

**ABDOLREZA OHADI HAMADANI**  
**Associate Professor**  
**Department:**  
**Mechanical Engineering**



### **Educational Records**

"Ph.D. in Mechanical Engineering, Sharif University of Technology, Tehran, Iran, 1995-2001"  
"M.Sc. in Mechanical Engineering, Amirkabir University of Technology, Tehran, Iran, 1991-1994"  
"B.Sc. in Mechanical Engineering, Amirkabir University of Technology, Tehran, Iran, 1985-1991"

### **Employment and Teaching**

"Amirkabir University of Technology, Associate Professor, Mech. Eng. Dept., 2007–Present"  
"Amirkabir University of Technology, Assistant Professor, Mech. Eng. Dept., 2004–2007"  
"Iran University of Science and Technology, Assistant Professor, Automotive Eng. Dept., 2001-2004"  
"Sharif University of Technology, Adjunct Faculty, Mech. Eng. Dept., 2001-2003"  
"Toosi University of Technology, Adjunct Faculty, Mech. Eng. Dept., 2000-2001"  
"Sharif University of Technology, Teaching Assistant, Mech. Eng. Dept., 1995-2000"  
"Amirkabir University of Technology, Teaching Assistant, Mech. Eng. Dept., 1990-1992"

### **Scientific Societies**

"Member, Automotive Engineering Society (SAE)"  
"Member, American Society of Mechanical Engineers (ASME)"  
"Member, International Institute of Acoustics and Vibration (IIAV)"  
"Member, Iranian Society of Mechanical Engineers (ISME)"  
"Founder Member, Iranian Society of Automotive Engineers (ISAE)"

### **Conference Activities**

"Executive Committee Member (Communication and Web Administration) of the 15th. Annual International Conference on Mechanical Engineering (ISME2007), 18-20 May 2007, Amirkabir University of Technology, Tehran, Iran."

### **Journal Papers**

Ohadi, A.R. and Maghsoodi, G., "Simulation of Engine Vibration on Nonlinear Hydraulic Engine Mounts", Trans. of ASME, Journal of Vibration and Acoustics, Vol. 129, 417-424, August 2007.  
Ohadi, A.R. and Moghaddami, M., "Investigating the Effects of Fibrous Material Compression on the Acoustical Behavior of Absorption and Barrier Materials", Trans. of ASME, Journal of Vibration and Acoustics, Vol. 129, 133-140, April 2007.  
Ohadi, A.R. and Moghaddami, M., "Optimization of Acoustical Behavior of Sound Absorptions Based on Finite Element Modeling", SAE 2005 Transactions, Journal of Commercial Vehicle, Vol. 114 (2), 246-254, 2005.  
Esmailzadeh, E., Ohadi, A.R. and Alasty, A., "Multi-channel Adaptive Feed forward Control of Noise in an Acoustic Duct", Trans. of ASME, Journal of Dynamic Systems, Measurement and Control, Vol.126, 406-415, June 2004.  
Esmailzadeh, E., Alasty, A. and Ohadi, A.R., "Hybrid Active Noise Control of a One-Dimensional Acoustic Duct", Trans. of ASME, Journal of Vibration and Acoustic, Vol.124, 10-18, January,2002.  
Esmailzadeh, E. and Ohadi, A.R., "Design Aspects for Feed forward Multiple-Input Active Noise Controller", Iranian Journal of Science and Technology, Transaction B, Vol.26, No. B3, 407-418, 2002.

Esmailzadeh, E. and Ohadi, A.R., "Vibration and Stability Analysis of Non-uniform Timoshenko Beams under Axial and Distributed Tangential Loads", Journal of Sound and Vibration, Vol.236 (3), 443-456, 2000.

Eslami, M.R., Shakeri, M., Ohadi, A.R. and Shiari, B., "Coupled Thermo elasticity of Shells of Revolution: Effect of Normal Stress and Coupling", AIAA Journal, Vol.37, No.4, April 1999.

Esmailzadeh, E., Ghorashi, M. and Ohadi, A.R., "Analysis of Preloaded Bolted Joints Under Exponentially Decaying Pressure", Trans. of ASME, Journal of Pressure Vessel Technology, Vol.118, November, 1996.

