CURRICULM VITAE

GENERAL INFORMATION

NAME: Dr. Eng. AHMED MOHAMED EL-GARHY

ACADEMIC QUALIFICATINS

- **Ph. D.,** Electrical Power and Machines, <u>Faculty of Engineering</u>, <u>Cairo University</u>, <u>Oct. 2003</u>. " Development of an Integrated Neural Scheme for Sensor Failures Diagnosis and Disturbance Absorption in MIMO Systems ".

- **M. Sc.,** Electrical Power and Machines, <u>Faculty of Engineering</u>, <u>Cairo University</u>, <u>Feb. 1996</u>. " Development of Fault Diagnostic Expert Systems for Distributed Control ".

- **Diploma of Higher Studies,** Control Engineering, <u>Faculty of Engineering</u>, <u>Cairo University</u>, <u>Oct. 1990</u>. **Project:** " Design of a Reliable Controller with Application in Power Systems ".

- **B. Sc.,** Electronics and Telecommunications Engineering, <u>Faculty of Engineering</u>, <u>Cairo University</u>, <u>July 1983</u>. **Project:** " Design of E10 Electronic Exchange ".

CURRENT JOB

- Associate Professor of Control Engineering, Department of Electronics, Computer and Telecommunications Engineering, **Faculty of Engineering**, **Helwan University**.

HISTORY OF EMPLOYMENT

- [27/3/2007- Now], Associate Professor of Control Engineering, Department of Electronics, Communications and Computers, **Faculty of Engineering**, **Helwan University**.
- [30/9/2001- 26/3/2007], Assistant Professor of Control Engineering, Department of Electronics, Communications and Computers, **Faculty of Engineering**, **Helwan University**.
- [1/1/1998-29/9/2001], Head of Computer, Control and Electronics Training Department, **Arab Institute for Advanced Technology**, **Arab Organization for Industrialization**.
- [1/1/1994-31/12/1997], Computer, Control and Electronics Training Chief Engineer, **Arab Institute for Advanced Technology**, **Arab Organization for Industrialization**.
- [1/1/1990-31/12/1993], Computer, Control and Electronics Training Senior Engineer, **Arab Institute for Advanced Technology**, **Arab Organization for Industrialization**.
- [26/4/1987-31/12/1989], Computer, Control and Electronics Training Engineer, **Arab Institute for Advanced Technology**, **Arab Organization for Industrialization**.
- [1/4/1986-1/4/1987], Electronic Instruments Maintenance Engineer, **National Center for Research and Radiation Technology**, **Atomic Energy Authority**.
- [1/10/1983-31/3/1986], **Military Service**.

LONG TERM CONINUING TRAINING PROGRAMS ATTENED (ABROAD)

- [January 1, 1994-December 31, 1994], Professional Certified Program in **Computer Based Management of Information Systems**, **Embery Riddle Aeronautical University**, **Daytona Beach**, **FL**, **USA** . (FOUR SEMESTERS: Peace Fellowship).

SHORT TERM TRAINING PROGRAMS ATTENDED (ABROAD)

- [May 26, 1993-July 28, 1993], Optics and Blueprints Instructor Training, **Lockheed Company**, **Fort Worth**, **TX**, **USA**.

MANAGEMENT TRAINING ATTENDED (in EGYPT)

- [29/3/1998-3/4/1998], **Loss Control Training Program**, Arab Institute for Advanced Technology, Cairo, Egypt & Sustainable Development Technologies Corporation, Ontario, Canada.

- [22/3/1998-26/3/1998], **Total Quality Management Training Program**, Arab Institute for Advanced Technology, Cairo, Egypt & Sustainable Development Technologies Corporation, Ontario, Canada.

- [21/12/1997-25/12/1997], **Marketing Policies Training Program**, Arab Institute for Advanced Technology.

- [11/5/1997-15/5/1997], **Internal Quality Auditors Training Program,** Arab Institute for Advanced Technology.

- [2/3/1997-27/2/1997], **Strategic Development Training Program**, Arab Institute for Advanced Technology.

- [23/2/1997-27/2/1997], **Managerial Development Training Program**, Arab Institute for Advanced Technology.

- [1/11/1993-11/11/1993, **Managerial Problem and Decision Making Training Program**, Arab Institute for Advanced Technology.

- [2/10/1993-13/10/1993], **Management of Engineering Projects Training Program**, International Center for Systems.

