

Professor Siamak Esmailzadeh Khadem

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**The top 1% of Scientists in a 10-year period
for Tarbiat Modares University**

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PERSONAL INFORMATION:

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EDUCATIONAL RECORDS:

<u>Degree</u>	<u>Institution</u>	<u>Field</u>	<u>Date</u>
B.Sc	Sharif University of Technology	Mechanical Engineering	1985
M.Sc	The University of Tennessee, Knoxville, USA	Mechanical Engineering	1988
Ph.D	The University of Tennessee, Knoxville, USA	Mechanical Engineering	1991

ACADEMIC EXPERIENCES:

1989- 1991 Graduate Teaching Associate, Department of Mechanical & Aerospace Engineering, The University of Tennessee, Knoxville,
Taught the following courses:

ME391 "Engineering Analysis ", which includes analysis techniques for solution of problems in Mechanical and Aerospace Engineering,

ME363 "Dynamics and Vibrations of Machines", which includes free and forced vibration of single and multi- degree of freedom vibrating systems, balancing of rotating equipment, gyroscopic torques, kinematics of cams.

1993- 1999 Assistant Professor, Department of Mechanical Engineering, Tarbiat Modarres University, Tehran, has taught the following graduate courses:

Advanced Engineering Mathematics I (MSc. level course)

Advanced Engineering Mathematics II (Ph. D level course)

Advanced Vibration of Mechanical Systems

Advanced Vibration of Continuous Systems

Advanced Robotics

Special Topics in Advanced Robotics (Ph.D level course)

Advanced Flight Dynamics I & II

Random Vibrations (Ph.D level course)

Advanced Flight Mechanics

Perturbation Theory (Ph.D level course)

Machinery Condition Monitoring (Ph.D level course)

Modal Analysis of Mechanical Systems (Ph.D level course)

1999- 2004 Associate Professor, Department of Mechanical Engineering,
Tarbiat Modarres University, Tehran, Iran.

2004- Present Professor, Department of Mechanical Engineering,
Tarbiat Modarres University, Tehran, Iran.

2000-2003 Associate Dean of Education, School of Engineering

2000 University Distinguished Professor

2001 University Distinguished Professor

2002- 2006 Head of Aerospace engineering faculty

2006- 2008 Member of the university committee on total planning of educational programs

2007- 2010 Head of applied mechanic faculty

2007- Present Board member of the Amirkabir university energy and control center of excellence

2007- Present Associate - Head of the committee for centers of excellence in engineering, Ministry of Science, Research, and Technology.

2008- Present Advisory Board Member of American-Eurasian Network of Scientific Information(AENSI)

2012- Present Editorial board member of the following ISC journals:

Fluid Dynamics Journal of Shahroud university

Mechanical Engineering Journal of Amirkabir University

Mechanical Engineering Journal of Tabriz University

1993 - Present Has supervised 100 MSc. Students on their thesis.

1999 - Present Has supervised 25 PhD students on their dissertations.

1999 - Present Has been co-supervisor for 10 PhD students on their dissertations..

2017- Present **The top 1% of Scientists in a 10-year period for Tarbiat Modares**

Research Experiences:

has contracted several research projects, among them are:

1993- 2006

- Development of Vibration Analysis for Fault Detection of Plates under External Loading,
- Application of Vibration Analysis to the Detection of Peripheral Cracks in Thick- walled Pipes and Enhancing the Existing Models,
- Development of Vibration Analysis for Fault Detection of Axis-symmetric Shells,
- Design and Manufacturing of a Microprocessor-Based Vibration Isolation System,
- Computer Simulation and Control of a Robot to Help Handicapped,
- Design of a Six Degree of Freedom Robot for Handicapped,
- Vibration Analysis of Flexible Robot Manipulators,
- Application of Wigner-distribution for Fault Detection of Rotating Machinery,
- Development of Vibration Signature Analysis for Fault Detection of of Rotating Machinery by Designing the Biorthogonal Wavelet and Multiwavelet Systems.

