

## Professor Siamak Esmaeilzadeh 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:

Name: Siamak Esmaeilzadeh Khadem  
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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-Eurasin 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**

**h-index: 24**

**Total Citation: 1675**

**Scopus Address:** <https://www.scopus.com/authid/detail.uri?authorId=57202132790>

## **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 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	<p>Participated in the following Condition Monitoring short courses held by Computational System Incorporated, USA, and received certificates:</p> <ul style="list-style-type: none"><li>• Master Trend I, II, III</li><li>• Nspectr</li><li>• Oil Trend</li><li>• Model 2110 seminar</li><li>• Model 2400 seminar</li><li>• Wavepak instructed by Dr. Art. Crawford</li><li>• Motor check</li><li>• Machine view</li><li>• Balancing I, II</li><li>• Single Channel Analysis I</li><li>• Single Channel Analysis II</li><li>• Multi-channel Analysis instructed by Dr. Art. Crawford</li><li>• Alignment I</li><li>• Machine Tool Diagnostics</li><li>• Electric Motor Diagnostics</li><li>• Power Plant Turbines</li><li>• Paper Industry Vibration</li><li>• Gas Industry Turbines</li></ul>
1993-1994	<p>Was consultant to the Industrial Development and Renovation Organization, IDRO, Tehran, Iran,</p>
1994-1995	<p>Was Contracted by Abyek Cement Complex for condition monitoring of centrifugal</p>

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 Comperessor 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 Comperessor 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 Toghraee 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 Toghrace 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 Khosravieh 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.
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