MirMohammad Ettefagh (Updated on November, 24, 2024)

Associate Professor, Mechanical Eng. Dep. University of Tabriz

Mobile No.: +989144064291, Email: ettefagh@tabrizu.ac.ir; mmettefagh@gmail.com

Scopus ID: 56063516300

Google Scholar: http://scholar.google.com/citations?user=AYOy7vIAAAAJ&hl=en

ORCID ID: https://orcid.org/0000-0002-9229-3482

Working for more than 20 years in vibration signal analysis, made me highly experienced in performing academic and industrial projects, related to Condition Monitoring (CM) of the rotary machines, Structural Health Monitoring (SHM) and Modal Analysis (MA) of structures and Parallel Robots (PR) applied in Advanced Manufacturing (AM). Moreover, my areas of expertise are the simulation of complex dynamic systems and applying Artificial Intelligence (AI) methods for damage detection in mechanical and structural systems. Most of my research outcomes are published in high-ranked journals with high citation.

EDUCATION AND DEGREES AWARDED

2004 - 2009	**PhD Dynamics & Vibration (Vibration Signal Processing & CM/SHM)** University of Tabriz Thesis: Fault diagnosis of time-varying systems using parametric modeling.
2002 - 2004	**M.Sc. Dynamics &Vibration (Modal Analysis)** University of Tabriz Thesis: Damage detection of beam-like structures in the frequency domain.
1997 - 2002	**B.Sc. Mechanical Engineering (Applied Design)** University of Tabriz

ACADEMIC POSITIONS

2015 - Present	Associate Professor, Mechanical Eng. Dep. University of Tabriz
2009 - 2015	Assistant Professor, Mechanical Eng. Dep. University of Tabriz

ADMINISTRATIVE POSITIONS

2018- Present	Administrator of computer simulation Lab. in Mechanical Eng. Dep. University of Tabriz
2016- Present	Administrator of talent students in Mechanical Eng. Dep. of University of Tabriz
2018- Present	Administrator of Mechanical Eng. Scientific Olympiad in North-West region
2013- Present	Administrator of Auto-mechanic work-shop in Mechanical Eng. Dep. University of Tabriz
2009 – 2013	Deputy head of Mechanical Eng. Dep. University of Tabriz
2022- Present	Deputy head of Mechanical Eng. Dep. University of Tabriz

SKILLS SUMMARY

- Performing vibration signals processing in LabView, MATLAB and MEscope in academic & industrial projects applied in CM, SHM and MA
- Applying National Instrument and B&K data acquisition systems, sensors and actuators for MA, CM and SHM
- Utilizing the shakers with different sizes and tonnages to actuate the workpieces for MA, CM and SHM purposes
- Performing experimental Modal Analysis tests and model updating on parallel mechanisms and robots, applied as machine tools in advanced manufacturing for chattering avoidance
- Performing experimental Modal Analysis tests on music instruments for the extraction of vibration patterns
- Performing experimental Modal Analysis tests on different structures
- Establishing dynamic modeling, simulation and AI-based optimization algorithms and computer programming of complex systems (such as advanced robots, parallel mechanisms, offshore structures, floating wind turbine, biomechanics and human body models) using MATLAB
- Developing vibrational characteristics of work/sports shoe using advanced dynamic modeling of the human body and experimental tests to prevent severe injuries and fatigue on athletes
- Managing academic and practical projects with Condition Monitoring (CM), Structural Health Monitoring (SHM) and Modal Analysis of Parallel Robots subjects
- Establishing Finite Element Modeling (FEM) of parallel mechanisms/robots and structures in ANSYS software
- Setting up an advanced laboratory of CM, SHM and Modal Analysis (Advanced vibration sensors and actuators) in academic and industrial sections
- Teaching Dynamics, Vibration, Mechanisms courses and related laboratories
- Teaching “Modeling and Simulation of dynamic systems” and “Advance Mechanism Design” courses at graduate levels
- Scientific writing
- Group and project leadership
- Computer literacy and proficiency in Microsoft Office & Web tools