Current Research Projects

2006-Present

- Static and Dynamic Analysis of a CNT-Reinforced Micro Cantilever
- Design and Analysis of a Nano Gyroscope
- Nonlinear Thermo-Viscoelastic Vibration and Dynamic Stability Analysis of a CNT-Reinforced Microbeam under Electrostatic Field
- Nonlinear Vibration and Dynamic Stability Analysis of High Speed Flexible Rotors
- Nonlinear Vibration and Dynamic Stability Analysis of a CNT Reinforced Viscoelastic Microplate
- Design and Modeling of a Shock Micro/Nano Accelerometer Used in Airbags
- Industrial Micro/Nano Accelerometers Design, Considering Aerodynamic Damping Effect
- Nonlinear Vibration and Dynamic Stability Analysis of a Fluid-Surrounded Multilayer Boron-Nitride Nanotube
- Design and Manufacturing of an Experimental Setup to study Silicon NEMS Resonators Characteristics
- Design and Manufacturing of a Nano Gas Sensor- Actuator
- Design and Manufacturing of a Pressure Sensor
- Nonlinear Vibration Analysis and Dynamic Stability of a Variable Compression Ratio Micropump for Energy Consumption optimization
- Analysis and design of Nonlinear Energy Sinks, NES, for different applications

INDUSTRIAL EXPERIENCES

1991-1993 Participated in the following Condition Monitoring short courses held by Computational System Incorporated, USA, and received certificates:

- Master Trend I, II, III
- Nspectr
- Oil Trend
- Model 2110 seminar
- Model 2400 seminar
- Wavepak instructed by Dr. Art. Crawford
- Motor check
- Machine view
- Balancing I, II
- Single Channel Analysis I
- Single Channel Analysis II
- Multi-channel Analysis instructed by Dr. Art. Crawford
- Alignment I
- Machine Tool Diagnostics
- Electric Motor Diagnostics
- Power Plant Turbines
- Paper Industry Vibration
- Gas Industry Turbines

1993-1994	Was consultant to the Industrial Development and Renovation Organization, IDRO, Tehran, Iran,
1994-1995	Was Contracted by Abyek Cement Complex for condition monitoring of centrifugal fans,
1995-1996	Was Contracted by Research and Technology Development Center to make the B&K Modal Analysis equipment operational and perform calibration tests,

- 1997 Taught a 5-day short course in condition monitoring of rotating machinery for LAB Petrochemical Complex in Isfahan,
- 1997-1998 Consulted to the Heavy Industry Research Center in condition monitoring and robotics,
- 1998 Organized the First Annual Seminar on Automation, Robotics and Control for the Heavy Industry Research Center,
- 2000 Participated in the following short course: Advanced Modal Testing Techniques instructed by Prof. D. Ewins and Prof. R.B. Randall.
- 2000-2001 Was contracted by IDRO to establish a complete Preventive Maintenance System for the Wagon Pars Company, Arak, Iran.
- 2001- 2006 Instructed a monthly seminar on "The Role of Maintenance Technologies in Energy Conservation" for the International Institute of Energy Studies.
- 2008- 2010 Was contracted by Refining and distributing oil products company as a third party for the Design of a diesel engine for automobile project assigned to IPCO.
- 2010- 2012 Was contracted by Gas company as a third party for the Development, Design, and manufacturing of a Training Simulator of GT10B Gas Turbine and Demag delaval Compressor project assigned to Turbotec company.
- 2010- 2012 Was contracted by Gas company as a third party for the Development, Design, and manufacturing of a condition monitoring and diagnostic system for GT10B Gas Turbine and Demag delaval Compressor project assigned to Turbotec company.

PUBLICATIONS

BOOKS:

- Khadem, S.E., and et. al " Monitoring and Balancing of Centrifugal Fans", Published by Guilan University, 2001.

- Khadem, S.E., and et. al " Maintenance Technologies and Machinery Vibration Analysis", Published by Guilan University, 2001.
- Khadem, S.E., and et. al " Machinery Condition Monitoring ", Published by Guilan University, 2001.