Esmailzadeh, E. and Ohadi, A.R., "Longitudinal and Transversal Vibration Response of Beams by Statistical Energy Analysis (SAE)", Esteghlal Journal of Engineering, Vol.17, No.1, 1998- (in Persian).

Esmailzadeh, E. and Ohadi, A.R. , "Exact Solution of Transversal Vibration of a Non-Uniform beam under Axial Loading", Amirkabir Journal of Science and Technology, Vol.9, No.36, 1998- (in Persian).

### **Co-operation with Industry**

"Design and Analysis of the Special Purpose Vehicle's Body Structure-Class ¾ Ton, Current Project"

"Redesign of the Stabilized Column Due to the Catastrophic Failure, 2006"

"Design and Analysis of the Special Purpose Vehicle's Body Structure-Class ¾ Ton, 2005"

"Advanced Technologies of Vehicle's Body (Future Trend), 2005"

"Finite Element Analysis (Static, Normal Mode) of a Supporting Structure, 2004"

"Finite Element Analysis (Static, Normal Mode) of a Turning Table, 2004"

"Finite Element Analysis (Static, Normal Mode and Thermal) of a Nozzle, 2003"

"Static, Dynamic and Thermal Analysis of a Turbine, 2002"

"Finite Element Analysis (Static, Buckling and Normal Mode) of a Flow Valve, 2002"

"Vibration Analysis of a Heavy Duty Vehicle, 2002"

"Advanced Technologies of Vehicle's Body (Future Trend), 2001"

"Management of the Project "Construction of the Semi-Anechoic Vehicle Noise Test Chamber", 2001"

"Management of the project "Design and Construction of the Torsion and Bending Test Rig for Vehicle's Body", 2000"

"Redesign of the Distillation Tower to Bear New Function, 2000"

"Redesign of the Distillation Tower Due to Catastrophic Failure, 1997"

### **Awards**

First Rank and Outstanding Graduate Student in M.Sc., Amirkabir University of Technology, 1995.

Second Rank Graduate Student in B.Sc., Amirkabir University of Technology, 1992.

### **Management/Administration Jobs**

Undergraduate Dean of Mechanical Engineering Department, Amirkabir University of Technology, August 2007-Present.

Deputy Dean of Automotive Engineering Department, Iran University of Science and Technology, September 2002-February 2004.

### **Graduate Students Projects**

\*\* M.Sc. Theses \*\*

Simulation of Active Vibration Control of a Plate using Finite Element Technique, Mech. Eng. Dept., Amirkabir University of Technology, January 2007.

Vibration of FGM Beam with Piezoelectric Sensor and Actuator (Consultant), Mech. Eng. Dept., Amirkabir University of Technology, April 2007.

Modeling, Simulation and Control of Chatter in Machine Tools, Mech. Eng. Dept., Amirkabir University of Technology, April 2007.

Monitoring of a Rotor Bearing System with Imbalancy and Clearance, Mech. Eng. Dept., Amirkabir University of Technology, February 2006.

Simulation of Active Control of Cabin Noise Using Finite Element Method, Automotive Eng. Dept., Iran University of Science and Technology, May 2005.

Vibration Simulation of Nonlinear Hydraulic Engine Mount System Automotive Eng. Dept., Iran University of Science and Technology, January 2005.

Replacement of Aluminum Parts for Axle System and Fatigue Behavior Analysis, Automotive Eng. Dept., Iran University of Science and Technology, October 2004.

Simulation and Analysis of the Acoustical Treatment of Automotive Absorption and Barrier Materials, Automotive Eng. Dept., Iran University of Science and Technology, June 2004.

Structural-borne Noise Prediction Using Statistical Energy Analysis Method, Automotive Eng. Dept., Iran University of Science and Technology, February 2004.

Analysis of Vehicle's Booming Noise with Boundary Element Method, Automotive Eng. Dept., Iran University of Science and Technology, February 2004.

Modeling and Analysis of Hydraulic Engine Mount, Automotive Eng. Dept., Iran University of Science and Technology, February 2004.

Finite Element Model Updating Based on FRF Results, Automotive Eng. Dept., Iran University of Science and Technology, September 2003

Robust Control Design for Power Steering of Passenger Car, Automotive Eng. Dept., Iran University of Science and Technology, September 2003.