TECHNICAL TRAINING ATTENDED (in EGYPT)

- [28/12/1996-30/12/1996], **CNC Machining Process Training Program**, Arab Institute for Aerospace Technology, Cairo, Egypt & MIT, MA, USA.
- [23/12/1991-26/12/1991], **Modern Processing Techniques and Their Industrial Applications Training Program**, Arab Institute for Aerospace Technology.

- [15/10/1991-24/10/1991], **Computer Based Project Planning and Management Training Program**, Arab Institute for Aerospace Technology.
- [3/12/1989-14/12/1989, **Engineering Technology Training Program**, Arab Institute for Aerospace Technology.
- [14/8/1989-22/8/1989], **Data Base Programming Training Program**, Arab Institute for Aerospace Technology.
- [9/2/1987-19/2/1987], **Egyptian German Seminar on Quality Assurance**, Atomic Energy Authority, Cairo, Egypt.
- [27/8/1983-13/10/1983], **FORTRAN Programming Training Program**, Scientific & Statistical Computation Center, Cairo University.

TEACHING ACTIVITIES

- **Under Graduate:**
- Automatic control courses.
- Measurement courses.
- System engineering courses.
- Electronic circuits courses.
- Digital electronics courses.
- Artificial intelligence courses.
- Exert systems courses.
- Systems modeling and dynamics courses.
- Microprocessors in control applications.
- Power electronics.

- Graduation projects.
- **Post Graduate:**
- Simulation of control systems using SIMULINK/MATLAB.
- Adaptive control.
- Industrial electronics.

PUBLISHED PAPERS

1- **A. M. EL-GARHY**, A. M. KAMEL and H. T. DORRAH, "Detecting Sensors Failures in MIMO System with Structured Disturbances", **Journal of Engineering and Applied Science**, **Faculty of Engineering**, **Cairo University**, Vol. 44, No. 5, PP. 989-1003, Oct. 1997.

2- **A. M. EL-GARHY** and H. T. DORRAH, "Artificial Neural System for Sensors FDI in MIMO System", **Journal of Engineering and Applied Science**, **Faculty of Engineering, Cairo University**, Vol. 46, No. 6, PP. 1125-1143, Dec. 1999.

3- **A. M. EL-GARHY**, " Genetic Approach for Tuning PI Controller with Minimization of the Integral Square Error ", **Journal of Engineering and Applied Science**, **Faculty of Engineering, Cairo University**, Vol. 50-Number 5, PP. 981-998, Oct. 2003.

4- **A. M. EL-GARHY**, " Identifying the Fuzzy Model of Highly Nonlinear Process Using Adaptive Neuro-Fuzzy Network ", **Journal of Engineering and Applied Science**, **Faculty of Engineering, Cairo University**, Vol. 51-Number 2, PP. 377-391, Apr. 2004.

5- M. E. EL-SHIMY, **A. M. EL-GARHY** and H. T. DORRAH, " Development of Gain Scheduling Scheme Using Radial Basis Function Neural Network Controllers", **Journal of Engineering Science, Faculty of Engineering**, **University of Assiut**, Vol.32-Number 3- Part B, PP. 1403- 1423, July 2004.

6- **A. M. EL-GARHY** and M. E. EL-SHIMY, " Development of Gain Scheduling Scheme Based on Group of Fuzzy Inference Systems ", **Journal of Engineering Science**, **Faculty of Engineering**, **University of Assuit**, Vol. 32-Number 4, PP. 1713- 1733, September 2004.

7- Mohamed I. El-Adawy, **Ahmed M. El-Garhy** and Besada A. Anees, " Failure Accommodation of Optical Fiber Current Sensors Using Integrated Adaptive Neuro-Fuzzy Inference Scheme ", **Alexandria Engineering Journal**, **Faculty of Engineering**, **Alexandria University**, Vol. 44- No. 4, PP. 569- 578, July 2005.

8- Hesham W. Gomma, Ahmed S. Aly and **Ahmed M. El-Garhy**, " Derivative Derived Generalized Predictive Control (DDGPC) For Unreliable Communication Links In Networked Control Systems ", **Journal of Engineering Science**, **Faculty of Engineering**, **University of Assuit**, Vol. 33-Number 6, PP. 2245- 2255, Nov. 2005.

9- Mohamed I. El-Adawy, **Ahmed M. El-Garhy**, Hesham W. Gomma and Besada A. Anees, " Development of Neuro-Fuzzy Scheme for Detecting, Identifying and Classifying Multiple Failures in Sensors ", **Alexandria Engineering Journal**, **Faculty of Engineering**, **Alexandria University**, Vol. 45, No. 2, PP. 185- 196, March 2006.

