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EDUCATION:

Isfahan University of technology (IUT), Mechanical Engineering, Bachelor of Science, 2002
Khaje Nasir al Din Toosi University of technology (KNTU), Mechanic of Flight, Ms. C, 2005
Iran University of Science & technology (IUST), Mechanical Engineering, Ph. D, 2012

PROFESSIONAL EXPERIENCE:

2008-Present   Lecturer, university of Kashan, Kashan
2005-2012   Lecturer, Islamic Azad University, Kashan
2005-2006   Lecturer, Shahid Rajaee college of mechanic, Kashan
2008-2012   Researcher, robotic Lab., IUST, Mechanical Engineering Department

RESEARCH INTERESTS:

- o   Mechatronics and Robotics
- o   Nonlinear control
- o   Optimal control
- o   Vibrations control
- o   Rotor dynamics

PUBLICATIONS IN JOURNALS:

	Title	Authors	Journal	Year
1	Vibration control of the rotating sandwich cylindrical shell considering functionally graded core and functionally graded magneto-electro-elastic layers by using differential quadrature method	R Rostami, M Irani Rahaghi, M Mohammadimehr	Journal of Sandwich Structures and Materials	2019
2	Dynamic stability and nonlinear vibration of rotating sandwich cylindrical shell with considering FG core integrated with sensor and actuator	R Rostami, M Irani Rahaghi, M Mohammadimehr	Steel and Composite Structures	2019
3	Free vibration analysis of a porous rotor integrated with regular patterns of circumferentially distributed FGP patches on inner and outer surface	Yaser Heidari, Mohsen Irani Rahaghi, Mohammad Arefi	Journal of Intelligent Material Systems and	2020

			Structures	
4	Nonlinear forced vibration of sandwich plate with considering FG core and CNTs reinforced nano-composite face sheets	Rasoul Rostami, Mohsen Irani Rahaghi and Mehdi Mohammadimehr	Smart Structures and Systems	2020
5	New optimization method to solve motion planning of dynamic systems: application on mechanical manipulators	MH Korayem, M Irani	Multibody System Dynamics	2014
6	Development of beam modal function for free vibration analysis of FML circular cylindrical shells	Masood Mohandes, Ahmad Reza Ghasemi, Mohsen Irani-Rahagi, Keivan Torabi, Fathollah Taheri-Behrooz	Journal of Vibration and Control	2017
7	Solving nonlinear optimal path tracking problem using a new closed loop direct–indirect optimization method: application on mechanical manipulators	M. Irani Rahaghi and F. Barat	Robotica	2019
8	Trajectory planning of mobile manipulators using dynamic programming approach	MH Korayem, M Irani, A Charesaz, AH Korayem, A Hashemi	Robotica	2013
9	Maximum load of flexible joint manipulators using nonlinear controllers	A. Korayem, M. Irani, H. Babaei, M.H. Korayem	Robotica	2017
10	Free vibration analysis of functionally graded laminated sandwich cylindrical shells integrated with piezoelectric layer	Mohammad Arefi, R Karroubi, M Irani-Rahaghi	Applied Mathematics and Mechanics	2016
11	Rotating sandwich cylindrical shells with an FGM core and two FGPM layers: free vibration analysis	R. KARROUBI, M. IRANI-RAHAGHI	Applied Mathematics and Mechanics	2019
12	Recursive approximate solution to time-varying matrix differential Riccati equation: linear and nonlinear systems	Saeed Rafee Nekoo & Mohsen Irani Rahaghi	International Journal of Systems Science	2018
13	Maximum allowable load of mobile manipulator in the presence of obstacle using non-linear open and closed loop optimal control	MH Korayem, V Azimirad, M Irani Rahagi	Arabian Journal for Science and Engineering	2014
14	Whirling analysis of multi-span multi-stepped rotating shafts	Hassan Afshari Mohsen Irani Rahaghi	Journal of the Brazilian Society of Mechanical Sciences and Engineering	2018
15	Free vibration of sandwich micro-beam with porous foam core, GPL layers and piezo-magneto-electric facesheets via NSGT	Mehdi Mohammadimehr, Saeed Firouzeh, Mahsa Pahlavanzade, Yaser Heidari and Mohsen Irani-Rahaghi	Computers and Concrete	2020
16	Vibration modelling and structural modification of combine harvester thresher using operational modal analysis and finite element method	Hamed Ghafarzadeh Zare, Ali Maleki, Mohsen Irani Rahaghi and Majid Lashgari	Structural Monitoring and Maintenance	2019
17	Longitudinal-Torsional and Two Plane Transverse Vibrations of a Composite Timoshenko Rotor	M Irani Rahagi, A Mohebbi, H Afshari	J Solid Mech	2016
18	Application of Stereo Vision and ARM Processor for Motion Control	Moharam Habibnejad Korayem, Michal Irani and Saeed Rafee Nekoo	John Wiley & Sons, Inc/ Interdisciplinary Mechatronics	2013
19	Load maximization of flexible joint mechanical manipulator using nonlinear optimal controller	MH Korayem, M Irani, S Rafee Nekoo	Acta Astronautica	2011
20	Maximum dynamic load determination of mobile	H Korayem, M Irani	SCIENTIA	2010

