



Professor Shyh-Rong Kuo (S.R. Kuo)

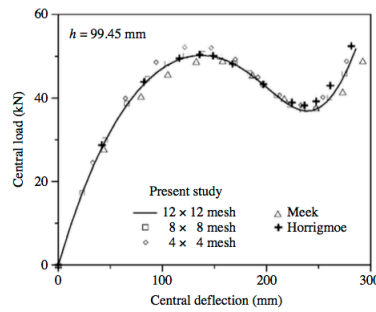


Fig. 4 Central deflection of spherical shell

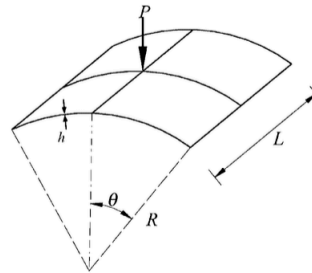


Fig. 5 Cylindrical shell (a concentrated load at the symmetric center)

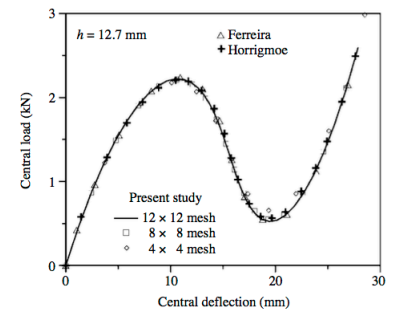


Fig. 6 Central deflection of cylindrical shell, ($h = 12.7$)

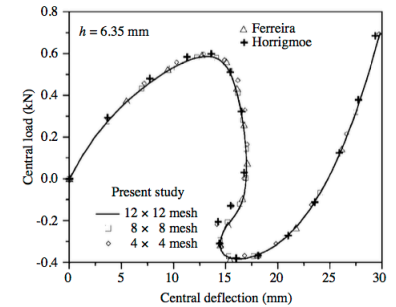


Fig. 7 Central deflection of cylindrical shell, ($h = 6.35$)

From: Shyh-Rong Kuo, Chih-Chang Chi, Weichung Heih and Jiang-Ren Chang, "A reliable three-node triangular plate element satisfying rigid body rule and incremental force equilibrium condition", Journal of the Chinese Institute of Engineers, Vol. 29, No. 4, pp 619-632, 2006

See:

- https://www.researchgate.net/scientific-contributions/2009915566_Sh yh-Rong_Kuo
- https://www.researchgate.net/scientific-contributions/2092058801_Sh yh_Rong_Kuo
- https://translate.google.com/translate?hl=en&sl=zh-TW&u=http://www.hre.ntou.edu.tw/zh-tw/%3Fpage_id%3D395&prev=search

Department of Harbor and River Engineering
National Taiwan Ocean University

Research Interests:

Nonlinear structural mechanics analysis; plate and shell buckling theory; Structural seismic strengthening

Selected Publications:

Books:

Y.B. Yang and S.R. Kuo (1994). Theory and Analysis of Nonlinear Frame Structures. Prentice Hall, Singapore.

Journal Articles, etc.:

S.R. Kuo and Y.B. Yang, New Theory on Buckling of Curved Beams, J. Engrg. Mech. Div., ASCE, vol. 117(8), pp. 1698–1717, 1991.

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S.R. Kuo and Y.B. Yang, Tracing postbuckling paths of structures containing multi loops, Int. J. Numer. Methods Eng., vol. 38, no. 23, pp. 4053–4075, 1995.

Jeng-Tzong Chen, Shyh-Rong Kuo, Wei-Chih Chen and Li-Wei Liu, "On the free terms of the dual BEM for the two and three-dimensional Laplace problems", *Journal of Marine Science and Technology*, Vol. 8, No. 1, pp 8-15, 2000

Y.B. Yang, S.R. Kuo, and Y.S. Wu, Incrementally small-deformation theory for nonlinear analysis of structural frames, *Eng. Struct.*, vol. 24, no. 6, pp. 783–798, 2002.

Jiang Ren Chang, Ru Feng Liu, Weichung Yeih and Shyh Rong Kuo, "Applications of the direct Trefftz boundary element method to the free-vibration problem of a membrane", *Journal of the Acoustical Society of America*, September 2002, DOI: 10.1121/1.1494992

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S.R. Kuo, C.C. Chi, and Y.B. Yang, A complete stability theory for the Kirchhoff thin plate under all kinds of actions, *J. Mar. Sci. Technol.*, vol. 17, no. 3, pp. 180–193, 2009.

Y.B. Yang and S.R. Kuo, "A new approach for deriving the instability potential for plates based on rigid body and force equilibrium considerations", *Procedia Engineering*, Vol. 14, pp 14-22, 2011

Shyh-Rong Kuo, J.D. Yau and Y.B. Yang, "A robust time-integration algorithm for solving nonlinear dynamic problems with large rotations and displacements", *International Journal of Structural Stability and Dynamics*, Vol. 12, No. 6, 1250051, December 2012

S.R. Kuo and Y.B. Yang, A rigid-body-qualified plate theory for the nonlinear analysis of structures involving torsional actions, *Eng. Struct.*, vol. 47, pp. 2–15, 2013.

Y.B. Yang, S.R. Kuo & J.D. Yau (2014): A new buckling theory for curved beams of solid cross sections derived from rigid body and force equilibrium considerations, *The IES Journal Part A: Civil & Structural Engineering*, DOI: 10.1080/19373260.2014.883056

S.R. Kuo, Judy P. Yang and Y.B. Yang, "A novel approach for buckling analysis of pretwisted spatially curved beams by state equations", *International Journal of Structural Stability and Dynamics*, 1550011, 31 pages, 2015

S.R. Kuo, Judy P. Yang and Y.B. Yang, A qualified plate theory for rigid rotation in postcritical nonlinear analysis, *Mechanics of Advanced Materials and Structures*, Vol. 25, Nos. 15-16, pp 1323-1334, 2018