ISI INTERNATIONAL REFEREE JOURNAL PAPERS:

- 1) **Khadem, Siamak E., and Dubey, Rajiv**, "A Global Cartesian Space Obstacle Avoidance Scheme for Redundant Manipulators" International Journal of Optimal Control: Application & Methods, No. 12, 1992.
- 2) **Khadem, Siamak E., and Rezaee, M.**, "An Analytical Approach for obtaining the Location and Depth of an All-over part-Through crack on Externally in-plane loaded Rectangular Plate Using Vibration Analysis" Journal of sound and Vibration , 230(2), 291-308, 2000.
- 3) **Khadem, Siamak E., and Rezaee, M.**, " Introduction of Modified Comparison Functions for Vibration Analysis of a Rectangular Cracked Plate", Journal of Sound and Vibration, Vol 236(2), 245-258, 2000.
- 4) **Khadem, Siamak E., and Rezaee, M.**, "Nonlinear Free Vibration Analysis of a String under Bending Moment Effects using the Perturbation Method", Journal of Sound and Vibration, Vol 254(4), 677-691, 2002.
- 5) **Khadem, Siamak E., and Pirmohammadi, A. A.**, " Analytical Development of Dynamic Equations of Motion for a Three Dimensional Flexible-Link Manipulator with Revolute and Prismatic Joints", The IEEE transaction on Systems, Man, and Cybernetics, Part B, Vol 33, No 2, 2003.
- 6) **Khadem, Siamak E., and Rezaee, M.**, " Development of Vibration Signature Analysis Using Multiwavelet Systems", Journal of Sound and Vibration, Vol 261(4), 2003.
- 7) **Eipackchi, H.R., Rahimi, G.H., and Khadem, Siamak E.**, " Closed form solution for displacements of thick cylinders with varying thickness subjected to nonuniform internal pressure", Journal of Structural Engineering and Mechanics, Vol 16, No 6, 731-748, 2003.
- 8) **Mahmoodi S. N., Khadem, Siamak E., and Rezaee, M.**, "Analysis of Non-Linear Mode Shapes and

Natural Frequencies of Continuous Damped Systems", Journal of Sound and Vibration, Vol 275, 283-298, 2004.

- 9) Hosseini, A.A., and Khadem, Siamak E., "Free Vibrations Analysis of Rotating beams with Random Properties" Structural Engineering and Mechanics, An International Journal, Volume 20, No. 3, 2005.
- 10) Khadem, Siamak E., and Rezaee, M., Authors' reply, Journal of Sound and Vibration, Volume 285, Page 512, 2005.
- 11) Mahmoodi S. N., Khadem, Siamak E., and Jalili, N., "Theoretical development and closed-form solution of nonlinear vibrations of a directly excited nanotube-reinforced composite cantilevered beam", Archive of Applied Mechanics, Vol 75, 153-163, 2006.
- 12) Hashemi S.M.T., and Khadem Siamak E., "Modeling and analysis of the vibration behavior of a shape memory alloy beam", International Jurnal of Mechanical Sciences, Vol 48, 44-52, 2006.
- 13) Shooshtari A., and Khadem Siamak E., "A multiple Scales method solution for the free and forced nonlinear transverse vibrations of rectangular plates", Structural Engineering and Mechanics, An International Journal, Volume 24, No. 5, 2006.
- 14) Mahmoodi S. N., Khadem, Siamak E., and Kokabi, M., "Nonlinear free vibrations of Kelvin-Voigt visco-elastic beams", International journal of Mechanical Sciences, Vol 49, 722-732, 2007. **(7th paper among Top 25 Hottest articles of International journal of Mechanical Sciences, April-June 2007)**
- 15) Hajghayesh M., and Khadem, Siamak E., "Non-linear vibration and stability analysis of a partially supported conveyor belt by a distributed viscoelastic foundation ", Structural Engineering and Mechanics, an international journal, Vol. 27, No. 1, 17-32, 2007.
- 16) Mahboobkhah, M, Nategh, M.J., and Khadem, Siamak E., "Vibration analysis of machine tool's hexapod table", International journal of advanced manufacturing technology, 2007.
- 17) Zamanian M, Khadem, Siamak E., and Ghazavi, M.R., " Stick-slip oscillations of drag bits by considering damping of drilling mud and active damping system", Journal of Petroleum Science and Engineering, Vol 59, 289-299, 2007.