	manipulators via nonlinear optimal feedback		IRANICA	
21	Analysis of manipulators using SDRE: A closed loop nonlinear optimal control approach	MH Korayem, M Irani, S Rafee Nekoo	SCIENTIA IRANICA	2010
22	Application of Stereo Vision on Determination of End-Effector Position and Orientation of Manipulators	A. Korayem, M. Irani, A. Hashemi, M. H. Korayem,	Journal of Control Engineering and Technology	2014
23	Motion Control and Dynamic Load Carrying Capacity of Mobile Robot via Nonlinear Optimal Feedback	MH Korayem, M Irani, S Rafee Nekoo	AMAE Int. J. on Manufacturing and Material Science	2011
24	Nonlinear optimal control techniques applied to a launch vehicle autopilot	M Irani Rahaghi, J Roshanian	Journal of aerospace science and technology	2006
25	Robot-Borne PLC-Based Control System Used for Lower Limbs Rehabilitation	Mohammad Hosein Kardan, Mohsen Irani Rahaghi	Modares Mechanical Engineering	2015
26	Free whirling analysis of multi-step Timoshenko rotor with multiple bearing using DQEM	Hassan Afshari, Mohsen Irani, Keivan Torabi	Modares Mechanical Engineering	2014
27	Free vibration of rotating FGM conical shell with smart patches	M. Jafari Niasar, A. A. Jafari, M. Irani Rahaghi	Journal of Solid and Fluid Mechanics	2020
28	Optimization of Bearing Location for Multi-Stepped Rotor by Genetic Algorithm	H. Mesforoosh, M. Irani Rahaghi, S. Golabi,	Journal of Solid and Fluid Mechanics	2016
29	Free Vibration Analysis of Sandwich Cylindrical Shells with Functionally Graded Core and Sensor and Actuator Piezoelectric Layers	R. Karroubi and M. Irani Rahaghi	Tabriz Journal of Mechanical Engineering	2018
30	Vibration modelling the thresher unit of john deere (955) combine harvester using operational modal analysis	Hamed Ghafarzadeh Zare, Ali Maleki, Mohsen Irani Rahaghi, majid Lashgari	Agricultural Engineering	2020

PUBLICATIONS IN CONFERENCES:

C1. M. Irani Rahaghi, J. Roshanian, A. Novinzadeh, "Nonlinear Optimal Controller design for spacecraft using Successive Galerkin Approximation", 6th conference of AERO, Tehran, Iran (2007)

C2. H. Korayem, M. Irani, S. Rafee Nekoo, "Maximum Dynamic Load Determination of Mobile Manipulators in trajectory tracking via two Nonlinear Optimal controller and output feedback", 10th conference of ICME, Babol, Iran (2010)

C3. H. Korayem, M. Irani, S. Rafee Nekoo, "Load Capacity of manipulator in trajectory tracking via Nonlinear Optimal controller", 19th conference of ISME, Birjand, Iran (2011)

C4. M.H. Korayem, M. Irani and S. Rafee Nekoo, "Motion Control and Dynamic Load Carrying Capacity of Mobile Robot via Nonlinear Optimal Feedback", Proc. of Int. Conf. on Advances in Mechanical Engineering, pp. 16-21, (2011)

C5. M. Irani Rahaghi, "Nonlinear optimal control system design using successive approximation method", 2nd national conf. of mechanical eng., Shiraz, (2011)

C6. M. Irani Rahaghi, M. R. Babavalian, M. Yari, "Digital Gyro Compass design using magnetic effects", 2nd national conf. of mechanical eng., Shiraz, (2011)

