

Member, National Academy of Inventors
Professional Engineer, State of Texas
Chartered Engineer, U.K. Engineering Council
Fellow, International Federation of Automatic Control (IFAC)
Fellow, Institute of Electrical and Electronics Engineers (IEEE)
Fellow, Institute of Measurement and Control, U.K.
University Distinguished Scholar Professor, UTA
University Distinguished Teaching Professor, UTA
Moncrief-O'Donnell Chair, Professor of Electrical Engineering, UTA
Head, Advanced Controls and Sensors Group, UTA Research Institute
Qian Ren Thousand Talents Consulting Professor, Northeastern University, Shenyang, China
Elected Guest Professor, Shanghai Jiao Tong University (SJTU), Shanghai, China.
Consulting Guest Professor, South China University of Technology, Guangzhou, China
China Distinguished Foreign Scholar, Nanjing Univ. Science & Technology, China
Project 111 Distinguished Professor, Northeastern University, Shenyang, China

RESUME

See separate listing of Publications. Author of 23 books, 301 journal papers, 28 reprint volumes/journal special issues, 56 book chapters, 397 fully refereed & published conference papers.

ADDRESS UTA Research Institute, The University of Texas at Arlington
7300 Jack Newell Blvd. S, Ft. Worth, Texas 76118
tel 817-272-5972, fax 817-272-5952,
Internet Lewis@uta.edu, <http://www.uta.edu/utari/acs/>

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EDUCATION AND PROFESSIONAL

B.A. in physics/electrical engineering	1971
Rice University, Houston, Texas	
M.E.E., Rice University, Houston, Texas	1971
M.S. in aeronautical systems	1977
University of West Florida, Pensacola	
Ph.D. in electrical engineering	1981
Georgia Institute of Technology, Atlanta	

Dissertation Title: *A Geometrical Approach to Linear Systems Based on the Riccati Equation*

Dissertation Advisor: Dr. E. W. Kamen

This thesis won the Monie Ferst Sigma Xi Award for Outstanding Doctoral Research.

Senior Member, IEEE	1986
Fulbright Fellow, Greece	1988
Professional Engineer, State of Texas, reg. nr. 72200	1992
Fellow, IEEE	1994
IEEE Control Systems Soc. Distinguished Lecturer	1998
Elected to UTA Academy of Distinguished Scholars, Charter Member	2004
UTA Research Institute Senior Research Fellow	2005
Fellow, U.K. Institute of Measurement and Control	2005
Chartered Engineer, U.K. Engineering Council, reg. nr. 562168	2006
Fellow, International Federation of Automatic Control (IFAC)	2008
Senior Member, Int. Neural Network Society	2010
Elected to UTA Academy of Distinguished Teachers	2012
IEEE Control Systems Soc. Distinguished Lecturer	2012
Fellow, National Academy of Inventors	2013
State of Texas Regents' Outstanding Teacher Award	2013
Qian Ren Thousand Talents Consulting Professor, Northeastern University, China	2014

EMPLOYMENT HISTORY

UTA Res. Inst., Univ. Texas at Arlington	
Head, Advanced Controls and Sensors Group	1990-pres
Moncrief-O'Donnell Endowed Chair	1990-pres
Professor of Electrical Engineering	1990-pres
Georgia Institute of Technology	
Adjunct Professor	1990-pres
Professor	1990
Associate Professor	1986-1990
Assistant Professor	1981-1986
Graduate Research Assistant	1977-1981
Lockheed Advanced Research Organization	1983-1987
Consulting in aircraft adaptive controls	
Colonial Pipeline Company, Atlanta, GA	1978
Microprocessor design technician	
Florida Junior College, Jacksonville, FL	1977
Instructor	

United States Navy (Final Rank Lt.)	1971-1977
Acting Commanding Officer, USS SALINAN	1977
Executive Officer, USS SALINAN (ATF-161)	1975-1977
Navigator & Division Officer, USS TRIPPE (FF-1075)	1971-1975
Rice University, Houston, TX	1966-1971
Graduate Teaching Assistant	
Columbia Scientific Company, Austin, TX	1970
Texas Nuclear Company, Austin, TX	1969

OTHER HONORARY ACADEMIC POSITIONS

High Rank Foreign Professor, Chongqing University, China
 Qian Ren Thousand Talents Consulting Professor, Northeastern Univ., Shenyang, China
 China Distinguished Foreign Scholar, Nanjing Univ. Science & Technology
 Project 111 Professor, Northeastern University, Shenyang, China
 Elected Guest Professor, Shanghai Jiao Tong University (SJTU), Shanghai, China.
 Adjunct Professor, Georgia Inst. of Technology, Dept. of Electrical Engineering, Atlanta
 Steering Committee, Centre for Intelligent Control, National Univ. of Singapore, 2008-pres
 Visiting Scholar Fellow, Singapore Institute of Manufacturing Technology, SIMTech, A-Star, 2009-2013.

MAIN EDITORIAL APPOINTMENTS

Editor, Taylor & Francis Book Series on Automation & Control Engineering
 Editor, Trans. Inst. Measurement and Control, Great Britain
 Deputy Editor-in-Chief, J. Control Theory & Applications, South China Univ. Tech.

VISITING PROFESSORSHIPS

Hong Kong Univ. Science and Technology, Feb-April 1996, with Dr. Zexiang Li and Dr. Xiren Cao.
 Chinese Univ. Hong Kong, with Dr. Jie Huang- March 2003, March 2004, March 2005, May 2007, Jan 2008.
 National Univ. Singapore, Oct. 2003, with Dr. Sam Ge.
 Data Storage Institute, A-Star, National University of Singapore campus, August 2005, with Dr. Guoxiao Guo and Dr. Sam Ge.
 A-Star Institute for Infocom Research / Nanyang Technological University, March 2006, with Dr. Lihua Xie and Dr. Wendong Xiao.
 National University of Singapore, April 2006, with Dr. Ben Chen.
 Nanyang Technological University, with Youyi Wang and Lihua Xie- Aug 2006, Jan 2008.
 Data Storage Institute, A-Star, National University of Singapore campus, with Dr. Ong Eng Hong and Dr. Sam Ge- Aug.-Sept. 2006, Aug 2007.
 Singapore Manufacturing & Technology Institute, A-Star SIMTech, Visiting Research Professor, August 2008-August 2010
 Data Storage Institute, A-Star, National University of Singapore campus, with Dr. Ong Eng Hong and Dr. Du Chunling- Aug.-2009-Aug 2011.
 Singapore Manufacturing & Technology Institute, A-Star SIMTech, Distinguished Scholar Professor 2009-2011, 2011-2013.
 City University of Hong Kong, Senior Research Fellow, August 2011.
 China Distinguished Foreign Scholar, Nanjing Univ. Science & Technology, China, 2012
 Project 111 Distinguished Professor, Northeastern University, Shenyang, China, 2012

Qian Ren Thousand Talents Consulting Professor, Northeastern Univ., Shenyang, China, 2014.

EXPERIENCE SUMMARY

Board of Governors of international associations including IEEE Control Systems Society, Ft. Worth International Science and Engineering Fair 1998, Mediterranean Controls Association (Founding Member). Editor, CRC Press/T&F Book Series on Automation & Control Engineering, Serve/Served as Editor of International Journals incl. Automatica, Optimal Control & Methods, Systems Man & Cybernetics B (AE). Served as member of NAE Committee on Space Station and various advisory panels including Fulbright/Greece Selection Panel, NSF reviews, U.N. Umbrella Project Warsaw, NSF/Portugal joint workshop on undersea vehicles. Principal Investigator on NSF grants since 1982. Received \$7 million in funding. Director, UTARI Controls DoD Small Business Innovation Research (SBIR) Program. Organizer of international workshops and conferences incl. General Chair IEEE CDC Maui 2003, Gen. Chair Mediterranean Control Conf., Thessaloniki, June 2009.

1990-pres. At UTA, Professor in Elect. Eng. Dept., developing curriculum and teaching courses on robotics and controls. At UTARI, Institute Senior Research Fellow and Principal Research Engineer in charge of a research group of 8 Ph.D. students, 2 visiting faculty, and staff engineers. Designed, financed, set up, and supervised: (1) Wireless Sensor Networks Lab, (2) MEMS Design, Testing, Calibration Lab, (3) Research Lab on Real-Time Control of Industrial and Military Systems, (4) Robotic Intelligent Manufacturing Handling Cell with 3 robots, and (5) EE Systems & Control Undergraduate Teaching Lab.. Principal Investigator on research contracts. Research in robust and adaptive nonlinear controls, intelligent control (neural nets, fuzzy logic, decision-making systems), wireless sensor networks, MEMS sensors and actuators, robotics, manufacturing processes, and DoD vehicle systems.

1980-1990. At Georgia Tech, Professor in Systems and Controls. Principal research topics: generalized state-space systems, aircraft control, and robotics. Principal Investigator of research projects, directing the research efforts of between 6 and 10 Ph.D. students and coordinating research with several visiting faculty associates. Organization of and participation in international research workshops and conferences. Served on and chaired various campus committees.

1983-1987. Consulting in adaptive systems and controls in aircraft applications for Lockheed Advanced Research Organization, Atlanta, GA.

Experience in digital signal processing, including two-dimensional signal processing and linear predictive coding. Experience with programming digital signal processors for controls applications. 1977-1978- At Colonial Pipeline, repair and design of microprocessors using MOTOROLA 6800 series components. At Columbia Scientific, research in nuclear scattering and theories of vision. At Texas Nuclear, research in linguistics and vision. At Florida Junior College, instructor in computer logic and construction. At Rice University, teaching signal analysis and circuit design, researching applications of holography.

1971-1977. In U.S. Navy, acting Commanding Officer of USS SALINAN (ATF-161). Navigator and Executive Officer on 86 man salvage vessel, in charge of materiel, vessel and personnel readiness, and shipboard administration. Division Officer on the frigate USS TRIPPE (FF-1075), Navigator, Gunnery/Missile Officer responsible for readiness for combat of Mk 54 five-inch gun mount, two advanced missile systems, ISSM and BPDMS, using UNIVAC-based fire-control system. Personnel and Administrative Officer, in charge of all ship's correspondence and maintaining service records of 250 men, and Supervisor of shipboard clearance and security program. Held Top-Secret Clearance, member and supervisor of Personnel Nuclear Reliability

Program.

ACTIVE RESEARCH INTERESTS

Cooperative multi-agent distributed systems.
Reinforcement Learning in Control, Intelligent Control
Nonlinear Control Systems
Wireless Sensor Networks for area security monitoring & condition-based maintenance
Robotic System Control
Robust and Adaptive Systems and Control
Discrete-Event Systems
Manufacturing Process Control, Scheduling

PUBLICATIONS--- (See Separate Listing)

Books--- 120
Proceedings, Reprint Volumes, Journal Special Issues--- 24
Book Chapters and Encyclopedia Articles--- 57
Journal papers--- 287
Refereed and Published Conference Papers--- 393

PH. D. STUDENTS

1. R.P. Malhamé, *A Statistical Approach for Modeling a Class of Power System Loads*, Feb. 1983. (Final adviser)
2. K. Özçaldıran, *Control of Descriptor Systems*, May 1985.
3. C.T. Abdallah, *Robust Control and Game Theory for Nonlinear Systems with Applications to Robotics*, Sept. 1988.
4. G. Beauchamp, *Algorithms For Singular Systems*, Mar. 1990.
5. G.N. Maliotis, *Adaptive Control of Partially Known Robotic Manipulators*, Mar. 1990.
6. D.M. Dawson, *Uncertainties in the Control of Robot Manipulators*, Mar. 1990.

Darren Dawson won the NSF Young Investigator Award and the Office of Naval Research Young Investigator Award.