AWARDS, GRANTS AND ACHEVEMENTS

- **Visiting University of West Attica (Greece) Grant,** Erasmus^{+} International Credit Mobility Program, 2022
  Achievements:
  - Formation of intercultural experience to identify both educational and scientific research directions
  - Exchanges of good practices concerning international relation and scientific research
  - Establishing of network for communication and future corporation
- **INSF Research Grant,** Iran National Science Foundation, 2019

Achievements:

- A method is developed based on dynamic modeling of human body for designing and manufacturing anti vibration work shoes.
- The primary results and the report of this project is published in high-ranked "International Journal of Industrial Ergonomics" (IF=1.662)

- **Industrial Grant**, IPMCo., Iran Piston Manufacturing Company, 2017
  Achievements:
  - Theoretical and Experimental Modal Analysis of XU7 engine tappet
  - Developing automatic method for tappet crack detection

- **Industrial Grant**, STP Co., Supplying Tractor Parts Company, 201٧
  Achievements:
  - Investigation of foundation vibration for installation of gear quality control system

- **Industrial Collaboration**, NSPCo., Navidsahand Company, 2019
  Achievements:
  - Proposing new DSP and CM method based on signal decomposition and deep neural-network for CM of rotary machinery
  - related papers about this innovation are published in high-ranked journals "Expert systems with Applications" (IF=5.452) and "Structural Health Monitoring" (IF=4.87)

- **Industrial Collaboration**, ITMCo., Iran Tractor Industrial Group, 2010
  Achievements:
  - Optimization of Tractor cabin's passive suspension parameters for making the cabin more comfortable and safer for drivers
  - Related papers about this project is published in high-ranked "Journal of Terramechanics" IF=2.043).

- **Industrial Collaboration,** Standard National Organization of Iran, 2017
  - Compilation of "Rotor Balancing - Section 31 (ISO 21940-31)" as national standard
  - Compilation of "Rotor Balancing- Section 21 (ISO 21940-21)" as national standard
  - Compilation of "Condition Monitoring- Section 1 (ISO 13381-1,)" as national standard
  - Compilation of "Condition Monitoring- Section 2 (ISO 13373-2)" as national standard
  - Compilation of "Condition Monitoring- Section 3 (ISO 13373-3)" as national standard

- **Supervisor of the Best MS. Thesis Award,** annually contributed by ISAV (Iranian Society of Acoustics and Vibration), 2015

- **Supervisor of the Best MS. Thesis Award,** annually contributed by ISAV (Iranian Society of Acoustics and Vibration), ٢٠٢٢

- **Distinguished Ph.D. Student Award** among PhD students of Mechanical Eng. Dep. University of Tabriz, 2008

- **3.5-year full scholarship** by Ministry of Science, Research and Technology, to study PhD of Mechanical Engineering in University of Tabriz, 2005-2009

- **Outstanding Contribution in Reviewing Award** by Journal of "Mechanical Systems and Signal Processing" 2015

- **Outstanding Contribution in Reviewing Award** by Journal of "Measurement" 2018

- **Invited Lecturer** for 2014 IEEE International Symposium on Innovations in Intelligent Systems and Application (INISTA 2014) in Alberobello, Italy

- **Invited Lecturer** for 2013 IEEE International Symposium on Innovations in Intelligent Systems and Application (INISTA 2013) in Albena, Bulgaria
  - My paper was selected for publishing in "International Journal of Reasoning-based Intelligent Systems"
- **Invited Lecturer** for 6th International Conference on Advanced Computational Engineering and Experimenting (ACE-X 2012), in Istanbul, Turkey, 2012

- **Invited Lecturer** for 2011 IEEE International Symposium on Innovations in Intelligent Systems and Application (INISTA 2011) in Istanbul, Turkey

- **Reviewer of more than 15 national patents,** Research Center of UT

- **Reviewer of papers for peer-reviewed international journals including (published by Elsevier, SAGE and Springer…):**

