

Biographical Sketch for Dr. Adel A. Ghandakly

Received his B.S. degree in EE in 1967 from the University of Alexandria, Egypt, M.S. and PhD degrees in 1973 and 1975 respectively, from the University of Calgary, Alberta, Canada. Held industrial positions with Montreal Engineering Co., Detroit Edison Co., and Egypt Public Utility. Did consulting work for a number of industries including; Louisiana Power and Light, Siemens-Allis Co., Detroit Edison Co. and Toledo Engineering, Dailmer Chrysler. Taught at The University of Calgary, University of New Orleans, the University of Toledo (EECS Past Chair), and California State University, Chico, where he is currently Chairman and Professor of Electrical and Computer Engineering. First Recipient of the College of Engineering Best Teacher Award for the EE department, May 1994. Technical Reviewer for the IEEE Transactions on Automatic Control, Technical Reviewer for the IEEE Transactions on Power Systems, Technical Reviewer for NSF proposals in Power Systems Control, Technical Reviewer for the Society for Computer Simulation Transactions. Born in Alexandria, Egypt on March 15, 1945.

Curriculum Vitae

Dr. Adel A. Ghandakly, Chairman & Professor

Department of Electrical and Computer Engineering

California State University, Chico

Chico, CA 95929-0888

Phone: 530-898-5746

Email: [Dr. Adel A. Ghandakly <aghandakly@csuchico.edu>](mailto:Dr.Adel.A.Ghandakly<aghandakly@csuchico.edu>)

Statement of Experience:

Includes a long and gratifying career of Professional Engineering, Teaching, Research, Administration as well as many industry collaborations, Best Teacher Award, overwhelming recognition by alumni as the professor that had the most impact on their professional careers, great number of publications including IEEE Best Paper award (Electric Glass Melting), many Ph.D. and MS well placed graduates, and securing over \$2 Million of external funding. Currently: the Chairman of the Electrical and Computer Engineering (ECE) at California State

University, Chico, pursuing a very unique niche and progressive vision of growth in the areas of graduate and undergraduate education of Computer Engineering, Computer Sciences and Electrical Engineering within the California State university system. Before joining CSU, I was also the Chairman of the college of engineering's largest department of Electrical Engineering and Computer Science (EECS) at my previous institution, the University of Toledo. The EECE department included 30 faculty, 7 staff members and a good number of part time, visiting and adjunct faculty, over 750 students in 2 ABET accredited EE and CSE programs, (the CSE program is also dually accredited by CSAC), 2 MS programs and a Ph.D. program. The department represented about 1/3 of our college of Engineering student as well as faculty populations. A summary of accomplishments as department chairman is outlined in a following section. These accomplishments are highlighted by a great deal of undergraduate and enrolment increase, while increasing admission standards, and greatly improving student services and retention, as well as a remarkable department expansion with a new entrepreneurial off campus satellite CSE program at the Lorain County Community College (LCCC), in the Cleveland area. I was also able to administer an effective restructuring of the EECE department with a management team that supported me in leading the department successfully through its mission of excellence. That administrative restructuring included 3 full professor Directors to oversee the EE, CSE and graduate programs, respectively, 1 Associate Director for the CSE program at LCCC, 2 Technicians (1 for CSE and 1 for EE), 2 secretaries (1 for the chair including budget, and 1 for the main office), 2 Academic program coordinators/advisors (1 for the CSE students and 1 for the EE's), 1 off campus Student Services coordinator at LCCC, and 1 COOP program associate director.

Employment History:

Academia:

August 2005 to date, Chairman & Professor, California State University, Chico, California,
Department of Electrical and Computer engineering.
1979-2005, EECS Department, the University of Toledo
1977-1979, Assistant Professor, University of New Orleans
1972-1975, Grant Research Assistant, University of Calgary
1971-1972, Instructor, Department of Mathematics, University of Calgary
1967-1969, Instructor, University of Alexandria, Electrical Engineering Department

Administration:

Currently the Chairman of the department of Electrical and Computer engineering at California State University Chico, and previously the Chairman of the department of Electrical Engineering and computer Science at the University of Toledo, in Toledo, Ohio.