7. K. Liu, *Decentralized Control of Interconnected Systems With Applications to Mobile Robots*, Sept. 1990.
8. A. Karamancioglu, *Two-Dimensional Implicit Linear Systems*, May 1991.
9. D. Fountain, *Implicit Systems: Orthogonal Functions Analysis and Geometry*, June 1991.
10. V. Syrmos, *Feedback Design techniques in Linear System Theory: Geometric and Algebraic Approaches*, June 1991.
11. F. AL-Sunni, *Applied Control of Linear Systems*, May 1992.
12. C. Temponi, *Dynamic Decision Model for an Integrated Manufacturing Enterprise: System Theory Approach*, May 1992.
13. J. Lin, *Dynamic Modeling, Estimation, and Control of Flexible Structural Systems*, May 1994.
This dissertation won the Republic of China "National Science Council Award", 1995, the top honor for Ph.D. theses in Taiwan.
14. S. Jagannathan, *Intelligent Control of Nonlinear Dynamical Systems using Multilayer Neural Networks*, Aug. 1994.

This dissertation won the UTA Sigma Xi Ph.D. Dissertation Award, 1994.

S. Jagannathan won the NSF Career Award.

15. A. Yesildirek, *Nonlinear Control of Continuous-Time Systems Using Neural networks*, Dec. 1994.
This dissertation was selected for publication as a book by Taylor and Francis.
16. M. Vandegrift, *Nonlinear and Intelligent Control of Flexible Robotic Systems*, May 1995.
17. H.-H. Huang, *Modeling and Control of Discrete Event Manufacturing Systems*, June 1995.
This dissertation won the Republic of China "National Science Council Research Award", 1997.
18. S. Commuri, *A Framework for Intelligent Control of Nonlinear Systems*, May 1996.
This dissertation won the UTA Sigma Xi Ph.D. Dissertation Award, 1996.
19. R. Fierro, *A Hybrid System Approach to a Class of Intelligent Control Systems*, July 1997.
This dissertation won the Ecuador Escuela Politecnica Nacional Best Research Award, 1998.
R. Fierro won the NSF Career Award.
20. Y. Kim, *Dynamic and High-Level Neural Networks for Control*, July 1997.
This dissertation was selected for publication as a book by World Scientific Press.
21. R. Selmic, *Neurocontrol of Industrial Motion Systems with Actuator Nonlinearities*, May 2000.
This research won the UTA ARRI Best Paper Award in 1997 and the IEEE Ft. Worth Section Graduate Student Paper First Place Award in 1999.
22. J. Campos, *Intelligent Control of Complex Mechanical Systems*, May 2000.
This research won the UTA ARRI Best Paper Award in 1998 and the IEEE Ft. Worth Section Graduate Student Paper Second Place Award in 1999. Campos won the "Outstanding UTA International Student Award," 2000.
23. S. Ikenaga, *Real Time Digital Controller for Active Suspension Control of Ground Vehicles*, May 2000.
24. B. Harris, *Improving the Efficiency and Applicability of Machine Planning: Applications in Manufacturing Scheduling and Routing*, May 2002. Co-advised with Prof. Diane Cook, CSE Dept.
25. J. Mireles, *Matrix-Based Intelligent Discrete Event Control for Flexible Manufacturing Systems*, August 2002.
Mireles won the Best Presentation Award at the UTA Graduate Research Symposium in 2000, and the ARRI Student Paper Award in 2002.
26. O. Kuljaca, *Intelligent Neural Network and Fuzzy Logic Control of Industrial and Power Systems*, May 2003.
Kuljaca won the ARRI Best Paper Award, 2003.
27. N. Swamy, *Control Algorithms for Networked Control and Communication Systems*, May 2003.
28. M. Abu-Khalaf, *Nonlinear H_2/H -infinity Constrained Feedback Control: A Practical Approach Using Neural Networks*, Aug. 2005.
This thesis won the Institute Outstanding Dissertation Award, ARRI, 2005

This thesis was published as a book by Springer-Verlag.

- 29. V. Giordano, *Experimental Implementation of Intelligent Controls for Autonomous Robotic Systems*, co-adviser with B. Turchiano, Tech. Inst. Bari, Italy, Aug. 2005.
- 30. B. Borovic, *Modeling, Actuation, and Control of Microelectromechanical Systems (MEMS)*, December 2005.

This thesis won the Institute Outstanding Dissertation Award, ARRI, 2005.

This thesis resulted in US Patent 7,548,011, awarded 16 June 2009.

- 31. Cheng Tao, *Neural Network Solution for Fixed-Final Time Optimal Control of Nonlinear Systems*, December 2006.
- 32. J. Gadewadikar, *H-Infinity Output Feedback Control: Application to Unmanned Aerial vehicle*, May 2007.

This thesis work resulted in the Institute Outstanding Student Research Award 2006. This dissertation was selected for publication as a book by Lambert Academic Publishing.

J. Gadewadikar won the Dept. of Homeland Security “Early Career Faculty Scientific Leadership Award”

- 33. Asma Al-Tamimi, *Discrete-Time Control Algorithms and Adaptive Intelligent Systems Designs*, May 2007.
- 34. P. Dang, *Distributed Recognition, Actuation, and Control*, Dec. 2007.
- 35. P. Ballal, *Decision and Control in Distributed Cooperative Systems*, May 2008

This thesis was published as a book by National Technology & Science Press, 2011.

- 36. Draguna Vrabie, *Online Adaptive Optimal Control for Continuous-Time Systems*, Dec. 2009.

Vrabie won the ARRI Outstanding Student Award, 2009.

Best Paper Award at Int. Joint Conf. Neural Networks, Barcelona, 2010.

- 37. Abhijit Das, *Control of Complex and Distributed Nonlinear Systems*, Aug. 2010.

Abhijit was awarded the UTA Graduate School Dissertation Fellowship

- 38. Hongwei Zhang, *Learning Techniques in Receding Horizon Control and Cooperative Control*, jointly advised with Jie Huang at Chinese University of Hong Kong, Aug. 2010.
- 39. K. Vamvoudakis, *Online Learning Algorithms For Differential Dynamic Games And Optimal Control*, May 2011.

Vamvoudakis won the ARRI Outstanding Student Award, 2010.

Best Paper Award for Autonomous/Unmanned Vehicles, Army Science Conf, Orlando, 29 Nov- 2 Dec, 2010.

- 40. E. Stingu, *Intelligent Control and Cooperation for Autonomous Mobile Robots*, Dec 2011.
- 41. M. Abouheaf, *Optimization and Reinforcement Learning Techniques in Multi-Agent Graphical Games and Economic Dispatch*, Dec. 2012.
- 42. M. Aurangzeb, *Coalitional Graph Games*, May 2013.
- 43. Kristian Hengster-Movric, *Distributed Cooperative Control*, August 2013.

Movric was awarded the UTA Graduate School Dissertation Fellowship for his

research.

44. Ali Bidram, coadviser with Dr. Ali Davoudi in UTA Dept. of Electrical Engineering. *cooperative control for electric power micro-grid*, in progress
Bidram received the N. M. Stelmakh outstanding student research award, UT-Arlington Dept. of Electrical Engineering, Spring 2014.
45. Vahidreza Nasirian, coadviser, main adviser is Ali Davoudi in UTA Dept. of Electrical Engineering. *cooperative control for dc electric power micro-grid*, in progress
46. Reza Modares, Reinforcement Learning, in progress
47. Bahare Kiumarsi, Reinforcement Learning and Bio-Inspired Cognition, in progress
48. Giulio Binetti, coadviser, main adviser is Dr. David Naso at Bari Inst. of Technology, Italy. Distributed computation for problems in electric power systems and robotics.

SELECTED MASTERS STUDENTS

1. Murad Abu-Khalaf, "Intelligent Tracking of Geostationary Satellite Systems," Master's Thesis, Sept. 2000.
2. Chanitnan Khanthapanit, "Internet Based Control," Master's Thesis, May 2002.
This thesis won the UTA ARRI Best Paper Award in 2002.
3. N. Srianeckul, "Control with Nonlinearity Compensation for 2-D Flexible-Link Robot Arm," Master's Thesis Subst., Dec. 2003.
4. A. Tiwari, "Design and Implementation of Wireless Sensor Networks for Condition Based Maintenance," Master's Thesis, May 2004.
5. P. Dang, "Controller for swing-up and balance of single inverted pendulum using SDRE-based solution," MS Thesis, July 2004.
6. S. Ramanathan, "Behavior-based vision-guided MEMS probe station with implementation in LabVIEW," MS Thesis, Aug. 2004.
7. A. Bhilegaonkar, "Design and Implementation of Advanced Control Algorithms on an Electromechanical Plant for Trajectory Tracking," MS Thesis subst., May 2005.
8. P. Ballal, "Control Structure and Decisions in Mobile Wireless Sensor Networks," MS thesis, Aug. 2005.
9. K. Sreenath, "Adaptive Sampling with Mobile Wireless Sensor Networks," MS thesis, co-adviser, Dec. 2005.
This work won the Best Paper Award at IEEE International Conference on Robotics, Automation, and Mechatronics, Bangkok, Thailand, June 2006.
This thesis was published as a book by IET Press, London, 2011.
10. A. N. Das, "Data-Logging and Supervisory Control in Wireless Sensor Networks," MS Thesis, Dec. 2005.
11. S.B. Gorthi, "Real-Time Data Monitoring and Manipulation in Wireless Sensor Networks," MS Thesis, May 2006.
12. A. Patkar, "Localization in noisy environment using extended Kalman filter," MS Thesis, Dec. 2007.

13. E. Stingu, "Hardware Platform for Research in Helicopter UAV Control," MS Thesis May 2008.
14. A. Ramani, "Diagnosis and Prognosis of Electrical and Mechanical Faults Using Wireless Sensor Networks and a Two-Stage Neural Network Classifier," MS Thesis May 2008.
15. Chris McMurrough, "Real Time Hardware and Software Systems for Micro Air Vehicle Flight Control Testing," MS Thesis, Dept. of CSE, Univ. Texas at Arlington, May 2010.
Received the Air Force Summer Fellowship to work at Wright Patterson AFB with Dr. David Doman and Dr. Siva Banda, in both 2008 and 2009.
Received Outstanding Graduate Teaching Assistant Award, Dept of CSE, UTA, 2010.
His paper C. McMurrough, K. French, D. Doman, "Real-Time MAV Flight Control System Testbed" won the Multicore Graphical Design Achievement Award at National Instruments Week, Austin, Aug. 2009
16. Matt Middleton, "A Framework for Real-Time Fault Detection and Response in Multi-Agent Teams," MS Thesis, Dept. of CSE, Univ. Texas at Arlington, Dec. 2010.
17. Drew Morgan, "Minirobot Designs for Swarm Motions," adviser Dr. Alan Bowling. MS Thesis, Dept. of Mechanical Eng., Univ. Texas at Arlington, May 2011.
Received the Air Force Summer Fellowship to work at Wright Patterson AFB with Dr. David Doman and Dr. Siva Banda, in 2010.
18. I. Weintraub, multi-agent systems and UAV, 2011.
Received the Air Force Summer Fellowship to work at Wright Patterson AFB with Dr. David Doman and Dr. Siva Banda, in 2011.
19. Shaikh Tousif, "Physical Human Robot Interaction Using Model Reference Neuroadaptive Control," May 2014.

SELECTED UNDERGRADUATE STUDENTS AND AWARDS

Have advised numerous women and minority students under NSF REU funding or other funds.

