

Figure 5: Illustration for the coupled conical-cylindrical shell

From: Fuzhen Pang, Chuang Wu, Hongbao Song and Haichao Li, "The free vibration characteristics of isotropic coupled conical-cylindrical shells based on the precise integration transfer matrix method", *Curved and Layered Structures*, Vol. 4, pp 272-287, 2017

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See:

https://www.researchgate.net/scientific-contributions/79529058_Fuzhen_Pang

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Selected Publications:

X. Yao, D. Tang, F. Pang, and S. Li, "Exact free vibration analysis of open circular cylindrical shells by the method of reverberation ray matrix," *Journal of Zhejiang University Science A: Applied Physics & Engineering*, vol. 1, no. 1, 1998.

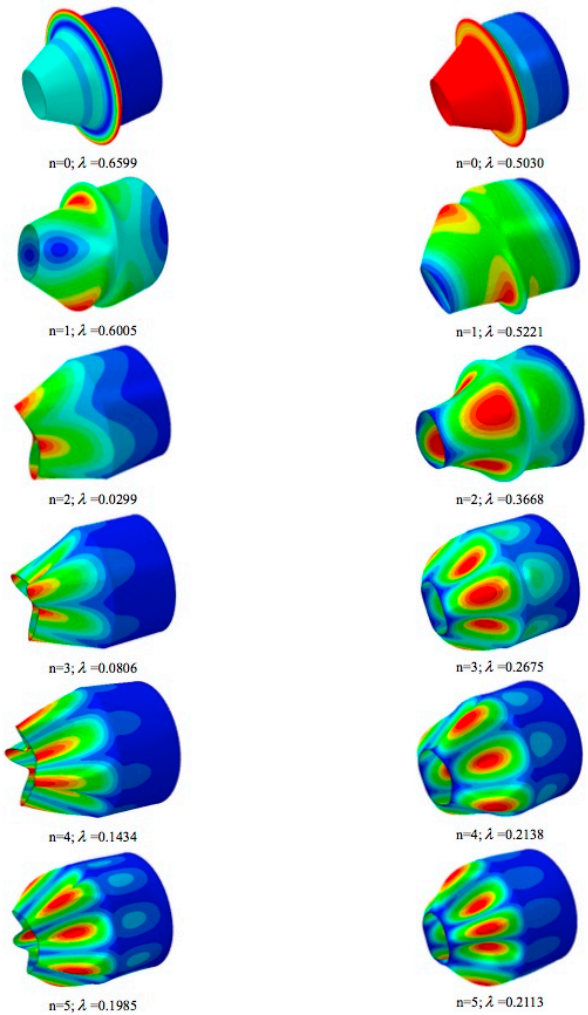


Figure 7: $m=1, n=0:5$ modal shape in F-S condition

Figure 8: $m=1, n=0:5$ modal shape in S-C condition

Dongyan Shi, Qingshan Wang, Xianjie Shi and Fuzhen Pang, "Free vibration analysis of moderately thick rectangular plates with variable thickness and arbitrary boundary conditions", *Shock and Vibration*, Vol. 2014, Article ID 572395, 23 pages

D. Shi, Q. Wang, X. Shi, and F. Pang, "An accurate solution method for the vibration analysis of Timoshenko beams with general elastic supports," *Proceedings of the Institution of Mechanical Engineers Part C: Journal of Mechanical Engineering Science*, vol. 229, no. 13, pp. 2327–2340, 2014.

D. Shi, Q. Wang, X. Shi, and F. Pang, "A series solution for the in-plane vibration analysis of orthotropic rectangular plates with non-uniform elastic boundary constraints and internal line supports," *Archive of Applied Mechanics*, vol. 85, no. 1, pp. 51–73, 2015.

Dongyan Shi, Yunke Zhao, Qingshan Wang, Xiaoyan Teng and Fuzhen Pang, "A unified spectro-geometric-Ritz method for vibration analysis of open and closed shells with arbitrary boundary conditions", *Shock and Vibration*, Vol. 2016, Article ID 4097123, 30 pages

Qingshan Wang, Dongyan Shi, Fuzhen Pang and Qian Liang, "Vibrations of composite laminated circular panels and shells of revolution with general elastic boundary conditions via Fourier-Ritz method", *Curved and Layered Structures*, Vol. 3, No. 1, pp 105-136, April 2016

D. Shao, F. Hu, Q. Wang, F. Pang, and S. Hu, "Transient response analysis of cross-ply composite laminated rectangular plates with general boundary restraints by the method of reverberation ray matrix," *Composite Structures*, vol. 152, pp. 168–182, 2016.

D. Shao, S. Hu, Q. Wang, and F. Pang, "A unified analysis for the transient response of composite laminated curved beam with arbitrary lamination schemes and general boundary restraints," *Composite Structures*, vol. 154, pp. 507–526, 2016.

