

**MOHAMMED SAMI FADALI  
CURRICULUM VITAE**

**PRESENT POSITION:** Professor and Graduate Coordinator  
Department of Electrical Engineering  
College of Engineering  
University of Nevada  
Reno, NV 89557-0153

**PRINCIPAL PAST POSITION:** Assistant Professor, King Abdul Aziz University,  
Jeddah, 1981-83.

**PLACE AND DATE OF BIRTH:** Cairo, Egypt, May 22, 1952.

**NATIONALITY:** U.S.

**LANGUAGES:** English, French, Spanish, Arabic.

**PERMANENT ADDRESS:** 3959 Regal Dr., Reno, NV 89503  
Work Phone: (702)784-6951  
Home Phone: (702)747-4832

**MARITAL STATUS:** Married

**RESEARCH INTERESTS:** Robust Control: Kharitonov theory, QFT variable  
structure control, fault detection.  
Engineering education.

**EDUCATION:**

DEGREE	DEPARTMENT	UNIVERSITY	YEAR
B.S.	Electrical Engineering	Cairo Univ., Cairo, Egypt.	1974
M.S.	Control Systems Center	UMIST, Manchester, England	1977
Ph.D.	Electrical Engineering	Univ. of Wyoming, Laramie, Wyoming, USA	1980

**PATENT:**

L. E. LaForge and M. S. Fadali. Method and System for Computing Minkowski Quotients, Products, and Sums of Polygons, and for Generating Feasible Regions for Robust Compensators. U.S. Patent pending, 60/265,679. 2-Feb-2001.

**POSITIONS HELD:**

University of Nevada-Reno, Professor 1995-Present, Associate Professor 1989 to 1995, Assistant Professor, 1985-89, tenured 1991

Duties include teaching, funded research, graduate and undergraduate advising. Past Chairman Department Curriculum Committee, Graduate Student Coordinator and Chair of Graduate Admission Committee 1989-98, Member College Bylaws Committee, Past Chair College Personnel Committee.

Colorado State University, Post Doctoral Fellow, 1984-1985

Investigated problems in robotics, satellite maneuvering, biochemical process control and physiological system identification.

King Abdul Aziz University, Jeddah, Assistant Professor, 1981-1983.

Duties included teaching, undergraduate advising and research. Participated in starting a new bioengineering program.

University of Wyoming, Teaching Assistant, 1979-80.

Taught several introductory electrical engineering labs.

Cairo Research Center, Engineer, 1975.

Participated in research on computer control of electrical machines.

Giza Systems, Consultants, Engineer, 1974-75.

Participated in the specification formulation for the communication system of the Egyptian Power Network.

**PROFESSIONAL EXPERIENCE:**

I. *Teaching Experience:* Over fourteen years.

*Undergraduate-*

Freshman: FORTRAN Programming, Introduction to Engineering.

Sophomore: Introduction to Electrical Engineering, Computer Matrix Algebra.

Junior: Introduction to Linear Systems, Circuits & Systems, Classical Control.

Senior: Modern Control, Digital Control.

*Graduate-*

Linear Systems, Optimal Control, Nonlinear Control, Robust Control, Robotics Seminar, Neural Networks Seminar, Neural Networks, Random Signals Seminar, Random Signals & Estimation, Estimation Theory, Fault Detection, Signal Detection.

**SESSIONS/SYMPOSIA CHAIRED OR ORGANIZED***American Control Conference:*

- 1998 Chair of a session on QFT, Chair and organizer of a session on fault detection
- 1997 Co-chair of two sessions on Robust Control.
- 1995 Chair of a session on Multivariable Control.
- 1991 Organized and Co-chaired a session on Power System Control
- 1990 Co-Chaired two sessions: "Robust Control of Robotic Manipulators" and "Applications of Neural Network in Control".
- 1986 Organized and chaired a session entitled: "Aerospace and Robotics Applications of Nonlinear Control"

*ISCA International Conference on Computer Applications*

- 1995 Conference General Chair CAINE '95
- 1993 Conference General Chair
- 1992 Member of the Organizing Committee.
- 1991 Member of the Organizing Committee.
- 1990 Conference General Chairman
- 1989 Program Chairman.

