Mohammad Zamani Nejad
Associate Professor of Mechanical Engineering

Contact Information

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Education

Ph.D.: Mechanical Engineering - Applied Design, Tarbiat Modares University, Tehran, Iran
Ph.D. Thesis: Elastic Analysis of Axisymmetric Thick-Walled Shells of Functionally Graded Materials Subjected to Internal Pressure
M.Sc.: Mechanical Engineering - Applied Design, Mazandaran University, Mazandaran, Iran
M.Sc. Thesis: Analysis of Thick-Walled Pipes under Internal Pressure and High Temperature
B.Sc.: Mechanical Engineering in Solids Design, Shiraz University, Shiraz, Iran
B.Sc. Project: Design of Mower Gear System

Teaching Interests

Undergraduate: Statics, Dynamics, Mechanics of Materials 1, Mechanics of Materials 2, Mechanics of Materials 3, Engineering Mathematics, Introduction to Finite Element Method, Introduction to Fracture Mechanics, Design of Pressure Vessels
Graduate: Advanced Mechanics of Materials, Thermoelasticity, Theory of Plates and Shells, Fracture Mechanics, Theory of Elasticity, Theory of Plasticity, Continuum Mechanics, Mechanics of Composite Materials, Advanced Mathematics

Field of Interest in Research

Plates and Shells Analysis, Creep Analysis, Thermo-elasto-plastic Analysis, Fracture of Solids, Composite Materials, Piezo-FGM

Awards

Yasouj University Award for the Best University Researcher in the Mechanical Engineering Department, 2010
Yasouj University Award for the Best University Teacher in the Mechanical Engineering Department, 2011
Yasouj University Award for the Best University Researcher in the Faculty of Engineering, 2012
Yasouj University Award for the Best University Researcher in the Faculty of Engineering, 2014
Yasouj University Award for the Best University Researcher in the Faculty of Engineering, 2015

Educational Supervision and Advise

Ph. D. Students under Supervision

(1) M. Jabbari, In Progress.
(2) M. Dehghan (Co-Superviser: Dr. A. Moosaie), In Progress.
(3) T. Taghizadeh (Co-Superviser: Dr. A. Moosaie; Adviser: Dr. S. Jafari Mehrabadi), In Progress.
(4) M. Jahanshahi, (Co-Superviser: Dr. M. Mahzoon), In Progress.

M. Sc. Students under Supervision

(1) M. Gharibi, *Elastic analysis of rotating thick-walled cylindrical and non-rotating spherical pressure vessels made of FG materials using power series solution*.Defence Date: February 13, 2013 (25 Bahman 1391).
(2) Z. Hoseini, (Yasouj University Award for the best M. Sc. researcher in the faculty of engineering (2012)), *Steady-state creep analysis in thick-walled FGM rotating cylindrical and non-rotating spherical shells subjected to internal pressure*. Defence Date: February 13, 2013 (25 Bahman 1391).
(3) A. Afshin, *Transient thermoelastic analysis in FGM rotating thick-walled cylindrical shells subjected to internal pressure*. Defence Date: February 18, 2013 (30 Bahman 1391).
(4) M. Davoudi Kashkoli, (Yasouj University Award for the best M. Sc. researcher in the mechanical engineering department (2013)), *Creep analysis of pressurized FGM rotating thick cylindrical shells under thermal load*. Defence Date: September 18, 2013 (27 Sharivar 1392).

(5) M. Janfaza, (Co-Supervised with Dr. A. Moosaie), *Thermoelastic analysis of thick hollow sphere under non-Fourier heat conduction with periodic surface flux*. Defence Date:October 9, 2013 (17 Mehr 1392).
(6) P. Fatehi, *Elasto-plastic analysis for rotating FGM thick-walled cylindrical shells under uniform internal pressure.* Defence Date: October 9, 2013 (17 Mehr 1392).
(7) S. Mohammadi, *Transient thermoelastic analysis of FGM thick-walled spherical pressure vessels under heat flux.* Defence Date: October 10, 2015 (18 Mehr 1394).
(8) N. Alamzadeh, *Thermo-elasto-plastic analysis of rotating thick-walled cylindrical shells made of functionally graded materials.* Defence Date: October 12, 2015 (20 Mehr 1394).
(9) Z. Mazarei, *Thermo-elasto-plastic analysis of thick-walled spherical shells made of functionally graded materials.* Defence Date: October 11, 2015 (19 Mehr 1394).
(10) A. Bakhshizadeh, In Progress.
(11) T. Ebrahimi, In Progress.

