

**Professor Farzad Ebrahimi** 



Figure 2. Comparison of CST and FSDT unstable regions for a simply supported silicon nitride-nickel FGM Type A cylindrical shell under combined static axial compressive loading and periodic axial loading (m=1,2 , n=1,2 ,  $N_0 = 0.5 N_{cr}$ , L/R=1.0 , T=300K,  $\Phi$ =1.0, h/R=0.01).

From: F. Ebrahimi, 2011, "A study on the influence of transverse shear and rotary inertia on the dynamic stability of cylindrical shells made from functionally graded material", Scientific Research and Essays Vol. 6 (11), pp. 2286-2295.

See:

http://www.ikiu.ac.ir/public\_files/profiles/items/090ad\_1360139553.pdf http://tehran.academia.edu/farzadebrahimi https://www.researchgate.net/profile/Farzad\_Ebrahimi3 http://www.intechopen.com/profiles/71997/farzad-ebrahimi http://publicationslist.org/febrahimy https://scholar.google.com/citations?user=D5DwUhwAAAAJ&hl=en http://www.sapub.org/journal/editorialdetails.aspx?JournaIID=1108&PersonID=16343

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#### **Biography:**

Dr. Farzad Ebrahimi was born in Qazvin, Iran, in 1979. He graduated in Mechanical engineering, from the University of Tehran, Iran, in 2002. He received his Msc and PhD in Mechanical engineering, with a specialization in applied design from the University of Tehran, Iran, in 2009. Since 2002, he has been working at the "Smart Materials and Structures Lab" Research Center of the Faculty of Mechanical Engineering at the University of Tehran, where he is a researcher of smart functionally graded materials and structures. He is involved in several international journals as editor and reviewer. He serves on the editorial board of "Far East Journal of Mechanical Engineering and Physics". He is the author of books "Smart Functionally Graded Plates" and "Progress in Analysis of Functionally Graded Structures", Nova Science Publishers, NY. He also served as the editor of the book "Advances in Vibration Analysis Research", InTech – Open Access Publisher, Croatia. His research interests focus on areas of smart materials and structures, plate and shell theory, vibration analysis of continuous systems, composite materials and structures, functionally graded materials and structures, finite element analysis and fracture mechanics and he has published several researches in these fields. His research in these areas has been presented at international conferences and appeared in academic journals such as "Journal of Mechanical Science and Technology", "Smart Materials and Structures", "European Journal of Mechanics"

and "Archive of Applied Mechanics and Thin Walled Structures". Farzad has also strong collaboration with Iranian industries on gas and oil projects, as well as serves as ad-hoc referee in several top academic journals.

### **Research Interests:**

Smart Materials and Structures, Plate And Shell Theory, Vibration Analysis of Continuous Systems, Composite Materials and Structures, Functionally Graded Materials and Structures, Finite Element Analysis, Fracture Mechanics

### **Education:**

2010	Ph.D	The University of Tehran, Mechanical engineering department
2004	M.Sc	The University of Tehran, Mechanical engineering department
2002	B.Sc	The University of Tehran, Mechanical engineering department, Mechanical Engineering

## Selected Publications:

## **Books:**

F. Ebrahimi: "Smart functionally graded plates: Vibration Analysis of FGM plates coupled with piezoelectric layers", December 2010, Nova Science Publishers, New York

F. Ebrahimi: "Advances in Vibration analysis research", Intech Publication, Croatia, April 2011.

F. Ebrahimi, H.A. Sepiani, and A. G. Arani: "Progress in Analysis of functionally graded structures", Nova Science Publishers, NY, Oct. 2011.

F. Ebrahimi, "Smart functionally graded plates: Vibration Analysis of FGM plates coupled with piezoelectric layers", December 2010, Nova Science Publishers, New York.

F. Ebrahimi: "Piezoelectric Transducers", to be appeared Dec. 2011, Intech Publication, Croatia.

# **Journal Articles:**

F. Ebrahimi and A. Rastgoo, 2011, "Nonlinear vibration analysis of piezo-thermo-electrically actuated functionally graded circular plates", Archive of applied mechanics, Vol. 81(3), pp. 361-383. (ISI)
F. Ebrahimi, H.A. Sepiani, 2011, "Meshfree modeling of shape memory alloy wires thermomechanical behavior Analytical", International Journal of the Physical Sciences, Vol. 6 (20), pp. 4739-4748. (ISI)
F. Ebrahimi, 2011, "A study on the influence of transverse shear and rotary inertia on the dynamic stability of cylindrical shells made from functionally graded material", Scientific Research and Essays Vol. 6 (11), pp. 2286-2295. (ISI)

F. Ebrahimi and A. Rastgoo, 2011, "An analytical model for free vibration analysis of smart annular fgm plates integrated with piezoelectric layers ", Majlesi Journal of Mechanical Engineering, Vol. 4(2), pp. 31-42. F. Ebrahimi, H. A. Sepiani, 2010, "An Investigation on the Influence of Transverse Shear and Rotary Inertia on Vibration and Buckling of Functionally Graded Cylindrical Shells", Mechanics of Advanced Materials and Structures, Vol. 17, 176-182. (ISI)

F. Ebrahimi and H.A. Sepiani, 2010, "Vibration and buckling analysis of cylindrical shells made of functionally graded materials under combined static and periodic axial forces", Advanced Composites Letters, Vol. 19, (2), 67-74. (ISI)