Industry:

1975-1977, Senior Design Engineer, Montreal Engineering Co. Ltd., Calgary, Alberta
Canada
1969-1971, Design Engineer, Egypt Public Utilities.
Summers 1980, 1981, 1982, 1983, 1985, Detroit Edison Industrial Fellow, 1982-92:
Consultant, System Planning Division, Detroit Edison Company
1978-1979: Long term contract consultant, Siemens-Allis Inc., New Orleans, Louisiana
1979-present: Consultant to Toledo Engineering, Sainai Engineering and others.

Degrees:

BS in Electrical Engineering (Systems and Control), June 1967, University of Alexandria, Egypt.
MS, Ph.D. in Electrical Engineering (Systems and Control), 1973 and 1975, respectively, The University of Calgary, Calgary, Alberta, Canada.

Technical Area of Expertise:

Adaptive and Intelligent Control Systems, System Identification, Large Scale Systems, Industrial Drives, Real Time Control, Microprocessor Relays and Protection, Power system analysis, planning, design and control, Power electronics, Energy Conversion, Electric Glass Melting Supply design and control.

Some Important Awards, Grants and recognition:

Grants: Over \$2.8 Million of External Funding, including National Science Foundation, Federal, State,

Local and Industry sources.

Recognition:

- First Recipient of the University of Toledo College of Engineering Best Teacher Award for the EE department, 1994.
- Member of the ETa Kappa Nu Honor Society.
- Listed in Lexington Who's Who.

Copyrights:

- US Federal Registration # TXu 151-915: "A Model for the Design of the Electric Supply to Glass Furnaces with Multi Electrode and Phases."
- US Federal Registration # TXu 151-916: "A Computer Program for the Design of the Electric Supply to Glass Furnaces with Multi Electrodes and Phases".

Graduate Student Supervision

Doctoral Dissertations

1. "A Model Reference Adaptive Controller for Stabilization of Multimachine Power Systems," P. Idowu, 1989.
2. "Development of Modeling and Control Techniques for Slip Power Recovery Drives in Motor and Generator Modes," S. Salem, 1989.
3. "Development of an On-Line Computer Control System for Wind Energy Self-Excited Induction Generators," H. Ahmad, April 1990.
4. "Optimal Active and Reactive Power Flows in Power Systems, A. El-Sinnary, December 1990.
5. "Design of an Expert System for Large Power System Operation Control," W. Refaey, February 1991.
6. "Continuous Adaptive Control Algorithms Based on Parameter Optimization and Their Applications to Power Systems," A. M. Farhoud, March, 1992.
7. "Design of a Microprocessor Based Adaptive Controller for Power Generating Units," M. Brihoum, June 1993.
8. "Design of Multimachine Power System Adaptive Stabilizers by Pole Shifting Techniques," A. Jalal, December 1993.
9. "Multivariable Adaptive Control Algorithms and Applications to Multimachine Power Systems Stabilizer (PSS)", J. Dai, March 1995.
10. " Adaptive Control Algorithms With Multiple Models and Fuzzy Logic Switching", K. S. Al-Olimat, August 1999.
11. "Development of Multiple Models Adaptive Control Algorithms for Jet Engine Control", Tim Wright, in progress.
12. "A New Generation of Adaptive Control: An Intelligent Supervisory Loop Approach", Sukumar Kamalasan, August 2004.

Select Masters Thesis

Numerous MS Thesis supervised; following is a sample of some recent ones:

- "Jet Engine Modeling and Adaptive Control", Tim Wright, August, 1999.
- "Efficient Interface Design for Industrial Adaptive Controller communication", P. Janani, May 2002.
- "Design of Adaptive Controllers For A High Performance Aircraft", Jason A. Reed, February 2004.
- "An Intelligent Adaptive Controller Design Based On A Genetic Algorithm", Sam McGilvery, August 2005.
- "Adaptive Control of Photovoltaic Arrays", Bret Bosma, in progress.

Sample of Courses taught:

Adaptive Control Systems, Digital Control Systems, Control Systems Design, Signals and Systems, Computer Aided Analysis of Large Scale Systems, Power System Control and Reliability, Power Systems Analysis, Power Systems Operation, Power Transmission and Distribution, Power Systems Economics and Protection, Power System Planning, Electric Machine Modeling & Control, EE and EECS Professional Development, Electrical Energy Conversion, Electric Circuits, Network Analysis.