  Mechanical Systems and Signal Processing
  Journal of Sound and Vibration
  Measurement Journal of the International Measurement Confederation (IMEKO)
  Ocean Engineering
  Applied Ocean Research
  Journal of Mechanical Science and Technology
  Journal of Civil Engineering (Korean Society of Civil Engineering)
  Earthquake Engineering and Engineering Vibration
  Inverse Problems in Science & Engineering
  Journal of Mechanical Engineering Science
  Structural Engineering and Mechanics

TEACHING EXPERIANCE

University of Tabriz:

2012 - Present	Advanced Mechanisms Design/ M.Sc. & PhD course in University of Tabriz
2011 - Present	Advanced Vibration/ M.Sc. & PhD course in University of Tabriz
2010 - Present	Simulation of Dynamic Systems/ M.Sc. & PhD course in University of Tabriz
2009 - Present	Mechanisms Design / B.Sc. course in University of Tabriz
2008 - Present	Engineering Dynamics / B.Sc. course in University of Tabriz
2008 - Present	Auto mechanics / B.Sc. course in University of Tabriz

2007 - Present Kinematics and Dynamics of machines / B.Sc. course in University of Tabriz
2007 - Present Engineering Statics / B.Sc. course in University of Tabriz
2005 - Present Dynamics and Vibration Lab. / B.Sc. course in University of Tabriz
2005 - 2012 Engineering Drawing / B.Sc. course in University of Tabriz

UCNA university
2014 - 2016 Invited professor for Advanced Vibration & Engineering Dynamics/ M.Sc. courses

Azad University
2014 - 2016 Invited professor for Kinematics and Dynamics of machines/ B.Sc. courses

Patents

Iranian Research Organization for Science and Technology (IROST)
No. 9608702 (24 December 2019) Dynamic Stimulus Device in Health Measurement of Fluid-Carrying Pipes

PUBLICATIONS

Web of Science h-Index: 23
Web of Science Citations: 1402

Scopus h-Index: 24
Scopus Citations: 2024

Google Scholar h-Index= 27
Google Scholar Citations=2724

ORCID ID: https://orcid.org/0000-0002-9229-3482
Web of Science ResearcherID: ABD-6297-2021
Scopus ID: 56063516300
Google Scholar: http://scholar.google.com/citations?user=AYOy7vIAAAAJ&hl=en

BOOK:

Simulation of complex dynamic systems with MATLAB (In Persian), 2022, Atharan/Ashina Publications, Tabriz, Iran

BOOK CHAPTERS:

1. Delamination Diagnosis in Composite Beam Using AIS and BGA Algorithms Based on Vibration Characteristics, B. Mohebbi, F. Abbasidoust, **M. M. Ettefagh (Corresponding Author)** and H. Biglari – Chapter 5 of Optimization of Structures and Components - Advanced Structured Materials 43-DOI: 10.1007/978-3-319-00717-5_5- © Springer International Publishing Switzerland 2014

2. Experimental and Theoretical Modeling of 5 MW Offshore Wind Turbine with TLP Platform - Chapter 66 of Progress in Clean Energy, **M.M. Ettefagh (Corresponding Author)**, Mobin Alipour, Yousef Golizadeh Akhlaghi and Ebrahim Akbari, Volume 2- Springer International Publishing- 2015

JOURNAL PAPERS:

1. A hybrid wavelet-deep learning approach for vibration-based damage detection in monopile offshore structures considering soil interaction, Wei-Qiang Feng, Zohreh Mousavi, Mohammadreza Farhadi, Meysam Bayat, **Mir Mohammad Ettefagh (Corresponding Author)**, Sina Varahram, Morteza H Sadeghi, Journal of Civil Structural Health Monitoring, 1-28, 2024
2. Black-box nonlinear observer-based deep reinforcement learning controller with application on Floating Wind Turbines, H Mohammadian KhalafAnsar, J Keighobadi, **MM Ettefagh**, J Tanha, Scientia Iranica 10.24200/sci.2024.63823.8614, 2024
3. Microstructure and mechanical characteristics of Al1050/B2O3+ Cu hybrid surface nanocomposite fabricated using friction stir processing, S Pedrammehr, M Sajed, S Pakzad, A Zare Jond, **MM Ettefagh**, S Tutunchilar, Materials Research Express 11 (9), 096503, 2024
4. Experimental and machine learning study on friction stir surface alloying in Al1050-Cu Alloy, Journal of Manufacturing and Materials Processing 8 (4), 163, S Pedrammehr, M Sajed, K Al-Abdullah, S Pakzad, A Zare Jond, MR Chalak Qazani, **MM Ettefagh, 2024**
5. Damage Detection of Gantry Crane with a Moving Mass Using Artificial Neural Network, Buildings 14 (2), 458, M Safaei, M Hejazian, S Pedrammehr, S Pakzad, **MM Ettefagh**, M Fotouhi, 2024
6. A digital twin-based framework for damage detection of a floating wind turbine structure under various loading conditions based on deep learning approach, Ocean Engineering, 292, 116563, Z Mousavi, S Varahram, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, WQ Feng, M Bayat , 2024
7. Dictionary learning-based damage detection under varying environmental conditions using only vibration responses of numerical model and real intact State: Verification on an experimental offshore jacket model, Mechanical Systems and Signal Processing 182, Z Mousavi, S Varahram, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, 2023
8. Machine Learning-Based Modelling and Meta-Heuristic-Based Optimization of Specific Tool Wear and Surface Roughness in the Milling Process, S Pedrammehr, M Hejazian, MR Chalak Qazani, H Parvaz, S Pakzad, **MM Ettefagh**, AH Suhail, Axioms 11(9), 2022
9. Effects of warping function on scale-dependent torsional vibration of nano-bars, R Hassannejad, **MM Ettefagh**, B Alizadeh-Hamidi, The European Physical Journal Plus 137(7), 2022
10. Model-based control of axisymmetric hexarot parallel manipulators, S Pedrammehr, MR Chalak Qazani, H Asadi, **MM Ettefagh**, S Nahavandi, Results in Control and Optimization 7, 2022
11. Damage detection of offshore jacket structure using dynamic responses based on simulated model, intact state of real model and deep auto-encoder neural network, S N Razavi, Z Mousavi, S Varahram, **MM Ettefagh (Corresponding Author)**, M Sadeghi, AJME 53(6), 2021
12. Incipient fault diagnosis of bearings based on parameter-optimized VMD and envelope spectrum weighted kurtosis index with a new sensitivity assessment threshold, A Dibaj, R Hassannejad, **MM Ettefagh**, MB Ehghaghi, ISA transactions 114, 413-433, 2021
13. Damage detection of offshore jacket structure using dynamic responses based on simulated model, intact state of real model and deep auto-encoder neural network
14. Mooring Damage Identification of Floating Wind Turbine Using a Non-Probabilistic Approach Under Different Environmental Conditions, PH Dehkharghani, **MM Ettefagh (Corresponding Author)**, R Hassannejad, Journal of Marine Science and Application 20, 156-169, 2021
15. Detection of Damages in Mooring Lines of Spar Type Floating Offshore Wind Turbines Using Fuzzy Classification and Arma Parametric Modeling, M Rezaee, R Fathi, V Jahangiri, **MM Ettefagh**, A

Jamalkia, MH Sadeghi, International Journal of Structural Stability and Dynamics, Online Ready (https://www.worldscientific.com/doi/abs/10.1142/S021945542150111X), 2021

