

## **CURRICULUM VITÆ OF**



## **PROFESSOR MAGDI S. MAHMOUD**

**Part I: Academic Career up to 09/2007**

**Part II: Academic Career from 09/2007**

**Part III: List of Publications**

# Part I: Academic Career Up to 09/2007

## PRESENT POSITION

Visiting Professor  
Systems Engineering Dept,  
King Fahd University for Petroleum and Minerals,  
PO Box 985, Dhahran 31261  
Saudi Arabia

Office: (+966)-3-860-7516  
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Email: [msmahmoud@kfupm.edu.sa](mailto:msmahmoud@kfupm.edu.sa)  
[magdim@yahoo.com](mailto:magdim@yahoo.com)

**Nationality:** Egyptian

**Birth Date:** April 5, 1948

**Marital Status:** Married, Three Children (Two Sons and Daughter)

## PERMANENT RESIDENCE

(Home): (+202) 3760-3980 / 3761-4540

(Mobile): (+2010)-5470500, (Fax): (+202) 3761-8260

(Email): [magdim@yahoo.com](mailto:magdim@yahoo.com), [goudims@gmail.com](mailto:goudims@gmail.com), [magdism@uaeu.ac.ae](mailto:magdism@uaeu.ac.ae)

(Home Address): 43 Sheikh Mohamed Al-Ghazzaly Street, Facing Shooting Club, Fifth Floor, Dokki-Giza, **Egypt**, Post Code 12311.

## EDUCATION

- **Ph.D.** in Systems Engineering, Cairo University, Egypt November 1974. **Thesis:** "New Computer-Aided Techniques for Large Scale Systems with Optimum Performance", **Major:** *Computer Control Systems*, **Minor:** *Computing and Applied Mathematics*.
- English Language Proficiency Program, English Language Institute, the American University in Cairo, Egypt, February - June 1973.
- **M. Sc.** in Electronic Engineering, Cairo University, Egypt, May 1972. **Thesis:** "Evaluation of Surface Parameters in Thermally Grown Oxidized Silicon". **Major:** *Electronic Engineering*, **Minor:** *Electron Devices*.
- A Special One-Year Program in Computer Engineering and Simulation, Institute of Statistical Studies and Researches, Cairo University, EGYPT, September 1971 - July 1972.
- **B.Sc.** (Honors) in Electrical Communications Engineering, Cairo University, Egypt, July 1968.

## PROFESSIONAL SOCIETIES

- **Fellow**, Institution of Electrical Engineers (IEE), UK.
- **Senior Member**, Institute of the Electrical and Electronic Engineers (IEEE), USA.
- **Member**, Council of Engineering Institutions, UK.
- **Member**, Egyptian Engineers Society, EGYPT.
- **Member**, Kuwaiti Engineers Society, KUWAIT.
- **Member**, Operations Research Society of Egypt, Egypt.
- **Member**, Sigma XI, USA.
- **Member**, National Academy of Sciences, New York, USA.