- 18) **Hosseini S.A.A., and Khadem, Siamak E.,** "Vibration and reliability of a rotating beam with random properties under random excitation ", *International journal of Mechanical Sciences*, Vol 49, 1377-1388, 2007.
- 19)) **Mahmoodi S. N., Jalili N., and Khadem, Siamak E.,**"An experimental investigation of nonlinear vibration and frequency response analysis of cantilever viscoelastic beams", *Journal of Sound and Vibration*, Vol 311, 1409-1419, 2008.
- 20) **Hajghayesh M., and Khadem, Siamak E.,** "Rotary inertia and temperature effects on nonlinear vibration, steady -state response and stability of an axially moving beam with time-dependent velocity ", *International journal of mechanical sciences* , Vol. 50, 389-404, 2008.
- 21) **Hajnayeb A., Khadem, Siamak E., Moradi, M.H."** Design and implementation of an automatic condition-monitoring expert system for ball-bearing fault detection" *International journal of industrial lubrication and tribology*, Vol 60, Number 2, 93-100, 2008.
- 22) **Eipakchi H. R., Khadem S. E., Rahimi G. H. "** Axisymmetric Stress Analysis of a Thick Conical Shell with Varying Thickness under Nonuniform Internal Pressure”, *Journal of Engineering Mechanics*, Vol. 134, No. 8, 601-610, 2008.
- 23) **Hosseini S.A.A., Khadem S.E.”** Analytical solution for primary resonances of a rotating shaft with stretching non-linearity” *Proc. IMechE, Part C: J. Mechanical Engineering Science*, 2008, **222**(C9), 1655-1664.
- 24) **M Zamanian, S. E. Khadem and S. N. Mahmoodi** “The effect of a piezoelectric layer on the mechanical behavior of an electrostatic actuated microbeam” *J. Smart Mater. Struct.* 2008, **17** , 97-111.
- 25) **Mahboobkhah, M, Nategh, M.J., and Khadem, Siamak E.,** "A comprehensive study on the free vibration of machine tool's hexapod table", *International journal of advanced manufacturing technology*, 2009, Vol 40 , 1239-1251.
- 26) **Hosseini S.A.A., Khadem S.E.”** Free vibrations analysis of a rotating shaft with nonlinearities in curvature and inertia” *J. Mechanism and Machine Theory*, 2009, **44**, 272-288.

- 27) Hosseini S.A.A., Khadem S.E.” combination resonances in rotating shafts” *J. Mechanism and Machine Theory*, 2009, **44**, 1535-1547.
- 28) Zamanian M., Khadem S. E. and Mahmoodi S. N. “Analysis of nonlinear vibrations of a microresonator under piezoelectric and electrostatic actuations” *Proc. IMechE, Part C: J. Mechanical Engineering Science*, 2009, **223**(C2), 329-344.
- 29) Rasekh M., Khadem S. E. " Nonlinear vibration and stability analysis of axially loaded embedded carbon nanotubes conveying fluid" *Journal of Physics D: Applied Physics*, 42 135112(8pp), 2009.
- 30) Zamanian M, Khadem S. E. "Nonlinear vibration of an electrically actuated microresonator tuned by combined DC piezoelectric and electric actuations", *Smart Matter. Struct.*, Vol. 19, 2010.
- 31) Hajghayesh M., Ghazavi R. M. and Khadem, Siamak E., "Non-linear vibration and stability analysis of an axially moving rotor in sub-critical transporting speed range", *Structural Engineering and Mechanics*, an international journal, Vol. 34, No. 4, 507-523, 2010.
- 32) Rasekh M, Khadem S E and Tatari M, "Nonlinear behaviour of electrostatically actuated carbon nanotube-based devices" *Journal of Physics D: Applied Physics*, Vol. 43, 2010.
- 33) Khadem S E, Shahgholi M and Hosseini S.A.A, "Primary resonances of a nonlinear in-extensional rotating shaft", *Mechanism and Machine Theory*, Volume 45, Issue 8, 1067-1081, 2010.
- 34) Zamanian M., Khadem S.E. and Mahmoodi S.N., "Nonlinear response of a resonant viscoelastic microbeam under an electrical actuation", *Structural Engineering and Mechanics*, Volume 35, Number 4, 2010.
- 35) Zamanian M. and Khadem S.E., " Analysis of thermoelastic damping in microresonators by considering the stretching effect" *International Journal of Mechanical Sciences*, Volume 52, Issue 10, 1366-1375, 2010.
- 36) Ghasemloonia A, Khadem S. E, " Gear tooth failure detection by the resonance demodulation technique and the instantaneous power spectrum method – A comparative study", *Shock and Vibration*, Vol. 17, 1-21, 2010.
- 37) Zamanian M. and Khadem S.E., " Analysis of deflection, natural frequency and damping of