16. Recognizing the viscoelastic safe area of work shoe sole in the sitting posture with vibration transmissibility in the vertical direction, Peyman Jalali, **MM Ettefagh (Corresponding Author)**, Reza Hassannejad, International Journal of Industrial Ergonomics 81, 103053, 2021
17. Developing deep neural network for damage detection of beam-like structures using dynamic response based on FE model and real healthy state, Z Mousavi, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, SN Razavi, Applied Acoustics 168, 107402, 2020
18. A hybrid fine-tuned VMD and CNN scheme for untrained compound fault diagnosis of rotating machinery with unequal-severity faults, A Dibaj, **MM Ettefagh (Corresponding Author)**, R Hassannejad, MB Ehghaghi, Expert Systems with Applications, 114094, 2020
19. Fine-tuned variational mode decomposition for fault diagnosis of rotary machinery, A Dibaj, **MM Ettefagh (Corresponding Author)**, R Hassannejad, MB Ehghaghi, Structural Health Monitoring 19 (5), 1453-1470, 2020
20. Investigating the Dynamics of a Ball-Spring Autobalancer in a Rotor with Non-Linear Bearings, M Rezaee, **MM Ettefagh**, R Fathi, Computational Methods in Engineering 39 (1), 29-43, 2020
21. Optimal design of sport footwear with considering energy dissipation of lower limb soft-tissue during running, P Jalali, R Hassannejad, **MM Ettefagh**, MRS Noorani, Science & Sports 35(6), 405-412, 2020
22. Deep neural networks–based damage detection using vibration signals of finite element model and real intact state: An evaluation via a lab-scale offshore jacket structure, Z Mousavi, S Varahram, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, SN Razavi, Structural Health Monitoring OnlineFirst https://doi.org/10.1177/1475921720932614, 2020
23. Structural control of a fixed offshore structure using a new developed tuned liquid column ball gas damper (TLCBGD), H Hokmabady, A Mojtahedi, S Mohammadyzadeh, **MM Ettefagh**, Ocean Engineering 192, 106551, 2019
24. Effect of PIG's physical parameters on dynamic behavior of above ground pipeline in pigging operation, MH Sadeghi, S Chitsaz, MM Ettefagh, Mechanical Systems and Signal Processing 132, 692-720, 2019
25. Vibration settling time of the gastrocnemius remains constant during an exhaustive run in rear foot strike runners, A Khassetarash, R Hassannejad, MM Ettefagh, AE Oskouei, Journal of biomechanics 93, 140-146, 2019
26. Experimental Study of Damage Detection in Beam Using Dynamic Excitation System and Wavelet Packet Transform and Energy Rate Index, M Kohdaragh, L Yaghin, **MM Etefagh**, AR Mojtahedi, Modares Mechanical Engineering 19 (7), 1655-1662, 2019
27. Dynamics and Stability of Non-Planar Rigid Rotor Equipped with Two Ball-Spring Autobalancers, M Rezaee, **M Mohammad Ettefagh**, R Fathi, International Journal of Structural Stability and Dynamics 19 (02), 1950001, 2019
28. Modeling the central nervous system functionality in controlling the calf muscle activity during running with sport shoes, P Jalali, MRS Noorani, R Hassannejad, **MM Ettefagh**, Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine 233(2), 254-266, 2019
29. Investigation of dynamic response changes in TLP type floating wind turbine with broken mooring lines, MA Nosratzadeh, **MM Ettefagh (Corresponding Author)**, P Hajinezhad Dehkharghani, Journal of Marine Engineering 14 (28), 51-63, 2019

