

CURRICULUM VITAE

M. Reza Ashory, PhD.

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Education

Ph.D., Mechanical Engineering in Dynamics (Vibrations), Imperial college of Science, Technology and Medicine, London, UK1999.

Ms.C., Mechanical engineering, Iran University of Science & Technology, Tehran, 1991.

Bs.C., Mechanical Engineering, Tehran University, Tehran 1987.

Ph.D. Thesis , “ High Quality Modal Testing” , under supervision of Prof D J Ewins.

Ms.C. Thesis , “ Study of Nonlinear Behavior of Structures by Modal Testing ”, under supervision of Dr M. Haghpanahi.

Certificates

Bruel & Kjaer Certificate: in “Sound Power Determination” held in Naerum, Denmark, Dec. 2002.

Bruel & Kjaer Certificate: in “Noise Source Identification Techniques” held in Naerum, Denmark, Dec. 2002.

Bruel & Kjaer Certificate: in “Modal Analysis (Using PULSE & ICATS)” held in Tehran, Iran, Jan. 2002.

Computer Skills

- FEM software: ANSYS , PATRAN-NASTRAN.
- Modal Testing software: ICATS , STAR , CATIA
- MATLAB (Basics, Signal Processing and Simulink tool boxes)
- FORTAN, C++, AutoCAD, Microsoft PowerPoint
- Microsoft Access, Microsoft Excel, Microsoft Word

Hardware

- Different types of Vibration Measurement instrument
- Laser Doppler Vibrometer (LDV).
- Pulse System in the field of Modal Testing.
- Shenck Vibrotest 60 in the Field of Vibration Diagnostics of the rotating machines
(Including the modules of: Balancing, Misalignment, Bearing Faults, Bent Shaft, Gearbox noise)

Language Skills

Farsi (First Language), **English** (Fluent)

Work History

Associate Professor, Semnan University, Sept. 1999- Present. (Associate Professor since 2011)

I have been Instructor of the following courses in mechanical Engineering Department:

- Vibrations - Automatic Control - Instrumentation
- Advanced Vibrations (MSc) - Vibration and machine dynamics laboratory
- Modal Testing (MSc) - Dynamics - Signal Processing (MSc)
- Fast Fourier Transform (MSc) - Random Vibrations (MSc)

Also I am involved in installation and commissioning of modal testing laboratory and noise & Vibration.

Instructor of various course studies in the field of industrial, including:

- Balancing of rotating machines. - Vibration diagnostics of the mechanical systems.
- Noise and Sound measurement in Industry. - Modal Analysis.
- Rotordynamics – Automatic Control - Signal processing

Also I have presented seminars in the field of Noise & Vibration for Industry.

Consultant, Research Organization of Science and Technology (IROST) , 1999-2000.

As a consultant and supervisory position in the field of vibration and Modal testing, I was involved in a couple of projects such as: “Study of the dynamic behavior of micro-satellites and its launching unit”.

Research assistant, Imperial college of science, Technology and medicine, 1995-1999.

I was involved in the following projects:

- Modeling of an alternator of BMW car using Modal testing and FEM for model updating.
- Analytical modeling of a diesel engine in order to reduce its level of vibration.
- Commissioning of a scanning Laser Doppler Vibrometer (LDV) and measuring the vibration of a car body in order to find the holographic diagrams and critical points of the car body.
- I was instructor of modal testing Laboratory.
- I was consultant of some other projects related to measurement in modal testing.

Research assistant, University of Science & Technology, 1988-1991.

I was involved in installation and commissioning of the equipment of modal testing laboratory. In this period I studied on the nonlinear behavior of the composites, dynamic behavior of rings and car wheels using modal testing.

Consultant, Small hydropower designing center (Ministry of electricity), Dec.2001-present.

I have been involved in designing of some 20 sites of small hydropower. Field of duty included Hydrological study and design of mechanical parts.

Consultant of SAIPA Car Manufacturing Industry, Sep 2001-2003

I have been involved in a research about the reduction of noise of car parts such as alternator and gearbox.