microactuators reinforced by SWCNT under electri actuation" *Physica E*, Volume 43, 487-493, 2010.

38) Rasekh M, and Khadem S E , "Pull-in analysis of an electrostatically actuated nano-cantilever beam with nonlinearity in curvature and inertia" *International Journal of Mechanical Sciences*, Vol. 53, 108-115 2011.

39) Hajnayeb A, Ghasemloonia A, Khadem S. E, Moradi M. H. " Application and comparison of an ANN-based feature selection method and the genetic algorithm in gearbox fault diagnosis", *Expert Systems with Applications*, Vol. 38, 10205-10209, 2011.

40) Zamanian M. and Khadem S.E., " Stability analysis of an electrically actuated microbeam using the Melnikov theorem and Poincare mapping", *Proceeding IMechE Part C: J. Mechanical Engineering Science*, Volume 225, 488-497, 2011.

41) Sahebkar S.M., Ghazavi M.R., Khadem S.E., and Ghayesh M.H.," Nonlinear vibration analysis of an axially moving drillstring system with time dependent axial load and axial velocity in inclined well", *Mechanism and Machine Theory*, Volume 46, 743-760, 2011.

42) Hoseinzadeh M. S., and Khadem S.E., " Thermoelastic vibration and damping analysis of double-walled carbon nanotubes based on shell theory" *Physica E*, Volume 43, 1146-1154, 2011.

43) Azizi S., Rezazadeh G., Ghazavi M.R., and Khadem S. E.," Stabilizing the pull-in instability of an electro-statically actuated micro-beam using piezoelectric actuation", *Applied mathematical modeling*, 2011.

44) Hajnayeb A., Khadem S.E.," Nonlinear vibrations of a Carbon Nanotube Resonator under Electrical and van der Waals Forces", *Journal of Computational and theroretical Nanosciences*, Vol 8, No 8, 1524-1534, 2011.

45) Khadem S.E., Shahgholi M., and Hosseini S.A.A., " Two-mode combination resonances of an in-extensional rotating shaft with large amplitude", *Journal of Nonlinear Dynamics*, Vol 65, 217-233, 2011.

46) Hajnayeb A., Khadem S.E., Zamanian M.," Thermoelastic damping of a double-walled carbon nanotube under electrostatic force", *Micro & Nano Letters*, Vol 6, No 8, 698-703, 2011.

47) Azizi S., , Ghazavi M.R., and Khadem S. E., Yang J., Rezazadeh G." Stability analysis of a

parametrically excited functionally graded piezoelectric MEM system”, current applied physics, Vol 12, 456-466, 2012.

48) Shahgholi M., and Khadem S.E., “ Primary and parametric resonances of asymmetrical rotating shafts with stretching nonlinearity”, Journal of Mechanism and Machine Theory, Vol 51, 131-144, 2012.

