



**Professor Yi-Ming Fu**

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Engineering Mechanics

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### **Biography:**

Professor Yi-Ming Fu was born in August, 1945 in southern China. He obtained a bachelor degree of mechanical engineering in Hunan University in 1968. After that, he worked as a R&D engineer in the Great Wall Control Electric Co., LTD for 11 years. In 1981, He obtained a master degree of solid mechanics from the graduate school of Tongji University in Shanghai, China. From then on, he has been teaching and researching on solid mechanics at Hunan University for about 30 years. During this period, He was the department chair, for 18 years, of engineering mechanics of Hunan University and, he also did research in other universities, such as, the University of Calgary, Hong Kong University for over 4 years. Besides, he has been part of the editorial board of many journals including Acta Mechanica Sinica, Applied Mathematics and Mechanics, Chinese Journal of Applied Mechanics, Journal of Vibration and Shock, etc. His research interest is mainly on the elasto-plastic theory, damage mechanics, structural nonlinear dynamics, and composite structures. He has authored eight monographs and textbooks as well as more than 250 refereed journal articles in those fields.

### **Selected Publications:**

**BOOK:** Yi-Ming Fu, Nonlinear Analyses of Laminated Plates and Shells with Damage, WIT Press (Series: Chinese Science Today, Computational Mechanics), 2013, 780 pages

### **Journal papers:**

Fu, Y.M. and Chia, C.Y. (1993). Non-Linear Vibration and Postbuckling of Generally Laminated Circular Cylindrical Thick Shells with Non-Uniform Boundary Conditions. *Nonlinear Dynamics*, 28(3):313–327.

Cheung, Y. K. and Fu, Y. M. (1995). Nonlinear Static and Dynamic Analysis for Laminated, Annular, and Spherical Caps of Moderate Thickness. *Nonlinear Dynamics*, 8:251–268

Cai, Z., Fu, Y., 2000. Exact and asymptotic stability analyses of a coated elastic half-space. *Int. J. Solids Struct.* 37, 3101–3119.

Fan Peng and Yi-ming Fu, “The dynamic stability of viscoelastic cylindrical shell under axial constant load”, *Engineering Mechanics*, Vol. 19, No. 6, pp 49-53, 2002

Fu, Y.M., Li, P.G., Zheng, Y.F.: Creep postbuckling of the viscoelastic plates with matrix transverse cracks. *Acta. Mech. Sin.* 37(1), 32–39 (2005)

Zheng, Y.F., Fu, Y.M.: Effect of damage on nonlinear dynamic properties of viscoelastic rectangular plates. *Appl. Math. Mech.* 26(3), 319–326 (2005)

Fu, Y.M., Wang, X.Q.: Nonlinear dynamic response of piezoelectric plates considering damage effects. *Key Eng. Mater.* 324–325, 299–302 (2006)

Fu, Y.M., Hong, J.W., Wang, X.Q.: Analysis of nonlinear vibration for embedded carbon nanotubes. *J. Sound Vib.* 296, 746–756 (2006)

Jin-hua Yang, Yi-ming Fu and Yong Wang, “Analysis of nonlinear dynamic response for axisymmetrical delaminated laminated cylindrical shell under considering the effect of contact”, *Engineering Mechanics*, Vol. 23, No. 3, pp 69-75, 2006

Jinhua Yang and Yiming Fu, “Analysis of energy release rate for composite delaminated cylindrical shells subjected to axial compression”, *Acta Mechanica Sinica*, Vol. 22, No. 6, September 2006, pp. 537-546

Jinhua Yang, Yiming Fu and Xianqiao Wang, “Variational analysis of delamination growth for composite laminated cylindrical shells under circumferential concentrated load”, *Composites Science and Technology*, Vol. 67, Nos. 3-4, March 2007, pp. 541-550

Hong Xiang, Yi-ming Fu and Yong-hong Lu, “Post-buckling analysis of orthotropic plate considering damage”, *Journal of Hunan University (Natural Sciences)*, 2007-09

Fan Peng, YiMing Fu and YiFan Liu, “On the durable critical load in creep buckling of viscoelastic laminated plates and circular cylindrical shells”, *Science in China Series G: Physics Mechanics and Astronomy*, Vol. 51, No. 7, 2008, pp. 873-882

Yiming Fu, Zhengqiang Gao, Fuhui Zhu, “Analysis of nonlinear dynamic response and dynamic buckling for laminated shallow spherical thick shells with damage”, *Nonlinear Dynamics*, Vol. 54, No. 43, pp 333-343, 2008

Yiming Fu and Pu Zhang, “Buckling and vibration of core–shell nanowires with weak interfaces”, *Mechanics Research Communications*, Vol. 37, No. 7, October 2010, pp. 622-626

Y. Fu, Y. Mao and Y. Tian, Damage Analysis and Dynamic Response of Elasto-Plastic Laminated Composite Shallow Spherical Shell Under Low Velocity Impact, *International Journal of Solids and Structures*, Vol. 47, 2010, pp. 126–137.

Pu Zhang and Yiming Fu, “Torsional buckling of elastic cylinders with hard coatings”, *Acta Mechanica*, Vol. 220, No. 1, pp 275-287, August 2011

Yiming Fu and Jin Zhang (College of Mechanical and Vehicle Engineering, Hunan University, P.R. China), “Buckling of yeast modeled as viscoelastic shells with transverse shearing”, *Archive of Applied Mechanics*, Vol. 82, No. 1, pp. 69-77, January 2012, Springer-Verlag

Ying-Li Li, Yi-Ming Fu and Hong-Liang Dai, “Postbuckling and delamination growth for delaminated piezoelectric elastoplastic laminated beams under hygrothermal conditions”, *Journal of Mechanics of Materials and Structures*, Vol. 7, No. 1, 2012

Jun Zhong, Yiming Fu and Chang Tao, “Linear free vibration in pre/post-buckled states and nonlinear dynamic stability of lipid tubules based on nonlocal beam model”, *Meccanica*, November 2015

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