30. A study on vibration of Setar: stringed Persian musical instrument, S Pedrammehr, N Jafarzadeh Aghdam, S Pakzad, **MM Ettefagh**, M Homayoun Sadegh, Journal of Vibroengineering 20 (7), 2680-2689, 2018
31. Modeling and vibration analysis of pipeline in the course of pigging operation, using FEM and experimentalmodal analysis, S Chitsaz, **MM Ettefagh**, Modares Mechanical Engineering 18 (6), 191-201, 2018
32. Health monitoring of mooring lines in floating structures using artificial neural networks, HR Aqdam, **MM Ettefagh (Corresponding Author)**, R Hassannejad, Ocean Engineering 164, 284-297, 2018
33. Cavitation intensity monitoring in an axial flow pump based on vibration signals using multi-class support vectormachine, MT Shervani-Tabar, **MM Ettefagh (Corresponding Author)**, S Lotfan, H Safarzadeh, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science 232(17), 3013-3026, 2018
34. Multibody dynamics of a floating wind turbine considering the flexibility between Nacelle and Tower, V Jahangiri, **MM Ettefagh (Corresponding Author)**, International Journal of Structural Stability and Dynamics 18 (06), 1850085, 2018
35. Vibration Analysis of 2-PR (Pa) U-2-PR (Pa) R New Parallel Mechanism, M Mahboubkhah, S Pakzad, M Homayoun Sadeghi, **MM Ettefagh**, ADMT Journal 11 (2), 47-56, 2018
36. Optimal novel super-twisting PID sliding mode control of a MEMS gyroscope based on multi-objective batalgorithm, M Rahmani, H Komijani, A Ghanbari, **MM Ettefagh**, Microsystem Technologies 24 (6), 2835-2846, 2018
37. A novel adaptive neural network integral sliding-mode control of a biped robot using bat algorithm, M Rahmani, A Ghanbari, **MM Ettefagh**, Journal of Vibration and Control 24 (10), 2045-2060, 2018
38. Reliability Study of Energy Harvesting from Sea Waves by Piezoelectric Patches Consideraing Random JONSWAP Wave Theory, **MM Ettefagh (Corresponding Author)**, H Mirab, R Fathi, Computational Methods in Engineering 36 (2), 21-34, 2018
39. Modal analysis of the vertical moving table of 4-DOF parallel machine tool by FEM and experimental test, M Mahboubkhah, S Pakzad, A Ghane Arasi, **MM Ettefagh**, Journal of Vibroengineering 19 (7), 5301-5309, 2017
40. Damage detection of Pelamis power take-off based on discrete model, **MM Ettefagh (Corresponding Author)**, B Medghalchi, A Dibaj, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science 213(22), 4110-4125, 2017
41. Diagnosis of combined faults in Rotary Machinery by Non-Naive Bayesian approach, MY Asr, **MM Ettefagh (Corresponding Author)**, R Hassannejad, SN Razavi, Mechanical Systems and Signal Processing 85, 56-70, 2017
42. Hybrid neural network fraction integral terminal sliding mode control of an Inchworm robot manipulator, M Rahmani, A Ghanbari, **MM Ettefagh**, Mechanical Systems and Signal Processing 80, 117-136, 2016
43. Damage detection of TLP and Spar floating wind turbine using dynamic response of the structure, A Jamalkia, **MM Ettefagh**, A Mojtahedi, Ocean Engineering 125, 191-202, 2016
44. Investigation of WaveStar Energy Converter Performance in Caspian Sea Using Regular Wave and Froude-Krylov Force, P Yoosefi Khiabani, MA Abbaszadeh, A Khorshid, **MM Ettefagh (Corresponding Author)**, Journal of Marine Engineering 12 (23), 45-55, 2016
45. Size-dependent nonlinear vibration analysis of carbon nanotubes conveying multiphase flow, S Lotfan, R Fathi, **MM Ettefagh**, International Journal of Mechanical Sciences 115, 723-735, 2016