49) Nili Ahmadabadi Z., and Khadem S.E., “ Nonlinear vibration control of a cantilever beam by a nonlinear energy sink”, Journal of Mechanism and Machine Theory, Vol 50, 134 -149, 2012.

50) Jalali A., and Khadem S.E., “ Pull-in analysis of a nonlinear viscoelastic nanocomposite microplate under an electrostatic actuation”, Journal of Mechanics, Vol 28, No. 1, 559 -569, 2012.

51) Khadem S. E., Rasekh M. , and Toghrace A., "Design and simulation of a carbon nanotube-based adjustable nano-electromechanical shock switch" Applied Mathematical modelling, Vol. 36, 2329-2339 2012.

52) Basirjafari S., Malekfar R., Khadem S.E.,”Modelling of the microstructure of carbon nanotube with two nonlocal elasticity theories”, Journal of Applied Physics, Vol. 111, 034315-1 034315-6, 2012.

53) Azizi S., Rezazadeh G., Ghazavi M.R., and Khadem S. E.,” Parametric excitation of a piezoelectrically actuated system near Hopf bifurcation”, Applied Mathematical Modelling, Vol. 36, issue 4, 1529-1549, 2012.

54) Basirjafari S., Khadem S.E, Malekfar R.,”A comprehensive study of sound pressure in a finite-length fluid-filled multi-walled carbon”, Journal of Ultrasonics, Vol. 52, 655-662, 2012.

55) Shahgholi M., and Khadem S.E., “ Stability analysis of a nonlinear rotating asymmetrical shaft near the resonances”, Nonlinear Dynamics, Vol 70, No 2, 1311-1325, 2012.

56) Hajnayeb A., Khadem S.E.,” Nonlinear vibrations and stability analysis of a double-walled carbon nanotube under electrostatic actuation”, Journal of Sound and Vibration, Vol 331, No 10, 2443-2456, 2012.

57) Salajeghe, S., Khadem S. E., and Rasekh M., "Nonlinear analysis of thermelastic damping in axisymmetric vibration of micro circular thin-plate resonators" Applied Mathematical modelling, Vol. 36, 5991-6000, 2012.

- 58)) Nili Ahmadabadi Z., and Khadem S.E.,** Self-excited oscillations attenuation of drill-string system using nonlinear energy sink”, Proc IMechE Part C: Journal of Mechanical Engineering Science, Vol 227, No 2, 230 -245, 2013.
- 59) Shahgholi M., and Khadem S.E.,** “ Resonances of an in-extensional asymmetrical spinning shaft with speed fluctuations”, Meccanica, Vol 48, No 1, 103-120, 2013.
- 60) Basirjafari, S., Khadem S.E, and Malekfar R.,** ”Radial breathing mode frequencies of carbon nanotubes for determination of their diameters”, Journal of Current Applied Physics, Vol. 13, 599-609, 2013.
- 61) Basirjafari, S., Khadem S.E, and Malekfar R.,** ”Determination of the inner diameter of a double-walled carbon nanotube from its Raman spectra”, Journal of Applied Physics, Vol. 113, 064304-1-064304-7, 2013.
- 62) Shahgholi M., and Khadem S.E.,** “ Resonance analysis of gyroscopic nonlinear spinning shafts with parametric excitations and speed fluctuations”, International Journal of Mechanical Sciences, Vol 64, No 1, 94-109, 2013.
- 63)) Rasekh M, and Khadem S E ,** "Design and performance analysis of a nanogyroscope based on electrostatic actuation and capacitive sensing" Journal of Sound and Vibration, Vol. 332, No 23, 6155-6168, 2013.
- 64) Hoseinzadeh M. S., and Khadem S.E.,** " A nonlocal shell theory model for evaluation of thermoelastic damping in the vibration of a double –walled carbon nanotube" Physica E, Volume 57, 6-11, 2014.
- 65) Rasekh M. , Khadem S. E., and Toghraee A.,** " NEMS thermal switch operating based on thermal expansion of carbon nanotubes" Physica E, Volume 59, 210-217, 2014.
- 66) Sanati M., Khadem S.E., Mirzabagheri S., Sanati H., and Khosravi M.Y.,**” Performance evaluation of a novel rotational damper for structural reinforcement steel frames subjected to lateral excitations” Earthq Eng & Eng Vib, Vol 13, No 1, 75-84, 2014.
- 67) Nili Ahmadabadi Z., and Khadem S.E.,** “ Nonlinear vibration control and energy harvesting of a

beam using a nonlinear energy sink and a piezoelectric device”, Journal of Sound and Vibration, Vol 333, 4444 - 4457, 2014.