Service on University committees:

Served on and chaired a great number of Personnel, Policy, as well as Advisory committees.

Professional activities outside the university

Technical Reviewer for the IEEE Transactions on Automatic Control and Transactions on Power Systems, Reviewer for NSF proposals in Power Systems Control, Reviewer for the Society for Computer Simulation Transactions, Professional consulting to a great number of industries, including: Detroit Edison Company, Detroit, Michigan, Toledo Engineering Co., Inc., Toledo, Ohio, Siemens-Allis, Inc., New Orleans, Louisiana, and Sinai Engineering, Edmonton, Canada.

Professional Reports:

Numerous Professional and Industry reports produced in connection with consulting

contracts.

Membership in professional societies:

Senior Member of the IEEE, Member of the IEEE Power System Dynamic Committee
Registered professional engineer in Alberta, Canada

Personal:

Born in Alexandria, Egypt (March 15, 1945); Married (Susan), 1 daughter (Elizabeth);
Sports: Tennis, Racquetball, Wind Surfing.

Publications

1. "Determination of Optimal Controls for Unsymmetrical Faults," IEEE PES Summer Meeting, July 1974. (A. Ghandakly and O. P. Malik)
2. "Unified Control for Synchronous Machine Stabilization," Proceedings of IEE, Vol. 121, No. 8, August 1974, pp. 833-839. (A. Ghandakly and O. P. Malik)
3. "Identification and Control of Generating Unit in Real Time Using On-Line Minicomputer," PSCC V, England, September 1975, pp. 2.1/5.1-5.15. (A. Ghandakly and O. P. Malik)
4. "Adaptive Control Applications to Generating Units," Seminar of Digital Computer Applications to the Real-Time Control and Protections, Calgary, Canada, September 1975. (A. Ghandakly)
5. "On-Line Adaptive Control of Synchronous Machine Excitation," IEEE PICA Conference, Toronto, May 1977, pp. 59-67. (A. Ghandakly and O. P. Malik)
6. "Reliability Evaluation of Substation Switching Arrangements," IEEE 10th Annual Southeastern Symposium on System Theory, March 1978. (A. Ghandakly, J. S. Mumick, Y. Mansour)
7. "A Technique for Coordinated On-Line Control of Exciter and Governor," Journal of Applied Science and Engineering, A-3, Amsterdam, Netherlands, 1978, pp. 39-56. (A. Ghandakly and G. S. Hope)
8. "Computer Simulation of SCR Controlled Large Wound-Rotor Induction Motor Loads," IEEE International Conference on Control of Power Systems, March, 1980. (A. Ghandakly and G. Eckenstaller)
9. "An On-Line Minicomputer Adaptive Control Software for Generating Unit Excitation System," IEEE 1980 International Conference on Circuits and Computers, pp. 887-890. (A. Ghandakly)
10. "Reliability Criteria for the Design of Substation Switching Arrangements," Arab Conference on Science and Technology - Kuwait, January 21-29, 1981. (A. Ghandakly)
11. "Parameter Identification Using On-Line Minicomputers in Real Time," Arab Conference on Science and Technology - Damascus, Syria, August 29, - September 9, 1981. (A. Ghandakly)
12. "Design of an Adaptive Control System Using an On-Line Minicomputer in Real Time," Proceedings of Arab Conference on Science and Technology, Damascus, Syria, August 29 - September 9, 1981, pp. 81-84. (A. Ghandakly)
13. "A Technique for the Design and Implementation of an Adaptive Control System," The Ohio Journal of Science, Vol. 82, #2, April 1982. (A. Ghandakly)
14. "A Detroit Edison's Computer Program for the Assessment of a Power System Island Performance Following a Major Contingency Situation," IEEE-1982 Midwest Power Symposium, November 1982. (A. Ghandakly and Ray Pillote)
15. "Modeling SCR Controlled Large Induction Motor Cascades for Computer Simulation," Arab Journal for Science and Engineering, Vol. 8:1, January 1983, pp. 16-19. (A. Ghandakly and George Eckenstaller)
16. "Design of a Digital PID Controller for AC Generator Excitation and Governor Control System," The Ohio Journal of Science, Vol. 83 #2, April 1983. (A. Ghandakly, Domingo Uy)

