

Name: Taher Awad

Title: Prof. Dr.

Tel:3877467

Email:taher.awad@pua.edu.eg

Room:E222



Biography

PhD: 1978 TU Dresden Germany

Master: 1972 Alexandria University

Bachelor: 1967 Alexandria University

-Vice Dean of ADA (Alexandria Desalination Academy)

The first virtual Academy in the Middle East.

<http://www.ada-eg.com/>

-Member of the Mechanical Engineering Association

Research Interests

Research Interests:

- Control Systems, Fuzzy Control, Neural Control, Computer Control. Micro-controllers.
- Optimization Techniques.
- Vibration Control
- Robotics.
- Analysis of Mechanisms
- Sliding Bearings
- Labyrinth Seals

Publications

Principal Publications:

- 1- Awad, T., El Haris H., El Gundi A., *Simulation of systems having step response with specified shape {Part I, II, and III}. Bulletin of the Faculty of Engineering, Alexandria University, 1973.*
- 2- Awad, T., *Probleme der adaptiven modellfindung in der maschinendynamik 'Tagung*

Festkoerpermechanik-Dynamic und Getriebetechnik'
Dresden, 1979.

- 3- Awad, T., Mostafa M., Gomaa A., Trabia B., *A computer method for kinematic and dynamic analysis of plane mechanisms. Bulletin of the Faculty of Engineering, Alexandria University, vol. XXII, 1983.*
- 4- Awad, T., Mostafa M., Gomaa A., Trabia B., *Optimum dynamic performance of mechanisms using nonlinear programming. Bulletin of the Faculty of Engineering, Alexandria University, 1983.*
- 5- Awad, T., *A new optimization technique for discrete objective function and its application in identification of control systems. 2nd PEDAC International conference, Alexandria University, 1983.*
- 6- Awad, T., El Gamal H., *An optimization technique for modeling of structure and parameters of systems. Bulletin of the Faculty of Engineering, Alexandria University, vol. XXIII 1984.*
- 7- Awad, T., El Gamal H., Saber E., *Models of labyrinth sealings for turbomachinery Part I Formulation of the problem and study of geometrical effects. Modeling, Simulation and control, B vol. 10, No. 4, pp41-52, 1987.*
- 8- Awad, T., El Gamal H., Saber E., *Models of labyrinth sealings for turbomachinery Part II The leakage problem. Modeling, Simulation and control, B vol. 10, No. 4, pp53-64, 1987.*
- 9- Awad, T., El Gamal H., Saber E., *A study of the design of labyrinth seal shapes. 3rd PEDAC International Conference, Alexandria University, 1986.*
- 10- Awad, T., Mostafa M., El Gamal H., Morsi E., *The effect of tensional vibrations on the leakage from labyrinth seals. . Bulletin of the Faculty of Engineering, Alexandria University, vol. XXV 1986.*
- 11- Awad, T., Mostafa M., El Gamal H., Saber E., *The effect of air drag and the velocity of pull on the dynamic behavior of vibrating viscoelastic strings. Bulletin of the Faculty of Engineering, Alexandria University, vol. XXV 1986.*
- 12- Awad, T., El Gamal H. , *The effect of the presense of an air bubbles in a hydraulic servo-motor on the dynamic response of a control loop. 3rd PEDAC International conference, Alexandria University, 1986.*
- 13- Awad, T., H. A El-Gamal, E. E. Saber, *Oscillatory flow in axisymmetric models of cavities. Modeling,*

Simulation and Control, B, ASME press, vol. 14, No. 20, 1988.

14- Awad, T., H. A El-Gamal, E. E. Saber, *Leakage control by the use of a porous labyrinth sealing gland. Modeling, Simulation and Control, B, ASME press, vol. 14, No. 20, 1988.*

15- S. Rezeka, M. Abouelwafa, A. Olick, *Synthesis of four link space mechanism. ASME Periodicals, Modeling, Simulation and Control, B, Vol.25, No1, 1989.*

16- Awad, T., M. Abouelwafa, S. Rezeka, A. Olick, *Optimum balancing of shaking effects for four-link spatial mechanism. ASME Periodicals, Modeling, Simulation and Control, B, Vol.25, No.2, 1989.*

17- Awad T., M. Abouelwafa, S. Rezeka, A. Olick, *An approach for dynamic analysis of HCCC, RCCC and PCCC spatial mechanisms. Alexandria Engineering Journal, Vol. 28, No.4, Oct. 1989*

18- Awad T., M. Abouelwafa, S. Rezeka, A. , *Olick Closed form expression for the kinematic of HCCC spatial four link mechanism. ASME Periodicals, Modeling, Simulation and Control, B, Vol.27, No.1, 1990.*

19- Awad, T., S. Rezeka., *Optimum parameters of spool valve feedback to minimize surge pressure. SAE Transactions of Journal of Commercial Vehicles, Section 2 volume 99, 1990.*

20- Awad, T., H. A. El-Gamal, A. A. Helmy, I. M. El-Faham, *Effect of shaft misalignment on the performance of heavily loaded journal bearings. Fourth International Conference of fluid Mechanics (ICFM4). Vol III session 31, 1992.*

21- Awad, T., H. A. El-Gamal, E. E. Saber , *The leakage across a slotted labyrinth seal gland through which blowing is applied. Fourth International Conference of fluid Mechanics (ICFM4). Vol III session 22, 1992.*

22- Awad, T., H. A El-Gamal, E. E. Saber , *The leakage from stationary and rotating labyrinth seals. 5th International Conference on Production Engineering, Design and Control, Alexandria, Vol.2, 1992*

23- Awad, T., M. Moustafa, H. A El-Gamal, E. Morsi, *The influence of oscillatory end on vibrating visco-elastic strings. The 8th International Conference for Mechanical Power Engineering, Alexandria, Egypt, Vol. 4 1993.*

24- Awad, T., H. A El-Gamal, E. E. Saber, *Effect of Lateral misalignment on the performance and dynamic characteristics of labyrinth seals. The 8th*

International Conference for Mechanical Power Engineering, Alexandria, Egypt, Vol. 2 1993.