C7. M. H. Korayem, M. Irani, A. Hashemi, "Experimental test for stereo vision system to determine end-effector position of manipulators", The Int. Conf. on Experimental Solid Mechanics and Dynamics (X-Mech), (2012)

C8. M. Irani Rahaghi, A. Bavarsad, "Design and Experimental Test of Tracker Robot", Int. Conf. on Experimental Solid Mechanics and Dynamics (X-Mech), (2014)

C9. M. Irani Rahaghi, A. Bavarsad, "Design, manufacture and operational Test of mobile Tracker Robot", 5th Conf. on ICEE, (2013)

C10. M. Irani Rahaghi, M. R. Kiyani, "Optimization of SDRE method using GSA algorithm", 22th conference of ISME, Ahvaz, Iran (2014)

C11. M. Irani Rahaghi, M.H. Kardan, 'Dynamic Analysis and Control of Robot-Borne Lower Limbs Rehabilitation", 23th conference of ISME, Tehran, Iran (2015)

C12. M. Irani Rahaghi, A.M. Managheb, M.H. Tavajohi 'Nonlinear Synthesis of Watt-II 6-bar Linkage using Compelete Dyad method", 23th conference of ISME, Tehran, Iran (2015)

C13. E. Golzari, M. Irani Rahaghi, "FEM analysis of polystyrene nano-composite beam reinforced by SWCNT as a rotor system based on Timoshenko beam theory", 23th conference of ISME, Tehran, Iran (2015)

C14. M. Mostafavifar, M. Irani Rahaghi, "Vibration analysis of composite drillstrings reinforced by SWCNT", 24th conference of ISME, Yazd, Iran (2016)

C15. H. H. Ghaffari, M. Irani Rahaghi, "Validation of dynamic equations of Stewart-Gough parallel Manipulator", 24th conference of ISME, Yazd, Iran (2016)

C16. A. Karim, S.A. Taher, M. Irani Rahaghi, "Nonlinear Robust Optimal Controller Design for Upper Limb Exoskeleton", 24th conference of ISME, Yazd, Iran (2016)

C17. A. Taghipoor, M. Irani Rahaghi, "Vibration Optimization of metal Drive Shaft reinforced by Laminated Composite Structures Using Genetic Algorithm", First Int. conference of Mechanical and Aerospace Eng., Tehran, Iran (2016)

C18. M. Fatehi, R. Karroubi, M. Irani Rahaghi, "Dynamic Modeling and Vibration Analysis of Gear Box and Bearings of Helocopter", 2nd conference on Modern Achivements of Aerospace, Mechanic and related sciences, Tehran, Iran (2016)

C19. M. Irani Rahaghi, R. Karroubi, "Active optimal control of functionally graded laminated sandwich cylindrical shells integrated with functionally graded piezoelectric layers using LQR", 25th conference of ISME, Tehran, Iran (2017)

C20. R. Karroubi, M. Irani Rahaghi, "Effect of non-homogeneous index of FGM and FGP materials on the natural frequencies of the rotating sandwich cylindrical shell", 25th conference of ISME, Tehran, Iran (2017)

C21. H. Osooli, M. Irani Rahaghi, "Build a robot by imitation from the human eye", 25th conference of ISME, Tehran, Iran (2017)

C22. A. Ghorbanpoor, M. Irani Rahaghi, F. Soltani, M. Pakizeh "Build a robot by imitation from the human eye", 25th conference of ISME, Tehran, Iran (2017)

C23. M. Irani Rahaghi, F Barat, "Solving nonlinear optimal path tracking and DLCC determination problems using a closed loop direct-indirect optimization method", 4th national and 2nd Int. conference on applied researchs in electric, mechanic and mechatronic Eng., Isfahan, Iran (2017)

C24. H. H. Ghaffari, M. Irani Rahaghi, M.R. Esmaeelbeygi, "Experimental Test of 6 DOF Stewart-Gough parallel Manipulator", 25th conference of ISME, Tehran, Iran (2017)

PARTICIPATION IN EDUCATION:

Under Graduate Level Courses:

- *Mechanical Vibrations,*
- *Automatic Control,*
- *Mechanisms Design,*
- *System Dynamics and Control,*
- *Robotics*
- *Engineering Drawings*

Graduate Level Courses:

- *Modern Control,*
- *Optimal Control,*
- *Advanced Robotics,*
- *Advanced Dynamics,*
- *Mechatronics,*
- *Rotor Dynamics,*
- *Nonlinear Vibrations,*
- *Advanced Mathematics*