

# CURRICULUM VITAE

## PERSONAL DATA

Name : Mohammad M. ElMadany  
Academic Rank : Professor – Accreditation Consultant  
Nationality : Canadian

## ADDRESS

Education Evaluation Commission – National Center for Academic Accreditation & Evaluation

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## ACADEMIC QUALIFICATIONS:

Degree	University	Department	Year
Ph.D.	McMaster University, Hamilton, Ontario, Canada	Mechanical Engineering	Nov, 1979
M.Eng.	McMaster University, Hamilton Ontario, Canada	Mechanical Engineering	June, 1975
B.Sc.	Alexandria University, Alexandria, Egypt	Mechanical Engineering	June, 1970

## WORK EXPERIENCE

1. October 2013- Present: Accreditation Consultant, Education Evaluation Commission – National Center for Academic Accreditation & evaluation .
2. May 1990 – June 2013: Professor, Department of Mechanical Engineering, King Saud University, Riyadh, Saudi Arabia.
3. August 1985 - May 1990: Associate Professor, Department of Mechanical Engineering, King Saud University, Riyadh, Saudi Arabia.
4. August 1983 - August 1985: Assistant Professor, Department of Mechanical Engineering, King Saud University, Riyadh, Saudi Arabia.
5. Consultant to the "Saudi Arabian Standards Organization" (SASO) to participate in the preparation of Saudi Arabian Standards for Mechanical Equipment (1988-1993)
6. November 1981 to August 1983: Research Specialist, Atomic Energy of Canada Limited, Mississauga, Ontario, Canada.  
Design concepts, test planning, and modeling of reactor structures. Development of RFP's, analyzing and comparing

bids for testing of the different components of the reactor structure. Nonlinear stress analysis of reactor structure assembly using finite element techniques, Sub-structuring, thermal stresses and modeling considerations are of major importance. Development of experimental and analytical techniques for identification of the dynamic characteristics of the fueling machine. Responsibilities include conceptual design, analysis and test planning. Experience includes using modal analysis, finite element techniques, and sub-structuring capabilities.

7. November 1979 to October 1981: Senior Research Engineer, Wyle Laboratories, Colorado Springs, Colorado, U.S.A.

As the lead analyst in the Truck Design Optimization Project, responsibilities included liaison with industry consultants, subcontractors and clients; definition of field test data requirements; reduction and analysis of field test data; survey, assessment, validation, and utilization of analytical models capable of predicting track/train dynamics; development of performance and test specifications for freight car trucks; Other responsibilities included modeling and analysis of complex structural and mechanical systems using finite element techniques, and providing technical support for various projects dealing with sensitivity analysis, and stochastic simulation of shock and vibration environment.

8. May 1979 to November 1979: Research Specialist, Wyle Laboratories, Colorado Springs, Colorado, U.S.A.

Modeling and analysis of the dynamic interaction of the railway trucks with the tracks. Studies included ride quality, lateral stability, and curving performance of freight cars.

9. November 1973 to May 1979: Post Graduate Research Assistant, McMaster University, Hamilton, Ontario, Canada.

Research in the probabilistic and deterministic analyses of linear and nonlinear structures, dynamic modeling of complex systems, development of advanced analytical and simulation techniques, and studies on optimization of vibration isolation systems. Teaching and laboratory supervision of undergraduate students in the subjects of mechanical vibrations, stress analysis, machine design, and automatic control.

10. June 1970 to November 1973: Post Graduate Research Student, Alexandria University, Alexandria, Egypt.

Conducting research in dynamic analysis of large systems by complex mode synthesis. Teaching undergraduate courses in dynamics, strength of materials, and machine design.