**OFFICES HELD IN PROFESSIONAL SOCIETIES:**

Industry-University Liaison Working Group of the Control Systems Society, Robotics & Automation Working Group of the Control Systems Society, Secretary of the Internat. Society for Computers and Their Applications (ISCA)

**MEMBERSHIP OF PROFESSIONAL SOCIETIES**

Senior Member IEEE, IEEE Control Systems Society  
 IEEE Circuits and Systems Society  
 IEEE Education Society  
 Eta Kappa Nu  
 ISCA

**RESEARCH PUBLICATIONS:***I. Papers Published**Journal Publications*

A. Sonbol and M. Sami Fadali, "Stability Analysis of Discrete TSK Types II/III Fuzzy Systems", *IEEE Trans. Fuzzy Systems*, (accepted for publication, to appear, 2006).

A. Sonbol and M. Sami Fadali, "TSK Fuzzy Systems Types II and III Stability Analysis: Continuous Case", *IEEE Trans. Systems, Man & Cybernetics*, Section B, Vol. 36, No. 1, 2006.

Hyun C. Cho, M. Sami Fadali, M. Saiidi, and Kwon S. Lee, "Neural Network Active Control of Structures with Earthquake Response", *International Journal of Control, Automation, and Systems*, June 2005.

M. S. Fadali, "Book Review: New approaches to fuzzy modeling and control: design and analysis", *Automatica*, 3 pages, March, 2005.

M. Sami Fadali, "Comments on "Limit Cycle Analysis of Single-loop Systems with Multiple Nonlinearities and Parameter Uncertainties", *European J. Control*, No. 2, 2004.

L. LaForge, K. Korver, M. S. Fadali, "What Designers of Bus and Network Architectures Should Know About Hypercubes", *IEEE Trans. On Computers*, Vol. 52, No. 4. April, 2003. pp. 525 - 544.

K. McNichols and M. S. Fadali, "Selecting Operating Points for Discrete-Time Gain Scheduling", *J. Control Applications*, Vol. 29, 1, 2003.

M. S. Fadali, "Fault Detection for Systems with Multirate Sampling: an Observer-based Approach", *J. Control Applications*, Jan. 2003.

M. S. Fadali, H. Emara-Shabaik, "Timely Robust Fault Detection for Multirate Linear System", *Internat. J. Control*, Vol. 75, No.5, 2002.

M. S. Fadali, L. LaForge, "Linear Time Computation of Feasible Regions for Robust Compensators", *J. Robust and Nonlinear Control*, 11, 2001.

M. S. Fadali, "Fault Detection for Systems with Multirate Sampling: an Observer-based Approach", *J. Control Applications*, 2001.

M. S. Fadali, "Computer-Aided Implementation of Graphical Root Locus Design Recipes", *IEEE Trans. Education, CD-ROM*, November, 1999.

M. S. Fadali, Y. Zhang, and S. Louis, Robust Stability Analysis of Discrete-Time Systems Using Genetic Algorithms, *IEEE Trans. Systems, Man, Cybern.*, Part A, No. 5, Sept., 1999.

J. Liu, M.S. Fadali, "Performance Constrained Stabilization of Uncertain Systems: Application to Load-frequency Control", *J. Computer Applications*, March, 1999.

C. Zhang, M. S. Fadali, Nonlinear System Identification Using a Gabor/Hopfield Network", *IEEE Trans. Systems, Man & Cybernetics*, Vol. 26, No. 2, 1996.

H. Assadi, M. Etezadi-Amoli, D. D. Egbert, M. S. Fadali, A. Tan, "Application of the New Voting ARTMAP Neural Network to Power System Stability Studies", *ISCA J.*, Apr., 1995.

P. Fanchons, M. S. Fadali, "Elements of Variable Structure Control for Economists", *Economics and Planning*, Vol. 27, pp. 93-116, 1994.