68) Shahgholi M., and Khadem S.E., “ Hopf bifurcation analysis of asymmetrical rotating shafts”, Nonlinear Dynamics, Vol 77, 1141-1155, 2014.

69) Shahgholi M., and Khadem S.E., “ Free vibration analysis of a nonlinear slender rotating shaft with simply support conditions”, Mechanism and Machine theory, Vol 82, 128-140, 2014.

70) Bab S., Khadem S.E., and Shahgholi M., “ Lateral Vibration attenuation of a rotor under mass eccentricity force using nonlinear energy sink”, International Journal of Nonlinear Mechanics, Vol 67, 251-266, 2014.

71) Shahgholi M., and Khadem S.E., “ Internal, combinational and sub-harmonic resonances of a nonlinear asymmetrical rotating shaft”, Nonlinear Dynamics, Vol 79, 173-184, 2015.

72) Hajnayeb A., Khadem S.E.,” An analytical study on the nonlinear vibration of a double- walled carbon nanotube”, Structural Engineering and Mechanics, Vol. 54, No. 5, p. 987-998, 2015.

73) Mirzabagheri S., Sanati M., Aghakouchak A.A., Khadem S.E.” Experimental and numerical investigation of rotational friction dampers with multi units in steel frames subjected to lateral excitation”, Archive of civil and mechanical engineering, Vol 1 5, p. 4 7 9 – 4 9 1, 2015.

74) Bab S., Khadem S.E., and Shahgholi M., “Vibration attenuation of a rotor supported by journal bearings with nonlinear suspensions under mass eccentricityforce using nonlinear energy sink”, Meccanica, Vol 50, 2441-2460, 2015.

75) Shahgholi M., Khadem S.E., and Bab S.,” Nonlinear vibration analysis of a spinning shaft with multidisks” Meccanica, Vol 50, 2293-2307, 2015.

76) Soleimani A., Khadem S.E.,”Early fault detection of rotating machinery through chaotic vibration feature extraction of experimental data sets”, Chaos, Solitons and Fractals, Vol 78, 61-75, 2015.

77) Nili Ahmadabadi Z., and Khadem S.E., “Analytical study of acceleration waves on a nonlinear, externally damped string”, Journal of Acta Mechanic, Vol 226, 4087 -4097, 2015.