- 25- Awad, T., M. Moustafa, H. A El-Gamal, E. Morsi. , *The effect of hysteresis and air drag on the behavior of axially moving and laterally vibrating viscoelastic thread lines. Modeling, Measurements and Control, B, Vol. 49, n3, 1993.*
- 26- Awad, T., H. A El-Gamal,., *Optimum model shape of sliding bearings for oscillating motion, Tribology International, Vol.27, N3, 1994.*
- 27- Awad T., *Optimal design of boiler control loops. Alexandria Engineering Journal, Vol. 33, No2 1994.*
- 28- Awad T., *Simulation and design of optimal controller for two joints arm robot with parameter uncertainty. Alexandria Engineering Journal, Vol. 33, No2 1994.*
- 29- Awad T., *Optimum Controller design for aircraft Engine. Alexandria Engineering Journal, Vol. 34, No2 1995.*
- 30- Awad, T., Moustafa M ,El- Gamal H. , Nabieh A., *A Three Dimensional Kinematical Model of The Human Tibial Femoral Joint., Alexandria Engineering Journal Vol. 39,2000.*
- 31- Awad, T., Metwally H., Al Chaar N. , *Vibration Control of Bridges Deck Under Vertical Earthquake Component. American Control Conference, Chicago USA, 2000.*
- 32- Awad, T., Metwally H. , Al Chaar N. , *Vibration Control of Bridges Deck using Variable Dampers., SEA IX International Congress on Experimental Mechanics and Manufactures , Oralando, Florida USA 2000.*
- 33- Awad, T., Metwally H. , Al Chaar N. , *Vibration Control of Bridges Deck Using Passive and Active Mass Dampers . PEDAC Production Engineering Design and Control Alexandria Egypt, 2001.*
- 34- Awad, T., Rashidy H., Saafan A., Rezeka S., *Fault Diagnosis of A Hydraulic Servovalve Using A Neuro-Fuzzy Model.,6th Biennial Conference On Engineering Systems Design and Analysis ESDA, Istambul, Turkey, 2002.*
- 35- Awad, T., Rashidy H., Saafan A., Rezeka S., *A Hierarchical Neuro-Fuzzy System For Identification Of Simultaneous Faults in Hydraulic Servovalves.,7th International Conference on Intelligent Engineering Systems Assiut-Luxor, Egypt, 2003.*
- 36- Awad T. , Rezeka S. F., Saafan A., Elmahdy A. Y., *Fuzzy Logic Control of Active Magnetic Bearing, 4th IEC International Engineering Conference,*

Mansoura university ,Egypt, 2004.

- 37- Awad T. , Rezeka S. F., Saafan A., El-Gohary., *Control of Aircraft Maneuvers Using Neural Network, 4th IEC International Engineering Conference.,Mansoura university ,Egypt, 2004.*
- 38- Awad, T., Attia E. M., Bader M. E., *Design of Neural Network System Realizing Aircraft Trajectories, 4th IEC International Engineering Conference., Mansoura university , Sharm EL Shikh ,Egypt, 2004.*
- 39- Awad T. , Helmy A., Attia E. M., Saeed A., *Artificial Neural Networks For Traking Turning Circle And Zigzag Maneuvers For An Underactuated Ship. 8th International Conference on Production Engineering, Design , and control PEDAC .Egypt, 2004.*
- 40- Awad T. , Helmy A., Attia E. M., Saeed A., *Design of a neuro –autopilot maneuvering controller for under actuated ship, Alexandria Engineering Journal, Vol 44, No. 4, 2005.*
- 41- Awad T. , Helmy A., Attia E. M., Crosby T., *Missile Homing Guidance Using Neural Networks. 5th IEC International Engineering Conference.,Mansoura university , Sharm EL Shikh ,Egypt, 2006.*
- 42- Awad T. , Rezeka S. F., Saafan A., El-Gohary., *Control of Aircraft Maneuvers Using Neural Network, Alexandria Engineering Journal, July, 2007.*
- 43- Awad T. , M.N. Aboelwafa, A. E. Hamdy, M. El-Hadary, *Fatigue Life Prediction for waven roving glass fiber Polyester Composite Using Neural Networks. 6th IEC International Engineering Conference. Mansoura university, Sharm EL Shikh ,Egypt, 2008.*
- 44- Awad T.,M.El-Arabi , T Kaled, M. Adel A *comprehensive Three dimensional Dynamic Model of the Human Elbow joint, International Review of Physics(IREPHY) Vol. 3 N. 2 April 2009.*
- 45- Awad T. , M. Elhadary ,M. N. Abouelwafa, A. Hamdy,K. H. Twafic *Artificial Neural Networks Applied to Woven Roving Glass Fiber Reinforced Polyester Composite Under IN and Out- of Phase Loading Conditions, 7th IEC International Engineering Conference. Mansoura university, Sharm EL Shikh ,Egypt, 2010.*