## **EMPLOYMENT RECORD**

- **9/2007-6/2009:** Visiting Professor, KFUPM, Dhahran, Saudi Arabia.
- **9/2006-6/2007:** Adjunct Professor, Graduate Studies Program, Cairo University, Giza, Egypt.
- **2/2007-6/2007:** Adjunct Professor, High Institute of Engineering, Al-Shorouk Academy, Egypt.
- **9/2006-2/2007:** Adjunct Professor, Institute of Aviation Engineering & Technology, Giza, Egypt.
- **5/2006-6/2006:** Visiting Professor, Ecole Polytechnique de Montreal, Montreal, Canada.
- **7/2004-2/2006:** Founding Dean, Canadian International College, New Cairo City, Egypt.
- **8/2002-7/2004:** Professor of Electrical Engineering, UAE University, Al-Ain, UAE.
- **10/2001-12/2001:** Visiting Professor, Department of Mathematics, University of South Australia, Adelaide, Australia.
- **7/2001-12/2001:** Professor of Engineering, Arab Academy for Sciences and Technology, Cairo, EGYPT.
- **9/2000-7/2001:** Dean of Engineering and Professor of Electrical Systems Engineering, October University for Modern Sciences and Arts, Giza, Egypt.
- **9/1997-9/1998:** Visiting Professor of Systems Engineering, School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore.
- **9/1991-9/1997, 9/1998-9/2000:** Professor of Systems Engineering and Coordinator of the Systems Control Group, Kuwait University, Kuwait.
- **9/1990-9/1991:** Professor of Systems Engineering and Coordinator of the Systems Control Group, Cairo University, Egypt.
- **9/1989-9/1990\*:** Professor of Electrical and Computer Engineering and Coordinator of the Systems Control Group, Kuwait University, Kuwait.
- **9/1988-9/1989\*:** Manager of Applied Systems Department and Senior Research Scientist, Kuwait Institute for Scientific Research, Kuwait.
- **1/1986-9/1988\*:** Professor of Systems Engineering and Coordinator of the Systems Control Group, Cairo University, Egypt.
- **11/1984-1/1986\*:** Professor of Systems Engineering, Kuwait University, Kuwait.
- **9/1981-11/1984\*:** Associate Professor of Systems Engineering, Kuwait University, Kuwait.
- **6/1980-9/1981\*:** Lecturer, Control Systems Center. University of Manchester Institute of Science and Technology, UK.
- **9/1977-6/1980:** Associate Professor of Systems Engineering, Cairo University, Egypt.
- **12/1976-7/1977:** Visiting Assistant Professor of Systems Engineering, Systems Research Center, Case Western Reserve University, USA.
- **9/1975-12/1976:** Visiting Assistant Professor of Systems Engineering, University of Pittsburgh, USA.
- **11/1974-9/1975:** Assistant Professor of Systems Engineering, Cairo University, Egypt.
- **4/1971-11/1974:** Instructor of Electronics and Communications Engineering, Cairo University, Egypt.
- **7/1968-4/1971:** Instructor of Electrical Engineering and Mathematics. Al-Azhar University, Egypt.

**\* On leave of absence from Cairo University, EGYPT till 9/1992.**

## **HONORS & AWARDS**

- Winner of a Cairo University Financial Award for Engineering Studies, (1963-1968), Egypt.
- Recipient of the **SCIENCE STATE INCENTIVE PRIZE** for outstanding research in engineering, (1978), Egypt.
- Recipient of the **STATE MEDAL FOR SCIENCE AND ART**, First Class, (1978), Egypt.
- Listed in the Annual Edition of **WHO'S WHO IN TECHNOLOGY TODAY**, Pittsburgh, (1979), USA.
- Recipient of the **ABDULHAMED SHOWMAN PRIZE** for Young Arab Scientists in the field of Engineering Sciences, (1986), Jordan.
- Recipient of the **SCIENCE STATE INCENTIVE PRIZE** for outstanding research in engineering, (1986), Egypt.
- Recipient of the **STATE DISTINCTION AWARD**, (1986), Egypt.
- Recipient of the **DISTINGUISHED ENGINEERING RESEARCH AWARD**, College of Engineering and Petroleum, Kuwait University, (1992), Kuwait.

## **TEACHING UNDER-GRADUATE COURSES**

Electrical Engineering Fundamentals, Electronic Devices, Electronic Circuits, Electromagnetics, Network Analysis, Network Synthesis, Digital Systems, Digital Electronics, Electronic Measurements, Linear Systems Analysis, Systems Engineering, Optimization Techniques, Industrial Control, Probability and Statistics, Communication Theory, Computer Programming Languages (FORTRAN, BASIC, C, PASCAL), Digital Control, Engineering Mathematics, Numerical Analysis, Performance Modeling, Control Theory, Power Electronics, Matrix Algebra, Power Systems Control, Differential Equations in Biology, Digital Signal Processing, Numerical Methods, Modern Control Design, Signals and Systems.