17. "Design of an Excitation Control System to a Wind Generator for Maximum Output Power," The Ohio Journal of Science, Vol. 83 #2, April 1983. (A. Ghandakly, Roger King, Mani Vichitchot)
18. "A Direct Method for the Design of Digital PID Controllers for Power Generator Excitation and Governor Systems," The Ohio Journal of Science, Vol. 83 #2, April 1983. (A. Ghandakly, Peter Kronegger)
19. "Computer Simulation of Slip-Power Recovery Drives with Current and Speed Control," Proceedings of the IEEE 1983 Summer Computer Simulation Conference, Vancouver, Canada (A. Ghandakly and Masoud Fathizadeh)
20. "An Adaptive Deadbeat Controller for Generating Units Stabilizer Loops," IEEE 1985 Midwest Power Symposium, October 1985. (A. Ghandakly)
21. "Design of an On-Line Computer Control System for Generating Units Governor Loops," IEEE 1985 Midwest Power Symposium, October 1985. (A. Ghandakly)
22. "Identification of Generating Unit Stabilizer Loops for Adaptive Control Applications," IEEE 1985 Midwest Power Symposium, October 1985 (A. Ghandakly)
23. "A New and Accurate Modeling Technique for the Glass Resistance in Multiphase Multielectrode Glass Furnaces," IEEE Transaction on Industry Applications, September/October 1986. (A. Ghandakly)
24. "A New Modeling Technique for the Glass Resistance in Glass Melters," Proceedings of the 95th Annual Meeting of the Ohio Academy of Science, Vol. 86, No. 2, April 1986. (A. Ghandakly)
25. "Development of Adaptive Control Systems for the Excitation of Turbogenerators," NSF Grant #INT-8511181, Final Report, June 1987.
26. "Design of On-Line Computer Control System for Generating Units Governor Loops," IEEE North American Power Conference, Oct. 1987.
27. "Digital Controller Design Method for Synchronous Generator Excitation and Stabilizer Systems, Part I: Methodology and Computer Simulation," IEEE Trans. on Power Systems, Aug. 1987, Vol. PWRS-2, #3, pp. 633-637, Part II, pp. 638-644. (A. Ghandakly, P. Kronegger)
28. "Digital Controller Design Method for Synchronous Generator Excitation and Stabilizer Systems, Part II: Hardware/Software Design and Implementation Results," IEEE Transactions on Power Systems, Aug. 1987, Vol. PWRS-2, #3, pp 638-644. (A. Ghandakly, P. Kronegger)
29. "An Adaptive Time - Optimal Controller for Generating Units Stabilizer Loops," IEEE-PES Transactions on Power Systems, Vol. PWRS-2, No. 4, Nov. 1987, pp. 1085-1090.
30. "Simulation of Multiphase Multielectrode Electric Glass Furnaces," 1988 Summer Simulation Conference, Seattle, WA, July 25-28, 1988, pp. 294-299. (A. Ghandakly, R. Curran)
31. "A Microprocessor Protective Relaying System for a Plant Class Substation," IEEE North American Power Conference, Sept. 1988, pp. 27-36. (A. Ghandakly, M. Vichitchot)
32. "Design of MRAC for Coordinating the Exciter and Governor Loops of Power Generators," IEEE North American Power Conference, Sept. 1988, pp. 109-118. (A. Ghandakly, P. Idowu)
33. "A Parametric State Feedback Control for the Exciter and Governor Loops of a Synchronous Generating Unit," IEEE North American Power Conference, Sept. 1988, pp. 119-128. (H. Tantawy, A. Ghandakly)

