

# Mohammad Reza Ghazavi

Associated professor of Mechanical Engineering

## Research Fields

Nonlinear Dynamics  
Stability  
Machine tools

## Teaching courses

Advanced Dynamics, Metal Cutting, Advanced CNC Machines, Mechanisms Design, Machines Dynamic, Machine tools Design, Static, Engineering Mathematics

## Recent Projects

Nonlinear stability and dynamic behavior analysis of the micro tube conveying fluid

## Recent Journal Papers

- 1- Nonlinear analysis of the micro/nanotube conveying fluid based on second strain gradient theory MR Ghazavi, H Molki Applied Mathematical Modelling 60, 77-93 2018
- 2-On the dynamics of a capacitive electret-based micro-cantilever for energy Harvesting M Ghavami, S Azizi, MR Ghazavi Energy 153, 967-976, 2018
- 3-On the nonlinear dynamics of a piezoelectrically tuned micro-resonator based on non-classical elasticity theories A. Nikpourian, MR Ghazavi, S Azizi International Journal of Mechanics and Materials in Design 14 (1), 1-191, 2018
- 4-Effects of Size, Surface Energy and Casimir Force on the Superharmonic Resonance Characteristics of a Double-Layered Viscoelastic NEMS Device Under Piezoelectric Actuation S Rahmanian, MR Ghazavi, S Hosseini-Hashemi, Iranian Journal of Science and Technology, Transactions of Mechanical Engineering, 2018
- 5-Stability of a multi-body driveshaft system excited through U-joints M SoltanRezaee, MR Ghazavi, A Najafi, S Rahmanian MECCANICA-MILANO- 53 (4), 1167-1183 2018
- 6-Thermal, size and surface effects on the nonlinear pull-in of small-scale piezoelectric actuators, M SoltanRezaee, MR Ghazavi, Smart Materials and Structures, 26 (9), 095023, 2017
- 7-Bifurcation onset delay in magnetic bearing systems by time varying stiffness MR Ghazavi, Q Sun, Mechanical Systems and Signal Processing 90, 97-109, 2017
- 8-Nonlinear vibration and stability analysis of the curved microtube conveying fluid as a model of the micro coriolis flowmeters based on strain gradient theory, MR Ghazavi, H Molki, Applied Mathematical Modelling 45, 1020-1030, 2017
- 9-Novel mass detection based on magnetic excitation in anti-resonance region,

- H Jafari, A Ghodsi, MR Ghazavi, S Azizi, *Microsystem Technologies* 23 (5), 1377-1383, 2017
- 10-Energy harvesting based on magnetostriction, for low frequency excitations,  
H Jafari, A Ghodsi, S Azizi, MR Ghazavi *Energy* 124, 1-8, 2017
- 11-Dynamics of a capacitive electret-based microcantilever for energy harvesting  
MG Khabir, S Azizi, MR Ghazavi, *arXiv preprint arXiv:1701.08843*, 2017
- 12- Parametric resonances for torsional vibration of excited rotating machineries  
with nonconstant velocity joints, M SoltanRezaee, MR Ghazavi, A Najafi,  
*Journal of Vibration and Control*, 1077546317703542, 2017
- 13-Bifurcation in a planar four-bar mechanism with revolute clearance joint,  
SB Farahan, MR Ghazavi, S Rahmanian, *Nonlinear Dynamics* 87 (2), 955-973, 2017
- 14-The influence of dispersion forces on the size-dependent pull-in instability  
of general cantilever nano-beams containing geometrical non-linearity  
M SoltanRezaee, A Farrokhabadi, MR Ghazavi, *International Journal of Mechanical  
Sciences* 119, 114-124, 2016
- 15-Nonlinear dynamics of the rotational slender axially moving string with  
simply supported conditions, H Heydari, MR Ghazavi, A Najafi, S Rahmanian,  
*International Journal of Engineering-Transactions C: Aspects* 29 (6), 834, 2016
- 16- A conceptual study on the dynamics of a piezoelectric MEMS (Micro  
Electro Mechanical System) energy harvester, S Azizi, A Ghodsi, H Jafari, MR Ghazavi  
*Energy* 96, 495-506, 2016
- 17-VIBRATION AND STABILITY ANALYSIS OF LAMINATED COMPOSITE  
PLATES WITH HYGROTHERMAL EFFECTS, H GHADIRIAN, MR GHAZAVI, K  
KHORSHIDI, *JOURNAL OF SOLID AND FLUID MECHANICS* 6 (2), 155-166, 2016
- 18-DYNAMICS ANALYSIS OF PIPE CONVEYING FLUID WITH AXIAL AND  
ROTATIONAL MOTION, H HEYDARI, MR GHAZAVI, A NAJAFI *MODARES MECHANICAL  
ENGINEERING* 16 (9), 387-393  
2016
- 19-Nonlinear dynamic analysis of a four-bar mechanism having revolute joint  
with clearance, S Boorghan Farahan, MR Ghazavi, S Rahmanian  
*Journal of Theoretical and Applied Vibration and Acoustics* 2 (1), 91-106, 2016
- 20 -Thermo-elastic damping in a functionally graded piezoelectric  
microresonator S, Azizi, MR Ghazavi, G Rezazadeh, SE Khadem, *International  
Journal of Mechanics and Materials in Design* 11 (4), 357-369, 2015
- 21- Bifurcation in planar slider–crank mechanism with revolute clearance joint,  
S Rahmanian, MR Ghazavi, *Mechanism and Machine Theory* 91, 86-101, 2015
- 22- Dynamic analysis of non-linear FE model of drillstring.  
M Mohammadzadeh, A Alibeigloo, *Modares Mechanical Engineering* 14 (13), 2015

- 23-Nonlinear analysis of resonance between the blade and rotor by the bifurcation equation and numerical method. A Najafi, MR Ghazavi, AA Jafari, Modares Mechanical Engineering 14 (12),2015
- 26- Obtaining stable cardan angles in rotating systems and investigating the effective parameters on system stability. MS Rezaee, MR Ghazavi, Modares Mechanical Engineering 14 (12),2015
- 27- Analysis of dynamic behavior of FE model of drillstring-wellbore contact with improved contact model. M Mohammadzadeh, M Ghazavi, Modares Mechanical Engineering 14 (11) 2015
- 28- Dynamic analysis of a rotor supported on ball bearings with waviness and centralizing springs and squeeze film dampers, S Modares Ahmadi, M Ghazavi, M Sheikhzad, International Journal of Engineering 28, 1351-1358,2015
- 29- STABILITY ANALYSIS OF A THREE-AXIS POWER TRANSMISSION SYSTEM, RM SOLTAN, MR GHAZAVI, ALIA JAFARI, MODARES MECHANICAL ENGINEERING 14 (1), 35-44,2015
- 30-Bifurcations of a System of Rotor-Ball Bearings with Waviness and Squeeze Film Dampers, SM Ahmadi, MR Ghazavi, M Sheikhzad, Wear 123, 16997,2014
- 31-Stability and bifurcations analysis of rotating shafts with base excitations M Asgarisabet, MR Ghazavi, M Shahgholi, Nonlinear Dynamics 78 (4), 2847-2859,2014