## **INVITED TALKS**

- Invited Speaker to GERAD, Ecole Polytechnique de Montreal, Montreal, Canada, May 2006.
- Invited Speaker to the IEEE Chapter, Montreal, Canada, June 2006.
- Keynote Speaker to the third Workshop on Industrial Systems and Control (WISC04), Saudi Arabia, May 2004.
- Invited Speaker to the Department of Applied Mathematics, University of South Australia, Adelaide, February 2002.
- Keynote Speaker to the second Workshop on Applications of Control Systems, Kuwait Foundations for Advancement of Science, Kuwait, November 2000.
- Invited Speaker to the Fifth European Control Conference (ECC 99), Germany, August 31-September 3, 1999.
- Invited Speaker to the Institute of Automatic Control, University of Hanover, Germany, August 1990.
- Keynote Speaker to the World Congress on Systems, Caracas, Venezuela, July 1983.

## TEACHING POST-GRADUATE COURSES

Information Theory, Linear Systems Theory, Nonlinear Control Systems, Linear Stochastic Control, Systems Identification, Optimal Control, Large Scale Systems, Adaptive Control, Computer Control, Robust and Optimal Control, Nonlinear Control, Stable Adaptive Systems.

## NEW COURSES

- **Large Scale Systems** (ECE 575, 3 credit hrs) first taught in fall 1985. A graduate-level course developed to provide students with a background and knowledge of an important class of systems: large-scale systems Emphasis placed on theoretical aspects and typical case studies.
- **Industrial Control** (ECE 475, 3 credit hrs) first taught in fall 1989. A senior-level course developed to expose students to different control strategies and CAD facilities for industrial processes.
- **Adaptive Process Control** (ECE 579, 3 credit hrs) first taught in spring 1992. A graduate-level course developed to equip students with basic principles and techniques of adaptive control applied to industrial processes.
- **Intelligent Control Systems** (ECE 595, 3 credit hrs) first taught in spring 1995. A graduate-level course developed to equip students with fundamentals and basic concepts of expert systems, fuzzy logic and artificial intelligent in the context of systems engineering.

## INTENSIVE COURSES OFFERED

- |   |                                    |
|---|------------------------------------|
| ◇ Introduction to MATLAB with Applications                      | Intelligent Instrumentation        |
| ◇ Computer-Based Process Control                                | Fundamentals of Industrial Control |
| ◇ Computer, Communication and Control (C3) Systems Measurements | Sensors, Actuators and Control     |

## INFORMAL COURSES ATTENDED

- |                                  |                                |
|----------------------------------|--------------------------------|
| ◇ Introduction to Microeconomics | Introduction to Macroeconomics |
| ◇ Operations Management          | Manpower Planning              |
| ◇ Basics of National Accounting  | Economic Development           |
| ◇ International Trade            |                                |

## INSTITUTIONS

- ⇒ Al-Azhar University, Egypt
- ⇒ Cairo University, Egypt
- ⇒ University of Pittsburgh, USA
- ⇒ Case Western Reserve University, USA
- ⇒ University of Manchester Institute of Science and Technology, UK
- ⇒ The American University in Cairo, Egypt
- ⇒ National Institute of Planning, Egypt
- ⇒ The Egyptian Air Academy, Egypt
- ⇒ Kuwait University, Kuwait

- ⇒ Nanyang Technological University, Singapore
- ⇒ October University for Modern Sciences & Arts, Egypt
- ⇒ Arab Academy for Sciences and Technology, Egypt
- ⇒ UAE University, United Arab Emirates
- ⇒ Canadian International College, Egypt
- ⇒ Ecole Polytechnique de Montreal, Montreal, Canada.
- ⇒ Institute of Aviation Engineering & Technology, Giza Egypt
- ⇒ High Institute of Engineering, Al-Shorouk Academy, Egypt.
- ⇒ King Fahd University of Petroleum and Minerals, Saudi Arabia.

