



Dr. Trung Vo-Duy

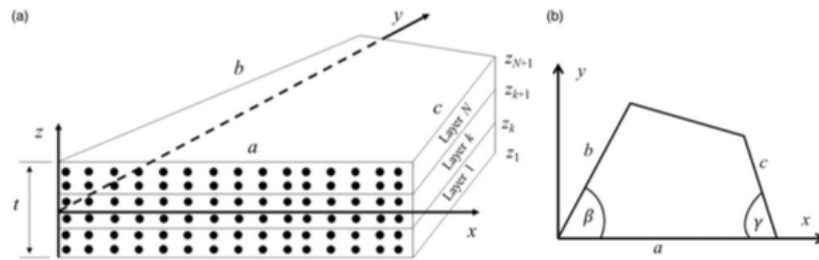


Figure 1. Configuration of carbon nanotube reinforced composite plates: (a) a quadrilateral laminated UD-CNT-reinforced composite plate in a global coordinate system $Oxyz$; (b) the sketch of the plate in the mid-plane. CNT: carbon nanotube.

From: T. Vo-Duy, T. Truong-Thi, V. Ho-Huu and T. Nguyen-Thoi, "Frequency optimization of laminated functionally graded carbon nanotube reinforced composite quadrilateral plates using smoothed FEM and evolution algorithm", *Journal of Composite Materials*, Vol. 52, No. 14, June 2018

See:

<https://scholar.google.com/citations?user=i42M5wwAAAAJ&hl=en>

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Research Interests:

My current research interests are numerical methods, metaheuristic optimization techniques, composite materials and smart materials, damage identification methods and machine learning.

Selected Publications:

Nguyen-Minh, N., Nguyen-Thoi, T., Bui-Xuan, T. and Vo-Duy, T. [2015] "Static and free vibration analyses of stiffened folded plates using a cell-based smoothed discrete shear gap method (CS-FEM-DSG3)," *Appl. Math. Comput.* 266, 212–234.

Nguyen-Thoi, T., Nguyen-Thoi, M. H., Vo-Duy, T. and Nguyen-Minh, N. [2015b] "Development of the cell-based smoothed discrete shear gap plate element (CS-FEM-DSG3) using three-node triangles," *Int. J. Comput. Methods* 12, 1540015.

Vo-Duy, T., Ho-Huu, V., Dang-Trung, H. and Nguyen-Thoi, T. [2016] "A two-step approach for damage detection in laminated composite structures using modal strain energy method and an improved differential evolution algorithm," *Compos. Struct.* 147, 42–53

Ho-Huu V, Vo-Duy T, Nguyen-Thoi T, et al. Optimization of truss structures with reliability-based frequency constraints under uncertainties of loadings and material properties. In: *Applied mathematics in engineering and reliability*. Ho Chi Minh City, Vietnam, 2016, CRC Press, pp. 59–65.

Ho-Huu V, Nguyen-Thoi T, Vo-Duy T, Nguyen-Trang T. An adaptive elitist differential evolution for truss optimization with discrete variables. *Comput Struct* 2016;165:59–75

Ho-Huu, V., Do-Thi, T. D., Dang-Trung, H., Vo-Duy, T. and Nguyen-Thoi, T. [2016] "Optimization of laminated composite plates for maximizing buckling load using improved differential evolution and smoothed finite element method," *Compos. Struct.* 146, 132–147.

T. Nguyen-Thoi, T. Rabczuk, V. Ho-Huu, L. Le-Anh, H. Dang-Trung and T. Vo-Duy, “An extended cell-based smoothed three-node Mindlin plate element (XCS-MIN3) for free vibration analysis of cracked FGM plates”, *International Journal of Computational Methods*, Vol. 14, No. 1, 1750011 (26 pages) 2017

Vo-Duy, T., Ho-Huu, V., Do-Thi, T. D., Dang-Trung, H. and Nguyen-Thoi, T. [2017] “A global numerical approach for lightweight design optimization of laminated composite plates subjected to frequency constraints,” *Compos. Struct.* 159, 646–655.

T. Nguyen-Thoi, T. Bui-Xuan, G.R. Liu and T. Vo-Duy, “Static and free vibration analysis of stiffened flat shells by a cell-based smoothed discrete shear gap method (CS-FEM-DSG3) using three-node triangular elements”, *International Journal of Computational Methods*, Vol. 14, No. 2, 1850056 (20 pages), 2018

K. Nguyen-Quang, T. Vo-Duy, H. Dang-Trung and T. Nguyen-Thoi, “An isogeometric approach for dynamic response of laminated FG-CNT reinforced composite plates integrated with piezoelectric layers”, *Computer Methods in Applied Mechanics and Engineering*, Vol. 332, pp 25-46, April 2018

T. Vo-Duy, T. Truong-Thi, V. Ho-Huu and T. Nguyen-Thoi, “Frequency optimization of laminated functionally graded carbon nanotube reinforced composite quadrilateral plates using smoothed FEM and evolution algorithm”, *Journal of Composite Materials*, Vol. 52, No. 14, June 2018