- 78) Kani, M., Khadem S.E., Pashaei, M.H., and Dardel, M.”** Vibration control of a nonlinear beam with nonlinear energy sink” *Nonlinear dynamics*, Vol 83, 1-22, 2016.
- 79) Sadooghi, M.S., and Khadem S.E”** A new performance evaluation scheme for jet engine vibration signal denoising” *Mechanical Systems and Signal Processing*, Vol 76-77, 201-212, 2016.
- 80) Kani, M., Khadem, S.E., Pashaei, M.H., and Dardel, M.”** Design and performance analysis of a nonlinear energy sink attached to a beam with different support conditions” *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, Vol 230, No. 4, 527-542, 2016.
- 81) Pourkiaee M.S., Khadem S.E., and Shahgholi M.,** “Parametric resonances of an electrically actuated piezoelectric nanobeam resonator considering surface effects and intermolecular interactions”, *Nonlinear Dynamic*, Vol 84, 1943-1960, 2016.
- 82) Abbasi A.H., Khadem S.E., Bab S., and Friswell M.I.,** “Vibration control of a rotor supported by journal bearings and an asymmetric high-static low-dynamic stiffness suspension”, *Nonlinear Dynamic*, Vol 85, Issue 1, 525-545, 2016.
- 83) Bab S., Khadem S.E., Abbasi A.H. , and Shahgholi M.,** “Dynamic stability and nonlinear vibration analysis of a rotor system with flexible/rigid blades”, *Mechanism and machine theory*, Vol 105, 633-653, 2016.
- 84) Ebrahimi M. Ali, Khadem S.E., Shahgholi M.,** “Vibration control of a pipe conveying fluid under external periodic excitation using a nonlinear energy sink” *Nonlinear Dynamic*, Vol 86, 1761-1795, 2016.
- 85) Abbasi A.H., Khadem S.E., and Bab S.,** “Vibration control of a continuous rotating shaft employing high-static low-dynamic stiffness isolators”, *Journal of vibration and control*, DoI: 1077546316651559, , 2016.
- 86) Davari Dolatabadi A., Khadem S.E., Mohammadzadeh asl B.,** “Automated diagnosis of coronary artery disease (CAD) patients using optimized SVM” *Computer methods and programs in biomedicine*, Vol 38, 117-126, 2017.
- 87) Firoozi P., Khadem S.E., Pourkiaee M.S.,** “Broadband energy harvesting using nonlinear vibrations of a magnetopiezoelectric cantilever beam” *International journal of Engineering science*, Vol 111, 113-133, 2017.
- 88) Bab S., Khadem S.E., Karamooz M., Shahgholi M.,** " Vibration mitigation of a rotating beam under external periodic force using a nonlinear energy sink (NES)" *Journal of Vibration and control*, Vol 23, 1001-1025, 2017.
- 89) Bab S., Khadem S.E., Shahgholi M., Abbasi A.H."** Vibration attenuation of a continuous rotor-blisk-

journal bearing system employing smooth nonlinear energy sinks"International journal of Mechanical systems and signal processing, Vol 84, 128-157, 2017.

90)Nezameslami R., Khadem S.E." Investigation of the Free Vibrations of Composite Anisogrid Lattice Conical Shells Formed by Geodesically Spiral and Circumferential Ribs" International journal of Applied mechanics, Vol 9, No. 4, 1-1750047- 29-1750047, 2017.

91)Pourkiaee S.M., Khadem S.E., Shahgholi M., Bab S., "Nonlinear modal interactions and bifurcations of a piezoelectric nanoresonator with three-to-one internal resonances incorporating surface effects and van der Waals dissipation forces" Nonlinear Dynamics, Vol 88, 1785-1816, 2017.

92) Pourkiaee S.M., Khadem S.E., Shahgholi M.," Nonlinear vibration and stability analysis of an electrically actuated piezoelectric nanobeam considering surface effects and intermolecular interactions"Vol 23, No. 12, 1873-1889, 2017.

93)Rezaee M. Khadem S.E., Firoozi P." Broadband and tunable PZT energy harvesting utilizing local nonlinearity and tip mass effects" International journal of Engineering Science, Vol 118, 1-15, 2017.

94) Firoozi P., Khadem S.E., Pourkiaee M.S., “Power enhancement of broadband piezoelectric energy harvesting using a prrof mass and nonlinearities in curvature and inertia” International journal of Mechanical science, Vol 133,227-239 , 2017.

95) Sadooghi M. S., and Khadem S.E., “Improving one class vector machine novelty detection scheme using nonlinear features” Pattern Recognition, Vol 83,14-33 , 2018.

96) Ebrahimi Mamaghani A., Khadem S.E., Bab S., and Pourkiaee M.S., “Irreversible passive energy transfer of an immersed beam subjected to a sinusoidal flow via local attachment” International journal of Mechanical science, Vol 138-139,427-447 , 2018.

97) Abbasi A.H., Khadem S.E., and Bab S., “Vibration control of a rotating shaft employing high-static low-dynamic stiffnes isolators” Journal of Vibration and control, Vol 24, No 4,760-783 , 2018.

IRANIAN REFEREE JOURNAL PAPERS:

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