M. Sc. Students under Advise

(1) M. M. Abedi (Superviser: Dr. A. Niknejad), *Investigation of the folding process in the foam-filled grooved tubes and square thin-walled sections under the axial loading*.Defence Date: June 28, 2012 (8 Tir 1391).
(2) F. Bahranifard, (Superviser: Dr. S. Ziaei), *Free vibration analysis of functionally graded curved panels with cut-out in thermal environment*. Defence Date: February 6, 2013 (18 Bahman 1391).
(3) A. Hadi (Tehran University), (Superviser: Prof. A. Rastgoo), *Elasto-plastic analysis of rotating disks made of functionally graded materials*. Defence Date: January 13, 2014 (23 Day 1392).
(4) A. Nikeghbalian (Tarbiat Modares University), (Superviser: Prof. G.H. Rahimi), In Progress.

B. Sc. Students under Supervision from First of Summer 2009 (1388) to End of Summer 2015 (1394): #57

Referee of Journals Papers

Structural Engineering and Mechanics
International Journal of Applied Mechanics
Scientia Iranica
Modares Mechanical Engineering
International Journal of Engineering
International Journal of Natural and Engineering Sciences

Scientific-Research Journal of Mechanics and Aerospace
Quarterly Scientific-Research Journal of Solid Mechanics

Selected Publications

[39] M. Jabbari, M. Zamani Nejad, M. Ghannad, "Thermo-elastic analysis of axially functionally graded rotating thick truncated conical shells with varying thickness", Composites Part B-Engineering <Elsevier, **Impact Factor: 2.983**>, Accepted Paper

[38] M. Zamani Nejad, A. Hadi, A. Rastgoo, "Buckling analysis of arbitrary two-directional functionally graded Euler-Bernoulli nano-beams based on nonlocal elasticity theory", International Journal of Engineering Science <Elsevier, **Impact Factor: 2.668**>, Accepted Paper

[37] M. Jabbari, M. Zamani Nejad, M. Ghannad, "Effects of radially material gradients on thermal stresses of rotating pressurized thick cylindrical shells with variable thickness", Journal of Theoretical and Applied Mechanics <**Impact Factor: 0.636**>, Accepted Paper

[36] Z. Mazarei, M. Zamani Nejad, A. Hadi, "Thermo-elasto-plastic analysis of thick-walled spherical pressure vessels made of functionally graded materials", International Journal of Applied Mechanics <Imperial College Press, **Impact Factor: 1.624**>, Accepted Paper

[35] M. Jabbari, M. Ghannad, M. Zamani Nejad, "Effect of thickness profile and FG function on rotating disks under thermal and mechanical loading", Journal of Mechanics <Cambridge Journals, **Impact Factor: 0.58**>, Accepted Paper

[34] M. Jabbari, M. Zamani Nejad, M. Ghannad, "Stress analysis of rotating thick truncated conical shells with variable thickness under mechanical and thermal loads", Journal of Solid Mechanics <Indexed in ISC, **Impact Factor: 0.094**, Iran>, Accepted Paper

[33] M. Zamani Nejad, M. Abedi, M. H. Lotfian, M. Ghannad, "Exact and numerical elastic analysis for the FGM thick-walled cylindrical pressure vessels with exponentially-varying properties", Archives of Metallurgy and Materials <**Impact Factor: 1.09**>, Accepted Paper

[32] M. Jabbari, M. Zamani Nejad, M. Ghannad, "Thermoelastic analysis of rotating thick truncated conical shells subjected to non-uniform pressure", Journal of Solid Mechanics <Indexed in ISC, **Impact Factor: 0.094**, Iran>, Accepted Paper

[31] M. Ghannad, H. Gharooni, M. Zamani Nejad, "Thermo-elastic analysis of clamped-clamped thick FGM cylinders by using third-order shear deformation theory", Latin American Journal of Solids and Structures <**Impact Factor: 1.272**>, 13(4), 750-774, 2016

