechanics, 2012, 6(2), 185–196.

Sayyad A. S. and Ghugal Y. M., “Flexure of Thick Beams Using New Hyperbolic Shear Deformation Theory”, International Journal of Mechanics, 2011, 5(3) pp. 113-122.

Ghugal Y. M. and Sayyad A. S., “Free Vibration of Thick Isotropic Plates Using Trigonometric Shear Deformation Theory”, Journal of Solid Mechanics, 2011, 3(2), pp. 172-182.

Ghugal Y. M. and Sayyad A. S., “Cylindrical Bending of Thick Orthotropic Plates Using Trigonometric Shear Deformation Theory”, International Journal of Applied Mathematics and Mechanics, 2011, 7(5), pp. 98-116.

Ghugal Y. M. and Sayyad A. S., “Free Vibration of Thick Orthotropic Plates Using Trigonometric Shear Deformation Theory”, Latin American Journal of Solids and Structures, 2011, 8, pp. 229-243.

Ghugal YM, Sharma R. A refined shear deformation theory for flexure of thick beams. Lat Am J Solids Struct 2011;8:183–95.

Sayyad A. S. and Ghugal Y. M., “Effect of Transverse Shear and Transverse Normal Strain on the Bending analysis of Cross-Ply Laminated Beams”, International Journal of Applied Mathematics and Mechanics, 2011, 7(12), 85-118.

Sayyad A. S. and Ghugal Y. M., “Static Flexure of Thick Isotropic Beam Using New Hyperbolic Shear Deformation Theory”, Proceeding of International conference on Sunrise Technologies,(i-COST-2011), 2011, 13-15 January, SSVPS College of Engineering, Dhule, M.S., Paper No 4.25.

Ghugal, Y.M., Pawar, M.D.: Buckling and vibration of plates by hyperbolic shear deformation theory. J. Aerosp. Eng. Technol. 1, 1–12 (2011)

Ghugal Y. M. and Sayyad A. S., “A Static Flexure of Thick Isotropic Plates Using Trigonometric Shear Deformation Theory”, Journal of Solid Mechanics, 2010, 2(1), pp. 79-90.

Sayyad A. S. and Ghugal Y. M., “Comparative Study of Refined Beam Theories for Static Flexure of Deep Beams”, Proceeding of Seventh Structural Engineering Convention (SEC-2010), 2010, 8-10 December Annamalai university, Annamalai nagar, T.N., pp. 202-210.

Sayyad A. S. and Ghugal Y. M. “Static Flexure of Thick Isotropic Plates Using Trigonometric Shear Deformation Theory”, Proceeding of International conference on Innovative world of Structural Engineering (ICIWSE-2010), 2010, 25-27 December Government College of Engineering, Aurangabad, M.S., pp 738-746.

Ghugal YM. Flexure and vibration of thick beams using trigonometric shear deformation theory. J Exp Appl Mech 2010;1(1):1–27.

Ghugal YM. A single variable parabolic shear deformation theory for flexure and flexural vibration of thick isotropic beams. In: Proc. of 3rd international conference on structural engineering, mechanics and computation, Cape Town, South Africa; 2007

Ghugal Y. M. and Shimpi R. P. A Review of Refined Shear Deformation Theories for Isotropic and Anisotropic Laminated Plates. Journal of Reinforced Plastics and Composites, U.S.A, Vol.21, No.9, pp. 775-813, 2002.

Shimpi R. P. and Ghugal Y. M. A New Layerwise Trigonometric Shear Deformation Theory for Two – Layered Cross-ply Laminated Beams. Composites Science and Technology, U.K., Vol.61, No.9, pp.1271-1283, 2001.

Ghugal Y. M. and Shimpi R. P. A Review of Refined Shear Deformation Theories for Isotropic and Anisotropic

Laminated Beams. *Journal of Reinforced Plastics and Composites*, U.S.A., Vol. 20, No. 3, pp. 255-273, 2001.

Ghugal YM, Shimpi RP. A trigonometric shear deformation theory for flexure and free vibration of isotropic thick beams. *Structural Engineering Convention (SEC-2000)*, IIT Bombay, India; 2000.

Shimpi R. P. and Ghugal Y. M. A Layerwise Shear Deformation Theory for Two Layered Cross-ply Laminated Plates. *Mechanics of Composite Materials & Structures- An International Journal*, U.S.A., Vol.7, No.4, pp. 331-353, 2000.

Shimpi R. P. and Ghugal Y. M. A Layerwise Trigonometric Shear Deformation Theory for Two – Layered Cross-ply Laminated Beams. *Journal of Reinforced Plastics and Composites*, U.S.A., Vol. 18, No.16, pp.1516-1542, 1999.