## **WORKSHOP EXPERIENCE**

- Assessment of Student Learning Outcomes
- Assessment of Administrative and Academic Service Units Outcomes
- Assessment of Student Learning Outcomes using rubrics
- Planning and Implementation of Self-Study for Institutional Accreditation
- Planning and Implementation of Self-Study for Programmatic Accreditation
- Quality Assurance in HEIs and Programs – An Overview
- Course and Program Specifications and Reports
- Institution and Program Preparation for the On-Site Visit
- Orientation of the Review Panel Members

## **TEACHING EXPERIENCE**

### **Undergraduate Courses**

- |                                      |                                |
|--------------------------------------|--------------------------------|
| - Design of Mechanical Systems I     | - Design of Mechanical Systems |
| II                                   |                                |
| - Introduction to Engineering Design | - Engineering Design           |
| - Product Design                     | - Senior Design Projects       |
| - Computer Aided Design              | - Mechanics of Materials       |
| - Dynamics                           | - Statics                      |
| - System Dynamics                    | - Mechanical Vibrations        |
| - Automatic Control                  | - Dynamics of Machinery        |
| - Machine Drawings                   | - Vehicle Dynamics             |

### **Graduate Courses**

- |                       |                                  |
|-----------------------|----------------------------------|
| - Advanced Vibrations | - Optimal Control Theory         |
| - Random Vibrations   | - Optimal Engineering Design     |
| - Analytical Dynamics | - Dynamics of Rotating Machinery |

## **SHORT COURSES EXPERIENCE**

- Vibration Analysis and Diagnosis
- Dynamics of Rotating Machinery

## **THESES SUPERVISED**

1. M. Sc. Thesis entitled: "Theoretical Evaluation of Guidance Laws for Homing Missiles".
2. M. Sc. Thesis entitled: "Active Vibration Control of a Flexible Rotor".
3. M. Sc. Thesis entitled: "Performance of Slow-Active Suspension Systems Based on a Full Car Model"
4. M. Sc. Thesis entitled: "On the Preview Control of a half-Car Model"

## **ADMINISTRATIVE POSITIONS**

1. Coordinator of the Activities of the Accreditation Review Committee, 2016 - present
2. Member, Accreditation Committee for Revising NCAAA Standards, 2017-present
3. Member, Joint Committee for SaudiMED Framework, 2016.
4. Coordinator, Accreditation Follow-up Committee, Present.
5. Member, Commission Strategic Plan Committee, 2014.
6. Leader, A Framework for Assessing Learning Outcomes in Engineering-Phase I, National Center for Assessment in Higher Education (NCAHE), 2011-2012.
7. Leader, A Framework for Assessing Learning Outcomes in Engineering-Phase II, National Center for Assessment in Higher Education (NCAHE), 2012-2013.
8. Coordinator, Vice Rectorate for Graduate Studies and Scientific Research Strategic Planning Committee, 2010-2012.
9. Leader, Center for Population Studies Strategic Planning Committee, 2012.
10. Leader, Mechanical Engineering Strategic Planning Committee, 2011-2013.
11. Member, King Abdullah Institute for Research and Consulting Studies Strategic Planning Committee, 2011.
12. Member, Deanship of Graduate Studies Strategic Planning Committee, 2010.
13. Member, King Khalid Prize Strategic Planning Committee, 2010.
14. Member, University Research Strategic Planning Committee, 2009-2012.
15. Coordinator, Committee for Preparation of Self-Study Report for Institutional Accreditation based on NCAAA, 2009-2010.
16. Coordinator, Committee for Preparation of Self-Study Report for Mechanical Engineering Program Accreditation based on NCAAA, 2010-2013.
17. Member, University Strategic Planning Committee, 2007-2009.
18. Leader, College of Engineering Assessment Committee for ABET Accreditation, 2005-2008.
19. Coordinator, Department Program Assessment Committee- for ABET Visit, 2005-2010.
20. Member, Manufacturing Technology Transfer Program- National Vehicle Research Center, 2008-2010.
21. Member, Report Composing Committee, Advisory Committee, Saudi National Center for Nondestructive Testing, King Abdulaziz City for Science and Technology, 2006-2008.
22. Member, Committee, Center of Excellence for Research in Engineering Materials (CEREM), 2007.
23. Leader, College of Engineering Strategic Planning Committee, 2007.
24. Coordinator, Mechanical Engineering Strategic Planning Committee, 2007.
25. Member, Editorial Board of the Journal of King Saud University (Engineering Sciences) (1997 -1999).
26. Member, College Academic Committee (1996 - 2013),
27. Coordinator, Academic Committee for Mechanical Engineering Dept., (1994 2013), Devising BSc., Master, and Ph.D. Programs in Mechanical Engineering.
28. Member, Saudi Standards Committee on Mechanical Systems (1993 - 1995).
29. Coordinator, Mechanical Systems Group (1988 - 1994) and (2001 – 2006).
30. Coordinator, Vibration Lab. Committee (1989 - 2013).
31. Coordinator, Design and Dynamics of Machinery Committee (1988 - 2013).