[30] M. D. Kashkoli, M. Zamani Nejad, "Time-dependent thermo-elastic creep analysis of thick-walled spherical pressure vessels made of functionally graded materials", Journal of Theoretical and Applied Mechanics <**Impact Factor: 0.636**>, 53(4), 1053-1065, 2015

[29] M. Jabbari, M. Zamani Nejad, M. Ghannad, "Thermo-elastic analysis of axially functionally graded rotating thick cylindrical pressure vessels with variable thickness under mechanical loading", International Journal of Engineering Science <Elsevier, **Impact Factor: 2.668**>, 96: 1-18, 2015

[28] M. Zamani Nejad, M. Jabbari, M. Ghannad, "Elastic analysis of axially functionally graded rotating thick cylinder with variable thickness under non-uniform arbitrarily pressure loading", International Journal of Engineering Science <Elsevier, **Impact Factor: 2.668**>, 89: 86-99, 2015

[27] M. Zamani Nejad, M. Jabbari, M. Ghannad, "Elastic analysis of FGM rotating thick truncated conical shells with axially-varying properties under non-uniform pressure loading", Composite Structures < Elsevier, **Impact Factor: 3.318**>, 122: 561-569, 2015

[26] A. Niknejad, M.M. Abedi, G.H. Liaghat, M. Zamani Nejad, "Absorbed energy by foam-filled quadrangle tubes during the crushing process by considering the interaction effects", Archives of Civil and Mechanical Engineering < Elsevier, **Impact Factor: 1.793**>, Accepted Paper

[25] M. Zamani Nejad, Z. Hoseini, A. Niknejad, M. Ghannad, "Steady-state creep deformations and stresses in FGM rotating thick cylindrical pressure vessels", Journal of Mechanics <Cambridge Journals, **Impact Factor: 0.58**>, 31(1): 1-6, 2015

[24] M. Zamani Nejad, P. Fatehi, "Exact elasto-plastic analysis of rotating thick-

walled cylindrical pressure vessels made of functionally graded materials", International Journal of Engineering Science <Elsevier, **Impact Factor: 2.668**>, 86: 26-43, 2015

[23] M. Zamani Nejad, A. Rastgoo, A. Hadi, "Exact elasto-plastic analysis of rotating disks made of functionally graded materials", International Journal of Engineering Science <Elsevier, **Impact Factor: 2.668**>, 85: 47-57, 2014

[22] M. Zamani Nejad, A. Rastgoo, A. Hadi, "Effect of exponentially-varying properties on displacements and stresses in pressurized functionally graded thick spherical shells with using iterative technique", Journal of Solid Mechanics <Indexed in ISC, **Impact Factor: 0.094**, Iran>, 6(4): 366-377, 2014

[21] M. Zamani Nejad, A. Rastgoo, A. Hadi, "Onset yield analysis of rotating disks made of functionally graded materials using Tresca yield criterion" Modares Mechanical Engineering <Indexed in ISC, **Impact Factor: 0.016**, Iran>, 14(8): 68-74, 2014

[20] M. Zamani Nejad, M. Davoudi Kashkoli, "Time-dependent thermo-creep analysis of rotating FGM thick-walled cylindrical pressure vessels under heat flux", International Journal of Engineering Science <Elsevier, **Impact Factor: 2.668**>, 82: 222-237, 2014

[19] P. Fatehi, M. Zamani Nejad, "Effects of material gradients on onset of yield in FGM rotating thick cylindrical shells", International Journal of Applied Mechanics <Imperial College Press, **Impact Factor: 1.624**>, 6(4): 1450038 (20 Pages), 2014

[18] M. Davoudi Kashkoli, M. Zamani Nejad, "Effect of heat flux on creep stresses of thick-walled cylindrical pressure vessels" Journal of Applied Research and Technology <**Impact Factor 2013: 0.447**>, 12(3): 585-597, 2014

[17] M. Zamani Nejad, M. Abedi, M.H. Lotfian, M. Ghannad, "The application of 2-dimensional elasticity for the elastic analysis of solid sphere made of exponential functionally graded material", Mechanika <**Impact Factor: 0.292**>, 20(3): 254-258, 2014

[16] M. Zamani Nejad, M. Jabbari, M. Ghannad, "A semi-analytical solution for elastic analysis of rotating cylindrical shells with variable thickness using disk form

multilayers, Scientific World Journal <**Impact Factor 2013: 1.219**>, Vol. 2014, Article ID 932743, 2014. doi:10.1155/2014/932743