M. S. Fadali, K. El-Zayyat, E. Maragakis, "Disturbance Rejection Control of Bridge Response to Earthquake Excitation", *Earthquake Engineering and Structural Dynamics*, Vol. 25, 291-302, 1996.

A. Bamani, M. Waly, M. S. Fadali, "Model reduction in the presence of small time delay", *Computers & Electrical Eng.*, Vol.19, No. 1, 1993.

M. Zohdy, M. S. Fadali, A. Abdel-Wahab, "Robust control system design with state constraints", *Int. J. Systems Science*, Vol.24, No. 1, 1993.

M. Zohdy, M. S. Fadali, J. Liu, "Robust design of discrete-time systems via optimization", *Internat. J. System Science*, Vol.24, No. 4, 1993.

M. Zohdy, M. S. Fadali, J. Liu, "Variable structure control using system decomposition", *IEEE Trans. Automatic Control*, Oct., 1992.

C. Li, M. S. Fadali, "Optimal control of 2-D systems", *IEEE Trans. Automatic Control*, Feb., 1991.

M. Zohdy, K., Gu, H. S. Tantawy, H.S., M. S. Fadali, "Robust eigenstructure assignment for multi-input systems", *Internat. J. Control*, Vol. 54, No. 5, May, 1991.

S. Bagchi, M.S. Fadali, "Error bounds for computed torque control in a noisy environment", *Control and Computers*, Vol. 18, No. 2, 1990.

M. S. Fadali, R. Gnanasekaran, "Normal matrices and their stability properties: application to 2-d system stabilization", *IEEE Trans. Cts. & Systems*, Vol. CAS-36, No. 6, June, 1989.

M. S. Fadali, C. Li, "Optimal control of linear 2-D systems", *Computer Control & Computers*, Vol. 17, No. 3, 1989.

M. S. Fadali, "Continuous drug delivery system design using nonlinear decoupling: a tutorial", *IEEE Trans. Biomed. Eng.*, Vol. BME-34, No. 9, Aug., 1987.

M. S. Fadali, N. Chen, N., T. A. W. Dwyer, III, "Comments on: Suboptimal control of industrial manipulators with a weighted minimum time-fuel criterion", *IEEE Trans. Automatic Control*, Vol. AC-32, No. 3, Mar., 1987.

T. A. W. Dwyer, III, M. S. Fadali, N. Chen, N., G. K. F. Lee, "Manipulator maneuvering by feedback linearization with saturating inputs", *Internat. J. Robotics & Automation*, Vol.2, No. 3, 1987.

M. S. Fadali, T. A. W. Dwyer, III, "Compact storage and reconstruction of periodic signals by means of a reproducing kernel", *J. Microcomputer Applications*, vol.5, no. 3, 1986, pp.79-83.

S. Al-Kafafy, M. S. Fadali, A. Wasfy, "The influence of smoking habits, body weight, height and age on pulmonary ventilation", *Bulletin Alexandria Faculty of Medicine*, vol. XX, No. 4, Dec. 1984.

M. S. Fadali, M. N. Karim, T. A. W., Dwyer, III, "Control of zymomonas mobilis using nonlinear decoupling", *J. Microcomputer Applications*, vol.5, no.1, 1986, pp.11-20.

### *Conference Publications*

2006 ( )

M. S. Fadali and H. Oloomi, "Realization for Discrete-Time Linear Systems through Input or Output Maps", *Proc. 2006 American Control Conference*, Minneapolis, MN, June 2006 (Under Review).

Hyun Cheol Cho, M. Sami Fadali, "Adaptive Online Parameter Learning of Dynamic Bayesian Networks", *Proc. 2006 American Control Conference*, Minneapolis, MN, June 2006 (Under Review).

2005 (4)

M. Sami Fadali, "Fuzzy Functional Observers for Dynamic TSK Systems", *Proc. Fuzz-IEEE 05 Conference*, Reno, NV, May 2005.

H. C. Cho, S. M. Fadali, and K. S. Lee, "Estimation of non-Gaussian probability density by dynamic Bayesian networks," *Proc. Int. Conf. on Control, Automation, and Systems*, pp. 408-413, Seoul, South Korea, July 2005.

