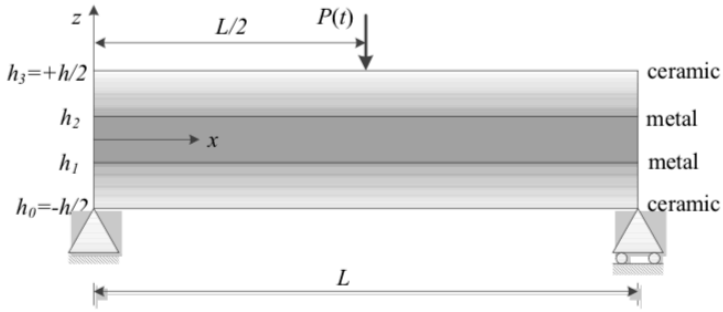
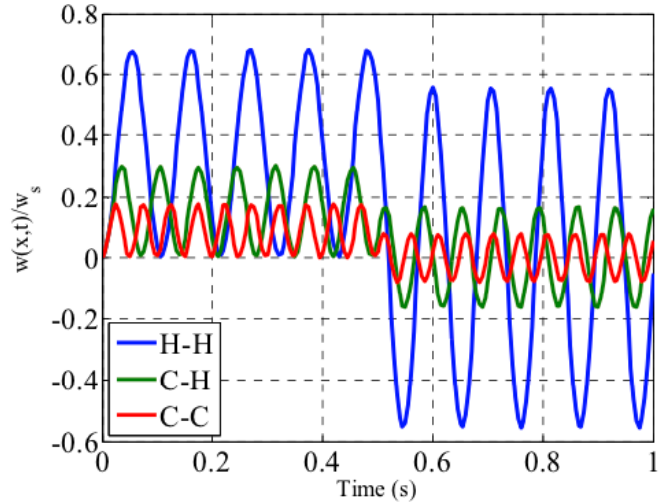


# Professor Nuttawit Wattanasakulpong

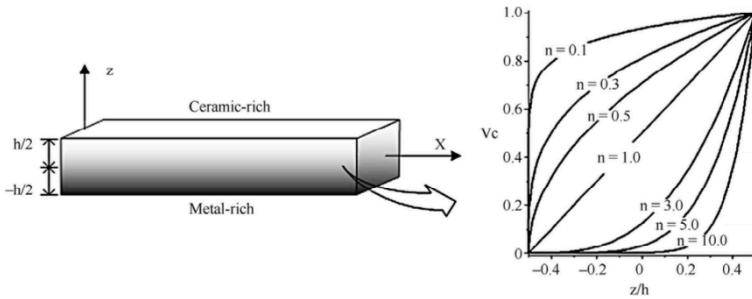


**Fig. 1** Geometry and coordinate of FG sandwich beam.

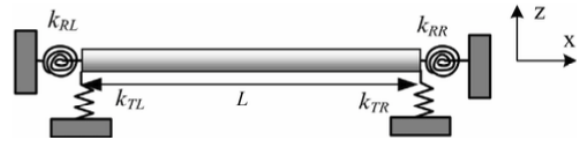
**The images above are from:** Wachirawit Songsuwan, Monsak Pimsarn and Nuttawit Wattanasakulpong, “A study on dynamic response of functionally graded sandwich beams under different dynamic loadings”, MATEC Web of Conferences, Vol. 192, 01011, 2018 (ICEAST2018)



**Fig. 5** Dynamic deflections of FG sandwich beams with  $n=0.5$  under Heaviside step loading: Effect of boundary condition.



**Figure 1.** Geometry of a functionally graded beam and volume fraction profile.



**Figure 2.** Geometry of FG beam with E-E boundary condition.

**The images above are from:** Nuttawit Wattanasakulpong and Variddhi Ungbhakorn, “Free vibration analysis of functionally graded beams with general elastically end constraints by DTM”, World Journal of Mechanics, Vol. 2, pp 297-310, 2012

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