## **RESEARCH ACTIVITIES & CONSULTANCIES**

- **1974-1975:** "Research Associate" at the socioeconomic systems group, Computer Center, The American University in Cairo, Egypt. Worked on dynamic modeling and systems analysis of socioeconomic and demographic systems.
- **1975:** "Research Associate" at the world energy modeling group, The Institute of National Planning, Cairo, Egypt. Worked on global modeling and performance analysis of the Mesarovic-Pestel system approach with emphasis on Egypt and the Middle-East region.
- **1976:** "Research Associate" at the computer-energy modeling group, University of Pittsburgh, USA. Worked on software development and policy analysis of energy- related Projects
- **1977:** "Research Associate" at the Systems Research Center, Case Western Reserve University, USA. Developed a three-level hierarchical system structure for systems analysis and decision making of inter-regional systems with global dynamics.
- **1978:** "Senior Research Associate" at the educational and manpower planning group, Computer Center, The American University in Cairo, Egypt. Developed multiple-objectives dynamic models for the pre-university educational system, schooling strategies and manpower planning.
- **1977-1978:** "Consultant" to (ILLACO-HIP-CEAT) for regional planning and socioeconomic development programs for the creation and establishment of New American City, EGYPT. Developed a DYNAMO-based software package for initialization and comprehensive socioeconomic development, demand activities and town planning.
- **1978-1980:** "Co-Principal Investigator" of the project of scientific manpower needs for Egypt till the year 2000 sponsored by the Academy of Scientific Research and Technology, Egypt and the Environmental Protection Agency, USA. Developed a dynamic model to predict the manpower needs by scientific sector and forecast the associated social costs.
- **1979-1980:** "Senior Research Associate" at the water quality studies on the River Nile and Lake Nasser project, sponsored by the Academy of Scientific Research and Technology, Egypt and the Environmental Protection Agency, USA. Developed mathematical models and software packages for water policy management for single and multiple-reaches of the River Nile.
- **1979:** "Consultant" to ARETO, EGYPT for performance modeling and assessment of the Telecommunications Research Center, Cairo, Egypt. Developed mathematical model and software package for the evaluation and performance patterns of the telecommunication sector in Egypt.
- **1979-1980:** "Consultant" to the communication needs for the rural development project, sponsored by (Cairo University/MIT), Technological Planning Program, Cairo, Egypt. Participated in the development of mathematical model and software package for the

clustering and socioeconomic patterns of the communication requirements in the rural areas of Egypt.

- **1980-1981:** "Consultant" to SHELL Carrington, UK for modeling and dynamic optimization of the utilities system, UK. Participated in the development of mathematical model and software package for the energy management of Shell utilities in UK.
- **1981-1984:** "Principal Investigator" of the project on Approximate Feedback Design of Complex Systems, sponsored by Kuwait University Research Administration, Kuwait. Develop mathematical models, designed feedback controllers and created a user-friendly software package based on reduced-order representation of interconnected and complex dynamical systems.
- **1986-1988:** "Senior Consultant" to the Cairo University Energy Research Center for the supply-demand alternatives in Egypt. Developed mathematical models and data-base management for the evaluation of energy supply-demand alternatives in Egypt.
- **1986-1988:** "Senior Consultant" to ISMAC, a Technical Consulting Firm in Egypt, for the development of management information systems to: **a.** the public sector authority for food-stuffs and refrigeration. **b.** the faculty of medicine at Suez Canal University. **c.** The national postal organization. Managed the development of management information systems for different societal organizations.
- **1986-1988:** "Senior Consultant" to the National Institute of Telecommunications, Egypt. Managed the research activities of system analysis and computer networking group.
- **1986-1988:** "Senior Consultant" to Tele-media Arabia Inc., An International Firm, for the development of computer engineering curricula at the Egyptian Air Academy, Egypt. Participated in the development of course syllabus of computer engineering curricula and in the teaching of software engineering and systems analysis courses.
- **1989-1990:** "Member" of the Office of Consultative Studies and Research (OCSR), Ministry of Electricity and Water (MEW), Kuwait. Participated in the development of national short-term load forecast and the plan projection of new power stations to meet population growth and increased future demands.
- **1989-1990:** "Senior Consultant" to the Engineering Division, Kuwait Institute for Scientific Research, Kuwait. Managed the research activities and system analysis of energy-related projects.
- **1993-1996:** "Senior Consultant" to the Systems and Control Department, Kuwait Institute for Scientific Research, Kuwait. Managed the research activities and system analysis of computer control projects in the oil refineries.