Hyun C. Cho, M. Sami Fadali, Hyunjeong Lee, "Dynamic Queue Scheduling Using Fuzzy Systems For Internet Routers", *Proc. Fuzz-IEEE 05 Conference*, Reno, NV, May 2005.

M. Sami Fadali, "Fuzzy Stability of Discrete Fuzzy Systems with Nontriangular Membership Functions", *Proc. Fuzz-IEEE 05 Conference*, Reno, NV, May 2005.

Hyun C. Cho, M. Sami Fadali, Hyunjeong Lee, "Neural Network Control for TCP Network Congestion", *Proc. 2005 American Control Conference*, Portland, OR, June 2005.

## 2004 (5)

K. White , M. Karam, M. S. Fadali, "Performance Enhancement of a Fourier/Hopfield Neural Network for Nonlinear Periodic System Representation", *Proceedings of the 36th IEEE Southeastern Symposium on System Theory*, Morgantown, WV, March, 2004.

M. Sami Fadali and H. Oloomi, "Realizatin and canonical representation of linear systems through I/O maps", 2004 Internat. Conf. Control, Automation, Systems, Bangkok, Thailand, Aug, 2004.

A. Sonbol and M. Sami Fadali, "Generalized Fuzzy Lyapunov Stability Analysis of Discrete Type II/III TSK Systems", *Proc. 2004 American Control Conf.*, Boston, MA, June, 2004.

M. Robinson, M. Sami Fadali, E. Wang, Ann-Marie Vollstedt "Middle School Science Using Robotics For ESL Students", *Proc. ASEE Conference*, Salt Lake City, Utah, June 2004.

M. Sami Fadali, Norma Velasquez-Bryant, M. Robinson "Is Attitude Toward Mathematics a Major Obstacle to Engineering Education?", *Proc. FIE 04 Conference*, Savannah, GA, Oct. 2004.

## 2003 (9)

A. Sonbol and M. Sami Fadali, "Fuzzy Stability Analysis of Type II TSK Systems", *Proc. 2003 Conf on Decision & Control*, Maui HI, December, 2003.

G. F. K. Lee, M. Sami Fadali and H. Cho, "Investigation of a Generalized Adaptive Neural Network Fuzzy Inference Structure for Nonlinear Systems with Sensor and Actuator Noise", *ISCA CAINE*, San Francisco, CA, 2003.

M. Sami Fadali, P. Colaneri and M. Nel, "H2 Robust Fault Detection for Periodic Systems", *Proc. 2003 American Control Conf.*, Denver, CO, June, 2003.

A. Sonbol and M. Sami Fadali, "Improved Fuzzy Appoximation Accuracy Using Linear TSK", *Proc. 2003 American Control Conf.*, Denver, CO, June, 2003.

M. Sami Fadali and L. E. LaForge, "Compensator Plane Design for Engineering Models", *Proc. 2003 American Control Conf.*, Denver, CO, June, 2003.

M. Karam, M.S. Fadali, & K. White, A Fourier/Hopfield Neural Network for Identification of Nonlinear Periodic Systems, *Proceedings of the 35th IEEE Southeastern Symposium on System Theory*, Morgantown, WV, March, 2003.

M. Robinson, M. S. Fadali, W. Johnson, T. Batchman, "AP Mathematics and Science Courses as a Gateway to Careers in Engineering", *FIE 2003*, Boulder, CO, Nov. 2003.

B. T. Westphal, F. Harris, M. S. Fadali, "Graphical Programming: a Vehicle for Teaching Computer Problem Solving", *FIE 2003*, Boulder, CO, Nov. 2003.

Alina Solovyova-Vincent, Frederick C. Harris, Jr., and M. Sami Fadali, "Parallel Inversion of Polynomial Matrices" *Proceedings of PDCS 2003*, Reno, NV, August 2003.