10- H. T. DORRAH, **A. M. EL-GARHY** and M. E. EL-SHIMY, " Decoupling of MIMO Process Using Particle Swarm Optimization Technique ", **Ain Shams Engineering Journal**, **Faculty of Engineering**, **Ain Shams University**, Vol.41- No. 1, Part II, Electrical Engineering, PP. 719- 748, March 31, 2006.

11-A. M. EL-GARHY and M. E. EL-SHIMY, " Development of Decoupling Scheme for High Order MIMO Process Based on PSO Technique ", **APPLIED INTELLIGENCE: The International Journal of Artificial Intelligence, Neural**

Network and Complex Problem-Solving Technologies , Vol. 26- No. 3, PP. 217-229, June 2007.

12- A. T. Azer, A. H. Kandil, K. M. Wahba, **A. M. Elgarhy** and W. A. Massoud," NEURO-FUZZY SYSTEM FOR POST-DIALYSIS UREA REBOUND PREDICTION ", **Proceedings of IEEE 4th Cairo International Biomedical Engineering Conference , CIBEC'08, Cairo, Egypt**, PP. 1-5, 18-20th December 2008.

13- **A. M. EL-GARHY,** E. M. KONSOWA, "Collision-Free Path Planning Algorithm For Two-Link Robotic Arm Based On Geometric Modeling"**, Journal of Engineering and Applied Science, Faculty of Engineering, Cairo University,** Vol. 55-Number 6, PP. 513 - 529, December. 2008.

14- A. A. LASHEEN, **A. M. EL-GARHY**, E. M. SAAD and S. M. EID, "Development of Decoupling Scheme for Higher Order MIMO Process Based on Hybrid Genetic and Nelder-Mead Algorithm", **Proceedings of the 11th WSEAS International Conference on Automatic Control, Modelling and Simulation (ACMOS' 09), Istanbul, Turkey**, PP. 544-556, May 30- June 1, 2009.

15- Atef A. Lasheen, **Ahmed M. El-Garhy**, Elsayed M. Saad, and Saad M. Eid, " Using hybrid genetic and Nelder-Mead algorithm for decoupling of MIMO systems with application on two coupled distillation coloumns process ", **International Journal of Mathematics and Computers in Simulation**, Issue 3, Volume 3 PP. 146-157, 2009.

16- A. A. Lasheen, **A. M. El-Garhy**, E. M. Saad, and S. M. Eid**, "**Tuning PID controllers using hybrid genetic and Nelder-Mead Algorithm"**, Journal of Engineering Science, Faculty of Engineering, University of Assuit**, Vol. 38-Number 4, PP. 979- 987, July 2010.

17- Hassen. T. Dorrah, **Ahmed M. El-Garhy**, and Mohamed M. El-Shimy, "Design of PSO-based optimal fuzzy PID controllers for the two-coupled

distillation column process", **Proceedings of the 14th International Middle East Power Systems Conference (MEPCON'10), Cairo University**, Egypt, PP. 181-188, December 19-21, 2010.

18- S. M. Rashad, F. Z. Amer, **A. M. El-Garhy**, M. Awadalla, and A. K. Abdien, "Development of thermal hydraulic mathematical model and faults analysis of (UTSG) of PWR, **Arab Journal of Nuclear Science and Applications,** Vol. 44-Number 1, PP. 286- 294, January 2011.

-19 Fathy Z. Amer, **Ahmed M. El-Garhy**, Medhat H. Awadalla, Samia M. Rashad, and Asmaa K. Abdien, "A real-valued genetic algorithm to optimize the parameters of support vector machine for classification of multiple faults in NPP", **NUKLEONIKA**, Vol. 56-Number 4, PP. 323-332, October 2011.

MEMBERSHIPS IN NATIONAL COMMITTEES

- Member in national committee for the development of national skill standards of electronics trades, Federation of Egyptian Industries.

REFERENCES

- Prof. Dr. Mohamed Ahmed El-Garhy

  Former vice chairman of Atomic Energy Authority.

  Nuclear Research Center, Atomic Energy Authority.

- Prof Dr. Hasan Taher Dorrah

  Electrical Power and Machines Dept.

  Faculty of Engineering, Cairo University, Giza, Egypt.

- Prof. Dr. Mohamed Ibrahim El-Adawy

  Electronics, Telecomm. and Computer Engineering Dept.

  Faculty of Engineering, Helwan University.