32. Coordinator, Graduate-to-be students Committee (1984 - 1988).
33. Supervisor of Engineering Drawing (1985 - 1990).
34. Member, Social and Cultural Activities Committee (1983 - 1985).
35. Member, Mechanical Engineering Department Council (1983 - 2013).
36. Member of Academic Committee of Symposium on Maintenance: Planning and Operations, held at King Saud University, 1990.
37. Member of Reviewing Committee of the Safety Techniques and Applications Symposium, held at King Saud University, 1985.
38. Member of the Acceptance Committee of the King Saud University, New Campus, 1984.
39. Lead Design Engineer on the Stress Analysis and Design of Pickering 'A' Nuclear Power Station, Atomic Energy of Canada Limited, 1981-1983.
40. Lead Analyst in the Truck Design Optimization Project for the Federal Railroad Administration, USA, 1979-1981.

## **TECHNICAL SERVICES**

### **Refereed technical papers for:**

- American Society of Mechanical Engineering (ASME).
- Canadian Society of Mechanical Engineering (CSME).
- Journal of Sound and Vibrations.
- Journal of Vehicle System Dynamics.
- Journal of Vibration and Control.
- Journal of King Saud University (Engineering Sciences).

### **Refereed several research proposals for:**

- Federal Railway Administration (FRA), USA.
- American Railway Administration (ARA), USA.
- Atomic Energy of Canada Limited, Canada.
- King Abdel-Aziz City for Science & Technology, Riyadh, Saudi Arabia.
- Research Center, College of Engineering, King Abdel-Aziz University, Jeddah, Saudi Arabia.
- Research Center, College of Engineering, King Fahd University for Petroleum & Minerals, Dhahran, Saudi Arabia.

## **MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

- Member of American Society of Mechanical Engineers, ASME (1974 - 2010).
- Member of Society of Automotive Engineers, SAE (1983 - 2010).
- Former member of American Institute of Aeronautics and Astronautics, AIAA (1988-1992).

## **RESEARCH INTEREST**

- Quality Assurance of Higher Education Systems
- Evaluation of the Impact of Quality Assurance on Saudi Higher Education Institutions
- Guidance of Homing Missiles.
- Dynamic Analysis and Active Control of Road and Railway Vehicles.
- Vibration Analysis and Control of Rotating Machinery.

- Fault Diagnosis of Rotating Machinery.
- Dynamics and Vibration Control of Micro-Satellites.
- Dynamic System Modeling and Control of Flexible Robot Arms.
- Design and Analysis of Solar Collectors for Salt-Water Desalination.
- Optimization Techniques and Applications.
- Noise Measurements and Mapping.
- Structural Dynamics of Composite Structures.
- Engineering Education- Education of the Engineer 2020.