Optimal and Sliding Mode Control of Vehicle's Active Suspension System, Automotive Eng. Dept., Iran University of Science and Technology, June 2003.

Improvement of the Crash Behavior of the Vehicle's Front Rail using New Design Aspects, Mechanical Eng. Dept., Sharif University of Technology, February 2003.

Dynamic Modeling (Mathematical & Experimental) of Port Fuel Injection Engine with Sensitivity Analysis, Automotive Eng. Dept., Iran University of Science and Technology, March 2003.

Finite Element Model Updating in Vehicle's Chassis Frame, Mechanical Eng. Dept., Sharif University of Technology, February 2002.

#### **Papers (Conference, Abstracts, etc.)**

Hashemi, O.R., Ohadi, A.R., "Active Control of Chatter Vibrations in a Turning Process Using an Adaptive FXLMS Algorithm", Proceedings, 14th International Congress on Sound and Vibration (ICSV14), Cairns, Australia, July 9-12, 2007.

Ohadi, A.R., Maghsoodi, G., and Fakhari, V., "Simulation of Engine Vibration on Nonlinear Hydraulic Engine Mounts through Full-Vehicle Model", Proceedings, 14th International Congress on Sound and Vibration (ICSV14), Cairns, Australia, July 9-12, 2007.

Saeidifar, M., Ohadi, A.R., "Investigating The Effects of The Static Cutting Force on the Chatter Vibrations of Milling Process", Proceedings, 14th International Congress on Sound and Vibration (ICSV14), Cairns, Australia, July 9-12, 2007.

Yeilaghi Tamijani, A., Abouhamze, M., Ohadi, A.R., and Eslami, M.R., "Feedback Control of Piezo-Laminate Composite Plate", Proceedings, 14th International Congress on Sound and Vibration (ICSV14), Cairns, Australia, July 9-12, 2007.

Hashemi, Seyyed M.R., Ohadi, A.R., "Multi-channel Adaptive Vibration Control of Smart Plate Using Hybrid Algorithm", Proceedings, 14th International Congress on Sound and Vibration (ICSV14), Cairns, Australia, July 9-12, 2007.

Yeilaghi Tamijani, A., Ohadi, A.R., and Eslami, M.R., "Thermal Vibration Analysis of Functionally Graded Plates with Piezoelectric Sensors and Actuators", Proceedings, 7th International Congress on Thermal Stress (TS2007), National Taiwan University of Science and Technology, Taiwan, June 4-7, 2007.

Ohadi, A.R., Fakhari, V., "Effect of Bell Plate on Vibration Behavior of Automotive Engine Supported by Hydraulic Engine Mounts", SAE 2007 Noise and Vibration Conference and Exhibition, SAE paper 2007-01-2364, Illinois, USA, May 15-17, 2007.

Yeilaghi Tamijani, A., Ohadi, A.R., and Eslami, M.R., "Finite Element Modeling of Functionally Graded Beams With Integrated Piezoelectric Layers for Vibration Control", Proceedings, 15th Annual-International Conference on Mechanical Engineering (ISME2007), Amirkabir University of Technology, Tehran, May 15-17, 2007.

Hashemi, Seyyed M.R., Ohadi, A.R., "Vibration Control of Smart Flexible Plate Using Multi-channel Adaptive Feedforward Algorithm", Proceedings, 15th Annual-International Conference on Mechanical Engineering (ISME2007), Amirkabir University of Technology, Tehran, May 15-17, 2007 (in Persian).

Tagvayipour, A., Ohadi, A.R., "Investigating the Effect of Stiffener of Flexible Panel on Interior Noise of Acoustic Cavity Using Coupled Fluid-Structure Analysis", Proceedings, 15th Annual-International Conference on Mechanical Engineering (ISME2007), Amirkabir University of Technology, Tehran, May 15-17, 2007 (in Persian).

Sadighi, M., Arvin, H., and Ohadi, A.R., "Investigating the Damping Characteristics of Sandwich Composite Plate with Viscoelastic Mid-layer", Proceedings, 6th. Conference of Iranian Aerospace Society, K.N. Toosi University of Technology, Tehran, Iran, Feb. 24-26, 2007 (in Persian).