A. B. Schultz, R. G. Lyon, M. Kochte, D. A. Fraquelli, F. Bruhweiler, I. J. E. Jordan, K. G. Carpenter, M. A. DiSanti, C. Miskey, M. Rodrigue, M. S. Fadali, D. Skelton, H. M. Hart, K.-P. Cheng, "Imaging terrestrial planets with a free-flying occulter and space telescope: an optical simulation", *Proceedings of SPIE*, # 5170-26, San Diego, CA, August, 2003.

#### 2002 (6)

M. Sami Fadali, "Stability Testing for Systems with Polynomial Uncertainty", *Proc. 2002 American Control Conf.*, Anchorage, AK, May, 2002.

A. Sonbol and M. Sami Fadali, "A New Approach for Designing TSK Fuzzy Systems From Input-Output Data", *Proc. 2002 American Control Conf.*, Anchorage, AK, May, 2002.

W. Abdel-Mageed, M. Sami Fadali and G. Bebis, "A Non-intrusive Kalman Filter-Based Tracker for Pursuit Eye Movement", *Proc. 2002 American Control Conf.*, Anchorage, AK, May, 2002.

M. Robinson and M. S. Fadali, "AP Classes and Their Impact on Engineering Education", *ASEE Annual Conference Proceedings*, Montreal, Quebec, CA, June, 2002.

N. Henderson, M. Sami Fadali, J. Johnson, "Peer-Tutoring: An Investigation of First-Year Engineering Students' Perceptions", *Proc. 2002 FIE Conf.*, Boston, MA, Nov., 2002.

M. Robinson, M. Sami Fadali, G. Ochs, "How Do High School Mathematics and Science Teachers Cover Engineering and Technology?", *Proc. 2002 FIE Conf.*, Boston, MA, Nov., 2002.

#### 2001 (10)

M. Sami Fadali and S. Gummuluri, "Robust Observer-based Fault Detection for Periodic Systems", *2001 American Control Conf.*, Arlington, VA, June, 2001.

M. Sami Fadali, L. LaForge and A. Sonbol, "Linear Time Computation of Robust Stability Margins", *2001 American Control Conf.*, Arlington, VA, June, 2001.

M. Robinson and M. S. Fadali, "How Do Secondary Science Texts Cover Mathematics and Engineering Principles and Design?", *ASEE Annual Conference Proceedings*, Albuquerque, NM, June, 2001.

M. Sami Fadali, N. Henderson, J. Johnson, J. Mortensen, J. McGough, "On-line Engineering Mathematics Testing and Assessment", *Proc. 2001 FIE Conf.*, Reno, NV, Oct., 2001.

R. Quinn, M. Sami Fadali, M. Robinson, "How Do High School Mathematics Texts Cover Engineering and Technology?", *Proc. 2001 FIE Conf.*, Reno, NV, Oct., 2001.

J. McGough, J. Mortensen, J. Johnson, M. Sami Fadali, A Web-Based Testing System With Dynamic Question Generation, *Proc. 2001 FIE Conf.*, Reno, NV, Oct., 2001.

M. S. Fadali, L. LaForge, F. Harris, "Frequency Response Bound Determination Using a Kharitonov and Algorithmic Framework", *Proc. 2001 ISCA-CAINE*, Las Vegas, NV, November, 2001.

Marc Karam and M. Sami Fadali, "Fault Detection and Diagnosis Using a Fourier/Hopfield Neural Network", Midwest Circuits & Systems Symposium, Fairborn, OH, August 2001.

J. Kleppe, M. Sami Fadali, M. Lapolla, G. Fralick, "High Temperature Gas Measurements in Combustors Using Acoustic Pyrometry Methods", *47<sup>th</sup> ISA Internat. Instrumentation Symp.*, Denver, CO, May 2001.

M. Robinson, S. Fadali, C. Maddux, "Promoting engineering literacy for secondary science teachers and students", *School Science and Mathematics Association, National Conference*, Downings Grove, IL, November, 2001.

2000 (6)

M. S. Fadali and K. McNichols, "Controller Design for Slowly Varying Interval Plants Using Gain Scheduling and Interval Mathematics", *2000 American Control Conf.*, Chicago, IL, June, 2000.