46. Robust adaptive control of a bio-inspired robot manipulator using bat algorithm, M Rahmani, A Ghanbari, **MM Ettefagh**, Expert Systems with Applications 56, 164-176, 2016
47. Damage detection in beam using dynamic excitation system by experimental, MA Lotfollahi Yaghin, M Kouhdaragh, **MM Ettefagh**, A Mojtahedi, Modares Mechanical Engineering 16 (4), 307-314, 2016
48. TLP structural health monitoring based on vibration signal of energy harvesting system, V Jahangiri, H Mirab, R Fathi, **MM Ettefagh (Corresponding Author)**, Latin American Journal of Solids and Structures 13 (5), 897-915, 2016
49. Investigating the dynamic behavior of ball-spring automatic balancer in presence of gyroscopic effect, M Rezaee, **MM Ettefagh**, R Fathi, Modares Mechanical Engineering 16 (11), 135-142, 2016
50. Damage identification of a TLP floating wind turbine by meta-heuristic algorithms, MM Ettefagh, China Ocean Engineering 29 (6), 891-902, 2015
51. Energy harvesting from sea waves with consideration of airy and JONSWAP theory and optimization of energy harvester parameters, H Mirab, R Fathi, V Jahangiri, **MM Ettefagh (Corresponding Author)**, R Hassannejad, Journal of Marine Science and Application 14 (4), 440-449, 2015
52. Fatigue and soft tissue vibration during prolonged running, A Khassetarash, R Hassannejad, **MM Ettefagh**, V Sari-Sarraf, Human movement science 44, 157-167, 2015
53. Fault diagnosis using noise modeling and a new artificial immune system-based algorithm, F Abbasi, A Mojtahedi, **MM Ettefagh**, Earthquake Engineering and Engineering Vibration 14 (4), 725-741, 2015
54. Statistical analysis of random uncertainty in the pipes conveying multi-phase flow based on nonlinear dynamicmodel, R Fathi, S Lotfan, **MM Ettefagh**, Modares Mechanical Engineering 15 (8), 323-331, 2015
55. Kinematic analysis and workspace determination of hexarot-a novel 6-DOF parallel manipulator with a rotation-symmetric arm system, MRC Qazani, S Pedrammehr, A Rahmani, B Danaei, **MM Ettefagh**, ..., Robotica 33 (8), 1686, 2015
56. Damage Identification of the Floating Wind Turbine Mooring Line by Fuzzy Classification, A Jamalkia, **MM Ettefagh (Corresponding Author)**, A Mojtahedi, Journal of Marine Engineering 11 (21), 41-56, 2015
57. New structural damage-identification method using modal updating and model reduction, **MM Ettefagh (Corresponding Author)**, H Akbari, K Asadi, F Abbasi, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science 229(6), 1041-1059, 2015
58. Damping and energy dissipation in soft tissue vibrations during running, A Khassetarash, R Hassannejad, H Enders, **MM Ettefagh**, Journal of Biomechanics 48 (2), 204-209, 2015
59. Reliability analysis of the bridge dynamic response in a stochastic vehicle-bridge interaction, **MM Ettefagh**, D Behkamkia, S Pedrammehr, K Asadi, KSCE journal of civil engineering 19 (1), 220-232, 2015
60. Investigating fatigue life effects on the vibration properties in friction stir spot welding using experimental andfinite element modal analysis, NJ Aghdam, S Hassanifard, **MM Ettefagh (Corresponding Author)**, A Nanvayesavojblaghi, Strojniški vestnik-Journal of Mechanical Engineering 60 (11), 735-741, 2014
61. An experimental study on motion error of hexarot parallel manipulator, Mohammad Reza Chalak Qazani, Siamak Pedrammehr, Arash Rahmani, Mehran Shahryari, Aslan Khani Sheykh Rajab, **Mir Mohammad Ettefagh**, The International Journal of Advanced Manufacturing Technology 72 (9-12), 1361-1376, 2014