1. Margaret Hoffmann. Her 1992 paper on Expert Systems Control won two awards: fourth place at the IEEE Region 5 Meeting and second place in the National IEEE Industry Applic. Soc. paper contest.
2. Nazee Barzin. Her paper on Discrete Event Manufacturing Systems won the UTA ARRI Best Paper Award in 1992.
3. Antoine Langston. His 1993 paper on Robotics in Construction won two awards: the Ft. Worth City and the Texas State Student Technical Paper Awards, Amer. Soc. Civil Engineers.
4. Adam Floyd. His 1996 paper on Control of Complex Systems won the Sigma Xi Best Paper Award at the UTA Symposium on Undergraduate Research.
5. Steve Scully. His 1999 paper on Modeling and Active Control of Vehicle Suspension Systems won the Dean of Engineering Paper Award at the UTA Symposium on Undergraduate Research.
6. Simon Halbur, "Analysis of Wireless Systems for Sensor Networks," NSF REU Scholar, summer 2002.

7. Shirin Haji-Mohammed, "Control of systems with saturation," NSF REU Scholar, summer 2002.
8. Alan Tomo, "Internet-based control of robotic systems with vision," NSF REU Scholar, summer 2002.
9. Tyson Henry, "Control of mobile robot," NSF REU Scholar, summer 2003.
10. Joshua Small, "MEMS design," NSF REU Scholar, summer 2003.
11. Andrew Dunn, "LabVIEW for control," 8th grade student, Oakridge School, summer 2003.
12. Keith Francis, "Wireless Sensor Networks," NSF REU Scholar, 2003.
13. Antonio Quevedo, NSF REU Scholar, 2003. His paper "Developing High Aspect Ratio MicroGrippers Using Electroplating Techniques for Robustness" was selected for presentation at the Society of Hispanic Professional Engineers Conference, Chicago, Jan. 2004.
14. J. Heatherly, "MEMS Sensors and Power Generation," NSF REU Scholar, BS, Aug. 2005
15. Ziye Zhang, Univ. S. California, visiting undergraduate student, summer 2006.
16. Chris McMurrough, autonomous flying vehicles, UTA undergraduate student in CSE. Participated in design team that won 3rd place at the regional Robotics Challenge, 2006.
17. Matt Middleton, autonomous flying vehicles, UTA undergraduate student in CSE. Participated in design team that won 3rd place at the regional Robotics Challenge, 2006.

SOCIETIES

(current and past member)

Automatic Control and Dynamic Optimization Society (ACDOS), India.

IEEE Societies of Automatic Control, Computational Intelligence, Industrial Electronics

International Neural Networks Society

U.K. Institute of Measurement and Control

American Institute of Aeronautics and Astronautics, member 2012.

Sigma Xi Scientific Research Society

American Association for the Advancement of Science

Society of Industrial and Applied Mathematics

Fulbright Association

Phi Beta Delta Honor Society for International Scholars

Sigma Pi Sigma (physics)

Sigma Tau (electrical engineering)

Pi Mu Epsilon (mathematics)

Phi Kappa Phi

HONORS AND AWARDS

(Most Significant awards in boldface.)

National and International Awards

Received National Science Foundation "Research Initiation Grant," July 1982.

Elected to Senior Member, IEEE, December 1986.

Fulbright Fellow Award for Program of Educational Exchange Between the United States and Greece, October 1988.

Invited to participate in the Fulbright Selection Committee for Greek Candidates, Athens, Greece, Oct. 1988.

Amer. Soc. Engineering Education Frederick E. Terman Award for Authors Under Forty, March 1989.

Invited Speaker, Fulbright Orientation Course for students studying in the U.S., Athens, Greece, June 1989.

Moncrief-O'Donnell Endowed Chair, Automation and Robotics Research Institute, The Univ. of Texas at Arlington, Sept. 1990.

Invited Consultant-Lecturer, United Nations Umbrella Project, Warsaw, Poland, July 1991.

Elected to Fellow, IEEE, January 1994.

Outstanding Service Award, IEEE Dallas Section, Mar. 1994.

IEEE Control Systems Society International Outstanding Chapter Award, as founding Chairman of DFW CSS Chapter, July 1994.

Outstanding Paper Award, Dallas/Ft. Worth IEEE Control Systems Chapter, 1994.

Appointed to National Academy of Engineering's '*NASA Committee on the Space Station*', Jan. 1995-Dec. 1995.

Engineer of the Year, Ft. Worth IEEE Section, April 1995.

Invited Participant, National Science Foundation/Portugal 'Joint Workshop on Undersea Robotics & Intelligent Control', Lisbon, March 1995.

Appointed to the Board of Governors, IEEE Control Systems Society, 1995-2002.

Key Contributor, U.S. Small Business Administration SBIR Tibbets Award, June 1996.

Sigma Xi National "Certificate of Excellence" for UTA Chapter, as President of UTA Chapter, Oct. 1997.

Appointed as IEEE Control Systems Society "Distinguished Lecturer", 1998-2002.

Ft. Worth Business Press, Who's Who in Manufacturing, Top 200 Leaders, 1999-pres.

Elected to the New York Academy of Sciences, June 2000.

Selected as Distinguished Speaker, 10th Anniversary Ceremony of Engineering Faculty, Chinese University of Hong Kong, Nov. 2001.

Finalist, STARTech Dallas Business Plan Competition, March 2002.

Elected Guest Professor, Shanghai Jiao Tong University (SJTU), Shanghai, China, March 2003.

Elected as Consulting Professor, South China University of Technology, March 2004.

Elected as Fellow, U.K. Institute of Measurement and Control, Nov. 2005.

Best Paper Award, IEEE International Conference on Robotics, Automation, and Mechatronics, Bangkok, Thailand, June 2006, K. Sreenath, F.L. Lewis and D. Popa.

Elected as Chartered Engineer, Engineering Council, U.K., July 2006.

Appointed to Steering Committee, Centre for International Control, National University of

Singapore, 2007.

Elected as Fellow, International Federation of Automatic Control (IFAC), April 2008

Gabor Award, Int. Neural Network Society, 2009.

Honeywell International Medal for Control Technology, U.K. Inst. Measurement and Control, 2009.

Benjamin Meaker Visiting Fellow, University of Bristol, U.K. March 2010. Sponsored by Dr. Guido Herrmann

IEEE Region 5 Outstanding Engineering Educator Award, April 2010.

Visiting Scholar Fellow, Singapore Institute of Manufacturing Technology, SIMTech, A-Star, 2009-2013.

Best Paper Award, Int. Joint Conf. Neural Networks, Barcelona, July 2010. D. Vrabie and F.L. Lewis.

Best Paper Award for Autonomous/Unmanned Vehicles, Army Science Conf, Orlando, 29 Nov- 2 Dec, 2010.

Best Application Paper Award, Asian Control Conference, Taiwan, May 2011.

China Distinguished Foreign Scholar, Nanjing Univ. Science & Technology, 2011

Distinguished Professor, Univ. Electronic Science and Technology of China, Chengdu, 2012.

Appointed 111 Project Professor, North Eastern University, Shenyang, China, 2012.

IEEE Computational Intelligence Society *Neural Networks Pioneer Award*, 2012.

Appointed as IEEE Control Systems Society "Distinguished Lecturer", 2012-2015.

State of Texas Regents' Outstanding Teacher Award, 2013.

Fellow, National Academy of Inventors, 2013

Appointed High Rank Foreign Professor, Chongqing University, China, March 2013

Qian Ren Thousand Talents Consulting Professor, Northeastern University, Shenyang, China, March 2014

University Awards

Monie A. Ferst Sigma Xi Award for Outstanding Doctoral Research in Engineering, Ga. Tech., May 1981.

Eta Kappa Nu "Outstanding Teacher Award", Ga. Tech., May 1981.

Monie A. Ferst Sigma Xi Junior Faculty Award in Engineering Research, Ga. Tech., May 1984.

Monie A. Ferst Sigma Xi Faculty Best Paper Award, Ga. Tech., May 1990.

Halliburton Outstanding Research Award, UTA, Feb. 1992.

Jeff Collins Best Paper Award, ARRI, Feb. 1992.

Jeff Collins Best Paper Award, ARRI, Feb. 1993.

ARRI Sponsored Research Award, Feb. 1993.

University-Wide Distinguished Research Career Award, The Univ. of Texas at Arlington, April 1994.

ARRI Patent Award, 1996.

ARRI Best Paper Award, 1997.

ARRI Best Paper Award, 1998.

ARRI Sponsored Research Award, 1999.

UTA University-Wide Outstanding Research Achievement Award, March 2000.

ARRI Patent Award, 2000.

Jeff Collins Best Paper Award, ARRI, Feb. 2003.

Elected as Charter Member of UTA Academy of Distinguished Scholars, March 2004.

Senior Research Fellow, Automation & Robotics Research Institute, 2005.

ARRI Leadership & Innovation Award, 2007.

UTA Graduate Dean's Excellence in Doctoral Mentoring Award, 2010.

Elected to UTA Academy of Distinguished Teachers, April 2012.

Who's Who Listings

Marquis Who's Who in the World, Who's Who in America, Who's Who in the South and Southwest, Who's Who in Frontiers of Science and Technology, Who's Who of Emerging Leaders in America, Who's Who in Science and Engineering

Marquis Who's Who in Higher Education, Who's Who in American Education, Who's Who Among America's Teachers, Who's Who in Finance and Business.

Who's Who Among Executives and Professionals, Honors Edition, 2008.

Research Publications Who's Who in Technology Today

American Men and Women of Science, Thomson Gale.

Int. Biog. Centre, Cambridge, England, Men of Achievement, International Leaders in Achievement, International Register of Profiles, Dictionary of Int. Biography, 2000 Outstanding Scientists of the 20th Century, Twentieth Century Award for Achievement, International Man of the Year 2000/2001, Who's Who in the 21st Century.

Amer. Biog. Inst. International Directory of Distinguished Leadership, Community Leaders of America, Leading Intellectuals of the World, Great Minds of the 21st Century.

Amer. Biog. Inst Man of the Year Award, 2009.

RESEARCH GRANTS AND CONTRACTS RECEIVED

Continuously funded by NSF since 1982. Total funding, 94 grants for a total in excess of \$8M. (Had 11 DoD SBIR contracts from small businesses.)

1. Georgia Tech Foundation Faculty Development Grants, approx \$40K
 Development of Systems and Controls Laboratory, \$1000 for equipment, Jan. 1982.
 Development of Kalman Filtering Short Course, \$1500 for expenses, June 1983.
 Completion of Optimal Control and Optimal Estimation manuscripts, \$10,000 for typing expenses and release time, 1985.
 Supplementary funding to accept Fulbright Award for study in Greece: \$9099, Oct. 1988; \$9607, May 1989.
 Funding for "International Cooperative Program in Singular Systems," \$9000, Mar. 1990.
2. Georgia Tech Research Corporation Grants, approx. \$8K.
 Travel to Greece for conference and research, \$1200, Dec. 1986.
 Travel to Los Angeles for helping organize IEEE Conf. on Decision and Control, \$1100, Dec. 1987.
 Funding to organize "International Symposium on Singular Systems," Atlanta, GA, \$4200, Dec. 1987.
 Expenses for attending American Control Conference in Atlanta, for organizing IEEE Conf. on Dec. and Control, \$800, June 1988.
 Travel to Paris to attend IMACS World Congress, \$1000, July 1988.
3. Equipment Donations, \$30K.
 Texas Instruments Equipment Grant:
 "Digital Controls Laboratory," equipment worth \$10,000, Nov. 1990.
 Texas Instruments Equipment Grant:
 "Digital Controls Laboratory," equipment worth \$20,000, Nov. 1991.
4. **National Science Foundation (NSF) Research Initiation Grant (RIG) ECS-8204656:**
 "Extension of Geometric System Theory to Descriptor Systems", 2 year grant for \$47,237, July 1982.
5. Georgia Tech Research Institute Project Number A-4316:
 Boeing Advanced Technology Demonstration Program, "Space Station Thermal Control System" subproject, 1 year grant for \$138,485, Co-PI, Sept. 1985.
6. NSF Grant ECS-8518164:
 "Subspace Recursions and Structure Algorithms for Singular Systems", 2 year grant for \$54,134, April 1986.
7. NSF Grant ECS-8805932:
 "Structure and Output Feedback in Singular Systems," 3 year grant for \$200,028, Sept. 1988.