34. "A Digital Controller Hardware Design for a Laboratory Power Generating Unit Using an IBM C," IEEE North American Power Conference, Sept. 1988, pp. 267-276. (A. Ghandakly, M. Borihoum).
35. "On the Structurally Fixed Models in Decentralized Control System," IEEE/NSF 1988 COMCON, Vol. II, Oct. 1988, Ppp. 809-816. (H. Tantawy, A. Ghandakly)
36. "Accurate Modeling of Interelectrode Resistance and Power Dissipation in Electric Glass Melters," IEEE Transactions on Industrial Applications, Vol. 24, #6, Nov. 88, pp. 1057-1061 (A. Ghandakly, Richard L. Curran).
37. "An On-Line Adaptive Control Technique for Generating Units Stabilizer Loops," International Journal of Energy Systems, Vol. 9, #1, Jan. 1989, pp. 59-62.
38. "Design of Adaptive Stabilizers for Power Systems," The Ohio Journal of Science, Vol. 89, No. 2, April, 1989, (A. Ghandakly, P. Idowu)
39. "A Laboratory Electrical Generating Unit Two Level Digital Controller Design," The Ohio Journal of Science, Vol. 89, No. 2, April, 1989, (A. Ghandakly, M. Brihoum)
40. "A Microcontroller Application for Protective Relaying System," The Ohio Journal of Science, Vol. 89, No. 2, April, 1989, (A. Ghandakly, M. Vichitchot)
41. "Design of A Robust Optimal Regulator for Synchronous Generator Excitation Control," A. Ghandakly, P. Idowu, Journal of Electric Machines & Power Systems, Vol. 16, No. 5, May 1989, pp. 319-330.
42. "A Simulation Procedure for Testing Real-Time Controllers for Generating Units," A. Ghandakly, M. Brihoum, Third European Simulation Congress, Edinburgh, Scotland, September 5-8, 1989, pp. 391-398.
43. "A Coordinated Adaptive Stabilizer for Multimachine Power Systems," A. Ghandakly, P. Idowu, IEEE 1989 NAPS, Rolla, Oct. 9-10, 1989, pp. 84-93.
44. "Design of Adaptive Stabilizers for Power Systems," A/ Ghandakly, A. Farhoud, The Ohio Journal of Science, Vol. 89, No. 2, April 1989.
45. "A Laboratory Electrical Generating Unit Two-level Digital Controller Design," A. Ghandakly, M. Brihoum, The Ohio Journal of Science, Vol. 89, No. 2, April 1989.
46. "A Microcontroller Application for Protective Relaying Systems," A. Ghandakly, M. Vichitchot, The Ohio Journal of Science, Vol. 89, No. 2, April 1989.
47. "Design of a Model Reference Adaptive Stabilizer for the Exciter & Governor Loops of Power Generators," A. Ghandakly, P. Idowu, IEEE Transactions on Power Systems, Vol. 5, No. 3, Aug. 1990, pp. 887-893.
48. "A Model to Predict Current Distribution in Bundled Cables for Electric Glass Melters," A. Ghandakly, R. Curran, IEEE Transactions on Industry Applications, Vol. 26, No. 6, November 1990, pp. 1043-1048.
49. "Ampacity Rating of Bundled Cables for Heavy Current Applications," A. Ghandakly, R. L. Curran, IEEE/IAS 1990 Annual Meeting, Seattle, Oct. 7-12, 1990, pp. 1334-1339.
50. "An Adaptive Stabilizer for Multimachine Power Systems," P. Idowu, A. Ghandakly, IEEE/NAPS, Oct. 1990, pp. 79-88.
51. "A Systematic Sensitivity Approach for Optimal Reactive Power Planning," W. M. Refaey, A. A. Ghandakly, IEEE/NAPS, Oct. 1990, pp. 134-143.
52. "Real Time Simulation for An 80197 Microcontroller for Synchronous Machine Control," M. E. Brihoum, A. A. Ghandakly, The Ohio Journal of Science, Vol. 90, No. 2, 1990.
53. "Microcontroller Based Impedance Relay," A. Ghandakly, M. Vichitchot, IEEE/IAS 1991 Annual Meeting, Dearborn, MI, September 28-October 4, 1991.