### **CURRENT RESEARCH PROJECTS/PROPOSALS**

- Evaluation of the Impact of Quality Assurance on Saudi Higher Education Institutions
- Evaluation of the Preparatory Year in the Kingdom of Saudi Arabia

### **PREVIOUS RESEARCH PROJECTS**

- Development of Dynamic Computerized Noise Pollution Maps for Riyadh City, 10/ENV 118202, NPST, 2012-2014 – (Budget : SR 1,619,000).
- Development of Noise Maps for the Great City of Riyadh, King Abdulaziz City for Science and Technology, 2010-2012.
- Impact of Micro Vibrations on Remote Sensing Satellites and Its Mitigation Techniques, Applied National Research Projects, No. 08-SPA237-2, 2009-2011.
- Noise Mapping of Riyadh City (The Area Enclosed by the Ring Road), King Abdulaziz City for Science and Technology, 2007-2010.
- Modeling and Control of Smart Composite Laminates Structures with Distributed PZT Sensors and Actuators, Center of Excellence for Research in Engineering Materials, 2009.
- Optimal Control of Rotating Machinery, College Research Center, 2009-2010.
- Design of Preview Controllers of Vehicle Active Suspension System, College Research Center, 2009-2010.
- On the Integrated Control of Vehicle Active Suspension and Steering Systems, College Research Center, 2006.
- Analysis, Design and Experimental Testing of a Solar Parabolic Trough Collector with Its Tracking System for Salt-Water Desalination in Arid Areas of Saudi Arabia: Applied National Research Project No. DSR-AR-37, 2005.
- Field Testing of Steel Bridges in the City of Riyadh: Applied National Research Project No. DSR-AR-35, 2005.
- Dynamics of Rotating Machinery- A computer Aided Design Approach: College Research Center, Project No. 9/424, 2006.

### **PUBLICATIONS**

1. ElMadany, M. M., and Dokainish, M.A. "On the Steady-State Response of A Tractor-Semitrailer", Proceedings of the Third Symposium on Engineering Applications of Solid Mechanics, June 7-8, 1976, Vol. 1, pp. 267-285.
2. Dokainish, M. A., and ElMadany, M. M. "Dynamic Response of Tractor-Semitrailer Vehicle to Random Inputs", 5th VSD-2nd IUTAM, Symposium on

- Dynamics of Vehicles on Roads and on Tracks, Vienna, September 1977, pp. 237-255.
3. ElMadany, M.M., and Dokainish, M.A., "Response of a Relief Valve to Dynamic Loads", Sixth Canadian Congress of Applied Mechanics, Vancouver, 1977.
  4. ElMadany, M.M., and Dokainish, M.A., "On the Optimum Design of A Tractor-Semitrailer Suspension", Sixth Canadian Congress of Applied Mechanics, Vancouver, 1977.
  5. Dokainish, M.A., and ElMadany, M.M., "On the Nonlinear Response of a Relief Valve", Transactions of ASME, Journal of Mechanical Design, 1977, Paper No.77DET-81.
  6. ElMadany, M. M., Dokainish, M.A., and Allan, A.B., " Ride Dynamics of Articulated Vehicles - A Literature Survey" , International Journal of Vehicle Mechanics and Mobility, Vehicle System Dynamics, Vol. 8, 1979, pp. 287-316.
  7. Dokainish, M.A., and ElMadany, M.M., "Nonlinear Random Response of Articulated Vehicles", 6th IAVSD - IUTAM Symposium on the Dynamics of Vehicles on Roads and on Railway Tracks, Berlin, September 1979, pp. 82-93.
  8. ElMadany, M.A., and Dokainish, M.A., "Nonlinear Vibration of Articulated Vehicles", Seventh Canadian Congress of Applied Mechanics, Sherbrooke, Quebec, 1979.
  9. Dokainish, M.A., and ElMadany, M.M., "Random Response of Tractor-Semitrailer Systems", International Journal of Vehicle Mechanics and Mobility, Vehicle System Dynamics, Vol.9,1980, pp.84-112
  10. ElMadany, M. M., and Dokainish, M.A., "An Assessment of the Ride Quality of Heavy-duty Trucks", Society of Automotive Engineers, Paper No. 801418, 1980, published in special publication "Current Trends in Truck Suspensions", SP-475.
  11. Allan, A.B., ElMadany, M.M., and Dokainish, M.A., "Articulated Vehicle Models", Society of Automotive Engineers, Paper No. 801420, 1980, published in special publication "Current Trends in Vehicle Suspensions", SP-475.
  12. ElMadany, M.M., and Dokainish, M. A., "Articulated Vehicle Dynamic Analyses Using Equivalent Linearization Technique", Society of Automotive Engineers, Paper No.801421, 1980, published in special publication "Current Trends in Vehicle Suspensions", SP475.
  13. ElMadany, M.M., Dokainish, M.A., and Allan, A.B., "Road Vehicle Train Response to Random Road Surface Undulations", ASME, paper No. 80-WA/DSC- 1, 1980.
  14. El Madany, M.M. , and Dokainish, M. A. , "Optimum Design of Tractor Semitrailer Suspension Systems", Society of Automotive Engineers, Paper No. 801419, 1980, published in a special publication "Current Trends in Vehicle Suspensions", SP-475.
  15. ElMadany, M.M., and Dokainish, M.A., "On Ride Aspects of Heavy Duty Trucks", Proceedings of the Fifth Symposium on Engineering Applications of Mechanics, June 1980, pp.289-293.
  16. RamaChandran, P.V., ElMadany, M. M. , and Tsai, N. T. "Dynamic Response of Freight Vehicle Systems - A Performance Characterization", ASME, Paper No. 81-RT-4,1981.