M. S. Fadali and H. E. Shabaik, "Robust Fault Detection for a Class of Multirate Linear Systems", *2000 American Control Conf.*, Chicago, IL, June, 2000.

M. Sami Fadali, Mike Robinson, K. McNichols, "Teaching Engineering to K-12 Students Using Role Playing Games", *ASEE Conf.*, Saint Louis, MO, June, 2000.

M. Sami Fadali, Mike Robinson, "How do the National Science Education Standards Support the Teaching of Engineering Principles and Design?", *Frontiers in Education*, Kansas City, MI, Nov. 2000.

M. Sami Fadali, J. Johnson, J. Mortensen, J. McGough, "A New On-line Testing and Remediation Strategy for Engineering Mathematics", *Frontiers in Education*, Kansas City, MI, Nov. 2000.

M. Robinson, M. Fadali, R. Quinn, "Engineering principles for secondary science and mathematics teachers", *School Science and Mathematics Association, National Conf.*, Albuquerque, NM, October, 2000.

1999 (5)

M. S Fadali, W. Liu, "Observer-based Robust Fault Detection for a Class of Multirate Sampled-Data Linear Systems", *1999 American Control Conf.*, San Diego, CA, June, 1999.

M. Holzman, M.S. Fadali, B. Johnson, L. Lautzenhiser, "Robust Stability Analysis of a Phased-locked Loop Voltage-Controlled Oscillator Circuit", *1999 American Control Conf.*, San Diego, CA, June, 1999.

Kenneth H. McNichols, M. Sami Fadali, "The Classroom Computer: A Role-Playing Educational Activity" *Frontiers in Education*, San Juan Puerto Rico, Nov. 1999.

Mike Robinson, M. Sami Fadali, J. Carr, C. Maddux, "Engineering Principles for High School Students", *Frontiers in Education*, San Juan Puerto Rico, Nov. 1999.

A. B. Schultz, D. J. Schroeder, I. Jordan, F. Bruhweiler, M. DiSanti, H. Hart, F. Hamilton, J. L. Hershey, M. Kochte, C. Miskey, K. Chen, M. Rodriguez, B. Johnson, M. S. Fadali, "Imaging Planets About Other Stars with UMBRAS", *Infrared Spaceborne Remote Sensing VII<sup>m</sup> Proc. SPIE*, Vol. 3759, Denver, CO, July, 1999.

1998 (7)

M. S. Fadali, W. Liu, "Fault Detection for Systems With Multirate Sampling", *American Control Conf.*, Philadelphia, PA, June, 1998.

J. Liu, M. S. Fadali, "Stability and Performance Measures of Stochastic System with Uncertainties", *American Control Conf.*, Philadelphia, PA, June, 1998.

M. S. Fadali, G. Bebis, "Robust controller Design Using Interval Arithmetic", *ISCA Conf. on Computer Applications*, Honolulu, HI, Mar, 1998.

M. Robinson, M. S. Fadali, "A Model to Promote the Study of Engineering through a Capstone Course for Pre Service Secondary Science and Mathematics Teachers, *Frontiers in Education*, Tempe, AZ, Nov., 1998.

M. S. Fadali, E. Wang, D. McPherson, "A Mobile Computer System for high school engineering experiments", *ISCA Caine 98*, Las Vegas, NV, Nov., 1998.

M. Holzman, B. Johnson, M.S. Fadali, L. Lautzenhiser, "Parameter Space Analysis of a Phased-locked Loop Voltage-Controlled Oscillator Circuit", *ISCA Caine 98*, Las Vegas, NV, Nov., 1998.

G. Bebis, S. Louis, M. S. Fadali, " Using Genetic Algorithms for 3D Object Recognition", *ISCA Caine 98*, Las Vegas, NV, Nov., 1998.

*1997 (3)*

M. S. Fadali, M. Zohdy, "Properties and interpretation of two robustness measures", *Proc. 1997 ACC*, Albuquerque, NM, June, 1997.