[15] M. Ghannad, M. Zamani Nejad, "Elastic solution of pressurized clamped-clamped thick cylindrical shells made of functionally graded materials", Journal of Theoretical and Applied Mechanics <**Impact Factor: 0.636**>, 51(4), 1067-1079, 2013

[14] M. Zamani Nejad, Z. Hoseini, T. Taghizadeh, A. Niknejad, "Closed-form analytical solution for creep stresses of pressurized FGM thick spherical shells", Advanced Science Letters <**Impact Factor 2010: 1.253**>, 19(2): 464-467, 2013

[13] M. Ghannad, G.H. Rahimi, M. Zamani Nejad, "Elastic analysis of pressurized thick cylindrical shells with variable thickness made of functionally graded materials", Composites Part B-Engineering <Elsevier, **Impact Factor: 2.983**>, 45(1): 388-396, 2013

[12] M. Zamani Nejad, M. Abedi, M.H. Lotfian, M. Ghannad, "An exact solution for stresses and displacements of pressurized FGM thick-walled spherical shells with exponential-varying properties", Journal of Mechanical Science and Technology <Springer, **Impact Factor: 0.838**>, 26(12): 4081-4087, 2012

[11] M. Ghannad, M. Zamani Nejad, "Elastic analysis of heterogeneous thick cylinders subjected to internal or external pressure using shear deformation theory", Acta Polytechnica Hungarica <**Impact Factor: 0.649**>, 9(6): 117-136, 2012

[10] M. Ghannad, M. Zamani Nejad, "Complete elastic solution of pressurized thick cylindrical shells made ofheterogeneous functionally graded materials", Mechanika <**Impact Factor: 0.292**>, 18(6): 640-649, 2012

[9] M.M. Abedi, A. Niknejad, G.H. Liaghat, M. Zamani Nejad, "Theoretical and experimental study on empty and foam-filled columns with square and rectangular cross section under axial compression", International Journal of Mechanical Sciences <Elsevier, **Impact Factor: 2.034**>, 65: 134-146, 2012

[8] M. Ghannad, M. Zamani Nejad, "Complete closed-form solution for pressurized heterogeneous thick spherical shells", Mechanika <**Impact Factor: 0.292**>, 18(5): 508-516, 2012

[7] M. Ghannad, M. Zamani Nejad, G.H. Rahimi, H. Sabouri, “Elastic analysis of pressurized thick truncated conical shells made of functionally graded materials”, Structural Engineering and Mechanics <Techno Press, **Impact Factor: 0.927**>, 43(1): 105-126, 2012

[6] A. Niknejad, M.M. Abedi, G.H. Liaghat, M. Zamani Nejad, “Prediction of the mean folding force during the axial compression in foam-filled grooved tubes by theoretical analysis”, Materials & Design <Elsevier, **Impact Factor: 3.501**>, 37: 144-151, 2012

[5] M. Ghannad, G.H. Rahimi, M. Zamani Nejad, “Determination of displacements and stresses in pressurized thick cylindrical shells with variable thickness using perturbation technique”, Mechanika <**Impact Factor: 0.292**>, 18(1): 14-21, 2012

[4] M. Ghannad, M. Zamani Nejad, “Elastic analysis of pressurized thick hollow cylindrical shells with clamped-clamped ends”, Mechanika <**Impact Factor: 0.292**>, 85(5): 11-18, 2010

[3] M. Zamani Nejad, G.H. Rahimi, “Elastic analysis of FGM rotating cylindrical pressure vessels”, Journal of the Chinese Institute of Engineers <Taylor & Francis, **Impact Factor: 0.241**>, 33(4): 525-530, 2010

[2] M. Ghannad, M. Zamani Nejad, G.H. Rahimi, “Elastic solution of axisymmetric thick truncated conical shells based on first-order shear deformation theory”, Mechanika <**Impact Factor: 0.292**>, 79(5): 13-20, 2009

[1] M. Zamani Nejad, G.H. Rahimi, M. Ghannad, “Set of field equations for thick shell of revolution made of functionally graded materials in curvilinear coordinate system” Mechanika <**Impact Factor: 0.292**>, 77(3): 18-26, 2009