



Professor Seyed Mahmoud Hosseini

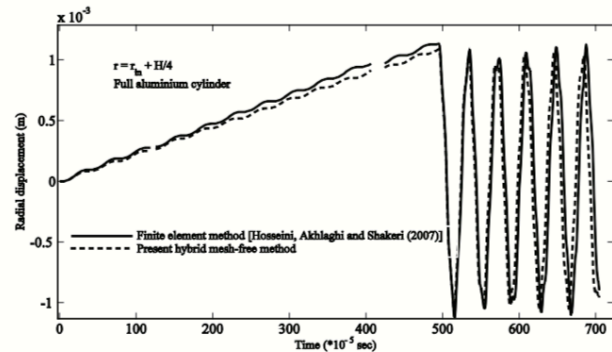


Figure 4: The comparison between obtained results from presented mesh-free method and those from finite element method by Hosseini et al. [Hosseini, Akhlaghi and Shakeri (2007)]

From: Hosseini, S.M., Application of a hybrid mesh-free method based on generalized finite difference (GFD) method for natural frequency analysis of functionally graded nanocomposite cylinders reinforced by carbon nanotubes. CMES - Computer Modeling in Engineering and Sciences, 2013. 95(1): p. 1-29.

See:

<https://scholar.google.com/citations?user=ahMdyv4AAAAJ&hl=en>

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Selected Publications:

Shakeri, M., M. Akhlaghi and S.M. Hosseini, 2006. "Vibration and Radial Wave Propagation Velocity in Functionally Graded Thick Hollow Cylinder", *Composite Structures*, 76(1-2): 174-181.

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M. Asgari, M. Akhlaghi and S.M. Hosseini, Dynamic analysis of two-dimensional functionally graded thick hollow cylinder with finite length under impact loading, *Acta Mech.*, 208 (2009), pp. 163-180

Hosseini SM (2009) Coupled thermoelasticity and second sound in finite length functionally graded thick hollow cylinders (without energy dissipation). *Mater Des* 30:2011-2023

Hosseini S.M., Abolbashari M.H.: General analytical solution for elastic radial wave propagation and dynamic analysis of functionally graded thick hollow cylinders subjected to impact loading. *Acta Mech.* 212, 1-19 (2010)

Talebian, S. T., Tahani, M., Hosseini, S. M., et al.: Displacement time history analysis and radial wave propagation velocity in pressurized multiwall carbon nanotubes. *Comput. Mater. Sci.* 49, 283-292 (2010)

Safari, A., Tahani, M., Hosseini, S.M.: Two-dimensional dynamic analysis of thermal stresses in a finite-length FG thick hollow cylinder subjected to thermal shock loading using an analytical method. *Acta Mech.* 220, 299-314 (2011)

Hosseini S.M., Shahabian F.: Stochastic assessment of thermo-elastic wave propagation in functionally graded materials (FGMs) with Gaussian uncertainty in constitutive mechanical properties. *J. Therm. Stress.* 34, 1071–1099 (2011)

S.T. Talebian, M. Tahani, M.H. Abolbashari and S.M. Hosseini, “A glance on the effects of temperature on axisymmetric dynamic behavior of multiwall carbon nanotubes”, *Acta Mechanica Sinica*, Vol. 28, No. 3, pp 720-728, June 2012

Hosseini SM (2012) Analysis of elastic wave propagation in a functionally graded thick hollow cylinder using a hybrid mesh-free method. *Eng Anal Bound Elem* 36(11):1536–1545

Hosseini, S.M., Application of a hybrid mesh-free method based on generalized finite difference (GFD) method for natural frequency analysis of functionally graded nanocomposite cylinders reinforced by carbon nanotubes. *CMES - Computer Modeling in Engineering and Sciences*, 2013. 95(1): p. 1-29.

Moussavinezhad, S.M., Shahabian, F., Hosseini, S.M.: Two-dimensional elastic wave propagation analysis in finite length FG thick hollow cylinders with 2D nonlinear grading patterns using MLPG method. *CMES Comput. Model. Eng. Sci.* 91, 177–204 (2013)

Hosseini S.M.: Shock-induced thermo-elastic wave propagation analysis in a thick hollow cylinder without energy dissipation using mesh-free generalized finite difference (GFD) method. *Acta Mech.* 224, 465–478 (2013)

Talebian S.T., Tahani M., Abolbashari M.H., Hosseini S.M.: Response of multiwall carbon nanotubes to impact loading. *Appl. Math. Model.* 37, 5359–5370 (2013)

Ghouhestani, S., Shahabian, F. and Hosseini, S.M. (2014), "Application of meshless local Petrov-Galerkin (MLPG) method for dynamic analysis of multilayer functionally graded nanocomposite cylinders reinforced by carbon nanotubes subjected to shock loading", *CMES: Comput. Model. Eng. Sci.*, 100(4), 295-321

Hosseini, S.M. (2014a), "Elastic wave propagation and time history analysis in functionally graded nanocomposite cylinders reinforced by carbon nanotubes using a hybrid mesh-free method", *Eng. Computat.*, 31(7), 1261-1282.

Hosseini, S.M. (2014b), "Application of a hybrid mesh-free method for shock-induced thermoelastic wave propagation analysis in a layered functionally graded thick hollow cylinder with nonlinear grading patterns", *Eng. Anal. Bound. Elem.*, 43, 56-66.

Hosseini, S.M. (2015), "Shock-induced two dimensional coupled non-Fickian diffusion-elasticity analysis using meshless generalized finite difference (GFD) method", *Eng. Anal. Bound. Elem.*, 61, 232-240.

Mohammad Hossein Ghadiri Rad, Farzad Shahabian and Seyed Mahmoud Hosseini, “A meshless local Petrov-Galerkin method for nonlinear dynamic analyses of hyper-elastic FG thick hollow cylinder with Rayleigh damping”, *Acta Mechanica*, Vol. 226, No. 5, pp 1497-1513, May 2015

Seyed Mahmoud Hosseini and Chuanzeng Zhang, “Elastodynamic and wave propagation analysis in a FG graphene platelets-reinforced nanocomposite cylinder using a modified nonlinear micromechanical model”, *Steel and Composite Structures*, Vol. 27, No. 3, pp 255-271, 2018

Seyed Morteza Hosseini and Mahmoud Shariati, “Experimental analysis of energy absorption capability of thin-walled composite cylindrical shells by quasi-static axial crushing test”, *Thin-Walled Structures*, Vol. 125, pp 259-268, April 2018