

Professor Sritawat Kitipornchai

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http://www.civil.uq.edu.au/kitipornchai http://wikisites.cityu.edu.hk/sites/newscentre/en/Pages/200912211200.aspx http://www.eng.monash.edu.au/civil/alumni/2007.html http://www.zoominfo.com/p/Sritawat-Kitipornchai/1405574502

School of Civil Engineering The University of Queensland, Australia

Biography:

Sritawat Kitipornchai joined The University of Queensland in 2012 as the TMR Chair (Transport and Main Roads) and Professor of Structural Engineering in the School of Civil Engineering. He had previously been in the Department of Civil Engineering at UQ from 1976 to 2000. He was appointed Chair Professor at The City University of Hong Kong in 2001 and was the Head of the Department of Building and Construction from 2005-2011. Aside from being Head of Department at CityU, he was also the Chairman of the Faculty/College Research Committee (2001-2009), Teaching Excellence Award (TEA) Panel (2002-2005), Advisory Committee for Research Centres and Deputy Chairman of the University Research Committee (2002-2006). As Head of Department, he expanded the Department of Building and Construction into a multi-disciplinary department, changing its name to the Department of Civil and Architectural to reflect the 5 distinct disciplines within the department. He established the disciplines of Structural, Geotechnical Laboratory and a large Wind Tunnel Facility at CityU. He was elected fellow of the Australian Academy of Technological Sciences and Engineering (ATSE) in 2009, and received the Monash University Civil Engineering Alumnus of the Year in 2007, the inaugural UQ Physical Science and Engineering Teaching Excellence Award in 1993 and the Munro Prize Award from Engineering Structures in 1993.

He is currently the Chairman of the EASEC International Steering Committee; a member of the Engineering Panel of the Hong Kong Research Grant Committee (RGC); a member of the ARC's College of Experts Panel;

and a member of the Singapore NRF's CRP Expert Panel on Computer and Engineering Sciences. He is the Regional Editor (Asia-Pacific) of Engineering Structures journal (since 1993), and a member of editorial boards of many other structural engineering and engineering mechanics journals. He has close links with the steel and the transmission tower industry and the utilities in Australia and was a Director of the Australian Institute of Streel Construction (AISC) from 1993-1999. He received 6 ARC grants (4DPs and 2 Linkages) in the period 1995-2000, and 7 CERG/GRF grants in HK in the period 2001-2011. He has extensive research publications (2 patents, 8 books, 7 book chapters and 306 journal papers) and numerous conference papers including many plenary, keynote and invited papers, and has an SCI personal h-index of 39. Several of the portal frame design book are widely used by students and practising engineers in Australia.

Education:

Bachlelor of Engineering in Civil Engineering (First Class honours) Monash University 1969 Doctor of Philosophy University of Sydney 1973.

Research Interests:

His research work is in structural engineering, stability, nonlinear analysis, thin-walled structures, transmission towers, cold-formed structures, structural mechanics, vibration of plates, composite structures, smart materials, structural design problems.

Selected Publications:

Kitipornchai, S. and Trahair, N.S. (1980), "Buckling Properties of Monosymmetric I-Beams", Journal of the Structural Division, ASCE, Vol. 106, No. ST5, May, pp. 941-957.

Kitipornchai S, Wang CM, Trahair NS. Buckling of monosymmetric I-beams under moment gradient. J Struct Eng, ASCE 1986;112(4):781–99.

Chan SL, Kitipornchai S. Geometric nonlinear analysis of asymmetric thin-walled beam-columns. Eng Struct 1987;9(4): 243–54.

Al-Bermani, F.G.A. and Kitipornchai, S. (1990), "Nonlinear Analysis of Thin-Walled Structures Using Least Element/Member", Journal of Structural Engineering, ASCE, Vol. 116, No. 1, January, pp. 215-234.

Kitipornchai S., Xiang Y., Wang CM., Liew KM. (1993) Buckling of thick skew plates, International Journal for Numerical Methods in Engineering, 36, pp.1299-1310.

Wang, C.M., Xiang, Y., Kitipornchai, S.K., Liew, M.: Buckling solutions for Mindlin plates of various shapes. Eng. Struct. 16, 119–127 (1994)

Lucas RM, Al-Bermani FGA, Kitipornchai S. Modeling of cold-formed purlins-sheeting systems. Proceedings of the Thirteenth International Specialty Conference on Cold-formed Steel Structures, St. Louis, Missouri, 1996.

Xiang, Y., Liew, K.M., and Kitipornchai, S., 1997. Vibration analysis of rectangular Mindlin plates resting on elastic edge supports. Journal of Sound and Vibration 204(1): 1-16.

Liew, K. M., Xiang, Y., and Kitipornchai, S., 1997. Vibration of laminated plates having elastic edge flexibilities. Journal of Engineering Mechanics, ASCE 123: 1012- 1019.