54. "A Model to Predict Current Distributions in Heavy Current Parallel Conductor Configurations," A. Ghandakly, R. Curran, IEEE/NAS 1991 Annual Meeting, Dearborn, MI, September 28-October 4, 1991.
55. "A Digital Optimal Controller for VSCF Generator, A. Ghandakly, Z. Sbeiti, IEEE/IAS 1991 Annual Meeting, Dearborn, MI, September 28-October 4, 1991.
56. "Design of a Digital Synchronous Machine Shaft Speed Transducer Using the INTEL 80C196 Microcontroller," A. Ghandakly, J. Davis, IEEE NAPS, October 1991, Vol. I, pp. 2-10.
57. "An Adaptive Generating Unit Stabilizer Design Using Generalized Predictive Control," A. Ghandakly, J. Dai, IEEE NAPS, October 1991, Vol. I, pp. 268-277.
58. "A Parametrically Optimized Self-Tuning Regulator for Power System Stabilizers," A. Ghandakly, A. Farhoud, IEEE Transactions on Power Systems, Vol. 7, No. 3, August 1992, pp. 1245-1250.
59. "An Adaptive Synchronous Generator Stabilizer Design by Generalized Multivariable Pole Shifting (GMPS) Technique," A. Ghandakly, J. Dai, IEEE Transactions on Power Systems, Vol. 7, No. 3, August 1992, pp. 1239-1244.
60. "Development of a New Digital Synchronous Generator Shaft-Speed Deviation Transducer," A. A. Ghandakly, H. E. Brihoum, IEEE/IAS Annual Meeting, Houston, Texas, October 3-4, 1992.
61. "PC Based Laboratory Station for Testing Adaptive Controllers on Synchronous Generators," A. A. Ghandakly, J. Dai, M. Vichitchot, IEEE/IAS Annual Meeting, Houston, Texas, October 30-31, 1992.
62. " Adaptive Enhancement of Synchronous Generator Stabilizer Performance Using A Parameter Optimization Technique ", A. Farhoud & A. Ghandakly, 1993 IEEE/IAS annual meeting proceedings, October 1993, Part I pp147-154.
63. " Adaptive Enhancement of Synchronous Generator Stabilizers by Including External System Dynamics ", A. Jalal & A. Ghandakly. 1993 IEEE/IAS annual meeting proceedings, October 1993, Part II pp1401-1408.
64. " A Two Level Computer Control System For The Assessment of Adaptive Power System Stabilizers", M.E. Brihoum, A.M. Jalal, A.M. Farhoud, A. A. Ghandakly, American Power Conference, Chicago Illinois, April 25-27, 1994.
65. " A Decentralized MRAC based PSS For Multimachine Power Systems " P. Idowu & A. Ghandakly . Journal Of Electric Machines & Power Systems, Vol. 22 #3, May/June 1994, pp423-438.
66. "Ampacity Rating of Bundled Cables for Heavy Current Applications," A. A. Ghandakly, R. L. Curran, IEEE Transactions on Industry applications, Vol. 30 #2, March/April 1994, pp233-239.
67. "A Model to Predict Current Distributions in Heavy Current Parallel Conductor Configurations," A. A. Ghandakly, R. L. Curran, IEEE transactions on Industry Applications, Vol.30 #2, March/April 1994, pp240-244.
68. " Real-Time Self-Tuning of Industrial Controllers Using A Continuous Parameter Optimization Technique", A. Farhoud, A. A. Ghandakly, IEEE/IAS Annual Meeting, Denver, Colorado, October 2-6, 1994.
69. " Real-Time self-Tuning of Industrial Controllers Using A Digital Parameter Optimization technique", A. Farhoud, A. A. Ghandakly, IEEE/IAS Annual Meeting, Denver, Colorado, October 2-6, 1994.

