



**Professor Reza Kolahchi**

See:

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

[https://www.researchgate.net/profile/Reza\\_Kolahchi](https://www.researchgate.net/profile/Reza_Kolahchi)

[https://www.researchgate.net/profile/Reza\\_Kolahchi/citations](https://www.researchgate.net/profile/Reza_Kolahchi/citations)

<http://lawarencepress.com/member/dr-reza-kolahchi/>

Faculty of Mechanics  
University of Kashan, Iran

**Education:**

Ph.D. Applied Design-Mechanical Engineering University of Kashan, Kashan, Iran.

M.Sc. Applied Design-Mechanical Engineering University of Kashan, Kashan, Iran.

**Research Interests:**

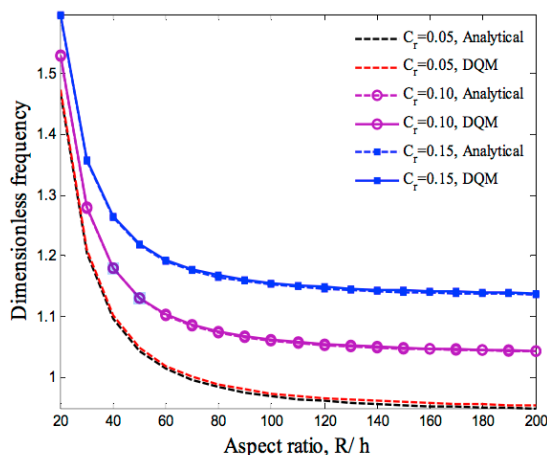
Applied Mechanics, Computational Solid Mechanics, Mathematical Modeling, Numerical Solutions of Partial Differential Equations, Modeling of Micro/Nano Structures, Higher-Order Continuum Theories, piezoelectric material, Functionally graded material.

**Selected Publications:**

Ghorbanpour Arani A., Kolahchi R., Mosallaie Barzoki A.A., Loghman, A., 2011, Electro-thermomechanical behaviors of FGPM spheres using analytical method and ANSYS software, Applied Mathematical Modelling 36: 139– 157.

Ghorbanpour Arani A., Kolahchi R., Mosallaie Barzoki A.A., 2011, Effect of material inhomogeneity on electro-thermo-mechanical behaviors of functionally graded piezoelectric rotating cylinder, Applied Mathematical Modelling 35: 2771–2789.

Mosallaie Barzoki A.A., Ghorbanpour Arani A., Kolahchi R., Mozdianfard M.R., 2011, Electro-thermo-mechanical torsional buckling of a piezoelectric polymeric cylindrical shell reinforced by DWBNNTs with an elastic core, Applied Mathematical Modeling 36: 2983–2995.



**Fig. 6:** Validation of present work

From: Javad Aghaari Noshad and Reza Kolahchi, “Magneto-thermo nonlinear vibration analysis of pipes reinforced with CNTs”, International Journal of Advanced and Applied Sciences, Vol. 2, No. 11, pp 47-55, 2015