The research performed under this grant resulted in the Monie Ferst Sigma Xi Faculty Best Paper Award, May 1990.
8. Ga. Tech. Research Inst. Internal Research Grant E904-039:
 "Research in Control System Time-Response Shaping," Co-PI, 1 year grant for \$78,544, July 1989.
9. NSF Grant MSS-8907779:
 "Engineering Research Equipment: A Basic Hardware Configuration For Robotics Research," Co-PI, 1 year grant for \$20,373, July 1989.

10. NSF Grant MSS-9114009:
"Integrated Modelling and Control for Intelligent Material Handling," Co-PI, 2 year grant for \$350,000, Sept. 1991.
11. Texas Advanced Technology Program Grant 003656-008:
"Modular Controls and Hardware Design for Manufacturing Workstations," 2 year grant for \$248,000, Oct. 1991.
12. Texas Instruments Grant:
"Modular TMS320 C30-Based Controller for the Stewart Platform," \$10,000 Graduate Student Fellowship, Oct. 1991.
13. Tandy Electronics, Inc.:
"Intelligent Scheduling of Material Flow in Personal Computer Assembly Plant," contract for \$50,000, Mar. 1992- Mar. 1993.
14. NSF Grant USE-9250179:
"Undergraduate Control Experiences Laboratory," 2 year equipment grant for \$23,000, July 1992.
15. NSF Grant MSS-9211970:
"Research Equipment Grant: Robotic Systems Control Research Lab," 2 year equipment grant for \$20,000, Aug. 1992.
16. Lockheed Aeronautical Systems Co. contract:
"Development of a Mobile Duct Painting Manipulator - Phase I," Co-PI, contract for \$94,889, July-Aug. 1992.
17. Lockheed Aeronautical Systems Co. contract:
"Development of a Mobile Duct Painting Manipulator - Phase II," Co-PI, contract for \$159,000, Sept. 1992 - Feb. 1993.
18. NSF Grant IRI-9216545:
"A Generic Framework for Flexible Agent-Based Intelligent Control," 3 year grant for \$200,000, Oct. 1992.
19. Electric Power Research Institute:
Supplementary funding for NSF grant "A Generic Framework for Flexible Agent-Based Intelligent Control," 3 year contract for \$100,000, Oct. 1992.
20. Electrocom Automation, Inc.:
"Intelligent Vision-Guided Robotic Manipulator For Paper Handling," contract for \$10,400, Oct.-Dec. 1992.
21. NSF Grant MSS-9114009 REU Supplement:
Research Experiences for Undergraduates supplementary funding for "Integrated Modelling and Control for Intelligent Material Handling," \$15,000, Nov. 1992.
22. NSF Grant GER-9355110:
"Graduate Research Traineeships in Robotics/Intelligent Control," 5 year grant for \$557,500,

Oct. 1993.

23. Electrospace Systems, Inc.:
"AN/WSC-6 Antenna Control," 3 week contract for \$7030, May 1994.
24. Electrospace Systems, Inc.:
"AN/WSC-6 Antenna Modeling, Computer Simulation, and Controls Analysis," 3 month contract for \$37,930, Jun. 1994.
25. Electrospace Systems, Inc.:
"Modeling and Pointing Control of Antenna Aboard Moving Vehicle," co-PI, 3 month contract for \$43,000, Aug. 1994.
26. Electrospace Systems, Inc.:
"Modeling, Simulation, and Control of Complex Tracking Systems with Vibration," 1 year grant for \$26,000, Aug. 1994.
27. Electrospace Systems, Inc.:
"Hydraulic Stewart Platform Demonstration," co-PI, 3 month contract for \$58,216, Aug. 1994.
28. NSF Grant DMI-9413923:
"Equipment Development for High-Performance Robotics Intelligent Material Handling in Unstructured Environments," 5 year grant for \$210,784, Sep. 1994.
29. U.S. Army Research Office (ARO) Small Business Innovation Research (SBIR) Contract, Phase I:
"Design and Implementation of Advanced Controllers for Vibratory Weapons Systems," co-PI with Simis Labs, 6 mo. contract for \$75,000, Feb. 1995.
30. Electrospace Systems, Inc.:
"Implementation Support for AN-WSC-6 Antenna Positioning System," co-PI, 3 month contract for \$25,923, Apr. 1995.
31. Electrospace Systems, Inc.:
"Background Study for AN-WSC-6 Antenna Positioning System," co-PI, 3 month contract for \$10,000, Apr. 1995.
32. Electrocom Automation, Inc.
"Engineering Services Agreement," co-PI, \$15,000, June 1995.
33. Electrospace Systems, Inc.:
"ARRI Membership," PI, 1 year grant for \$26,000, Oct. 1995.
34. NSF Grant ECS-9521673:
"Neural Networks for Control of Nonlinear Dynamical Systems," 3 year grant for \$148,596, Oct. 1995.
35. U.S. Army ARO Small Business Innovation Research (SBIR) Contract, Phase II:
"Design and Implementation of Advanced Controllers for Vibratory Weapons Systems," co-PI with Simis Labs, 2 yr. contract for \$180,000, Feb. 1996.

36. U.S. Army ARO Small Business Innovation Research (SBIR) Contract, Phase I:
"Hybrid Controller for Complex Weapons Systems," co-PI with Sagent Corp., 6 mo. contract for \$13,000, Feb. 1996.

The award of the SBIR contracts and the work performed under them contributed in large measure to ARRI's winning in 1996 of the National SBA Tibbets Award.
37. Electrospace Systems, Inc.:
"C30 Antenna Controller Tracking Estimation Algorithm Redesign" co-PI, 1 month contract for \$19,500, May 1996.
38. Electrospace Systems, Inc.:
"Design Support for 6.1m Conformable Antenna Development" co-PI, 1 month contract for \$10,000, June 1996.
39. Electrospace Systems, Inc.:
"Technical Assistance in Support of 93C-30 ACU Titan Application" co-PI, 1 month contract for \$9,927, Oct. 1996.
40. Electrospace Systems, Inc.:
"ARRI Membership," PI, 1 year grant for \$26,000, Nov. 1996.
41. U.S. Army ARO Small Business Innovation Research (SBIR) Contract, Phase I:
"Extension of Intelligent Sensor Based Robotic Systems Technologies," co-PI with Simis Labs, 6 mo. contract for \$31,016, Nov. 1996.
42. U.S. Army ARO Small Business Innovation Research (SBIR) Contract, Phase I:
"Advanced Nonlinear and Hybrid Systems Control Technology," PI, Intelligent Automation, Inc., 6 mo. subcontract for \$12,500, Feb. 1997.
43. NSF Grant ECS-9521673 REU Supplement:
Research Experiences for Undergraduates supplementary funding for "Neural Networks for Control of Nonlinear Dynamical Systems," \$9,996, April 1997.
44. Raytheon Electrospace Systems, Inc.:
"Assistance in the Improvement of Timing Methods for 93C-30 Real-Time Controller" co-PI, 3 month contract for \$16,107, April 1997.
45. U.S. Army ARO Small Business Innovation Research (SBIR) Contract, Phase II:
"Nonlinear/Fuzzy Logic Control for Scout Active Suspension and Steering," PI, Davis Technologies Int., 12 mo. subcontract for \$34,000, Sep. 1997.
46. NSF Grant DMI-9724497:
"MRI Equipment for Next Generation Supervisory and Real-Time Controller for Reconfigurable Manufacturing Workcells," 3 year grant \$110,091, Sept. 1997.
47. Texas ATP Award:
F.L. Lewis and J.M. Fitzgerald, "Intelligent Real-Time Control System for Industrial and DoD Motion Systems," 2 year grant for \$121,523, Oct. 1997.

48. U.S. Navy ONR Small Business Innovation Research (SBIR) Contract, Phase I: "Neural Network Control of Nonlinear Systems Using Multiple Models," PI, Intelligent Automation, Inc., 6 mo. contract for \$22,998, June 1998.
49. NSF Grant ECS-9521673 REU Supplement: Research Experiences for Undergraduates supplementary funding for "Neural Networks for Control of Nonlinear Dynamical Systems," \$10,000, Jan. 1999.
50. U.S. Army Research Office Grant DAAD19-99-1-0137, "Neural Network Control of DoD and Industrial Motion Systems," PI, 3 year grant for \$210,000, March 1999.
51. UTA Centennial Funds Grant, "Equipment for Web-Based Virtual Controls Teaching Lab," PI, 1 year grant for \$50,000, May 1999.
52. Bell Helicopter Textron, "Testbed for Laser Positioning Sensors," co-PI, 6 month contract for \$83,000, June 1999.
53. Andrew Corp, " Satellite Tracking Antenna Controller Design," PI, 6 month contract for \$65,700, Apr. 2000.
54. U.S. Army Research Office DURIP Grant DAAD19-00-1-0037, "Supervisory and Motion Control for DoD and Industrial Dynamical Systems," PI, equipment grant for \$75,000, March 2000.
55. Bell Helicopter, "Laser-Assisted Automated Machine Tool Verification System," co-PI, 6 month contract for \$45,000, Aug. 2000.
56. UTA LERR Laboratory Equipment Funds, "Lab Equipment for Capstone Design Course in Control Engineering," \$5,000, June-Aug. 2001.
57. UTA LERR Laboratory Equipment Funds, "Lab Equipment for Microelectromechanical Systems (MEMS) Teaching and Design," \$35,000, Sept. 2001.
58. NASA Small Business Innovation Research (SBIR) Contract, Phase I: "MEMS Wire Testing for Aging Aircraft," PI, Williams Pyro, Inc., 6 mo. contract for \$14,500, Jan. 2002.
59. F.L. Lewis, "Summer Youth Technology Program," \$5886 in Grand Prairie SER funding for Paul Selvaraj to teach kids during Summer 2002.
60. F.L. Lewis, "Nonlinear Network Structures for Dynamic System Control," NSF, \$200,000 for 3 years, July 2002.
61. F.L. Lewis, "Nearly Optimal Solution of HJB Equation using Neural Networks: Applications to Control of DoD Systems and MEMS Assembly," Army Research Office, \$200,000 grant for 3 years, Sept. 2002.
62. F.L. Lewis, K. Behbehani, D.B. Wallace, and E. Kolesar, "GOALI- Optical MEMS-Based Sensors for Medical and Biological Applications," NSF, \$235,000 for 3 years, Sept. 2002.