- I have also been involved in developing of a signal processing tool box for balancing of rotating machines. (Power Industry Institute of Technology of, Dec2000-Dec2001)

Scientific committee of conferences

IOMAC (International Operational Modal Analysis Conference)

ISAV (International Society of Acoustic and Vibration of Iran)

Reviewer of Journals

MSSP (Mechanical Systems and Signal Processing) _USA

JSV (Journal of Sound and Vibration)-UK

JMST (Journal of Mechanical Science and Technology) _ South Korea

Selected Publications

I have published around 100 papers in the international journals and conferences, A selection of this list is as below:

- 1- **M. R. Ashory**, A. Ghasemi-Ghalebahmani, M. J. Kokabi, “*An Efficient Modal Strain Energy-Based Damage Detection for Laminated Composite Plates*” Advanced Composite Materials, 2017.
- 2- A. A. Maddah, Y. Hojjat, M. R. Karafi, **M. R. Ashory**, “*Reduction of magneto rheological dampers stiffness by incorporating of an eddy current damper*” Journal of Sound and Vibration, 2017.
- 3- **M. R. Ashory**, A. Ghasemi-Ghalebahmani, M. J. Kokabi, “*Damage detection in laminated composite plates via an optimal wavelet selection criterion*” Journal of Reinforced Plastics and Composites, 2016.
- 4- A. Malekjafarian, **M. R. Ashory**, M. M. Khatibi, M. Saberlatibari, “*Rigid body stiffness matrix for identification of inertia properties from output-only data*” European Journal of Mechanics, A/Solids, 2016.
- 5- M. Masoumi, **M. R. Ashory**, “*Damage identification from uniform load surface using continuous and stationary wavelet transforms*” Latin American Journal of Aolids and Structures, 2014.
- 6- H. Sarparast, **M. R. Ashory**, M. R. Hajiazizi, M. Afzali, M. M. Khatibi, “*Estimation of modal parameters for structurally damped systems using wavelet transform*” European Journal of Mechanics, A/Solids, 2014.
- 7- M. Masoumi, **M. R. Ashory**, “*Damage identification in plate-type structures using 2-D spatial wavelet transform and flexibility-based methods*” International Journal of Fracture, 2013.
- 8- **M. R. Ashory**, M. Masoumi, E. Jamshidi, B. Khalili, “*Using continuous wavelet transform of generalized flexibility matrix in damage identification*” Journal of Vibroengineering, 2013.
- 9- A. Malekjafarian, **M. R. Ashory**, M. M. Khatibi, “*Identification of inertia properties from the results of output-only modal analysis*” Archive of Applied Mechanics, 2013.
- 10- **M. R. Ashory**, M. M. Khatibi, M. Jafari, A. Malekjafarian, “*Determination of mode shapes using wavelet transform of free vibration data*” Archive of Applied Mechanics, 2013.
- 11- A. H. Aghdasi, A. Berghuvud, M. M. Khatibi, **M. R. Ashory**, “*Application of transmissibility measurement in estimation of modal parameters for a structure subject to a moving load*” 5th International Operational Modal Analysis Conference, IOMAC 2013.
- 12- S. M. Marashi, **M. R. Ashory**, M. M. Khatibi, “*A new formulation for optimum magnitude of additive mass in scaling of mode shapes*” 5th International Operational Modal Analysis Conference, IOMAC 2013.
- 13- H. Neyestani, **M. R. Ashory**, M. Masoumi, M. M. Khatibi, “*Damage detection using CSLDV measurement for randomly excited structures*” 5th International Operational Modal Analysis Conference, IOMAC 2013.
- 14- M. M. Khatibi, **M. R. Ashory**, A. Malekjafarian and R. Brincker, “*Mass-stiffness change method for scaling of operational mode shapes*” Journal of Mechanical Systems and Signal Processing, pp. 34-59 , Vol 26, ۲۰۱۲.
- 15- N. Nematipoor, **M. R. Ashory**, E. Jamshidi, “*Imposing nodes for linear structures during harmonic excitations using SMURF method*” Journal of Archive of Applied Mechanics, pp. ۶۴۲-۶۳۱, Vol 82,

No.5, 2012.