- R. Kolahchi and A. Ghorbanpour Arani, "Nonlinear vibration and instability analysis of a PVDF cylindrical shell reinforced with BNNTs conveying viscose fluid using HDQ method", *Journal of Solid Mechanics*, Vol. 4, No. 3, pp 267-276, 2012
- Ghorbanpour Arani A, Shiravand A, Rahi M, Kolahchi R. Nonlocal vibration of coupled DLGS systems embedded on Visco-Pasternak foundation. *Physica B* 2012; 407: 4123–4131
- Mosallaie Barzoki, A.A.; Ghorbanpour Arani, A.; Kolahchi, R.; Mozdianfard, M.R.; Loghman, A., "Nonlinear buckling response of embedded piezoelectric cylindrical shell reinforced with BNNT under electro-thermo-mechanical loadings using HDQM", *Composites: Part B*, Vol. 44, pp. 722-727, 2013
- Khoddami Maraghi Z, Ghorbanpour Arani A, Kolahchi R, Amir S, Bagheri MR. Nonlocal vibration and instability of embedded DWBNNT conveying viscose fluid. *Composites Part B* 2013; 45: 423–432.
- A. Ghorbanpour Arani, M. Abdollahian, R. Kolahchi, A.H. Rahmati, "Electro-thermo-torsional buckling of an embedded armchair DWBNNT using nonlocal shear deformable shell model", *Composites Part B: Engineering*, Vol. 51, August 2013, pp 291–299
- A Ghorbanpour Arani, R. Kolahchi and Z. Khoddami Maragni, "Nonlinear vibration and instability of embedded double-walled boron nitride nanotubes based on nonlocal cylindrical shell theory", *Applied Mathematical Modelling*, Vol. 37, Nos. 14-15, pp 7685-7707, August 2013
- A. Ghorbanpour Arani, M.R. Bagheri, R. Kolahchi and Z. Khoddami Maraghi, "Nonlinear vibration and instability of fluid-conveying DWBNNT embedded in a visco-Pasternak medium using modified couple stress theory", *Journal of Mechanical Science and Technology*, Vol. 27, No. 9, pp 2645-2658, September 2013
- A. Ghorbanpour Arani, A.A. Mosallaie Barzoki and R. Kolahchi, "Nonlinear Dynamic Buckling of Viscous-Fluid-Conveying PNC Cylindrical Shells with Core Resting on Visco-Pasternak Medium", *Journal of Solid Mechanics* Vol. 6, No. 3 (2014) pp. 265-277
- Arani, A.G., Kolahchi, R., Allahyari, S.: Nonlocal DQM for large amplitude vibration of annular boron nitride sheets on nonlinear elastic medium. *J. Solid Mech.* 6, 334–346 (2014)
- A. Ghorbanpour Arani, R. Kolahchi, S.A. Mortazavi, Nonlocal piezoelectricity based wave propagation of bonded double-piezoelectric nanobeam-systems, *Int J Mech Mater Design*, 10 (2014), pp. 179–191
- Javad Aghaari Noshad and Reza Kolahchi, "Magneto-thermo nonlinear vibration analysis of pipes reinforced with CNTs", *International Journal of Advanced and Applied Sciences*, Vol. 2, No. 11, pp 47-55, 2015
- A. Ghorbanpour Arani, M. Abdollahian, R. Kolahchi, Nonlinear vibration of a nanobeam elastically bonded with a piezoelectric nanobeam via strain gradient theory, *Int J Mech Sci*, 100 (2015), pp. 32–40
- Arani, A.G., Fereidoon, A., Kolahchi, R.: Nonlinear surface and nonlocal piezoelectricity theories for vibration of embedded single-layer boron nitride sheet using harmonic differential quadrature and differential cubature methods. *J. Intell. Mater. Syst. Struct.* 26, 1150–1163 (2015)
- A. Ghorbanpour Arani, M. Jamali, M. Mosayyebi, R. Kolahchi, Wave propagation in FG-CNT-reinforced piezoelectric composite micro plates using viscoelastic quasi-3D sinusoidal shear deformation theory, *Compos B*, 95 (15) (2016), pp. 209–224
- A.H. Ghorbanpour-Arani, A. Rastgoo, M.M. Sharafi, R. Kolahchi, A. Ghorbanpour Arani. Nonlocal viscoelasticity based vibration of double viscoelastic piezoelectric nanobeam systems, *Meccanica*, 51 (1) (2016), pp. 25–40
- A. Ghorbanpour Arani, G.S. Jafari, R. Kolahchi, Vibration analysis of nanocomposite microplates integrated with sensor and actuator layers using surface SSDPT, *Polym Compos* (2016)
- Ghorbanpour Arani, A., Jamali, M., Mosayyebi, M., Kolahchi, R.: Analytical modeling of wave propagation in viscoelastic functionally graded carbon nanotubes reinforced piezoelectric microplate under electro-magnetic field. *J. Nanomater. Nanoeng. Nanosyst.* (2016).

Reza Kolahchi, Mohammad Sharif Zarei, Mohammad Hadi Hajmohammad and Alireza Naddaf Oskouei, "Visco-nonlocal-refined zigzag theories for dynamic buckling of laminated nanoplates using differential cubature-Bolotin methods", *Thin-Walled Structures*, Vol. 113, pp 162-169, April 2017

Reza Kolahchi, "A comparative study on the bending, vibration and buckling of viscoelastic sandwich nanoplates based on different nonlocal theories using DC, HDQ and DQ methods", *Aerospace Science and Technology*, Vol. 66, pp 235-248, July 2017