Ahani, R., Gaffari Saadat, M.H., and Ohadi, A.R., "Monitoring of a Rotor Bearing System with Imbalance and Clearance", Proceedings, Third International Conference on Advances in Mechanical Engineering and Mechanics (ICAMEM2006), Hamammet, Tunisia, December 17-19, 2006.

Yeilaghi Tamijani, A., Gharib, A., Ohadi, A.R., Sadough Vanini, S.A., and Eslami, M.R., "Analytical Vibration Analysis of Functionally Graded Material Beams With Bonded Piezoelectric Sensors and Actuators", Proceedings, 12th European Conference on Composite Materials (ECCM12), Biarritz, France, 29th August -1st September, 2006.

Yeilaghi Tamijani, A., Mirzaeifar, A., Ohadi, A.R., and Eslami, M.R., "Vibration Control of FGM Plate With Piezoelectric Sensors and Actuators Using Higher Order Shear Deformation Theory", Proceedings, 8th. Biennial ASME Conference on Engineering Systems Design and Analysis (ESDA2006), Torino, Italy, July 4-7, 2006.

Ohadi, A.R., Moghaddami, M., "Sound Absorption Prediction Using Finite Element Model Based on Modified Biot Poroelastic Model", Proceedings, 8th. Biennial ASME Conference on Engineering Systems Design and Analysis (ESDA2006), Torino, Italy, July 4-7, 2006.

Ohadi, A.R., Emadi, A., "Active Noise Control Simulation in a Passenger Car Cabin Using Finite Element Modeling", Proceedings, Canadian Society for Mechanical Engineering Conference (CSME2006), paper IVTS-2-2, Kananaskis, Calgary, Alberta, Canada, May 21-24, 2006.

Yeilaghi Tamijani, A., Mirzaeifar, A., Ohadi, A.R., and Eslami, M.R., "Active Control of FGM Plates Using Piezoelectric Sensor/Actuator Patches", Proceedings, 14th Annual-International Conference on Mechanical Engineering (ISME2006), Isfahan University of Technology, Isfahan, Iran, May 16-18, 2006.

Ohadi, A.R., Moghaddami, M., " Optimization of Acoustical Behavior of Sound Absorptions Based on Finite Element Modeling", 2005 SAE Commercial Vehicle Engineering Congress and Exhibition, SAE paper 2005-01-3580, Metro Chicago (Rosemont), Illinois, USA, Nov. 1-3, 2005.

Ohadi, A.R., Maghsoodi, G., " Simulation of Engine Vibration on Nonlinear Hydraulic Engine Mounts", Proceedings, ASME 2005 International Design Engineering Technical Conference & Computers and Informations in Engineering Conference (IDETC/CIE 2005), Long Beach, California, USA, September 24-28 2005.

Ohadi, A.R., Moghaddami, M., " Investigating the Effects of Porous Material Compression on the Acoustical Behavior of Absorption and Barrier Materials", Proceedings, ASME 2005 International Design Engineering Technical Conference & Computers and Informations in Engineering Conference (IDETC/CIE 2005), Long Beach, California, USA, September 24-28, 2005.

Hadad, H., Ohadi, A.R., and Kargarnovin, M.H., "Finite Element Model Updating in a Vehicle Chassis Frame", Proceedings, International Conference on Noise and Vibration Engineering (ISMA2004), Katholieke Universiteit, Leuven Belgium, September 20-22, 2004.

Ohadi, A.R., Seraj, S., " Comparison of Vibration Behavior of Engine on Elastic and Hydraulic Mounts", Proceedings, 12th Annual (International) Mechanical Engineering Conference (ISME2004), Tarbiat Modarres University, Tehran, May 18-20, 2004 (in Persian).

Ohadi, A.R., Hosseini Tehrani, P. and Soltani, A., "Investigating Interior Noise of an Enclosed Cavity Using Boundary Element Method", Proceedings, 12th Annual (International) Mechanical Engineering Conference (ISME2004), Tarbiat Modarres University, Tehran, May 18-20, 2004 (in Persian).