M. S. Fadali, "A Design Exercise for Electives in Control Systems", *Frontiers in Education*, Pittsburgh, PA, Nov., 1997.

M. S. Fadali, C. Evrensel, "A Compartmental Model of Pulmonary Gas Exchange", *ISCA International Conf. On Computer Applications*, Phoenix, AZ, Mar., 1997.

*1996 (2)*

M. S. Fadali, "Control Systems Laboratory at the University of Nevada", *Frontiers in Education*, Salt Lake City, UT, Nov., 1996.

M. S. Fadali, L. E. LaForge, "Algorithmic Analysis of Geometrically Computed QFT Bound", *Proc. IFAC World Congress*, San Francisco, CA, 1996.

*1995 (6)*

M. S. Fadali, N. Publicover, "Mathematical Model of Current Activation in Cloned Delayed-Rectifier Channels Expressed in *Xenopus* Oocytes", *Proc. ISCA Conf. Comp. Applic. Eng. & Med.*, Indianapolis, IN, Mar, 1995.

M. Zohdy, M. S. Fadali, J. Liu, "Variable Structure Dynamic Output Feedback", *Proc. 1995 American Control Conference*, Seattle, WA, 1995.

M. S. Fadali, N. Chachavalvoong, "Describing Function Analysis of Uncertain Nonlinear Systems Using the Kharitonov Approach", *Proc. 1995 American Control Conference*, Seattle, WA, 1995.

M. S. Fadali, E. Yaz, "Multivariable PID Controller Design", *Proc. 1995 American Control Conference*, Seattle, WA, 1995.

M. S. Fadali, E. Yaz, "Stability Robustness and Robustification of the Exact Linearization Method of Robotic Manipulator Control", *1995 Conf. on Decision and Control*, New Orleans, LA, Dec. 1995.

M. S. Fadali, S. Wongbuddha, "Maximum Absolute Values of Dynamic Variables in Piecewise Linear Control Systems", *CAINE '95*, Honolulu, HI, Dec. 1995.

*1994 (1)*

M. S. Fadali, G. Cai, Y. Ghoneim, "Air/fuel controller design using the describing function approach", *Proc. 1994 American Control Conf.*, Baltimore, MD, 1994.

*1993 (4)*

C. Zhang, M.S. Fadali, "Nonlinear System Identification Using a Gabor/Hopfield Network", *ISCA Internat. Conf. Computer Applications*, George Washington Univ., Washington DC, Mar., 1993.

M. S. Fadali, Y. Ghoneim, "2-D modeling control and simulation of vehicle platoons", *Proc. 1993 American Control Conf.*, San Francisco, CA, June, 1993.

L. Bandt, M.S. Fadali, "Analytical gain scheduled control for a nonlinear DC motor system", *ISCA CAINE'93*, Honolulu, HI, Dec., 1993.

H. Assadi, A. Tan, M. Etezadi, D. D. Egbert, M. S. Fadali, "Power system stability studies using the voting fuzzy ARTMAP neural network", *ISCA CAINE'93*, Honolulu, HI, Dec., 1993.

*1992 (5)*

M. S. Fadali, K. El-Zayyat, M. Zohdy, "Robust optimal control of binary distillation column", *Proc. ISMM Conf. Control Applic.*, Orlando, FA, 1992.

B. Adamczyk, M. S. Fadali, M. Zohdy, "Path optimization using dynamic programming", *Summer Simulation Conf.*, Reno, NV, 1992.

M. Pinsky, M. S. Fadali, "Path tracking using WKB approximation", *1992 American Control Conf.*, Chicago, Il, 1992.

S. Gardner, M. S. Fadali, "Vehicular longitudinal control using quantitative feedback theory", *Proc. Symp. QFT*, Wright-Patterson AFB, Dayton, Ohio, Aug., 1992.

H. Assadi, A. Tan, M. Etezadi, D. Egbert, M. S. Fadali, "Application of the ARTMAP neural network to power system stability studies", *1992 IEEE Conf. Systems, Man & Cybern.*, Chicago, Il, 1992.