63. F.L. Lewis and J. Mireles, "Bi-National Effort on Distributed Manufacturing Supervisory Control Systems," NSF/CONACyT, \$80,000 for 3 years, Sept. 2002.
64. F.L. Lewis, NSF REU Supplement- Research Experiences for Undergraduates supplementary funding for "Nonlinear Network Structures for Dynamic System Control," \$10,000, Aug. 2003.
65. F.L. Lewis and J. Mireles, NSF Supplement- Workshop support supplement for "Bi-National Effort on Distributed Manufacturing Supervisory Control Systems," \$9,000, Sept. 2003.
66. F.L. Lewis, NSF REU Supplement- Research Experiences for Undergraduates supplementary funding for "Nonlinear Network Structures for Dynamic System Control," \$5,958, May 2004.
67. J.B. Zhang et al. PIs, F.L. Lewis international collaborator co-PI, "Integrating equipment health prognostics in high value manufacturing," Singapore Science & Engineering Research Council, \$28,735, Sept. 2004 for 6 months.
68. L. Holder, I. Ahmad, S. Das, F.L. Lewis, F. Lu, NSF MRI- "Acquisition of Instrumentation for Engineering Research in Advanced Security Detection Systems," \$250K, Sept. 2004, 3 years.
69. F.L. Lewis and J. Mireles, NSF Supplement- Workshop support supplement for "Bi-National Effort on Distributed Manufacturing Supervisory Control Systems," \$8,000, Sept. 2004.
70. Internal awards from Univ. Texas at Arlington, Dec. 2004
F.L. Lewis and H. Stephanou, "Equipment for MEMS Assembly Station," \$55,000.
J. Gadewadikar and F.L. Lewis, "Equipment for Undergraduate Teaching Laboratory," \$18,750.
71. F.L. Lewis and R. Gracy, "Wireless Biochemical Toxin Sensor Network," UNT Health Science Center/UTA Joint Funding, \$12,000, April 2005.
72. F.L. Lewis, "LabVIEW Applications for Wireless Sensor Networks," National Instruments, Inc., Lead User Program, \$25,000, May 2005.
73. F.L. Lewis, "Wireless Sensor Network Development System for Security, BDA, and Biochemical Monitoring," Army Research Office DURIP equipment grant, \$78,741, March 2005.
74. International collaborator on "Intelligent Control for Hard Disk Drives," Data Storage Institute, A-Star, National Univ. Singapore campus, PI G. Guo and S.S. Ge, \$250,000 for 3 years, August 2005.
75. F.L. Lewis, "Nonlinear Motion Control for DoD and Industrial Systems," ARO grant, \$260,000 for 3 years, July 2005.
76. F.L. Lewis, "Adaptive Critics for Nonlinear Continuous-Time Systems," NSF grant, \$240,000 for 3 years, July 2005.

77. Y. Liu, S. Das, and F.L. Lewis, "Defending Against Compromised Nodes in Wireless Sensor Networks: A Multi-Layer Security Framework," Texas ARP Program, \$100,000 for 3 years, May 2006.
78. International Collaborator on "Markov Jump System Theory for Collaborative Signal and Information Processing in Wireless Sensor Network," Singapore SERC Grant No: 052 101 0037, \$15,000, PI Lihua Xie, Nanyang Technological University, April 2006.
79. International collaborator on "Disturbance Rejection for Mobile Hard Disk Drives," Data Storage Institute, A-Star, National Univ. Singapore campus, PI J. Zhang and S.S. Ge, \$250,000 for 3 years, August 2007.
80. F.L. Lewis and Weijen Lee, Dept. of Energy Small Business Innovation Research (SBIR) Contract, Phase I: "Secure and Reliable Wireless Communication and Fault Diagnosis for Energy Control Systems," from SignalPro, Inc., PI Chiman Kwan, 9 mo. contract for \$33,000, Jun 2007-Mar. 2008.
81. F.L. Lewis, "Adaptive Dynamic Programming for Continuous Time Systems and Networked Agents on Graphs," NSF grant, \$250,000 for 3 years, July 2008.
82. F.L. Lewis, "Supervisory Control and Nonlinear Motion Control of Networked Autonomous Teams," ARO MIPR extension grant, \$100,000 for 15 months, July 2008,
83. F.L. Lewis and Weijen Lee, Dept. of Energy Small Business Innovation Research (SBIR) Contract, Phase II: "Secure and Reliable Wireless Communication and Fault Diagnosis for Energy Control Systems," from SignalPro, Inc., PI Chiman Kwan, 2 year contract for \$180,000, Oct. 2008-Oct. 2010.
84. International Collaborator on "Aircraft structure health monitoring and diagnosis using intelligent active sensor network technology," \$200,000, PI Chunling Du, Singapore A-Star data Storage Institute Grant, 3 years, Feb. 2009.
85. F.L. Lewis, "Trust Based Collaborative Control for Teams on Communication Networks," Air Force Office of Scientific Research (AFOSR), \$250,000 for 3 years, April 2009.
86. F.L. Lewis, "High Performance Intelligent Controller for Systems with Unknown Dynamics," DARPA SBIR Phase I, through Signal Processing, Inc, PI Chiman Kwan, \$30,000 for 6 months, June 2009.
87. F.L. Lewis and S. Das, "Graduate Research Supplement for PhD student support," \$100,000 for 3 years, July 2009. NSF GRS grant on NSF grant "Pervasively Secure Infrastructures," PI S. Das.
88. F.L. Lewis and S. Das., "Undergraduate Supplement support," \$16,000, May 2010, on NSF grant "Pervasively Secure Infrastructures," PI S. Das.
89. F.L. Lewis, "Adaptive Dynamic Programming for Real-Time Cooperative Multi-Player Games and Graphical Games," NSF Grant, \$272,000 for 3 years, July 2011.

90. D. Popa, Z. Celik-Butler, D. Butler, and F.L. Lewis, "NRI: Multi-Modal Skin and Garments for Healthcare and Home Robots," NSF Grant, \$1.3M for 4 years, Sept. 2012. Lewis share \$250,000.
91. D. Popa, A. Bowling, F.L. Lewis, G. Mariottini, K. Subbarao, "Rapid and Agile Software Development for the DARPA Disaster Robotics Challenge," subcontract from RE2 technologies, \$182,000 for 2 years, Oct. 2012.
92. S. Bogdan and F.L. Lewis, "Human-in-the-loop Control of Multi-agent Aerial Systems Under Intermittent Communication," AFOSR European Office of Aerospace Research & Development (EOARD) International Grant, \$82,000 for two years, April 2013.
93. F.L. Lewis and Dan Levine, "Neurocognition, Controls, Efficient Communication, and Enhanced Decision for Fast Satisficing in Autonomous Military Systems," Office of Naval Research, \$492,000 for 3 years, June 2013.
94. F.L. Lewis, "Games and Learning for Cooperative Nonlinear Systems and Internal Structure of Coalitions on Graphs," US Army TARDEC Grant from US Army National Automotive Center, \$81,000 grant for 1 year, Oct. 2013.
95. A. Davoudi, F.L. Lewis, and C.S. Edrington, "Organic Distributed Decision-making for Heterogeneous Energy Systems," Office of Naval Research, \$77,000 for 1 year, July 2014.
96. F.L. Lewis, Ali Davoudi, and Dan Levine, "New Adaptive Dynamic Programming Structures From Neurocognitive Psychology and Graphical Games," NSF grant, \$370,513 for 3 years, August 2014.

CONSULTING

1. Network Analysis, Celulosa de Chihuahua, S.A. Chihuahua, Mexico, March 1982.
2. Adaptive and Multivariable Control Applications to Aircraft, Lockheed Advanced Research Organization, Atlanta, GA, 1983-1987.
3. Simulation, Control, and Estimation for Radar Tracking, Georgia Tech Research Institute, Atlanta, GA, summer 1988.
4. Implementation of Real-Time Controllers, Sagent Corp., May 1996.
5. Fuzzy Logic Compensation of Deadzones in Vehicle Active Suspension, Davis Technol. Int., 1997-1998.
6. MEMS Testing of Aircraft Wiring Systems, Williams Pyrotechnic, Inc., 2002
7. National Univ. Singapore, analysis and control of UAV helicopters, May 2006.
8. Nanyang Technological University, Singapore, Decision and Control in Wireless Sensor Networks, Aug. 2006.
9. A-Star Data Storage Institute, Singapore, analysis and design of control systems for portable hard disk drives, Sept. 2006, Aug. 2009.
10. Nanyang Technological University, Singapore, Control of Electric Power Systems, Aug. 2007.

11. Singapore Institute of Manufacturing Technology, A-Star SIMTech, intelligent diagnostics & prognostics, June 2008, July 2009.
12. A-Star Data Storage Institute, Singapore, intelligent diagnostics & prognostics, Aug 2009, July 2010.
13. Nanyang Technological University, Singapore, distributed control, Jan. 2010.
14. Singapore Institute of Manufacturing Technology, A-Star SIMTech, control for sustainable manufacturing and green engineering, May 2010.
15. Nanyang Technological University, Singapore, distributed control, Jan. 2011.
16. Singapore Institute of Manufacturing Technology, A-Star SIMTech, control for transshipment sorting hubs, July 2011.
17. Singapore Institute of Manufacturing Technology, A-Star SIMTech, renewable energy and sustainable manufacturing, March 2012

PATENTS AWARDED

1. A. Yesildirek and F.L. Lewis, "Method for feedback linearization of neural networks and neural network incorporating same," U.S. Patent 5,943,660, awarded 24 August 1999.
2. S. Jagannathan and F.L. Lewis, "Discrete-time tuning of neural network controllers for nonlinear dynamical systems," U.S. Patent 6,064,997, awarded 16 May 2000.
3. F.L. Lewis, D.A. Tacconi, Ayla Gurel, and O.C. Pastravanu, "Method and Apparatus for Testing and Controlling a Flexible Manufacturing System," U.S. Patent 6,185,469, awarded 6 Feb. 2001.
4. R. Selmic, F.L. Lewis, A.J. Calise, and M.B. McFarland, "Backlash Compensation Using Neural Network," U.S. Patent 6,611,823, awarded 26 Aug. 2003.
5. J. Campos and F.L. Lewis, "Method for Backlash Compensation Using Discrete-Time Neural Networks," U.S. Patent 7,080,055, awarded July 2006.
6. B. Borovic, F.L. Lewis, A.Q. Liu, and D. Popa, "Systems and Methods for Improved Control of Micro-Electrical-Mechanical System (MEMS) Electrostatic Actuator," U.S. Patent 7,548,011, awarded 16 June 2009.

PATENTS APPLIED FOR AND DISCLOSURES

1. A. Bidram, A. Davoudi, and F. L. Lewis, "Decentralized coordination of small-footprint energy nodes," UTA disclosure number 13-06, submitted 12/01/2013.
2. K. Vamvoudakis, D. Vrabie, and F.L. Lewis, "Control methodology for online adaptation to optimal feedback controller using integral reinforcement learning," patent applied for, Application number 13/715,116, December 2012.
3. V.L. Syrmos and F.L. Lewis, "VLSI implementation of the inverse of the matrix pencil (zE-A) via systolic arrays," Disclosure of Invention, Ga. Tech, Atlanta, GA, Oct. 1988.
4. F.L. Lewis, C.T. Abdallah, and D.M. Dawson, "Hardware analog control chip for robot arm," Disclosure of Invention, Ga. Tech., Atlanta, Nov. 1988.
5. K. Liu and F.L. Lewis, "Stewart platform manipulator control system," Disclosure of Invention, The Univ. Texas at Arlington, Dec. 1991.

6. J. Lin and F.L. Lewis, "Two-time scale Kalman filter for flexible system estimation," Disclosure of Invention, The Univ. Texas at Arlington, Dec. 1994.

TEACHING AND COURSE DEVELOPMENT

1. At Georgia Tech.:

Taught one or two graduate or undergraduate courses per quarter for 10 years. Course topics included systems theory, controls, robotics, circuits, analog devices, digital devices.

Developed Controls Project Lab

Participated in Undergraduate Systems & Controls Curriculum Revision

Graduate courses developed:

Robot Dynamics and Control

Implicit Systems

Large-Scale Systems

Geometric Systems Theory

2. At UT Arlington:

1990, Revised entire Controls Curriculum of School of Engineering (Committee Chair).

Developed Undergraduate Controls Laboratory with \$60,000 from 3 NSF grants.