Fuzhen Pang, Haichao Li, Kwangnam Choe, Dongyan Shi and Kwanghun Kim, "Free and forced vibration analysis of airtight cylindrical vessels with doubly curved shells of revolution by using Jacobi-Ritz method", *Shock and Vibration*, Article ID 4538540, Vol. 2017

D. Shao, S. Hu, Q. Wang, and F. Pang, "An enhanced reverberation-ray matrix approach for transient response analysis of composite laminated shallow shells with general boundary conditions," *Composite Structures*, vol. 162, pp. 133–155, 2017.

D. Shao, S. Hu, Q. Wang, and F. Pang, "Free vibration of refined higher-order shear deformation composite laminated beams with general boundary conditions," *Composites Part B: Engineering*, vol. 108, pp. 75–90, 2017.

F. Pang, H. Li, X. Miao, and X. Wang. A modified Fourier solution for vibration analysis of moderately thick laminated annular sector plates with general boundary conditions, internal radial line and circumferential arc supports. *Curved and Layered Structures*, 4(1):189-220, 2017.

Qingshan Wang, Dongyan Shi, Qian Liang and Fuzhen Pang, "Free vibrations of composite laminated doubly-curved shells and panels of revolution with general elastic restraints", *Applied Mathematical Modelling*, Vol. 46, pp 227-262, June 2017

Fuzhen Pang, Chuang Wu, Hongbao Song and Haichao Li, "The free vibration characteristics of isotropic coupled conical-cylindrical shells based on the precise integration transfer matrix method", *Curved and Layered Structures*, Vol. 4, pp 272-287, 2017

Z. Shi, X. Yao, F. Pang, Q. Wang, A semi-analytical solution for in-plane free vibration analysis of functionally graded carbon nanotube reinforced composite circular arches with elastic restraints, *Compos Struct*, 182 (2017), pp. 420-434

Q. Wang, D. Shi, F. Pang, and F. Ahad, "Benchmark solution for free vibration of thick open cylindrical shells on Pasternak foundation with general boundary conditions," *Meccanica. International Journal of eoretical and Applied Mechanics*, vol. 52, no. 1-2, pp. 457–482, 2017.

Qingshan Wang, Dongyan Shi, Qian Liang and Fuzhen Pang, "Free vibration of four-parameter functionally graded moderately thick doubly-curved panels and shells of revolution with general boundary conditions", *Applied Mathematical Modelling*, Vol. 42, pp 705-734, February 2017

Qingshan Wang, Dongyan Shi, Qian Liang and Fuzhen Pang, "A unified solution for vibration analysis of moderately thick, functionally graded rectangular plates with general boundary restraints and internal line supports", *Mechanics of Advanced Materials and Structures*, Vol. 24, No. 11, pp 943-961, 2017

Q. Wang, F. Pang, B. Qin, and Q. Liang, "A unified formulation for free vibration of functionally graded carbon nanotube reinforced composite spherical panels and shells of revolution with general elastic restraints by means of the Rayleigh-Ritz method," *Polymer Composites*, 2017.

H. Li, F. Pang, X. Wang, and S. Li, "Benchmark Solution for Free Vibration of Moderately Thick Functionally Graded Sandwich Sector Plates on Two-Parameter Elastic Foundation with General Boundary Conditions," *Shock and Vibration*, vol. 2017, Article ID 4018629, 35 pages, 2017.

L. Li, H. Li, F. Pang, X. Wang, Y. Du, and S. Li, "The modified Fourier-Ritz approach for the free vibration of functionally graded cylindrical, conical, spherical panels and shells of revolution with general boundary condition," *Mathematical Problems in Engineering*, Art. ID 9183924, 32 pages, 2017.

Pang F., Li H., Du Y., Shan Y., Ji F., Free vibration of functionally graded carbon nanotube reinforced composite annular sector plate with general boundary supports, *Curved and Layered Structures*, 2018, 5, 49-67

H. Li, F. Pang, X. Miao, Y. Du, and H. Tian, "A semi-analytical method for vibration analysis of stepped doubly-curved shells of revolution with arbitrary boundary conditions," *Thin-Walled Structures*, vol. 129, pp. 125–144, 2018.

Haichao Li, Ning Liu, Fuzhen Pang, Yuan Du and Shuo Li, "An accurate solution method for the static and vibration analysis of functionally graded Reissner-Mindlin rectangular plate with general boundary conditions", *Shock and Vibration*, Article ID 4535871, Vol. 2018

Fuzhen Pang, Haichao Li, Yuan Du, Shuo Li, Hailong Chen and Ning Liu, "A series solution for the vibration of Mindlin rectangular plates with elastic point supports around the edges", *Shock and Vibration*, Article ID 8562079, Vol. 2018

F. Pang et al., "A semi analytical method for the free vibration of doubly-curved shells of revolution," *Computers & Mathematics with Applications*, vol. 75, no. 9, pp. 3249–3268, 2018.

Haichao Li, Fuzhen Pang, Xuhong Miao, Shengyao Gao and Feng Liu, "A semi analytical method for free vibration of composite laminated cylindrical and spherical shells with complex boundary conditions", *Thin-Walled Structures*, Vol. 136, pp 200-220, March 2019