*1991 (2)*

M. S. Fadali, M. Etezadi, M. Zohdy, "Variable structure control of power networks", *1991 American Control Conf.*, Boston, MA, June, 1991.

H. Assadi, A. Tan, M. Etezadi-Amoli, D. D. Egbert, M.S. Fadali, "Steady state stability studies using artificial neural networks", *1991 North American Power Symp.*, Carbondale, IL, Oct., 1991.

*1990 (8)*

M. S. Fadali, E. C. Tacker, "Hierarchical process modeling of submarine command and control system", *IEEE Internat. Conf. on Systems, Man & Cybern.*, Los Angeles, CA, Nov., 1990.

M. S. Fadali, D. D. Egbert, F. Aguirre, E. C. Tacker, "Minimum-time control of robotic manipulators using a hierarchical neural network", *1990 American Control Conf.*, San Diego, CA, May, 1990.

E. Yaz, M. S. Fadali, M. Zohdy, "Control of robotic manipulators with payload uncertainty", *1990 American Control Conf.*, San Diego, CA, May, 1990.

A. M. El-Ramsisi, M., Zohdy, M. S. Fadali, "An integrated estimation and control scheme for piece-wise linear systems using neural networks", *1990 American Control Conf.*, San Diego, CA, May, 1990.

M. S. Fadali, B. Adamczyk, "Optimal path planning using dynamic programming", *Proc. 1990 ISMM Internat. Conf. Design Applications*, New Orleans, LA, March, 1990.

D. D. Egbert, M. S. Fadali, "Laser beam microferometric system for rapid pavement profiling", *69th Annual Meeting Transport. Res. Board*, Washington, D.C., Jan, 1990.

M. Pinsky, M. S. Fadali, "WKB asymptotic approach to robot control", *ISRAM 90*, Vancouver, B.C., Canada, July, 1990.

M. Zohdy, J. Liu, M. S. Fadali, "Robust design of discrete-time systems via optimization", *21st Running of Modeling & Simulation Conf.*, University of Pittsburgh, Pittsburgh, PA, May, 1990.

*1989 (8)*

M. S. Fadali, M. Zohdy, B. Adamczyk, "Robust pole assignment for computed torque control of robotic manipulators", *1989 American Control Conf.*, Pittsburgh, PA, June, 1989.

M. Zohdy, M. S. Fadali, N. Loh, "Robust control of robotic manipulators", *1989 American Control Conf.*, Pittsburgh, PA, June, 1989.

L. Marran, M. S. Fadali, E. C. Tacker, "A new modeling methodology for large scale systems", *IEEE Conf. on Systems, Man & Cybern.*, Cambridge, MA, Nov., 1989.

E. C. Tacker, C. Looney, M. S. Fadali, D. D. Egbert, "A fuzzy logic/neural network approach to signal processing in large scale decision systems", *IEEE Conf. on Systems, Man & Cybern.*, Cambridge, MA, Nov., 1989.

M. Zohdy, J. Liu, M. S. Fadali, "Some results in system robustness", *20th Running of Modeling & Simulation Conf.*, University of Pittsburgh, Pittsburgh, PA, May, 1989.

M. S. Fadali, C. Li, "Optimal control of linear 2-D systems", *ISMM Internat. Conf. Computer Applic.*, Reno, NV, Feb., 1989 .

S. Bagchi, M. S. Fadali, S. Gardner, "Error bounds for computed torque control of robotic manipulators in a noisy environment", *ISMM Internat. Conf. Computer Applic.*, Reno, NV, Feb., 1989.

A. Bamani, G. Al Saddiki, M. S. Fadali, "Robust Model Reduction of Discrete Stochastic systems", *ISMM Internat. Conf. Computer Applic.*, Reno, NV, Feb., 1989 .

1988 (5)

M. S. Fadali, M. Wei, "Step size selection for straight line suboptimal control of robotic manipulators", *Second Internat. Conf. Robotics & Manufacturing*, Nov. 16-18, Albuquerque, NM, 1988.

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