62. Optimal synthesis of four-bar steering mechanism using AIS and genetic algorithms, **MM Ettefagh (Corresponding Author)**, MS Javash, Journal of Mechanical Science and Technology 28 (6), 2351-2362, 2014
63. Path synthesis of the four-bar mechanism using meta-heuristic algorithms, **MM Ettefagh (Corresponding Author)**, M Abbasi, H Emdadi, International Journal of Reasoning-based Intelligent Systems 6 (3-4), 109-117, 2014
64. Fatigue Strength of a Chassis of a Semi-Heavy Truck under Dynamic loads due to real road roughness, M Zehsaz, MH Sadeghi, **MM Ettefagh**, R Hassannejad, Transactions of FAMENA 38 (4), 89-105, 2014
65. Detection of nonlinearity effects in structural integrity monitoring methods for offshore jacket-type structuresbased on principal component analysis, A Mojtahedi, MAL Yaghin, **MM Ettefagh**, Y Hassanzadeh, M Fujikubo, Marine Structures 33, 100-119, 2013
66. A study on modal parameters of cylindrical grinding machine structure through experimental test and FEM, R Barzegar, M Mahboubkhah, **MM Ettefagh**, Applied Mechanics and Materials 307, 275-278, 2013
67. A robust damage detection method developed for offshore jacket platforms using modified artificial immunesystem algorithm, A Mojtahedi, MAL Yaghin, Y Hassanzadeh, F Abbasidoust, **MM Ettefagh**, ..., China Ocean Engineering 26 (3), 379-395, 2012
68. A hybrid particle swarm–Nelder–Mead optimization method for crack detection in cantilever beams, MTV Baghmisheh, M Peimani, MH Sadeghi, **MM Ettefagh**, AF Tabrizi, Applied Soft Computing 12 (8), 2217-2226, 2012
69. Dynamic modeling of peach fruit during normal impact, E Ahmadi, HR Ghassemzadeh, M Sadeghi, M Moghaddam, SZ Neshat, **MM Ettefagh**, Journal of Food Process Engineering 35 (3), 483-504, 2012
70. Numerical and experimental investigation of fatigue life and frequency response of the different arrangements oftensile-shear spot-welded joints, S Hassanifard, **MM Ettefagh**, Modares Mechanical Engineering 12 (1), 77-84, 2012
71. Modal analysis of the surface grinding machine structure through FEM and experimental test, S Pakzad, AKS Rajab, M Mahboubkhah, **MM Ettefagh**, O Masoudi, Advanced Materials Research 566, 353-356, 2012
72. Modal analysis of the milling machine structure through FEM and experimental test, S Pedrammehr, H Farrokhi, A Rajab, S Pakzad, M Mahboubkhah, **MM Ettefagh**, MH Sadeghi, Advanced Materials Research 383, 6717-6721, 2012
73. Tractor cabin's passive suspension parameters optimization via experimental and numerical methods, M Zehsaz, MH Sadeghi, **MM Ettefagh**, F Shams, Journal of Terramechanics 48 (6), 439-450, 2011
74. Developing a robust SHM method for offshore jacket platform using model updating and fuzzy logic system, A Mojtahedi, MAL Yaghin, Y Hassanzadeh, **MM Ettefagh**, MH Aminfar, ..., Applied Ocean Research 33 (4), 398-411, 2011
75. Experimental investigation of TARMAX model for modeling of hydrodynamic forces on cylinder-like structures, MA Lotfollahi Yaghin, A Mojtahedi, **MM Ettefagh**, MH Aminfar, Journal of Marine Science and Application 10 (3), 281-288, 2011
76. Experimental investigation of TARMAX model for modeling of hydrodynamic forces on cylinder-like structures, MAL Yaghin, A Mojtahedi, **MM Ettefagh**, MH Aminfar, Journal of Marine Science and Application 10 (3), 281, 2011

77. Gear fault diagnosis via non-stationary adaptive MARTIN distance, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, Scientia Iranica 18 (1), 59-65, 2011
78. Numerical and experimental study of engine cylinder block under mechanical and thermal loads: static anddynamic investigation, MH Sadeghi, M Zehsaz, **MM Ettefagh**, International Journal of Vehicle Systems Modelling and Testing 6 (1), 1-20, 2011
79. Application of a new parametric model-based filter to knock intensity measurement, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, M Rezaee, R Khoshbakhti, R Akbarpour, Measurement 43 (3), 353-362, 2010
80. Latent component-based gear tooth fault detection filter using advanced parametric modeling, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, M Rezaee, S Chitsaz, Mechanical systems and signal processing 23 (7), 2260-2286, 2009
81. Dynamic simulation of beam-like structure with a crack subjected to a random moving mass oscillator, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, M Rezaee, Earthquake Engineering and Engineering Vibration 8 (3), 447-458, 2009
82. The Application of Laser Velocity Meter in Detecting Incipient Cavitation and Measurement its Intensity, InsideAxial Flow Pumps, HA Tash, M Sadeghi, MT Shervanitabar, **MM Ettefagh**, Journal of Applied Sciences 9 (7), 1317-1323, 2009
83. Knock detection in spark ignition engines by vibration analysis of cylinder block: A parametric modelingapproach, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, V Pirouzpanah, HA Tash, Mechanical Systems and Signal Processing 22 (6), 1495-1514, 2008
84. Health monitoring of time-varying stochastic structures by latent components and fuzzy expert system, **MM Ettefagh (Corresponding Author)**, MH Sadeghi, Earthquake Engineering and Engineering Vibration 7 (1), 91, 2008
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