

a. Tree cross-section¹

b. Skin²

Fig. 1. 1: FGMs in nature.

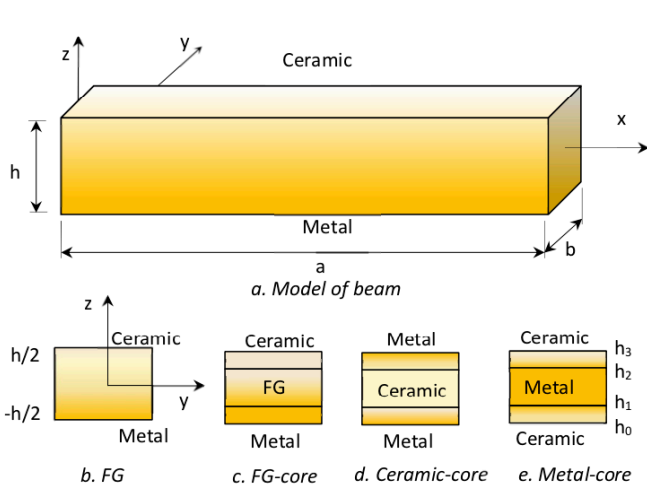


Fig. 1. 2: Geometries, co-ordinates and cross-sections of FG-sandwich beams

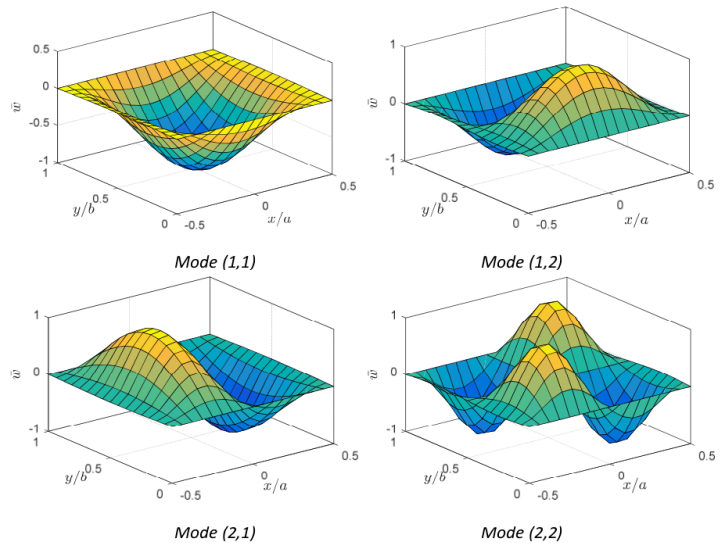


Fig. 5. 15: The first four mode shapes of SCSC FG microplates ($a/h=10$, $h/l=2$).

The images above are from: Luan Cong Trinh, “Behaviours of functionally graded sandwich micro-beams and plates”, Ph.D. dissertation, Dept. of Engineering and Environment, University of Northumbria at Newcastle, UK, October 2017

Dr. Luan Cong Trinh

Perhaps with:
Ho Chi Minh University of Technology

Formerly with:
Dept. of Engineering and Environment, University of Northumbria, Newcastle, UK

Selected Publications:

PhD thesis:

Luan Cong Trinh, "Behaviours of functionally graded sandwich micro-beams and plates", Ph.D. dissertation, Dept. of Engineering and Environment, University of Northumbria at Newcastle, UK, October 2017

Peer-reviewed papers:

Trinh LC, Vo TP, Thai H-T, Trung-Kien Nguyen. Size-dependent vibration of bi-directional functionally graded microbeams with arbitrary boundary conditions. *Composites Part B: Engineering* 2017, In press.

Trinh LC, Vo TP, Thai H-T, Mantari JL. Size-dependent behaviour of functionally graded sandwich microplates under mechanical and thermal loads. *Composites Part B: Engineering* 2017; 124:218-41.

Trinh LC, Vo TP, Thai H-T, Nguyen T-K. An analytical method for the vibration and buckling of functionally graded beams under mechanical and thermal loads. *Composites Part B: Engineering* 2016; 100:152-63.

Trinh LC, Nguyen HX, Vo TP, Nguyen T-K. Size-dependent behaviour of functionally graded microbeams using various shear deformation theories based on the modified couple stress theory. *Composite Structures* 2016; 154:556-72.

Trinh LC, Vo TP, Osofero AI, Lee J. Fundamental frequency analysis of functionally graded sandwich beams based on the state space approach. *Composite Structures* 2016; 156:263-75.

Conference Presentations:

Trinh LC, Vo TP. Size-dependent vibration and buckling behaviours of functionally graded plates using a Levy-type solution. 20th International conference on Composite Structures, 4-7 September 2017, Paris, France.

Trinh LC, Vo TP. Vibration and Buckling behaviours of functionally graded microbeams based on a state space approach. 3rd International Conference on Mechanics of Composites, 4-7 July 2017, Bologna, Italy.

Trinh LC, Vo TP. Analytical solution for thermal buckling analysis of functionally graded sandwich beams. *Vibrations and Buckling*, 7-9 March 2016, Porto, Portugal.

Trinh LC, Osofero AI, Vo TP, Nguyen T-K. Free vibration analysis of functionally graded Euler-Bernoulli and Timoshenko beams using Levy-type solution. 2nd International Conference on Agriculture, Biotechnology, Science and Engineering, 28-29 August 2015, Ho Chi Minh City, Vietnam.

Trinh LC, Vo TP. Levy-type solution for vibration and buckling analysis of functionally graded sandwich plates based on quasi-3D theory. 18th International conference on Composite Structures, 15-18 June 2015, Lisbon, Portugal.