17. ElMadany, M. M. , and RamaChandran, P. V., "Lateral Dynamics of 70-Ton Freight Car Trucks", ASME, Paper No.81-WA/RT-2,1981.
18. RamaChandran, P. V., ElMadany, M. M., and Tsai, N. T., "Performance Characteristics of Conventional Freight Vehicle Systems" , ASME, Paper No. 81 - WA/RT-3,1981.
19. ElMadany, M. M., and RamaChandran , P.V., "Lateral Stability of Flat Cars - An Over-the-Road Investigation", International Journal of Vehicle Design, Vol.2, No.2, 1981 .
20. RamaChandran, P.V. and ElMadany, M.M., "Improved Suspension Designs and Their Influence on Freight Car Dynamics", 34th Mechanical Failure Prevention Group Symposium, October 1981.
21. RamaChandran, P.V. Gilchrist, A.J., ElMadany, M.M., and Cappel, K., "Validation of Rail Vehicle System Dynamic Models", International Journal of Vehicle Design, Vol.3, No.2, 1982, pp. 202-233.
22. RamaChandran, P. V., ElMadany, M. M. , and Tsai, N. T., "Performance Characteristics of Premium Freight Car Trucks", Presented at ASME/IEEE Joint Railroad conference, April 1982.
23. ElMadany, M.M. and RamaChandran, P.V., "Trucks and Suspension Systems Premium Design and Performance Improvements," Presented at Second International Heavy Haul Railway Conference, 1982.
24. ElMadany, M.M., and Samaha, M., "Freight Car Harmonic Rock and Roll - The Safety Problem", Safety Techniques and Applications Symposium, King Saud University, November 1984.
25. ElMadany, M..M. , "Conventional and Premium Freight Car Trucks - A Comparative Study", Journal of Engineering Sciences , King Saud University, Vol. II , No.2, 1985.
26. ElMadany, M.M. and Gadala, M.S. , "On Some Aspects of the Design of the Heavy Trucks and Their Suspension Systems", Current Advances in Mechanical Design and Production III, Proceedings of the Third Cairo University NMP Conference, Cairo, 28-30 December, 1985.
27. ElMadany, M.M., "Truck Riding Motions - A Theoretical Analysis", SECTAM XIII Proceedings, The Southeastern Conference on Theoretical and Applied Mechanics, pp. 721-725, 1986.
28. Gadala, M.S., Abo-Elkhier, M. and ElMadany, M.M., "The Application of Lagrangian and Updated Lagrangian Formulations to Pipe Whip Problems", Proceedings of the 4th International Modal Analysis Conference, Los Angeles, California, Feb. 1986. pp. 773-780.
29. ElMadany, M.M., "Nonlinear Ride Analysis of Heavy Trucks", International Journal of Computers and Structures", Vol .27, No. 5, pp. 679-688, 1987.
30. ElMadany, M.M., "A Procedure for Optimization of Truck Suspensions" Journal of Vehicle System Dynamics, Vol. 16, pp. 193-210, 1987.
31. ElMadany, M.M. "Design and Optimization of Truck Suspensions Using Covariance Analysis", International Journal of Computers and Structures, Vol. 28, No.2, pp. 241-246, 1987.
32. ElMadany, M.M. "An Analytical Investigation of Isolation Systems for Cab Ride", International Journal of Computers and Structures, Vol. 27, No. 5, pp. 679-688, 1987.
33. Gadala, M.S. and ElMadany, M.M., "Finite Element Formulation and Application to Metal Flow Problems", Proceedings of Computational