F. Ebrahimi, A. Rastgoo and M. Nikkhah Bahrami, 2010, "Investigating the thermal environment effects on geometrically nonlinear vibration of smart functionally graded plates", Journal of Mechanical Science and Technology, Vol.24 (3), pp.775-791. (ISI)

F. Ebrahimi and A. Rastgoo, 2009, "Nonlinear vibration of smart circular functionally graded plates coupled with piezoelectric layers", International Journal of Mechanics and Materials in Design, Vol. 5, 157-165.F. Ebrahimi, A. Rastgoo and M.H. Kargarnovin, 2008, "Analytical investigation on axisymmetric free

vibrations of moderately thick circular functionally graded plate integrated with piezoelectric layers", Journal of Mechanical Science and Technology, Vol.22, pp.1058-1072. (ISI)

F .Ebrahimi and A. Rastgoo, 2008, "An analytical study on the free vibration of smart circular thin FGM plate based on classical plate theory", Thin-Walled Structures, 46, 1402–1408. (ISI)

F Ebrahimi and A. Rastgoo, 2008, "Free vibration analysis of smart annular FGM plates integrated with piezoelectric layers", Smart Materials and Structures, Vol. 17-015044 (13pp), doi: 10.1088/0964-1726/17/1/015044.(ISI)

F. Ebrahimi and A. Rastgoo, 2008. "Free Vibration Analysis of Smart FGM Plates", International Journal of Aerospace and Mechanical Engineering, Vol. 2 No. 2, pp. 94- 99.

H.A Sepiani, F. Ebrahimi, H. Karimipour, 2009, "A mathematical model for smart functionally graded beam integrated with shape memory alloy actuators", Journal of mechanical science and technology, Vol. 23, 3179-3190. (ISI)

F. Ebrahimi and A. Rastgoo, A. Feyz Dizaji, 2006, "On the existence of periodic solution for equation of motion of thick beams having arbitrary cross section with tip mass under harmonic support motion", International Journal of Mechanics and Materials in Design, Vol. 3, pp. 29-38.

F. Ebrahimi and A. Rastgoo, 2009, "FSDPT based study for vibration analysis of piezoelectric coupled annular FGM plate" Journal of Mechanical Science and Technology", 23, 2157-2168. (ISI) F. Ebrahimi, A. Rastgoo and A.A. Atai, 2009, "A theoretical analysis of smart moderately thick shear deformable annular functionally graded plate", European Journal of Mechanics - A/Solids, 28 962–973. (ISI)

F. Ebrahimi, M.H. Naei and A. Rastgoo, 2009, "Geometrically nonlinear vibration analysis of piezoelectrically actuated FGM plate with an initial large deformation", Journal of mechanical science and technology, 23, 2107-2124. (ISI)

H.A. Sepiani, A. Rastgoo, F. Ebrahimi and G. Arani A. 2010 "Vibration and buckling analysis of two-layered functionally graded cylindrical shell, considering the effects of transverse shear and rotary inertia", Materials and Design 31 1063–1069. (ISI) F. Ebrahimi, 2010, "Dynamic Stability of FGM Cylindrical Shells", Journal of Advanced Research in Mechanical Engineering, 1 (2), 111-119.

A. Feyz Dizaji, H.A. Sepiani, F. Ebrahimi, et al., 2009, "Schauder fixed point theorem based existence of periodic solution for the response of Duffing's oscillator", Journal of mechanical science and technology, 23, 2299-2307.(ISI)

F. Ebrahimi and H.A. Sepiani, 2010, "Vibration and Buckling Analysis of Cylindrical Shells made of Functionally Graded Materials under Combined Static and Periodic Axial Forces", Advanced Composites Letters, 19 (2), 77-84. (ISI)

F. Ebrahimi and H.A. Sepiani, 2010, "Transverse shear and rotary inertia effects on the stability analysis of functionally graded shells under combined static and periodic axial loadings", Journal of mechanical science and technology, 24(12) 1-9. (ISI) M. Aghelinejad, K. Zare, F. Ebrahimi and A. Rastgoo, 2011, "Nonlinear thermomechanical post-buckling analysis of thin functionally graded annular plates based on Von-Karman's plate theory", Mechanics of Advanced Materials and Structures, 18, pp. 319-326. (ISI)

F. Ebrahimi, and A. Rastgoo, 2009, "Temperature effects on nonlinear vibration of FGM plates couples with piezoelectric actuators", An International Quarterly journal of solid mechanics, vol. 1, no. 4, 2009. pp. 271-288. F. Ebrahimi, and M.H. Naei, 2008, "Application of Galerkin mesh-free methods in Crack Propagation analysis of functionally graded plates", Journal of faculty of Engineering, vol. 42, no. 1, 2008. pp. 107-118 (in Persian) F. Ebrahimi, and A. Rastgoo, 2009, "Vibration analysis of thin circular FGM plate coupled with piezoelectric layers", Amirkabir journal –Mechanical engineering, vol. 41, no.1, 2009. pp. 1-8 (in Persian)

F. Ebrahimi, A. Rastgoo and M. Mousavi Mashhadi, 2009, "Vibration analysis of thick circular FGM plate coupled with piezoelectric layers", Iranian Journal of Mechanical Engineering – Transaction of the ISME, vol. 11, no. 2, 2009. pp. 86-110 (in Persian)