Undergraduate courses developed:

Control Systems Capstone Design Project

Graduate courses developed:

Robot Dynamics and Control

Nonlinear and Adaptive Control

Kalman Filtering

Intelligent, Fuzzy, Neural Control

Computer Methods in Control Systems Design

Distributed Decision & Cooperative Control on Graphs

Developed WWW-based coursework, putting on the web the courses: EE 4314 Control Systems, EE 5325/4315 Robotics, EE 4343/5329 Control Systems Capstone Design Project, EE 5307 linear Systems, EE 5322 Intelligent Control Systems, EE 5329 Distributed Decision & Control

These courses are linked to <http://www.uta.edu/utari/acs/>

SEMINARS AND SHORT COURSES OFFERED

1. "General Engineering Refresher", EIT exam 2 day course: Spring and Fall, Ga. Tech., 1982-1990.
2. "Applications of Singular Systems," lecture: Univ. of Thrace, Xanthi, Greece, Nov. 1988; SUNY Stony Brook, April, 1989.
3. "Aircraft Control," lecture: Clemson Univ., SC, March 1990.
4. "Robust Nonlinear Control," lecture: The Univ. of Texas at Arlington, Aug. 1990.

5. "Kalman Filtering", 2 day course: Ga. Tech. June 1983.; Univ. Texas at Arlington, May 1992, May 1993.
6. "Adaptive Control", lecture: Ga. Tech., April 1985.
7. "Control of Robot Manipulators", lecture: Univ. of Patras, Greece, Dec. 1986; Univ. of Thrace, Xanthi, Greece, Oct. 1988; Int. Summer School on Modern Control Theory, Prague, Czechoslovakia, Sept. 1992; Rice Univ., April 1993.
8. "Applications of DSP in Robotics and Control," Keynote Speech, Texas Inst. TMS320 Educator's Conf., Houston, Aug. 1992.
9. "Control Applications in Manufacturing," lecture: Univ. Autónoma de Nuevo León, Monterrey, Mexico, Oct. 1992.
10. "Neural Network Control of Robots and Nonlinear Systems," lecture: Ga. Tech. Distinguished Lecture Series Mar. 1993, Univ. Texas at Dallas Control Workshop Mar. 1993, Cambridge University Lecture Series Mar. 1995, Hong Kong Univ. Science and Technology, Feb. 1996, Plenary Lecture Mexico National Congress of Robotics Sep. 1997, Ft. Worth Industrial Expose Nov. 1997, UTA Seminar Feb. 1998, Southern Methodist Univ. Feb. 1998, University of Zagreb Croatia Sept. 1998.
11. "Neural Network Control of Robots and Nonlinear Systems," 1 Day Workshop, NNACIP Conf., Mexico City, Nov. 1994.
12. "Robots and Machine Intelligence in Construction," workshop: Amer. Inst. Constructors Nat. Forum, Dallas, Apr. 1993.
13. "Design of Discrete-Event Manufacturing System Controllers," lecture: Ga. Tech. Distinguished Lecture Series June 1993; U.T. Dallas Workshop Dec. 1993, Cambridge University Lecture Series Mar. 1995, Hong Kong Univ. Science and Technology, Feb. 1996.
14. "Fuzzy Logic Control of Nonlinear Systems," Cambridge University Lecture Series Mar. 1995.
15. IEEE Distinguished Lecture Series:
"Neural network control," Czech Academy of Sciences, Prague, July 1998.
"Neural network control," Univ. Zagreb, Croatia, 1998.
16. "Fuzzy logic and Neural Network Control," City University, Hong Kong, November 2001.
17. "Neural network design and implications of chaos," Chinese University of Hong Kong, March 2003, March 2004, March 2005.
18. Workshop on Wireless Sensor Networks and Condition-Based Machinery Maintenance, National Univ. Singapore, Oct 2003, Oct. 2004.
19. Invited lecture on Wireless Sensor Networks, in Workshop on Machine Diagnostics & Prognostics, George Vachtsevanos, Georgia Tech, Atlanta, May 2004.
20. Wireless Sensor Networks, Institute for Infocom Research, A-Star, Singapore, Mar 2006.
21. Wireless Sensor Networks, School of Computing, National University of Singapore, Mar 2006.
22. Intelligent Diagnostics & Prognostics for Machinery, A-Star Inst. for InfoCom Research, Singapore, April 2006.

23. Neural Networks for Optimal Control, Conf. for Founding of International Systems & Controls Center, Xiamen University, China, July 2006.
24. Control of Portable Hard Disk Drives, A-Star Data Storage Institute, Sep. 2006.
25. Prognostics/Health Trend Monitoring Tutorial, Soc. Aerospace Engineering Conf, New Orleans, Nov. 2006.
26. Control of MEMS Micro actuators, IEEE Int. Conf. Nano/Micro Engineered Systems (IEEE-NEMS 07), Bangkok, Thailand, Jan. 2007.
27. Intelligent Disturbance Rejection of Portable Hard Disk Drives, A-Star Data Storage Institute, Sep. 2007.
28. Decision and Control in Discrete Event Systems: Applications to Manufacturing and Wireless Sensor Networks, Singapore A-Star, June 2008.
29. Neural Network and Adaptive Control, Invited Workshop, Xiamen University, China, July 2008.
30. Adaptive dynamic programming and reinforcement learning for control applications,” Invited Workshop, Int. Symposium on ADP/RL, Nashville, April, 2009.
31. A-Star Data Storage Institute, Singapore, “Intelligent diagnostics & prognostics for structural health monitoring,” Aug 2009.
32. A-Star Singapore Institute for Manufacturing Technology, SIMTech, Singapore, “Decision & Control for Sustainable Manufacturing,” May 2010.
33. Workshop on Student Mentoring , University of Texas at Arlington, Oct. 2010.
34. King Fahd Univ. Petroleum and Minerals, Dammam, Saudi Arabia, “Approximate Dynamic Programming for Control, May 2011.
35. South China Univ. Science and Technology, Guangzhou, “Cooperative Control for Networked Teams,” May 2011.
36. A-Star Singapore Institute for Manufacturing Technology, SIMTech, Singapore, “Decision & Control for multicommodity flow problems,” July 2011.
37. Workshop on Reinforcement Learning for Optimal Adaptive Control,” IEEE CDC Orlando, Dec. 2011.
38. Workshop on Cooperative Control of Multi-Agent systems, Nanjing Univ. Science and Technology, June 2012.
39. Workshop on Multi-Agent Cooperative Control, Hong Kong Univ. Science and Technology, Aug. 2012.
40. Workshop on Reinforcement Learning for Industrial Process Control, Singapore Institute of Manufacturing Technology, May 2013.
41. Short Course on “Data-driven learning for optimal industrial process control,” Project 111 Program, Northeastern University, Shenyang, China, July 2013.
42. Short Course on “Data-driven optimization and Reinforcement Learning for industrial process control,” Qian Ren Program, Northeastern University, Shenyang, China, May 2014.

SERVICE AND PROFESSIONAL ACTIVITIES

(Most Significant activities in boldface.)

National and International Activities

Founding Member, Board of Governors, Mediterranean Control Association, 1998.

Founding Chairman, IEEE Control Systems Society, Joint Dallas/Ft. Worth Chapter, April 1993-May 1994.

Chairman, IEEE Control Systems Society 'IEEE Fellows Solicitation Subcommittee', 1995.

Chairman, IEEE Control Systems Society 'IEEE Fellows Solicitation Subcommittee', 1996.

Member, Board of Governors, IEEE Control Systems Society, 1995- 2002.

Member, IEEE Control Systems Society Technical Committee on "Intelligent Control", April 1997- pres.

Member, Board of Governors, International Science and Engineering Fair ISEF'98, Ft. Worth, Texas, May 1998.

Member, Executive Committee, Year of Control and Automation 2000, 1999.

Member, IFAC Technical Committee on Linear Control Systems, March 2003.

Member, IFAC Technical Committee on Cognition and Control, March 2004.

Member IEEE Control Systems Society Technical Committee on Integrated Manufacturing, July 2005.

Member, IEEE Computational Intelligence Society, Committee on Tutorials, 2006.

Member, IEEE Computational Intelligence Society, Neural Network Pioneer Award Subcommittee, 2014.

Local University Activities

Faculty Advisor, Pi Kappa Phi Fraternity, Ga. Tech., 1981-1983.

Member, Graduate Committee, School of Electrical Engineering, Ga. Tech., 1981-1984.

Member, Research Committee, School of Electrical Engineering, Ga. Tech., 1984-1990.

Member, Dean's Committee on Reapp., Promotion, and Tenure, Ga. Tech., 1987.

Member, Sigma Xi Best Paper Award Committee, Ga. Tech., 1987.

Member, Sigma Xi Admissions Committee, Ga. Tech., 1987-1990.

Chairman, Sigma Xi Best Paper Award Committee, Ga. Tech., 1988.

Chairman, Dean's Committee on Reapp., Promotion, and Tenure, Ga. Tech., 1988.

Member, Reappointment, Promotion, and Tenure Committee, Dept. of Elect. Eng., Univ. Tx. at Arlington, 1991-pres.

Member, Project Integration Team, ARRI, Univ. Tx. at Arlington, 1991-2010.

Member, Invention Review Board, ARRI, Univ. Tx. at Arlington, 1991-2010.

Chairman, Best Paper Review Board, ARRI, Univ. Tx. at Arlington, 1991.

Chairman, Standing Committee on the Academic Program in Control Systems, Univ. Tx. at Arlington, 1992.

Vice President, UTA Sigma Xi Chapter, 1994-1996

Member, EE Chairman Search Committee, UTA, 1994.

President, UTA Sigma Xi Chapter, 1996-1998

Member, Faculty Search Committee, Dept. of Elect. Eng., 1999.

Member, Undergraduate Curriculum Committee, Dept. of Elect. Eng., 2000

Member, Faculty Search Committee, EE Dept., 2004.

Chairman, EE Dept. Awards Committee, 2005-7.

Chair, Systems & Controls Thrust Area, EE Dept., 2005-2007.

Chair, EE Diagnostic Exam Review Committee, 2008- 2009.

PLENARY AND INVITED SPEAKER

1. Plenary Speaker, IFAC Int. Conf. Intelligent Control and Signal Proc., Algarve, Portugal, Apr. 2003.
2. Invited Speaker, National Instruments Technology Forum, Austin Texas, 12 Aug 2003.
3. Invited Speaker, Mexico/US Workshop on MEMS, Puerto Vallarta, Sept. 2003.
4. Opening Plenary Speaker, IEEE Int. Symp. Intelligent Control, Houston, TX, Oct. 2003
5. Keynote Speaker, A-Star Workshop on Complex Autonomous Systems, Nanyang Technological Univ., Singapore, Oct. 2003.
6. Invited Speaker, Control Systems Lecture Series, National University of Singapore, Oct. 2003.
7. Sole Presenter, Workshop on Wireless Sensor Networks and Condition-Based Maintenance, National Singapore University, Oct. 2003.
8. Invited Speaker, Harbin Institute of Technology, Shenzhen, China. Mar. 2003.
9. Invited Speaker, South China University of Technology, April 2003.
10. Plenary Speaker, Chinese Control Conference, Wuxi, China, Aug. 2004.
11. Invited speaker, Shanghai Jiao Tong Univ., Shanghai, Aug. 2004.
12. Plenary Speaker, International Symposium on Neural Networks, Dalian, China, Aug. 2004.
13. Plenary Speaker, Int. Symposium on System Structure and Control, Oaxaca, Mexico, Dec. 2004.
14. Plenary Speaker, Int. Conf. Control & Automation, Budapest, June 2005.
15. Keynote Speaker, Int. Joint Conf. Neural Networks, Montreal, Canada, Aug. 2005.
16. Nan Chang Plenary Speaker, Xiamen University, China, 85th Anniversary Celebration, School of Information Science and Technology, 5 April 2006.
17. Invited speaker, Workshop on Nonlinear Control & Sensor Networks, National University

of Singapore, 13 April 2006.