Liew KM, Lim CW, Kitipornchai S. Vibration of shallow shells: a review with bibliography. Appl Mech Rev 1997;50:431–44

K.M. Liew, C.M. Wang, Y. Xiang, S. Kitipornchai, Vibration of Mindlin plates (Google eBook), Elsevier, 1998, 202 pages

Cheng, Z. Q., Kitipornchai, S. 1999 Membrane analogy of buckling and vibration of inhomogeneous plates J. Engng. Mech.125, 1293-1297

Reddy, J. N., Wang, C. M., and Kitipornchai, S., 1999, "Axisymmetric Bending of Functionally Graded Circular and Annular Plates," Eur. J. Mech. A/Solids, 18, pp. 185–199.

Q. Cheng and S. Kitipornchai, "Membrane Analogy of Buckling and Vibration of Inhomogeneous Plates," Journal of Engineering Mechanics–ASCE, Vol. 125, No. 11, 1999, pp. 1293-1297.

He, LH., Lim, CW, and Kitipornchai, S. (2000) A non discretized global model for free vibration of generally Laminated fibre reinforced pre twisted cantilever plates . Computational Mechanics, 197-207

Z.Q. Cheng, L.H. He, S. Kitipornchai, Influence of imperfect interfaces on bending and vibration of laminated composite shells, Int. J. Solids Struct. 37 (15) (2000) 2127-2150.

Liew K.M., He X.Q., Ng T.Y., Kitipornchai S.: Active control of FGM Shells subjected to temperature gradient via piezoelectric sensor/actuator patches. Int. J. Num. Meth. Engng. 55, 653–668 (2002)

Y. Xiang, Y. F. Ma, S. Kitipornchai, C. W. Lim and C. W. H. Lau, "Exact solutions for vibration of cylindrical shells with intermediate ring supports", International Journal of Mechanical Sciences, Vol. 44, No. 9, September 2002, pp. 1907-1924

Lim, C. W., Ma, Y. F., Kitipornchai, S., Wang, C. M., and Yuen, R. K. K. (2003). "Buckling of vertical cylindrical shells under combined end pressure and body force." ASCE J. Eng. Mech., 129(8), pp. 876–884

Liew, K. M., Yang, J., and Kitipornchai, S., 2003, "Postbuckling of Piezoelectric, FGM Plates Subject to Thermo-Electro-Mechanical Loading," Int. J. Solids Struct., 40, pp. 3869–3892.

Yang, J., Kitipornchai, S., and Liew, K. M., 2003, "Large Amplitude Vibration of Thermo-Electro-Mechanically Stressed, FGM Laminated Plates," Comput. Methods Appl. Mech. Eng., 192, pp. 3861–3885.

Liew, K. M., Kitipornchai, S., Zhang, X. Z., and Lim, C. W., 2003, "Analysis of the Thermal Stress Behaviour of Functionally Graded Hollow Circular Cylinders," Int. J. Solids Struct., 40, pp. 2355–2380

Liew, K. M., Yang, J., and Kitipornchai, S., 2004, "Thermal Post-Buckling of Laminated Plates Comprising Functionally Graded Materials with Temperature-Dependent Properties," ASME J. Appl. Mech., 71, pp. 839– 850 Liew K.M., He X.Q., Kitipornchai S.: Finite element method for the feedback control of FGM shells in frequency domain via piezoelectric sensors and actuators. Computer Methods in Applied Mechanics and Engineering 193(3–5), 257–273 (2004)

Yang J, Liew KM and Kitipornchai, S (2004), Dynamic stability of laminated FGM plates based on higher order shear deformation theory, Computational Mechanics, 33, 305-315

Kitipornchai, S., Yang, J., and Liew, K. M., 2004, "Semi-Analytical Solution for Nonlinear Vibration of Laminated, FGM Plates with Geometric Imperfections," Int. J. Solids Struct., 41, pp. 2235–2257.

Yang, J., Kitipornchai, S., and Liew, K. M., 2004, "Non-Linear Analysis of the Thermo-Electro-Mechanical Behaviour of Shear Deformable, FGM Plates With Piezoelectric Actuators," Int. J. Numer. Methods Eng., 59, pp. 1605–1632.

Kitipornchai, S, Kang, WJ, Lam, HF, Albermani, F. (2005), Factors affecting the design and construction of Lamella suspen-dome systems. Journal of Constructional Steel Research 61: 764-785.

He, XQ, Kitipornchai, S, Liew, KM. (2005) Buckling analysis of multi-walled carbon nanotubes: a continuum model accounting for van der Waals interaction. Journal of Mechanics and Physics of Solids 53, 303-326.

L. X. Peng, S. Kitipornchai, and K. M. Liew, Analysis of rectangular stiffened plates under uniform lateral load based on FSDT and element-free Galerkin method, _ International Journal of Mechanical Sciences, vol. 47, no. 2, pp. 251-276, 2005.

Y. Xiang, C.M. Wang, C.W. Lim and S. Kitipornchai, "Buckling of intermediate ring supported cylindrical shells under axial compression", Thin-Walled Structures, Vol. 43, No. 3, March 2005, pp. 427-443

Yang, J., Liew, K. M., and Kitipornchai, S., 2005, "Second-Order Statistics of the Elastic Buckling of Functionally Graded Rectangular Plates," Compos. Sci. Technol., 65, pp. 1165–1175.