70. " A Decentralized Adaptive Control Algorithm And Its Application In Power System Stabilizer (PSS) Design", J.J. Dai, A. A. Ghandakly, 1995 IEEE Industrial Applications Society annual meeting, October 1995.
71. " Design Of An Adaptive Speed Controller For DC Brushless Motors", M. Owed, A. A. Ghandakly, 1995 IEEE Industrial Applications Society annual meeting, October 1995.
72. "Enhancement Of Existing PLC's With An Adaptive Control Technique", A. A. Ghandakly, M.E. Shields, 1995 IEEE Industrial Applications Society annual meeting, October 1995.
73. " Intelligent Self Tuning Regulator For On-Line Tuning Of Industrial Controllers Using A Digital Parameter Optimization Technique", A.A. ghandakly, M. E. Brihoum, A. Farhoud, 1995 IEEE Industrial Applications Society annual meeting, October 1995.
74. " Design of An Adaptive Controller For A DC Motor Within An Existing PLC Framework", A. A. Ghandakly, M. E. Shields, M. E. Brihoum, 1996 IEEE Industrial Applications Society annual meeting, October 1996.
75. " On-Line Fuzzy Logic Switching of Adaptive Parallel Power System Stabilizers", A. A. Ghandakly, K. S. Al-Olimat, 1997 IEEE North American Power Symposium, October 1997.
76. "On Line Tuning of Power System Stabilizers Using a Parameter Optimization Technique", A. A. Ghandakly, A.M. Farhoud, 1997 IEEE North American Power Symposium, October 1997.
77. " "Using Multiple Identification Models In Adaptive Power System Stabilizers", Khalid S. Al-Olimat and Adel A. Ghandakly, *North American Power Symposium*, pp. 474-480, October 1998.
78. Adaptive Air-Fuel Ratio Control of an SI Engine Using Fuzzy Logic Parameters Evaluation", K Al-Olimat, A. Ghandakly, SAE Electronic Engine Control, SP-1501, pp 217-225, March 2000.
79. "Multiple Model Reference Adaptive Control Algorithm Using on-Line Fuzzy Logic Adjustment and Its Application to Robotic Manipulators", Khalid S. Al-Olimat and Adel A. Ghandakly, the ISCA 16th International Conference on Computers and Their Applications, March 28-30, 2001.
80. "Flexible Model Reference Adaptive Speed Control for Induction Motor Drives," Khalid S. Al-Olimat and Adel A. Ghandakly, *International Agean Conference on Electrical Machines and Power Electronics (ACEMP)*, pp. 460-465, Istanbul, Turkey, June 27-29, 2001.
81. "Intelligent Parallel Controller Based on Fuzzy Linguistics Rules Assessment," Khalid S. Al-Olimat and Adel A. Ghandakly, *33rd Southeastern Symposium on System Theory (SSST)*, pp. 359-363, Athens, OH, March 18-20, 2001.
82. "Model Reference Adaptive Control of Synchronous Machine Speed via Model-Updating Concept," Khalid S. Al-Olimat, Adel A. Ghandakly, *Proceedings of IASTED International Conference on Power and Energy Systems*, pp. 383-391, Marina Del Rey, CA, May 13-15, 2002.
83. "Development of A Computer-Aided Learning Tool to Optimize Students' Learning of Undergraduate Electromagnetics", Khalid S. Al-Olimat, Adel A. Ghandakly, *Proceedings of ASEE Annual Conference & Exposition*, Montreal, Quebec, Canada, June 16-19, 2002.
84. "On-Line Tuning of Industrial PID Controllers Using A Parameter Optimization Technique," Ahmad M. Farhoud, Adel A. Ghandakly and Khalid S. Al-Olimat, *Proceedings of International Conference on Automatic Control "Automatica 2002"*, Reference P - 089, pp 102, summary book ISBN: 84 - 699 - 9025 - X, Santiago de Cuba, July 17-19, 2002.
85. "An adaptive position tracking controller for permanent magnetic stepper motors," Sukumar Kamalasan, Adel A. Ghandakly, *Proceedings of International Conference on*