18. Keynote Speaker, IEEE Int. Conf. Computational Intelligence Systems / Robotics, Automation, Mechatronics, Bangkok, Jun. 2006.
19. Opening Ceremony Address, Founding of International Systems & Controls Center, Xiamen University, China, July 2006.
20. Invited Speaker, IEEE Int. Conf. Nano/Micro Engineered Systems (IEEE-NEMS 07), Bangkok, Thailand, Jan. 2007.
21. Keynote Speaker, Int. Symp. Approximate Dynamic Programming and Reinforcement Learning, Honolulu, April 2007.
22. Plenary Panel on Control Research and Education, Int. Conf. Control Applications, Guangzhou, May 2007.
23. Plenary Speaker, International Conference on Life System Modeling and Simulation (LSMS), Shanghai, Sept. 2007.
24. Keynote Speaker, IEEE Conf. Industrial Electronics and Applications, Singapore, June 2008.
25. Invited Speaker, Annual Chinese/Swedish Control Symposium, Hong Kong, Jan. 2008.
26. Invited Speaker, 4th IDGA Military Antennas Conf., Washington DC, 7 May 2008.
27. Keynote Speaker, Workshop on Petri nets and Agile Manufacturing, Xian, China, June 2008.
28. Invited Workshop on Neuro adaptive control, Xiamen University, July 2008.
29. Keynote Speaker, Int. Conf. Computer Science and Education, Kaifeng, China, July 2008.
30. Keynote Speaker, Int. Conf. Intelligent Control, Shanghai, China, Sept. 2008.
31. Semi-Plenary Speaker, IEEE CDC- Conf. Decision & Control, Cancun, Dec. 2008.
32. Keynote Speaker, Asian Control Conference ASCC, Hong Kong, Aug. 2009.
33. Invited Workshop on Nonlinear and Networked Systems, Chinese Academy of Sciences, Beijing, May, 2010.
34. Keynote Speaker, Chinese Control & Decision Conf., Xuzhou, May 2010.
35. Plenary Speaker, International Symposium on Systems and Control in Aeronautics and Astronautics (ISSCAA 2010), Harbin, China. June 2010.
36. Plenary Speaker, World Congress on Intelligent Control and Automation WCICA, Jinan, 6-9 July 2010.
37. Plenary Speaker, IFAC Workshop on Adaptation and Learning in Control, Antalya, Turkey, August 2010.
38. Invited Tutorial, Int. Symp. ADP and Reinforcement Learning, Paris, April 2011.
39. Invited Speaker, Chinese Academy of Sciences, "Reinforcement Learning for feedback control, Beijing, May, 2011.
40. Plenary Speaker, ISA, "Approximate dynamic programming and cooperative control," Wuhan, China, May 2011
41. Plenary Panel Chair, Int. Symposium on Neural Networks, "Future directions of neural networks," Guilin, China, May 2011.

42. Faculty 20th Anniversary Distinguished Lecture, Dept. of Mechanical and Automation Engineering, Chinese University of Hong Kong, Nov. 2011.
43. Plenary Panel Chair, Int. Symposium on Neural Networks ISNN, Shenyang, China, July 2012.
44. Plenary Talk, Conference on Industrial Informatics INDIN, Beijing, July 2012.
45. Opening Plenary Talk, FIRA Robo World Soccer Congress, Bristol, UK, August 2012.
46. Opening Plenary Talk, IEEE Multi-Conference on Systems and Controls, Dubrovnik, Croatia, Oct. 2012.
47. Opening Plenary Talk, Int. Conf. on System Theory, Control and Computing, Sinaia, Romania, Oct. 2012.
48. IEEE Distinguished Lecturer, IEEE Santa Clara Section, CA, Feb., 2013.
43. Invited Lecture on Reinforcement Learning for Feedback Control, Chinese University of Hong Kong, 22 May 2013.
49. Visiting SIMTech Fellow 20th Anniversary Speaker, Singapore Institute of Manufacturing Technology, May 2013.
50. Plenary Speaker, IEEE CYBER, Nanjing, May 2013.
51. Opening Plenary Speaker, Int. Conf. Intelligent Control and Information Processing (ICICIP), Beijing China, June 2013.
52. H.S. Tsien International Distinguished Scientist Speaker, Chinese Academy of Sciences, Institute of Automation, Beijing, July 2013.
53. Opening Speaker, Workshop on Cooperative Control, Chinese Academy of Sciences, Academy of Mathematics and Systems Science, Beijing, July 2013.
54. Opening Plenary Speaker, “IEEE CIS Neural Network Pioneer Award Acceptance Speech,” Int. Joint Conf. on Neural Networks, IJCNN, Dallas, Texas, Aug. 2013.
55. Plenary Speaker, IEEE Int. Conf. on Information & Automation, Yinchuan, China, Aug. 2013
56. Plenary Speaker, IFAC Int. Conf. on Intelligent Control and Automation Science, Chengdu, China Sept. 2013.
57. Distinguished Lecture, Dept. of ECE, Univ. Central Florida, Oct. 2013.
58. IEEE Distinguished Lecturer, Prague, Czech Republic, Dec. 2013.
59. Semi-Plenary Speaker, World Congress on Intelligent Control and Automation WCICA, Shenyang, China, June 29- July 2, 2014.
60. Plenary Speaker, Int. Conf. Intelligent Computing, ICIC Taiyuan, China, Aug. 2014.
61. Plenary Speaker, Int. Conf. Advanced Mechatronic Systems, ICAMEchS, Kumamoto, Japan, Aug 2014

CONFERENCE ACTIVITIES

National and International Conference Organization

Publications Chairman, 23rd IEEE Conference on Decision and Control, Las Vegas, NV, Dec. 1984.

Organizer and Chairman, International Symposium on Singular Systems, Ga. Tech., Atlanta, GA, Dec. 1987.

Local Arrangements Chairman, American Control Conference, Atlanta, GA, June 1988.

Finance Chairman, 27th IEEE Conference on Decision and Control, Austin, TX, Dec. 1988.

International Publicity Chairman, IEEE International Conference on Control and Applications, Jerusalem, Israel, April 1989.

Organizer and Joint Chairman, ARRI Symposium on "Control of Robots and Manufacturing Systems," UTA, Ft. Worth, Tx, Nov. 1990.

Joint Chairman and Organizer, Second International Symposium on Implicit and Robust Systems, Warsaw, Poland, July 1991.

Organizer and Chairman, International Symposium on Implicit and Nonlinear Systems, ARRI, Ft. Worth, Dec. 1992.

Program Chairman, IEEE Mediterranean Symp. New Directions in Control Theory and Automation, Crete, June 1994.

Program Chairman, IEEE Mediterranean Symp. New Directions in Control Theory and Automation, Cyprus, July 1995.

Program Chairman, IEEE Int. Symp. Intelligent Control, Monterey, Aug. 1995.

Publicity Chairman, IEEE Conf. Decision and Control, New Orleans, Dec. 1995.

Organizer, Symposium on Automation and Control, UTA, Dec. 1995.

General Chairman, IEEE Mediterranean Symp. New Directions in Control Theory and Automation, Crete, June 1996.

General Chairman, IEEE Conf. Control Applications, Trieste, Sept. 1998.

International Program Chairman, Int. Conf. System Structure and Control, Prague, Sept. 2001.

Co-organizer, Hong Kong Symposium on Control Systems, Nov, 2001.

General Chairman, Texas MEMS Conf., TEXMEMS 03, Arlington, TX, May, 2003.

General Chairman, Mediterranean Control Conference, Rhodes, June 2003.

Co-Chair, Workshop on US/Mexico MEMS Collaboration, 7 May, 2003, at ARRI, UTA.

General Chair, ARRI / Georgia Tech Workshop on Automated Machinery Maintenance, 17 July, 2003, at ARRI, UTA.

Program Chairman and Organizer, International Symposium on Homeland Security, "Developing Agile Enterprises to Overcome Vulnerability," 28-30 July, 2003, at ARRI, UTA.

General Chairman, IEEE Conference on Decision and Control, Hawaii, Dec. 2003.

Sponsorship Chair, IEEE Multi-Conference on Systems & Control, Singapore Oct. 2007.

Advisory Committee, Int. Conf. Life System Modeling and Simulation, Shanghai, Oct. 2007.

Selected to Honorary Advisory Committee, European Control Conference, Kos, July 2007.

Industry Relations and Funding Development Chair, IEEE Multi Systems Conf., Singapore,

Oct. 2007. Secured \$15K in industry sponsorship funding.

Co-General Chair, IEEE Mediterranean Control Conference, Thessaloniki, June 2009.

Co-chair, International Symposium on Optomechatronic Technologies, Istanbul, Nov. 2009.

IEEE Conf. Decision & Control, Shanghai, Dec. 2009, Industry Sponsor Chair, secured \$35K in industry sponsorships from 8 companies.

Honorary General Chair, IEEE Conf. Cyber Security, Bangkok Thailand, 28-30 May 2012.

Regional Chair, World Congress on Intelligent Control and Automation, Shenyang, China 27-30 June 2014.

International Program Committee Memberships

IFAC Workshop on System Structure and Control, Prague, Czechoslovakia, Sept. 1989.

Second IFAC Workshop on System Structure and Control, Prague, Czechoslovakia, Sept. 1992.

IEEE Conf. Decision and Control, Tucson, Dec. 1992.

IEEE Mediterranean Symp. New Directions in Control Theory and Applications, Crete, July 1993.

Third Int. Conf. Industrial Fuzzy Control and Intelligent Systems (IFIS), Houston, Dec. 1993.

IEEE Conf. Decision and Control, San Antonio, TX, Dec. 1993.

Int. Joint Conf. of NAFIPS/IFIS/NASA, San Antonio, Dec. 1994.

Int. Symposium on Automatic Control and Computer Science (SACCS), Iasi, Romania, Oct. 1995.

Workshop on Modeling, Simulation, and Control Technologies for Manufacturing, organizer Ron Lumia, SPIE Int. Symp. Intelligent Systems and Advanced Manufacturing, Philadelphia, Oct. 1995.

IEEE Int. Symp. Intelligent Control, Dearborn, MI, Sep. 1996.

Int. Symp. on Artificial Intelligence, Cancun, Mexico, Nov. 1996.

Year of Control and Automation 2000, Oct. 1996.

IFAC Workshop on Architectures for Real-Time Control, Cancun, Mexico, Apr. 1998.

IEEE Conf. Computational Eng. in Systems Applications, Tunisia, April 1998.

European Robotics, Intelligent Systems, and Control Conf., Athens, Jun. 1998.

IEEE Mediterranean Conf. Control and Automation, Sardinia, Jun. 1998.

IEEE European Workshop on Computer-Intensive Methods in Control, Prague, Sep. 1998.

IEEE Int. Symposium on Intelligent Control, Gaithersburg, MD, Sep. 1998.

"Int. Conf. Circuits, Systems, and Computers," Hellenic Naval Academy, Piraeus, Greece, Oct. 1998

Int. Symposium on Automatic Control and Computer Science, Iasi, Romania, Nov. 1998.

IEEE Int. Symposium on Intelligent Control, NIST, Gaithersburg, MD, Sept. 1998.

Mexican International Symposium of Robotics and Automation, Saltillo Coahuila, Mexico, Dec. 1998.

Int. IMACS Conference on Circuits, Systems, and Computers, Athens, July 1999.

IEEE Conf. Control Applications, Hawaii, Aug. 1999.

IEEE Int. Symposium on Intelligent Control, Patras, Greece, July 2000.

World Conference on Systems, Athens, Greece, July 2000.

IEEE Conf. Decision and Control, Sydney, Australia, Dec. 2000.

IEEE Mediterranean Conf. Control and Automation, Dubrovnik, June 2001.

IFAC Workshop on Advanced Fuzzy/Neural Control, Valencia, Spain, Oct. 2001.