- Plasticity-Models, Software and Applications, Barcelona, Spain, 6-10 April, 1987.
34. ElMadany, M.M., El-Tamimi, A., and Al-Swailam, S.I., "On Some Aspects of Active Control of Road Vehicles", Modeling, Simulation and Control, B, AMSE, Vol. 10, No. 4, pp. 13-23, 1987.
  35. ElMadany, M. M., "Ride Safety of Road Vehicles", Journal of Engineering Sciences, Vol. 14(1), pp. 95-113, 1988.
  36. ElMadany, M.M. "Active Damping and Load Leveling for Ride Improvement", International Journal of Computers and Structures, Vol. 29, pp. 89-97, 1988.
  37. ElMadany, M.M. "Design of An Active Suspension for a Heavy Duty Truck Using Optimal Control Theory", International Journal of Computers and Structures, Vol. 3 1, No. 3, pp. 385-393, 1988.
  38. ElMadany, M.M. and ElRazaz, Z., "Performance of Actively Suspended Cabs in Highway Trucks - Evaluation and Optimization", Journal of Sound and Vibration, 126(3), pp. 423-435, 1988.
  39. ElMadany, M.M. "Stochastic Optimal Control of Highway Tractors with Active Suspensions", Journal of Vehicle System Dynamics, Vol. 17, pp. 193-210, 1988.
  40. ElMadany, M.M., and Z. Abduljabbar, "On the Statistical Performance of Active and Semi-active Car Suspension Systems", International Journal of Computers and Structures, Vol. 33, No. 3, pp. 785-790, 1989.
  41. ElMadany, M.M., and Samaha, M., "Optimum Response of a Stochastic Model of a Tractor-Semitrailer Vehicle, Part I: Linear and Nonlinear Models of a Passively Suspended Vehicle", Twelfth Biennial ASME Conference on Mechanical Vibration and Noise, September 17-20, 1989, Montreal, Canada, DE-Vol. 18-5, pp. 167-175.
  42. ElMadany, M.M., and Samaha, M., "Optimum Response of a Stochastic Model of a Tractor-Semitrailer Vehicle, Part 11. Ride Control of an Actively Suspended Vehicle", Twelfth Biennial ASME Conference on Mechanical Vibration and Noise, September 17-20, 1989, Montreal, Canada, DE-Vol. 18-5, pp. 176-184.
  43. ElRazaz, Z. and ElMadany, M.M. "Eigenvalue Sensitivities as an Effective Tool for Active Automotive Suspension Design", Twelfth Biennial ASME Conference on Mechanical Vibration and Noise, September 17-20, 1989, Montreal, Canada, DE-Vol. 18-5, pp. 203-210.
  44. ElMadany, M.M. "Ride Performance Potential of Active Fast Load Leveling Systems", Journal of Vehicle System Dynamics, 19, pp. 19-47, 1990.
  45. ElMadany, M. M. and El-Tamimi , A., "On a Subclass of Nonlinear Passive and Semi-active Damping for Vibration Isolation" International Journal of Computers and Structures, Vol.36, No.5, pp. 921-931, 1990.
  46. ElMadany, M.M., and Abduljabbar, Z., "Design Evaluation of Advanced Suspension Systems for Truck Ride Comfort", International Journal of Computers and Structures, Vol. 36, No. 2, pp. 321-331, 1990.
  47. ElMadany, M.M., "Optimal Linear Active Suspensions with Multivariable Integral Control", Journal of Vehicle System Dynamics, Vol. 19, No. 6, pp. 313-329, 1990.
  48. ElMadany, M.M., and Abduljabbar, Z., "Alternative Control Laws for Active and Semi-active Automotive Suspensions - A Comparative Study", Intentional Journal of Computers and Structures, vol. 39, No. 6, pp. 623-629, 1991.

