



Professor Thuc P. Vo

See:

- <https://www.northumbria.ac.uk/about-us/our-staff/v/dr-thuc-vo/>
- https://www.researchgate.net/profile/Thuc_Vo
- https://scholar.google.com/citations?user=1NE_wEoAAAAJ&hl=en

Department of Mechanical and Construction Engineering
Northumbria University, Newcastle, UK

Biography:

Dr Vo joined Northumbria University as a lecturer in Civil Engineering in 8/2013 after being with Airbus' Advanced Composite Training and Development Centre and Glyndŵr University as Lecturer (11/2011 – 8/2013). Prior to that, he worked as a Research Associate at University of Liverpool (6/2010 – 10/2011) and as a lecturer at University of Technical Education Ho Chi Minh City, Vietnam (11/2002 – 8/2005).

Research Interests:

Dr Vo's most recent efforts have been devoted towards the development of refined shear deformation theories to investigate static, vibration and buckling responses of composite structures (laminate, functionally graded material and sandwich). Besides, he has published several papers dealing with finite element analysis to understand the behavior of thin-walled composite structures. He has also implemented a user material subroutine (VUMAT) in ABAQUS/Explicit to model blast response of Fiber-Metal Laminates.

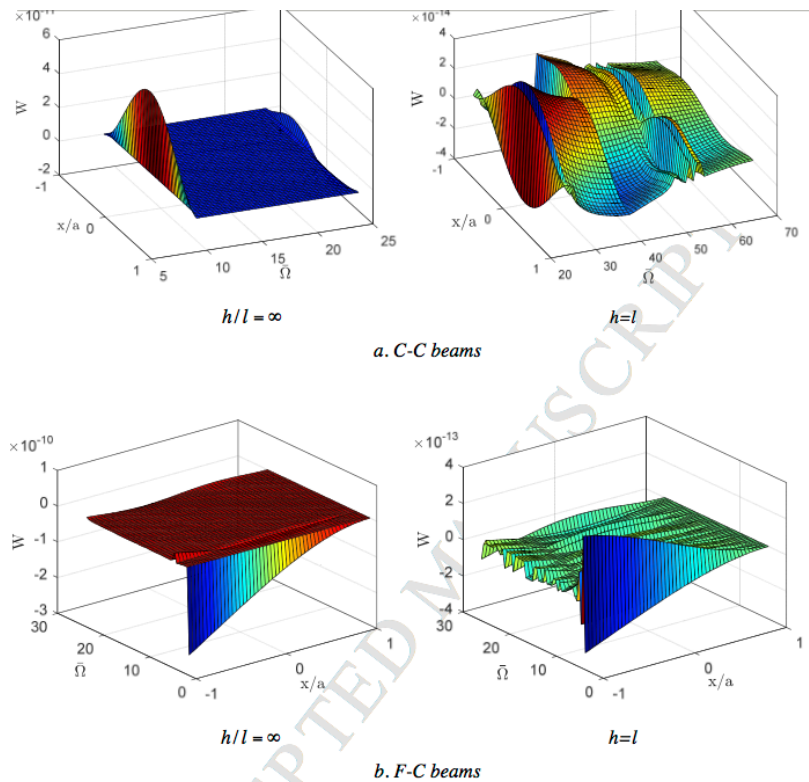


Fig. 5: Variation of mode shapes with respect to the frequencies $\bar{\Omega}$ (SiC/Al beams, $a/h = 10$, $n_z = 2$).

From: Trinh LC, Vo TP, Thai H-T, Nguyen T-K, Size-dependent vibration of bi-directional functionally graded microbeams with arbitrary boundary conditions, Composites Part B (2017), doi: 10.1016/j.compositesb.2017.09.054

Selected Publications:

- Vo, T.P. and Lee, J. Flexural-torsional behavior of thin-walled closed-section composite box beams. *Engineering Structures* 2007; 29(8):1774-1782.
- Vo, T.P. and Lee, J. Flexural-torsional behavior of thin-walled composite box beams using shear-deformable beam theory. *Engineering Structures* 2008;30(7):1958-1968.
- Vo, T.P., Guan, Z.W., Cantwell, W.J. and Schleyer, G.K. Low-impulse blast behaviour of fibre-metal laminates. *Composite Structures* 2012; 94(3): 954-965.
- Vo, T.P. and Thai, H-T. Static behavior of composite beams using various refined shear deformation theories. *Composite Structures* 2012; 94(8): 2513-2522.
- Thai, H-T. and Vo, T.P. Bending and free vibration of functionally graded beams using various higher-order shear deformation beam theories, *International Journal of Mechanical Sciences* 2012; 62(1):57-66.
- Thai, H-T. and Vo, T.P. A size-dependent functionally graded sinusoidal plate model based on a modified couple stress theory, *Composite Structures* 2013; 96:376-383.
- Nguyen, T-K., Vo, T.P. and Thai, H-T. Static and free vibration of axially loaded functionally graded beams based on the first-order shear deformation theory. *Composites Part B: Engineering* 2013, 55:147–157.
- Thuc P. Vo, Huu-Tai Thai, Trung-Kien Nguyen, Alireza Maheri and Jaehong Lee, “Finite element model for vibration and buckling of functionally graded sandwich beams based on a refined shear deformation theory”, *Engineering Structures*, Vol. 64, pp 12-22, April 2014
- Van-Hau Nguyen, Trung-Kien Nguyen, Nuu-Tai Thai and Thuc P. Vo, “A new inverse trigonometric shear deformation theory for isotropic and functionally graded sandwich plates”, *Composites Part B: Engineering*, Vol. 66, pp 233-246, November 2014
- Trung-Kien Nguyen, T. Truong-Phong Nguyen, Thuc P. Vo and Huu-Tai Thai, “Vibration and buckling analysis of functionally graded sandwich beams by a new higher-order shear deformation theory”, *Composites Part B: Engineering*, Vol. 76, pp 273-285, July 2015
- Hoang X. Nguyen, Jaehong Lee, Thuc P. Vo and Domagoj Lanc, “Vibration and lateral buckling optimization of thin-walled laminated composite channel-section beams”, *Composite Structures*, Vol. 143, pp 84-92, May 2016
- Domagoj Lanc, Goran Turkalj, Thuc P. Vo and Josip Brnic, “Nonlinear buckling behaviours of thin-walled functionally graded open section beams”, *Composite Structures*, Vol. 152, pp 829-839, September 2016
- Trinh LC, Vo TP, Thai H-T, Nguyen T-K, Size-dependent vibration of bi- directional functionally graded microbeams with arbitrary boundary conditions, *Composites Part B* (2017), doi: 10.1016/j.compositesb.2017.09.054
- Trung-Kien Nguyen, Van-Hau Nguyen, Thanh Chau-Dinh, Thuc P. Vo and H. Nguyen-Xuan, “Static and vibration analysis of isotropic and functionally graded sandwich plates using an edge-based MITC3 finite elements”, *Composites Part B: Engineering*, Vol. 107, pp 162-173, December 2016
- Luan C. Trinh, Thuc P. Vo, Huu-Tai Thai and J.L. Mantari, “Size-dependent behaviour of functionally graded sandwich microplates under mechanical and thermal loads”, *Composites Part B: Engineering*, Vol. 124, pp 218-241, September 2017
- Trung-Kien Nguyen, Ba-Duy Nguyen, Thuc P. Vo and Huu-Tai Tha, “Hygro-thermal effects on vibration and thermal buckling behaviours of functionally graded beams”, *Composite Structures*, Vol. 176, pp 1050-1060, September 2017
- Kuu-Tai Thai, Thuc P. Vo, Trung-Kien Nguyen and Seung-Eock Kim, “A review of continuum mechanics models for size-dependent analysis of beams and plates”, *Composite Structures*, Vol. 177, pp 196-219, October 2017

Son Thai, Huu-Tai Thai, Thuc P. Vo and Vipulkumar Ishvarbhai Patel, “Size-dependant behaviour of functionally graded microplates based on the modified strain gradient elasticity theory and isogeometric analysis”, *Computers & Structures*, Vol. 190, pp 219-241, October 2017

Son Thai, Huu-Tai Thai, Thuc P. Vo and J.N. Reddy, “Post-buckling of functionally graded microplates under mechanical and thermal loads using isogeometric analysis”, *Engineering Structures*, Vol. 150, pp 905-917, November 2017

Hoang X. Nguyen, Elena Atroshchenko, H. Nguyen-Xuan and Thuc P. Vo, “Geometrically nonlinear isogeometric analysis of functionally graded microplates with the modified couple stress theory”, *Computers & Structures*, Vol. 193, pp 110-127, December 2017