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Selected Publications:

- K. Sepahvand, S. Marburg, H.-J. Hardtke, Uncertainty quantification in stochastic systems using polynomial chaos expansion, *Int J Appl Mech*, 02 (02) (2010), pp. 305-353
- Steffen Marburg and Robert Anderssohn, "Fluid structure interaction and admittance boundary conditions: Setup of an analytical example", *Journal of Computational Acoustics*, Vol. 19, No. 1, pp 63-74, 2011
- K. Sepahvand, S. Marburg, and H.-J. Hardtke, "Stochastic structural modal analysis involving uncertain parameters using generalized polynomial chaos expansion," *International Journal of Applied Mechanics*, vol. 3, no. 3, pp. 587–606, 2011.
- K. Sepahvand, S. Marburg and H.-J. Hardtke, "Stochastic free vibration of orthotropic plates using generalized polynomial chaos expansion", *Journal of Sound and Vibration*, Vol. 331, No. 1, pp 167-179, January 2012
- K. Sepahvand, S. Marburg: On construction of uncertain material parameter using generalized polynomial chaos expansion from experimental data. *Procedia IUTAM* 6 (2013) 4–17.
- S. Saha, K. Sepahvand, V. Matsagar, A. Jain, S. Marburg, Stochastic analysis of base-isolated liquid storage tanks with uncertain isolator parameters under random excitation, *Eng Struct*, 57 (2013), pp. 465-474
- K. Sepahvand, S. Marburg: Identification of composite uncertain material parameters from experimental modal data. *Probabilistic Engineering Mechanics* 37 (2014) 148–153.
- K. Sepahvand, S. Marburg, Stochastic dynamic analysis of structures with spatially uncertain material parameters, *Int J Struct Stab Dyn*, 14 (08) (2014), p. 1440029

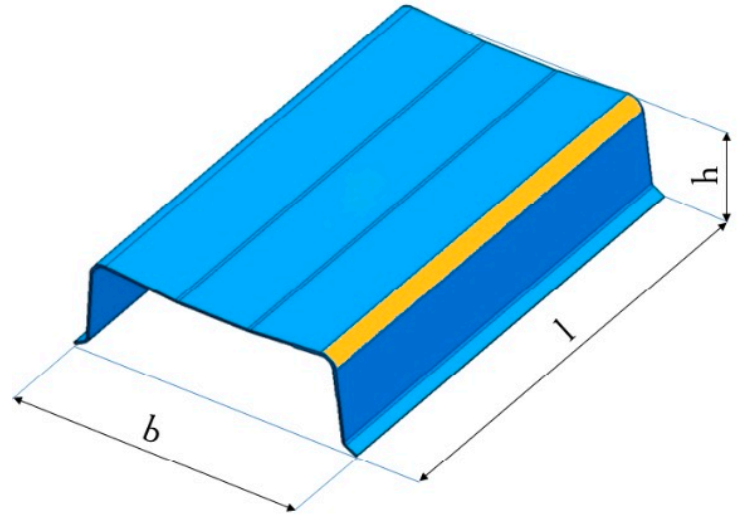


Figure 1 – Geometry of the samples

From: C.A. Geweth, F. Saati Khosroshahi, K. Sepahvand, C. Kerkeling and S. Marburg, "Non-destructive testing due to analysis of natural frequencies of multilayer fibre-reinforced composites", *Inter.noise*, Hamburg 2016

P. Langer, K. Sepahvand, M. Krause and S. Marburg, "Experimentally uncertainty quantification in numerical and analytical beam models", Inter.noise 2014 Conference, Melbourne Australia 16-19 November 2014

P. Langer, K. Sepahvand and S. Marburg, "Uncertainty quantification in numerical and experimental models of structural vibration problems", Inter.noise 2015, 9-12 August 2015, San Francisco, California USA

C.A. Geweth, F. Saati Khosroshahi, K. Sepahvand, C. Kerkeling and S. Marburg, "Non-destructive testing due to analysis of natural frequencies of multilayer fibre-reinforced composites", Inter.noise, Hamburg 2016

K. Sepahvand, S. Marburg, Random and stochastic structural acoustic analysis, John Wiley & Sons, New York, USA (2016), Ch. 10, pp. 305–338

Sandip Kumar Saha, Kian Sepahvand, Vasant A. Matsagar, Arvind K. Jain and Steffen Marburg, "Fragility analysis of base-isolated liquid storage tanks under random sinusoidal base excitation using generalized polynomial chaos expansion-based simulation", ASCE Journal of Structural Engineering, Vol. 142, No. 10, October 2016

K. Sepahvand, Ch. A. Geweth, F. Saati, M. Klaerner, L. Kroll and S. Marburg, "Spectral representation of uncertainty in experimental vibration modal data", Advances in Acoustic and Vibration, Vol. 2018, Article ID 9695357, 2018

S. Chandra, K. Sepahvand, V.A. Matsagar and S. Marburg, "Stochastic dynamic analysis of composite plate with random temperature increment", Composite Structures, Vol. 226, Article 111159, 15 October 2019

S. Chandra, K. Sepahvand, C.A. Geweth, F. Saati and S. Marburg, "Stochastic non-parametric identification in composite structures using experimental modal data", ECCOMAS Procedia UNCECOMP, pp 543-554, 2019