49. ElMadany, M.M. and Abduljabbar, Z., "On the Ride and Attitude Control of Road Vehicles", International Journal of Computers and Structures, Vol. 42, No. 2, pp. 245-253, 1992.
50. ElMadany, M.M., "Integral and State Variable Feedback Controllers for Improved Performance in Automotive Vehicles", International Journal of Computers and Structures, Vol. 42, No. 2, pp. 237-244, 1992.
51. ElMadany, M.M., and Samaha, M., "On the Optimum Ride Control of a Stochastic Model of a Tractor-Semitrailer Vehicle", Journal of Sound and Vibration, 156(2), pp. 269-281, 1992.
52. ElMadany, M.M., and Yigit, A.S., "Robust Control of Linear Active Suspensions", Journal of Canadian Society of Mechanical Engineers, Vol. 17, No. 4B, pp. 759-773, 1993.
53. Abduljabbar, Z., Foda, M., and ElMadany, M.M., "Isolation Quality Versus Attitude Control in the Design of Intelligent Electronic Suspensions", Eighth International Conference on Mechanical Power Engineering, April 27-29, 1993, Alexandria University, Alexandria, Egypt.
54. Abduljabbar, Z., ElMadany, M.M., and Al-Dokhiel, H.D., "Controller Design of a One-Link Flexible Robot Arm", International Journal of Computers and Structures, Vol. 49, No. 1, pp. 117-126, 1993.
55. ElMadany, M.M., and Alswailem, S.I., "Classical Versus Modern Guidance Laws for Homing Missiles", Proceedings, Current Advances in Mechanical Design and Production, Sixth Cairo University International MDP Conference, Cairo, 1996, pp. 449-459.
56. ElMadany, M.M., and RamaChandran, P.V., "Road and Laboratory Testing of Freight Trucks - A Methodology", Proceedings, Current Advances in Mechanical Design & Production, Sixth Cairo University International MDP Conference, Cairo, 1996, pp. 661-667.
57. Abduljabbar, Z., ElMadany, M.M., and Al-Abdulwahab, A.A., "Active Vibration Control of a Flexible Rotor", International Journal of Computers and Structures, Vol. 58, No. 3, pp. 494-511, 1996.
58. Abduljabbar, Z., and ElMadany, M.M., "On the Vibration and Control of a Flexible Rotor Mounted on Fluid Film Bearings", International Journal of Computers and Structures, Vol. 65, No. 6, pp. 849-856, 1997.
59. ElMadany, M.M., and Abduljabbar, Z., "Optimal Controller for Rotor-Bearing Systems", Proceedings, 6th International Conference on Production Engineering, Design and Control, PEDAC'97, Alexandria, Egypt, 15-17 February, 1997, pp. 639-648.
60. Gomaa, A., ElMadany, M.M., and Albedah, A.M., "CAD of Hydrodynamic Journal Bearings", Proceedings, 6th International Conference on Production Engineering, Design and Control, PEDAC'97, Alexandria, Egypt, 15-17 February, 1997, pp. 71-80.
61. ElMadany, M.M., and Abduljabbar, Z., "Controller Design for High-Performance Turbomachines", International Journal of Vibration and Control, 32, 1999, pp. 479-497.
62. ElMadany, M.M., and Abduljabbar, Z., "Linear Quadratic Gaussian Control of a Quarter-Car Suspension", Journal of Vehicle System Dynamics, 32, 1999, pp. 479-497.
63. ElMadany, M.M., and Abduljabbar, Z., "Optimal Active Suspension with Preview for a quarter-Car Model Incorporating Integral Constraint and Vibration Absorber", Proceedings, Current Advances in Mechanical Design