- 16- M. Masoumi, **M. R. Ashory**, “ *Damage localization by wavelet analysis of uniform load surface*” Journal of Vibroengineering, pp. ۴۰۷-۳۹۰, No. 12,2012.
- 17- E. Jamshidi, **M. R. Ashory**, A. Ghoddosian, N. Nematipoor “*FRF based model updating using SMURF technique*” Journal of Vibroengineering, pp. 10-14, No. 14, 2012.
- 18- E. Jamshidi, **M. R. Ashory**, A. Ghoddosian and N. Nematipoor, “ *Imposing nodes A Hybrid Frequency Response Function Formulation for MDOF Nonlinear Systems*” pp. 14-24, No.14, 2012.
- 19- M. Najafi, **M. R. Ashory**, E. Jamshidi “*Optimal design of a damped vibration absorber using genetic algorithm*” Journal of Advances in Vibration Engineering, pp. ۵۸-۴۷, Vol. 1, No.11, 2012.
- 20- M. M. Khatibi, **M. R. Ashory**, A. Alboeyh “*Optimum Amount of Additive Mass in Scaling of Operational Mode Shapes*” Journal of Structural Engineering and Mechanics, pp. ۷۳۳-۷۵۰, No.1 2011.
- 21- A. Fereidoon, N. Kordani, MG. Ahangari, **M. R. Ashory**, “ *Damping Augmentation of Epoxy using carbon nanotubes*” International journal of polymeric material, pp. 11-26, No. 61, 2012-2.
- 22- **M. R. Ashory**, A. Malekjafarian, P. Harandi, “*On the accuracy of estimation of rigid body inertia properties from modal testing results*” pp. 53-65. No. 17, 2012-5.
- 23- M. Hajiazizi, **M. R. Ashory** “*Application of Point Interpolation Method in Jointed Rock Mass*” International journal of Computational Methods, pp. 41-55, No. 8, 2011-3.
- 24- M. Masoumi, **M. R. Ashory** “*Damage identification from flexibility matrix using wavelet transform*” Proceeding of the International Modal Analysis (IMAC) Conference 2012, USA.
- 25- Malekjafarian, R. Brinker, **M. R. Ashory**, M. M. Khatibi, “*Modified Ibrahim Time Domain Method for Identification of Closely Spaced Modes: Experimental Results*” Proceeding of the International Modal Analysis (IMAC) Conference, 2012 USA.
- 26- E. Jamshidi, S. Arshi, **M. R. Ashory**, N. Nematipoor “*Imposing Node on Linear Structures During Multi-harmonic Excitations*” Proceeding of the International Modal Analysis (IMAC) Conference, 2012 USA.
- 27- A. Malekjafarian, **M. R. Ashory**, M. M. Khatibi “*Estimation of rigid body properties from the results of operational modal analysis*” Proceeding of the International Modal Analysis (IMAC) Conference, 2010, USA.
- 28- Nematipoor, **M.R. Ashory**, E. Jamshidi “*Vibration Absorber Design Via Frequency Response Function Measurements*” Proceeding of the International Modal Analysis (IMAC) Conference, 2010 USA.
- 29- **M.R. Ashory**, “*Correction of Mass-loading Effects of Transducers and Suspension Effects in Modal Testing*” Proceeding of the 16th International Modal Analysis Conference, pp. 815-828, 1998, USA.
- 30- **M.R. Ashory** and D.J. Ewins, “*Generation of the Whole FRF Matrix from Measurements on one column*” Proceeding of the 16th International Modal Analysis Conference, pp. 800-814, 1998, USA.
- 31- **M.R. Ashory**, “*Assessment of the Mass-loading effects of accelerometers in Modal Testing*”, Proceeding of the 20th International Modal Analysis Conference, pp. 1027-1031, 2002, USA.
- 32- **M.R. Ashory**, “*Calibration of the Test Set Up Using Correction Methods*” Proceeding of the 20th International Modal Analysis Conference, pp. 1027-1031, 2002, USA.
- 33- **M.R. Ashory**, “*The Effects of Stingers on Measured FRF*” Proceeding of ISMA 27, pp. 2247-2256, 2002, Belgium.
- 34- **M.R. Ashory** “*The Effects of Suspension on Test Structures in Modal Testing*”, 10th International Congress on Sound and Vibration, pp.4441-4448, 2003, Sweden.
- 35- **M.R. Ashory** “*The effect of nonlinearity on the correction methods*” International Operational Modal Analysis Conference (IOMAC), 2005, Denmark.