X.Q. He, S. Kitipornchai and K.M. Liew, "Buckling analysis of multi-walled carbon nanotubes: a continuum model accounting for van der Waals interaction", Journal of the Mechanics and Physics of Solids, Vol. 53, No. 2, February 2005, pp. 303-326

X. Q. He, S. Kitipornchai, C. M. Wang and K. M. Liew, Modeling of van der Waals force for infinitesimal deformation of multi-walled carbon nanotubes treated as cylindrical shells, Int. J. Solids Stuct., 42 (2005) 6032–6047.

S. Kitipornchai, X. Q. He and K. M. Liew, Buckling analysis of triple-walled carbon nanotubes embedded in an elastic matrix, J. Appl. Phys., 2005, 97(11), 114318

Yang, J., Liew, K. M., and Kitipornchai, S., 2006, "Stochastic Analysis of Computationally Graded Plates With System Randomness Under Static Loading," Int. J. Solids Struct., 47, pp. 1519–1541

Yang, J., Liew, K. M., Wu, Y. F., and Kitipornchai, S., 2006, "Thermo-Mechanical Post-Buckling Of, FGM Cylindrical Panels With Temperature-Dependent Properties," Int. J. Solids Struct., 43, pp. 307–324

Kitipornchai, S., Yang, J., and Liew, K. M., 2006, "Random Vibration of the Functionally Graded Laminates in Thermal Environments," Comput. Methods Appl. Mech. Eng., 195, pp. 1075–1095.

Peng L. X, Kitipornchai S, Liew K. M. _Bending Analysis of Folded Plates by the FSDT Meshless Method. _ Thin-Walled Structures 44(2006): 1138-1160.

K. M. Liew, Y. Cheng, and S. Kitipornchai, Boundary element-free method (BEFM) and its application to twodimensional elasticity problems, _ International Journal for Numerical Methods in Engineering, vol. 65, no. 8, pp. 1310-1332, 2006.

K. Liew, L. Peng, and S. Kitipornchai, Buckling analysis of corrugated plates using a mesh-free Galerkin method based on the first-order shear deformation theory, _ Computational Mechanics, vol. 38, no. 1, pp. 61-75, 2006.

Liew KM, Peng LX, Kitipornchai S (2006) Buckling of folded plate structures subjected to partial in-plane edge loads by the FSDT meshfree Galerkin method. Int J Numer Methods Eng 65: 1495–1526

Peng LX, Liew KM, Kitipornchai S (2006) Buckling and free vibration analyses of stiffened plates using the FSDT mesh-free method. J Sound Vib 289: 421–449

Peng L. X, Kitipornchai S, Liew K. M., Bending Analysis of Folded Plates by the FSDT Meshless Method. Thin-Walled Structures 44(2006): 1138-1160.

Wang CM, Zhang YY, Ramesh SS, Kitipornchai S. Buckling analysis of micro- and nano-rods/tubes based on nonlocal Timoshenko beam theory. J Phys D Appl Phys 2006; 39: 3904–3909.

Yang J., Liew K.M., Kitipornchai S.: Imperfection sensitivity of the post-buckling behavior of higher-order shear deformable functionally graded plates. Int. J. Solids Struct. 43(17), 5247–5266 (2006)

L. X. Peng, K. M. Liew, and S. Kitipornchai, Analysis of stiffened corrugated plates based on the FSDT via the mesh-free method, International Journal of Mechanical Sciences, vol. 49, no. 3, pp. 364-378, 2007.

K. M. Liew, L. X. Peng, and S. Kitipornchai, Nonlinear analysis of corrugated plates using a FSDT and a meshfree method, _ Computer Methods in Applied Mechanics and Engineering, vol. 196, no. 21 _24, pp. 2358-2376, 2007.

Yang J., Jia X.L., Kitipornchai S.: Pull-in instability of nano-switches using nonlocal elasticity theory. J. Phys. D 41, 035103 (2008)

Liew K. M, Peng L. X, Kitipornchai S. "Analysis of Symmetrically Laminated Folded Plate Structures Using the Meshfree Galerkin Method." Mechanics of Advanced Materials and Structures 16 (2009): 69-81.

Yang J., Ke L.L., Kitipornchai S., 2010, Nonlinear free vibration of single-walled carbon nanotubes using nonlocal Timoshenko beam theory, Physica E, 42, 1727-1735

] Shen H.S, Yang J, Kitipornchai S. Postbuckling of internal pressure loaded FGM cylindrical shells surrounded by an elastic medium. European J Mech A/Solids, 29 (2010) 448 - 460.

Jinhua Yang, Jie Yang and Sritawat Kitipornchai, "Dynamic stability of piezoelectric laminated cylindrical shells with delamination", Journal of Intelligent Material Systems and Structures, May 2, 2013, DOI: 1045389X13486710