- and Production, Seventh Cairo University International Conference on Mechanical Design and Production, Cairo, Egypt, Feb. 15-17, 2000, pp. 95-103.
64. ElMadany, M.M., and AlSwailem, S.I., "An Improved Optimal Guidance Law for Homing Missiles", Proceedings, Current Advances in Mechanical Design and Production, Seventh Cairo University International Conference on Mechanical Design and Production, Cairo, Egypt, Feb. 15-17, 2000, pp, 13-20.
  65. ElMadany, M.M., "On the Dynamics and Control of Rotating Machinery", Keynote Paper, Workshop on Vibration in Rotating Machinery, WVRM 2000, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, April 29 - May 1, 2000.
  66. ElMadany, M.M., and AlMajed, M.I., "Quadratic Synthesis of Active Controls for a Quarter-Car Model", Journal of Vibration and Control,7, pp.1237-1252, 2001.
  67. ElMadany, M.M., Abduljabbar, Z., and Foda, M. , "Optimal Review Control of Active Suspensions with Integral Constraint", Journal of Vibration and Control, 9, No. 12, 2003.
  68. ElMadany, M.M., "Establishing Engineering Design Competencies- An Approach", Third Forum, Engineering Education, University of Sharja, 14-15 October, 2003.
  69. ElMadany, M.M., and AlBassam, B.A., "Curriculum Development- An Integrated Methodology", Third Forum, Engineering Education, University of Sharja, 14-15 October, 2003.
  70. ElMadany, M.M., "Isotropic Optimal Controller for Rotor-Bearing Systems", Mansoura 4<sup>th</sup> International Engineering Conference, Paper No. 127, 20-22 April, 2004.
  71. ElMadany, M.M., Alduljabbar, Z., and Abdulwahab, A., "On the Dynamic Analysis of Rotor-Bearing Systems Using Finite Elements", Mansoura 4<sup>th</sup> International Conference, Paper No. 206, 20-22, April, 2004.
  72. ElMadany, M. M., and Qarmoush, A. O., "Control and Evaluation of Slow-Active Suspensions with Preview for a Full Vehicle Model", Third Saudi Conference and Exhibition STCEX -3, Dec. 11-15, 2004, Riyadh, Kingdom of Saudi Arabia.
  73. ElMadany, M. M., and AlBahkali, E., "Engineering Design Education at King Saud University- an Overview", 2004 International Mechanical Engineering Conference & Exposition (IMECE), Kuwait, Dec. 5-8, 2004.
  74. ElMadany, M. M., and Qarmoush, A. O., "Ride performance of a Slow-Active Suspension System Based on a Full Car Model", 2004 International Mechanical Engineering Conference & Exposition (IMECE) , Kuwait, Dec. 5-8, 2004.
  75. ElMadany, M.M., and Al-Bahkaly, E., "Mechanical Engineering Design at King Saud University- An Outcome Assessment", ICEE2006, International Conference on Engineering Education, March 2006, Qassim University, Qassim.
  76. ElMadany, M.M., "Rotating Machinery: Analysis, Testing and Fault Diagnostic Methodology", 5<sup>th</sup> International Engineering Conference, March 27-31, 2006, ElMansoura-Sharm El-Sheikh, Egypt.
  77. ElMadany, M.M., and AlBassam, B, "Mechanical Engineering Curriculum Development for Qassim University", ICEE2006, International Conference on Engineering Education, March 2006, Qassim University, Qassim.

78. ElMadany, M.M., "Engineering Education in the New Century", ICEET-2-1013, Proceedings, Conference on Engineering Education and Training, April 9-11, Kuwait.
79. ElMadany, M.M., AlMajed, M. I., "Development of an Undergraduate Curriculum in Mechatronics Engineering", ICEET-2-1008, Proceedings, Conference on Engineering Education and Training, April 9-11, Kuwait.
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