

Professor Yeong-Bin Yang (Y.B. Yang)

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<https://scholar.google.com/citations?user=rnZb4PUAAAAJ&hl=en>
https://www.researchgate.net/profile/Yb_Yang3
<https://www.worldscientific.com/page/ijssd/editorial-Y-B-Yang>
<http://www2.ce.ntu.edu.tw/~ybyang/eng/profile/intro.htm>

Civil Engineering, National Taiwan University
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School of Civil Engineering, Chongqing University, China
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Department of Construction Engineering, National Yunlin University of Science and Technology, Taiwan

Biography:

Dr. Yang is currently Honorary Dean of College of Civil Engineering, Chongqing University (CQU), China, Professor Emeritus at the Department of Civil Engineering, National Taiwan University (NTU), Chairman of Accreditation Council of Institute of Engineering Education Taiwan (IEET), and Vice President of the following two organizations: Asian-Pacific Association for Computational Mechanics (APACM) and East Asia-Pacific Conference on Structural Engineering and Construction (EASEC). He is a member of Chinese Academy of Engineering, foreign member of Austrian Academy of Sciences, and fellow of American Society of Civil Engineers (ASCE) and International Association of Computational Mechanics (IACM). Previously, he was President of YunTech, i.e., National Yunlin University of Science and Technology (2009-13), and Dean of College of Engineering, NTU (1999-2005). He received his Ph.D. degree from Cornell University in 1984. His areas of expertise include structural nonlinear analysis, vehicle-bridge interaction dynamics, and train-induced wave propagation. On each area he has published a monograph. As of now, he has published over 180 referred journal papers and over 250 conference papers. He is an Editor-in-Chief of International Journal of Structural

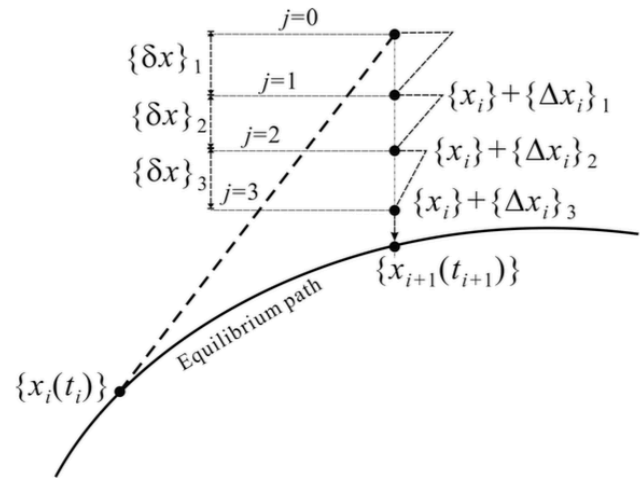


Fig. 3. Schematic of iteration from t_i to t_{i+1} .

From: 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

Stability and Dynamics, and a member of the Editorial or Advisory Board of journals including Engineering Structures, Journal of Sound and Vibration, Structural Engineering and Mechanics, Advances in Structural Engineering, etc

Education:

1984 Ph.D Structural Engineering, Cornell University
1980 Civil Engineering, National Taiwan University
1976 Civil Engineering, National Taiwan University

Positions:

Chair Professor, National Yunlin University of Science and Technology (2010-)
President, National Yunlin University of Science and Technology (YunTech) (2009-)
Distinguished Professor, National Taiwan University (2006-)
Member, Chinese Academy of Engineering (2009-)
Foreign Member, Austrian Academy of Sciences (2007-)
C. C. Tzong Chair Professor, College of Engineering, NTU (2007-)
Director, Testing Center for Technological and Vocational Education (2009-)
President, Institute of Engineering Education Taiwan (IEET) (2009-)
President, Society of Theoretical and Applied Mechanics, Taiwan (2009-)
Chairman, University League of the Changhua-Yunlin-Chiayi Region, Taiwan (2010-)
Editor, International Journal of Structural Stability and Dynamics (2000-)
Editor, Interaction and Multiscale Mechanics, an International Journal (2007-)

Selected Publications:

Books:

Y.B. Yang and S.R. Kuo (1994). Theory and Analysis of Nonlinear Frame Structures. Prentice Hall, Singapore.
Y.B. Yang, J.D. Yau and Y.S. Wu, Vehicle-Bridge Interaction Dynamics (with applications to high speed railways), World Scientific Publishing, 2004, 564 pages
C.M. Wang, Y.B. Yang, and J.N. Reddy (Eds.), Proceedings of the IJSSD Symposium 2012 on Progress in Structural Stability and Dynamics, Southeast University Press, Nanjing, 2012

Journal Articles, etc.:

Y.-B. Yang, W. McGuire, A procedure for analysing space frames with partial warping restraint, Int. J. Numer. Methods Eng., 20 (1984), pp. 1377-1398
Y.B. Yang and H.T. Chiou, Rigid body motion test for nonlinear analysis with beam elements, J. Eng. Mech., vol. 113, no. 9, pp. 1404–1419, 1987
Y.B. Yang and M.S. Shieh. Solution method for nonlinear problems with multiple critical points. AIAA Journal, 28(2):2110–2116, 1990.
Y.B. Yang and L.J. Leu, Force recovery procedures in nonlinear analysis. Compos. Struct., vol. 41, no. 6, pp. 1255–1261, 1991.
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.
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.

Y.B. Yang and J.T. Chang (1998). Derivation of a geometric nonlinear triangular plate element by rigid-body concept. *Bulletin of The International Association for Shell and Spatial Structures*, 39, n. 127, 77–84.

Y.B. Yang, J.T. Chang and J.D. Yau (1999). A simple nonlinear analysis plate element and strategies of computation for nonlinear analysis. *Comput. Methods Appl. Mech. Engng.*, 178, 307–321.

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.

R. Levy, C.W. Lin, E. Gal and Y.B. Yang (2003). Geometric stiffness of space frames using symbolic algebra. *International Journal of Structural Stability and Dynamics*, 3(3), 335–353.

R. Levy, C.S. Chen, C.W. Lin and Y.B. Yang (2004). Geometric stiffness of membranes using symbolic algebra. *Engineering Structures*, 26, 759–767.

Y.B. Yang, L.J. Leu, and J.P. Yang, Key considerations in tracing postbuckling response of structures with multiwinding loops, *Mech. Adv. Mater. Struct.*, vol. 14, no. 3, pp. 175–189, 2007

Y.B. Yang, S.P. Lin, and C.S. Chen, Rigid body concept for geometric nonlinear analysis of 3D frames, plates and shells based on the updated Lagrangian formulation, *Comput. Methods Appl. Mech. Eng.*, vol. 196, no. 7, pp. 1178–1192, 2007.

Y.B. Yang, S.P. Lin, and L.J. Leu, Solution strategy and rigid element for nonlinear analysis of elastic structures based on updated Lagrangian formulation, *Eng. Struct.*, vol. 29, no. 6, pp. 1189–1200, 2007.

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

Georg Zenz, Johannes Gerstmayr, Karin Nachbagauer, Ming-Hsiang Shih and Yeong-Bin Yang, “Identification of system properties in a square frame undergoing large deformations: Numerical and experimental investigations”, *International Journal of Structural Stability and Dynamics*, Vol. 14, No. 6, 1450017, 26 pages, 2014, DOI: 10.1142/S0219455414500175

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

Yun-tian Wu, Dao-yang Kang, Yi-ting Su and Yeong-bin Yang, “Seismic behavior of composite walls with encased steel truss”, *Steel and Composite Structures*, Vol. 22, No. 2, pp 449-472, 2016

Minmao Liao, Feng Chen, Zhaohui Chen and Y.B. Yang, “A weak-form quadrature element formulation for 3D beam elements used in nonlinear and postbuckling analysis of space frames”, *Engineering Structures*, Vol. 145, pp 34-43, August 2017

Y.B. Yang and J.H. Kang, “Vibration and buckling analysis of a rotating annular plate subjected to a compressive centrifugal body force”, *International Journal of Structural Stability and Dynamics*, Vol. 18, No. 7, 1850097, July 2018

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