IFAC Conf. New Technologies for Computer Control, Hong Kong, Nov. 2001.

Int. Conf. Comp. Intelligence and Robotics, Singapore, Nov. 2001.

Int. Conf. Control and Automation, Xiamen, China, June 2002.

IEEE Mediterranean Conf. Control and Automation, Lisbon, July 2002.

IEEE Symposium on Intelligent Systems, Bulgaria, Sept. 2002.

IEEE Int. Symp. Intelligent Control, Vancouver, Oct. 2002.

Conf. Control, Automation, Robotics, Singapore, Dec. 2002.

IFAC Int. Conf. Intelligent Control and Signal Proc., Algarve, Portugal, Apr. 2003.

Int. Conf. Informatics in Control, Automation, Robotics, ICINCO, Portugal, Aug. 2004.

IFAC Symp. Systems, Structure, and Control, Oaxaca, Mexico, Dec. 2004.

Int. Conf. Control, Automation, Robotics, Vision (ICARV), Kunming, China, Dec. 2004.

IASTED Int. Conf. Control & Applications, Cancun, May 2005.

Int. Conf. Control & Automation (ICCA), Budapest, May 2005.

Int. Symp. Neural Networks, Chongqing, China, May 2005.

Int. Symp. Collaborative Research in Applied Science, Vancouver, Oct. 2005.

SPIE ISOT Optomechatronic Systems Control Conf., Sapporo, Japan, Dec. 2005.

IEEE Mediterranean Conf. on Control and Automation, Ancona, June 2006.

IEEE Int. Conf. Robotics & Automation, Cybern. & Intel. Systems, Bangkok, June 2006.

IEEE Int. Conf. Service Operations, Logistics, and Informatics, Shanghai, June 2006.

IEEE Int. Conf. Industrial Informatics (INDIN), Singapore, August 2006.

IEEE Int. Symp. Intelligent Control, Munich, Oct. 2006.

Conf. Control, Automation, Robotics, and Vision- ICARV, Singapore, Dec. 2006.

IEEE Int. Symp. On Approximate Dynamic Programming and Reinforcement Learning, Hawaii, April 2007.

IEEE Conf. System of Systems, San Antonio, April 2007.

Int. Conf. Control & Automation, Guangzhou, China, June 2007.

IEEE Intelligent Vehicles Symposium, Istanbul Turkey, June 2007.

IASTED Int. Conf. Control Applications, Montreal, June 2007.

Honorary Advisory Committee, European Control Conf., Kos, July 2007.

IFAC Symp. Systems, Structure, and Control, Iguacu Falls, Brazil, Oct. 2007.

SPIE Int. Conf. Optomechatronic Technologies, Lausanne, Switzerland, Oct. 2007.

IEEE Int. Conf. Nano/Micro Engineered & Molecular Systems NEMS, Hainan, Jan 2008.

IEEE Mediterranean Conf. on Control and Automation, Corsica, June 2008.

2009 IEEE International Symposium on Adaptive Dynamic Programming and Reinforcement Learning, Nashville, Mar. 2009.

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Session Organization and Chair

Co-Chairman, Session on "Pole-Placement Design," ACC, San Diego, CA, June 1984.

Organizer and Joint Chairman, Invited Session on "Generalized State Space Systems," 23rd IEEE Conference on Decision and Control, Las Vegas, NV, Dec. 1984.

Chairman, Session on "Singular Systems," 25th IEEE Conference on Decision and Control, Athens, Greece, Dec. 1986.

Organizer and Joint Chairman, Invited Session on "Singular Systems," 26th IEEE Conference on Decision and Control, Los Angeles, CA, Dec. 1987.

Co-Chairman, Session on "Stochastic Systems and Control," ACC, Atlanta, GA, June 1988.

Organizer and Joint Chairman, Invited Session on "Computational Methods for Singular Systems," 12th IMACS World Congress, Paris, July 1988.

Co-Chairman, Session on "Adaptive Control," 27th IEEE Conference on Decision and Control, Austin, TX, Dec. 1988.

Organizer and Joint Chairman, Invited Session on "Singular Systems," Conf. on MTNS, Amsterdam, June 1989.

Co-Chairman, Invited Session on "Recent Advances in Theory and Applications of Singular Systems," American Control Conf., Pittsburgh, PA, June 1989.

Organizer and Chairman, Invited Session on "Singular Systems," IFAC Workshop on System Structure and Control, Prague, Czechoslovakia, Sept. 1989.

Chairman, Session on "Robot Control," 28th IEEE Conference on Decision and Control, Tampa, FL, Dec. 1989.

Organizer and Joint Chairman, Invited Session on "New Directions in Implicit Control Systems," 29th IEEE Conference on Decision and Control, Honolulu, Dec. 1990.

Co-Chairman, Session on "Descriptor and Interconnected Systems," 29th IEEE Conference on Decision and Control, Honolulu, Dec. 1990.

Member, Panel Discussion on "Implicit Systems," European Control Conference, Grenoble, France, July 1991.

Organizer and Joint Chairman, Session on "Control of robots and industrial processes," 13th IMACS World Congress, Dublin, July 1991.

Chairman, Session on "Linear Multivariable Systems," American Control Conf., Chicago, June 1992.

Organizer and Co-Chairman, Session on "Advanced Control Issues for Robot Manipulators, ASME Winter Annual Meeting, Anaheim, Nov. 1992.

Chairman, Session on "Control of Flexible Link Manipulators," IEEE Conf. Robotics and Automation, Atlanta, May 1993.

Chairman, Session on "Neural Networks," IEEE Conf. Decision and Control, San Antonio, TX, Dec. 1993.

Chairman, Session on "Manufacturing Systems," IEEE Conf. Decision and Control, San Antonio, TX, Dec. 1993.

Co-organizer, Workshop on "Petri Nets in Industrial Automation," IFAC World Congress, San Francisco, June-July, 1996.

Co-organizer, Session on "Neural Network Control for Industrial Systems," IEEE Conf. Decision and Control, Sydney, Dec. 2000.

G, Vachtsevanos and F.L. Lewis, Session on "Autonomous Air Vehicles," Mediterranean Conf. Control and Automation, Ancona, June 2006.

STOPPED KEEPING TRACK THIS DATE- Friday, June 15, 2007

JOURNAL ACTIVITIES

(Most Significant activities in boldface.)

(Guest editor for many journal special issues- see separate list of publications.)

Editor, Trans. Inst. Measurement and Control, Great Britain, 2000-pres.

Advisory Board, Unmanned Systems, World Scientific, 2012.

Senior Editor, Int. Journal of Control & Decision, World Scientific, 2012.

Editorial Board, Acta Automatica Sinica, 2012.

Associate Editor, J. Defense Modeling and Simulation, Sage Press, 2010-pres

Deputy Editor-in-Chief, J. Control Theory & Applications, Springer-Verlag, 2008-pres

Editor for Adaptive and Intelligent Control, Automatica, 1999-2001.

Editor, Optimal Control Applications and Methods, 2005-2007.

North American Regional Editor, Int. J. Systems Science, Taylor & Francis, 2007-pres.

Editor-at-Large for The Americas, Journal of Intelligent and Robotic Systems, Kluwer, 2006-pres.

Associate Editor, IEEE Trans. Neural networks, Jan 2010-pres.

Associate Editor, IEEE Trans. Systems, Man, and Cybernetics, Part B, Jan 2006-July 2007.

Associate Editor, IET J. Control Theory & Applications, 2006-pres.

Associate Editor, Circuits, Systems, and Signal Processing, 1987-1995.

Advisory Editor, The Arabian Journal for Science and Engineering, Special Issue on "Control Theory and its Applications," to appear 1996.

Editorial Board, Int. J. Intelligent Control and Systems, World Scientific Press, 1995-pres.

Editorial Board, Circuits, Systems, and Signal Processing, 1995-2005.

Editorial Board, Int. Journal of Control, 1995-1998.

Editorial Board, Int. J. Intelligent Control Systems, John Wiley, 1995-pres.

Editorial Board, Neural Computing & Applications, Springer-Verlag, 1995-pres.

Editorial Board, Journal of Intelligent and Robotic Systems, Kluwer, 2000-2006.

Associate Editor, Journal of Control Theory and Applications, 2006-pres

Editorial Board, J. South China Univ. Technology, 2004-pres.

Editorial Committee, Automatic Control and Computers Section IV, Buletinul Institutului Politehnic Iasi, Romania, 2005-pres.

Editorial Advisory Board, Int. J. Advanced Robotic Systems, 2006-pres.

Review Work:

Mathematical Reviews

IEEE Trans. Automatic Control

IEEE Trans. Acoustics, Speech, and Signal Processing

Automatica

IEEE Trans. Education

Optimal Control Applications and Methods

Quart. Trans. J. Dynamic Systems, Meas. and Control, ASME

SIAM J. Algebraic and Discrete Methods

Springer-Verlag Publishers, Inc.

Macmillan Publishers, Inc.

Addison-Wesley Publishing Co., Inc.

National Science Foundation

American Control Conference

IEEE Conference on Decision and Control

Etc.

REFERENCES, F. L. Lewis

Professor Peter Fleming Vice President, Int. Federation of Automatic Control, 2005

Editor-in-Chief, Int. Journal of Systems Science, IEE Fellow

Pro-Vice-Chancellor for External Affairs, University of Sheffield, UK

Department of Automatic Control and Systems Engineering

University of Sheffield, Mappin Street, Sheffield S1 3JD, UK

email: P.Fleming@sheffield.ac.uk, tel: +44 (0)114 222 5233 (Direct), fax: +44 (0)114 222 5138

URL: www.shef.ac.uk/acse

Mike Grimble, Director, Industrial Control Centre, IEEE Fellow

Editor, Springer Verlag Textbook Series on Control and Signal Processing

Managing Editor, International Journal of Adaptive Control and Signal Processing

University of Strathclyde, Level 7, Graham Hills

Building, 50 George Street, Glasgow, G1 1QE, United Kingdom.

Tel: +44 (0) 141 548 2378/2880; Fax: +44 (0) 141 548 4203

E-mail: m.grimble@eee.strath.ac.uk; , Website: <http://www.icc.strath.ac.uk/>

Professor Jie Huang, IEEE Fellow, IFAC Fellow
Dept. of Automation and Computer-Aided Eng.
Chinese Univ. of Hong Kong
Shatin, NT, New Territories, HONG KONG
Phone: +852. 26098473, Fax: +852. 26036002, Email: jhuang@mae.cuhk.edu.hk

Professor Petros A. Ioannou, IEEE Fellow, IFAC Fellow
Director, Center for Advanced Transportation Technologies
Univ. S. Cal., EEB200B, MC-2562
Los Angeles, CA 90089-2562
tel. 213-740-4452, email ioannou@bode.usc.edu

Professor Vladimir Kucera, President, Int. Federation of Automatic Control, 2005
Czech Academy of Science, IEEE Fellow
Dean, Faculty of Electrical Engineering, Czech Technical University in Prague
Technicka 2, 16627 Prague 6, Czech Republic
Tel. 420-2-24357201, Fax 420-2-290159
E-mail kucera@fel.cvut.cz
<http://dce.felk.cvut.cz/kucera.htm>

Professor A. C. Pugh, Head
Dept. of Math. Sciences
Loughborough Univ. of Technology
Loughborough, Leicestershire LE11 3TU
UNITED KINGDOM
tel. 0509-223190, email a.c.pugh@lut.ac.uk

Professor Irwin W. Sandberg, IEEE Fellow, NAE
Cockrell Family Regents Chair
Dept. Elect. and Comp. Eng.
Univ. of Texas at Austin
Austin, TX 78712-1084
tel. 512-471-6899, email iws@mail.utexas.edu