Ohadi, A.R., Langari, J., "Prediction of Sound Pressure Level of an Acoustic Cavity in High Frequencies Using SEA Method ", Proceedings, 12th Annual (International) Mechanical Engineering Conference (ISME2004), Tarbiat Modarres University, Tehran, May 18-20, 2004 (in Persian).

Moghaddami, M., Ohadi, A.R., "Investigating Acoustical Behavior of Sound Absorption Porous Materials", Proceedings, 12th Annual (International) Mechanical Engineering Conference (ISME2004), Tarbiat Modarres University, Tehran, May 18-20, 2004 (in Persian).

Ohadi, A.R., Mehdigholi, H., Esmailzadeh, E., "Vibration and Frequency Analysis of Non-Uniform Timoshenko Beams Subjected to Axial Forces", Proceedings, 2003 ASME International Mechanical Engineering Congress and Exposition, Washington, D. C., November 15-21, 2003.

Ohadi, A.R., Mehdigholi, H., Esmailzadeh, E. " Feedforward Multiple-Input Active Noise Control Systems", Proceedings, 2003 ASME International Mechanical Engineering Congress and Exposition, Washington, D. C., November 15-21, 2003.

Kazemi, R., Ohadi, A.R. and Soleymani, M., "Nonlinear Sliding Mode Control of Active Suspension Considering Hydraulic Actuator Dynamics", Proceedings, 11th Annual (International) Mechanical Engineering Conference (ISME2003), Mashhad, May 13-15, 2003.

Ohadi, A.R., Kargarnovin, H. and Hadad Khodaparast, H., "Finite Element Model Updating of Vehicle's Chassis Frame", Proceedings, 11th Annual (International) Mechanical Engineering Conference (ISME2003), Mashhad, May 13-15, 2003 (in Persian).

Ohadi, A.R., Kargarnovin, H. and Hadad Khodaparast, H., "Finite Element Model Updating of Vehicle's Chassis Frame", Proceedings, 11th Annual (International) Mechanical Engineering Conference (ISME2003), Mashhad, May 13-15, 2003 (in Persian).

Farrahi, G.H., Ohadi, A.R. and Abbasi, M.R., "Investigating the Effect of Strain Rate on Dynamical Buckling Behavior of Thin Structures Under Impact Loads", Proceedings, 11th Annual (International) Mechanical Engineering Conference (ISME2003), Mashhad, May 13-15, 2003 (in Persian).

Ohadi, A.R. , Esmailzadeh, E. and Alasty, A., "Active Noise Cancellation Using Feedforward and Hybrid Controls", Proceedings, 2001 ASME International Mechanical Engineering Congress and Exposition, New York, New York, November 16-21, 2001.

Ohadi, A.R., Esmailzadeh, E., and Alasty, A., "Adaptive Feed Forward Active Noise Control in an Acoustic Duct", Proceedings, 2001 ASME Design Engineering Technical Conference, Pittsburg, Pennsylvania, September 9-12, 2001.

Eslami, M.R., Shakeri, M and Ohadi, A.R., "Coupled Thermoelasticity of Shells", Proceedings, the First International Symposium on Thermal Stress, Thermal Stress "95", Japan, June 4-7, 1995.

Shakeri, M, Eslami, M.R. and Ohadi, A.R "Consideration of Normal Stress in Shell Equations under Shock Loads", Proceedings, Second Biennial European Conference on Engineering Systems Design and Analysis (ESDA1994), London, July 4-7, 1994.

Eslami, M.R., Shaker, M., Yas, M.H. and Ohadi A.R., " Galerkin Finite Element Analysis of Shells of Revolution Under Blast Loads", Proceedings, Second Biennial European Conference on Engineering Systems Design and Analysis(ESDA1994),London, July 4-7, 1994.

Shakeri, M., Eslami, M.R., Ghassaa, M. and Ohadi, A.R., "Cylindrical Shell Under Impact Load including Transverse Shear and Normal Stress", Proceedings, 12th Int. Conf. on Structural Mechanics in Reactor Tech.( SmiRT-12), Univ. of Stuttgart, Germany, 1993.

Shakeri, M., Eslami, A.R. and Ohadi, A.R., "Analysis of Cylindrical Shells Under Dynamics Loading, Including the Shear Effect", Proceedings, First Annual Conf. of ISME, Tehran Univ., Feb., 1993 (in Persian).