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**Research Interests:**

Finite element analysis; Analysis and control of vibrations with focus on wind induced vibrations; Structural dynamics; Composite mechanics; Computational mechanics

**Selected Publications:**

- Yu P, Desai YM, Shah AH, Popplewell N (1992) Three-degree-of-freedom model for galloping. Part I: Formulation. *J Eng Mech-ASCE* 119:2404–2424
- Yu P, Desai YM, Popplewell N, Shah AH (1992) Three-degree-of-freedom model for galloping. Part II: Solutions. *J Eng Mech-ASCE* 119:2426–2446
- M. K. Rao, Y. Desai, and M. Chistnis, “Free vibrations of laminated beams using mixed theory”, *Compos. Struct.*, vol. 52, pp. 149–160, 2001.
- G. S. Ramtekkar, Y. M. Desai and A. H. Shah, Mixed finite element model for thick composite laminated plates, *Mech. Adv. Mater. Struct.* 9 (2) (2002) 133–156.
- G.S. Ramtekkar and Y.M. Desai. Natural vibrations of laminated composite beams by using mixed finite element modeling. *Journal of Sound and Vibration*, 257(4):635–651, 2002
- O.M. Mukdadi, Y.M. Desai, S.K. Datta, A.H. Shah and A.J. Niklasson, “Elastic guided waves in a layered plate with rectangular cross section”, *Journal of the Acoustical Society of America*, Vol. 112, No. 5, pp 1766-1779, November 2001
- Kulkarni, S.C., Desai, Y.M., Kant, T., Reddy, G.R., Parulekar, Y. and Vaze, K.K. (2003). “Uniaxial and biaxial ratcheting study of SA333 Gr.6 steel at room temperature.” *International Journal of Pressure vessels and Piping*. 80, pp. 179–185
- Desai Y. M., Ramtekkar G. S., Shah A. H., A novel 3D mixed finite-element model for statics of angleply laminates, *Int. Journal for Numerical Methods in Engineering* 57, 2003, 1695–1716

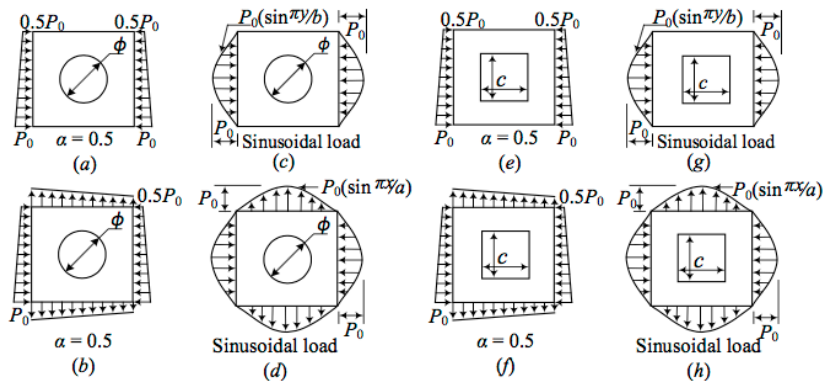


Fig. 4 Square panels under various kinds of uniaxial and biaxial non-uniform edge loading

From: Rajanna, T., Banerjee, S., Desai, Y.M. and Prabhakara, D.L. (2016), "Vibration and buckling analyses of laminated panels with and without cutouts under compressive and tensile edge loads", *Steel Compos. Struct.*, 21(1), 37-55.

Ramtekkar GS, Desai YM, Shah AH. Application of a three dimensional mixed finite element model to the flexure of sandwich plate. *Compos Struct* 2003;81:2383–2398.

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Rao M.K., Desai Y.M.: Analytical solutions for vibrations of laminated and sandwich plates using mixed theory. *Compos. Strut.* 63, 361–373 (2004)

Kulkarni, S.C., Desai, Y.M., Kant, T., Reddy, G.R., Prasad, P. and K.K Vaze, K.K. (2004). “Uniaxial and biaxial ratcheting in piping materials-experiments and analysis.” *International Journal of Pressure vessels and Piping*, 81, pp. 609–617.

J.B. Dafedar and Y.M. Desai. Stability of composite and sandwich struts by mixed formulation. *Journal of Engineering Mechanics*, 130(7):762–770, 2004.

M.K. Rao, K. Scherbatiuk, Y.M. Desai, and A.H. Shah. Natural vibrations of laminated and sandwich plates. *J Eng Mech*, 130:1268–1278, 2004

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Kant, T., Pendhari, S. S. and Desai, Y. M. [2007] “ On accurate stress analysis of composite and sandwich narrow beams,” *International Journal of Computational Methods in Engineering Science and Mechanics* 8, 165–177.

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A.N. Bambole and Y.M. Desai. Hybrid-interface finite element for laminated composite and sandwich beams. *Finite Element in Analysis and Design*, 43:1023–1036, 2007.

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Pendhari, S.S., Kant, T., Desai, Y.M., Subbaiah, C.V.: Static solutions for functionally graded simply supported plates. *Int. J. Mech. Mater. Des.* 8, 51–69 (2012)

T. Rajanna, Sauvik Banerjee, Yogesh M. Desai and D.L. Prabhakara, “Buckling analysis of laminated plates subjected to partial edge loading”, 5<sup>th</sup> International Congress on Computational Mechanics and Simulation (ICCMS2014), 10-13 December 2014, India

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T. Rajanna, Sauvik Banerjee, Yogesh M. Desai and D.L. Prabhakara, "Effect of boundary conditions and non-uniform edge loads on buckling characteristics of laminated composite panels with and without cutout", *International Journal for Computational Methods in Engineering Science and Mechanics*, Vol.18, No.1, Special Issue: Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures, pp 64-76, January 2017

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