- Automatic Control "Automatica 2002"*, Reference P - 089, pp 101, summary book ISBN: 84 - 699 - 9025 - X, Santiago de Cuba, July 17-19, 2002.
86. "Multiple Model Adaptive Control Algorithm Using Fuzzy Logic Adjustment and Its Application to Robotic Manipulator", Khalid S. Al-Olimat, Adel A. Ghandakly, *Proceedings of IEEE Industry Applications Society Annual Meeting, Session 37, Paper 5*, Pittsburgh, PA, October 13-18, 2002.
 87. "A Fuzzy Logic approach for Multiple Reference Model Adaptive Control", Sukumar Kamalasan, Adel A. Ghandakly, Khalid S. Al-Olimat, ISCA International Conference on Computer Applications in Industry and Engineering, Las Vegas, Nevada, Nov. 11-13, 2003.
 88. "Voltage Stability Assessment Using MATLAB Based Artificial Neural Network Approach", Sukumar Kamalasan, Adel A. Ghandakly, ISCA International Conference on Computer Applications in Industry and Engineering, Las Vegas, Nevada, November 11-13, 2003.
 89. S.Kamalasan, Adel A Ghandakly, Khalid Al-Olimat "A Fuzzy Multiple Reference Model Adaptive Control Scheme for Flexible Link Robotic Manipulator", In Proceedings of 2004 IEEE International Conference on Computational Intelligence for Measurements Systems and Applications, ISBN 0-7803-8342-7, Boston USA July 14-16, 2004, pp.162-167.
 90. "A Neural Network based Intelligent Model Reference Adaptive Controller", S.Kamalasan, Adel A Ghandakly, Khalid Al-Olimat, In Proceedings of 2004 IEEE International Conference on Computational Intelligence for Measurements Systems and Applications, ISBN 0-7803-8342-7, Boston USA July 14-16, 2004, pp.174-179.
 91. "Multiple Fuzzy Reference Model Adaptive Controller Algorithm for Aircraft Pitch-Rate Tracking", Sukumar Kamalasan, Adel A. Ghandakly, Proceedings of the 12th International Conference On Intelligent And Adaptive Systems and Software Engineering (IASSE-2005), ISBN 1-880843-55-2, 20-22 July, Toronto, Canada, July 20-22. pp.117-122, 2005.
 92. "A Neural Network Parallel Adaptive Controller Algorithm For Fighter Aircraft Pitch Rate Control", Sukumar Kamalasan, Adel A. Ghandakly, Proceedings of the ISCA 12th International Conference On Intelligent And Adaptive Systems and Software Engineering (IASSE-2005), ISBN 1-880843-55-2, 20-22 July, Toronto, Canada, July 20-22. pp.123-128, 2005.
 93. "A Fighter Aircraft Pitch Rate Control based on Neural Network Parallel Controller", In Proceedings of the IEEE International Conference on Computational Intelligence for Measurement Systems and Applications (CIMSA'05), ISBN 0-7803-9026-1, 20-22 July 2005, pp 135-140, Giardini-Naxos, Italy.
 94. "Nonlinear Fighter Aircraft Pitch-Rate Tracking Using A Multiple Fuzzy Reference Model Adaptive Controller", In proceedings of the IEEE International Conference on Computational Intelligence for Measurement Systems and Applications(CIMSA'05), ISBN 0-7803-9026-1, 20-22 July, 2005, pp 44-49, Giardini-Naxos, Italy.
 95. "An Artificial Neural Network Algorithm for Voltage Stability Monitoring and Assessment", Sukumar Kamalasan, Adel A. Ghandakly, D.Thukaram, **International Journal of Computers and Their Applications, ISSN 1076-5204, Vol.12, No.2, pp.93-100, June 2005.**
 96. "A Fuzzy Logic based Multiple Reference Model Adaptive Control Approach for Multi Modal Systems ", Sukumar Kamalasan, Adel A. Ghandakly, accepted and to appear in **International Journal of Computers and Their Applications, August 2007.**

97. "A Novel Fuzzy Multiple Reference Model Adaptive Controller Design", Sukumar Kamalasan, Adel A. Ghandakly, **International Journal of Fuzzy Systems, Vol. 8, No 3, pp165-172, September 2006.**
98. "A Stable Intelligent Agent Controller for Parametric and Functional Uncertain Systems", Sukumar Kamalasan, Adel A. Ghandakly, in print in **Book Chapter**, Notes in Computer Science (LNCS), International Conference on Adaptive and Natural Computing Algorithms (ICANNGA 2007).
99. "Induction Motor Speed Control via Fuzzy Logic Modification of Reference Model", Khalid S. Al-Olimat, Adel A. Ghandakly, Sukumar Kamalasan, IEEE Power Engineering Society Annual Meeting, Tampa, Florida, April 24-28, 2007.
100. "A Neural Network Parallel Adaptive Controller for dynamic Systems Control", Sukumar Kamalasan, Adel A. Ghandakly, In Press, **IEEE Transactions of Instrumentation and Measurements, June 2007.**
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