## **EDUCATIONAL DEVELOPMENTS**

- **1982-1985:** Member of the planning committee at the college of engineering and petroleum, Kuwait University for the development of undergraduate and postgraduate engineering curricula, KUWAIT.
- **1986-1988:** Member of the steering committee of the Computer Department, The American University in Cairo for the formation of professional diploma of computer studies, EGYPT.
- **1986-1988:** Member of the planning group of engineering division, Egyptian Air Academy for the design of study guide courses syllabus and lab manuals of computer engineering courses, EGYPT.
- **1990-1991:** Member of the postgraduate committee in control and systems engineering, Cairo University, EGYPT.
- **1991-1993:** Member of the academic promotion and recruitment committees at the department/college / university levels, Kuwait University, KUWAIT.

- **1993-1996:** Member of the academic planning committee at the department/college levels, Kuwait University, KUWAIT.
- **1996-1997:** Member of the research committee at the college level, Kuwait University, KUWAIT.
- **1999-2000:** Coordinator of the academic planning committee at the department level and member of the college committee, Kuwait University, KUWAIT.
- **2002-2003:** Member of the research, curriculum and promotion committees at the department level and member of the college promotion committee, UAE University, UAE.
- **2004-2006:** Chairman of the curriculum and academic planning committees at the Canadian International College, Egypt.

## **INTERNATIONAL PROFESSIONAL MEETINGS**

- **1976-1977:** Associate Editor of the Seventh and Eighth Annual Modeling and Simulation Conference, University of Pittsburgh, USA.
- **1978:** Associate Editor of the Second Workshop on Demographic Aspects of Development Planning, The American University in Cairo, EGYPT.
- **1981-1984:** Vice-Chairman of the IFAC SECOM Working Group of Large Scale Systems Methodology and Applications.
- **1982-1984:** Counselor of the IEEE student Branch at Kuwait University, KUWAIT.
- **1985:** Member of the International Program Committee (IPC) of the IFAC Workshop on Automatic Control Applications in Petrochemical and Desalination Industries, KUWAIT.
- **1988:** Member of the International Program Committee (IPC) of the Second International Workshop on Methodologies and Applications of Complex System Theory to Communication and Computer Networks, Cairo-EGYPT.
- **1992:** Member of the International Program Committee (IPC) , the Fourth International Symposium on Robotics and Manufacturing, Santa Fe, New Mexico, USA.
- **1994:** Member of the Program Sessions Committee (PSC), the Third International Conference on Automation, Robotics and Computer Vision, SINGAPORE.
- **1998:** Member of the International Advisory Committee (IAC), the Fifth International Conference on Control, Automation, Robotics and Vision (ICARCV), SINGAPORE.
- **1998:** Member of the International Program Committee (IPC), the Third European Robotics, Intelligent Systems and Control (EURISCON), GREECE.
- **2000:** Member of the International Advisory Committee (IAC), the Sixth International Conference on Control, Automation, Robotics and Vision (ICARCV), SINGAPORE.
- **2006:** Member of the International Program Committee (IPC), the First International Symposium on Systems and Control in Aerospace and Astronautics (ISSCAA), Herbine, CHINA.

## **PROFESSIONAL JOURNALS**

- **1985-1988:** Associate Editor of the Large Scale Systems Theory and Applications Journal, NORTH HOLLAND.
- **1985-1990:** Editor-at-Large of the Electrical Engineering and Electronics Series, MARCEL-DEKKER, Inc., USA.
- **1997-NOW:** Associate Editor of the International Journal of Parallel and Distributed Systems and Networks, IASTED.
- **2004-NOW:** Member of the Advisory Board of the Mediterranean Journal of Measurement and Control.



- **2004-NOW:** Member of the Board of International Editorial Advisors of ‘Scientific Inquiry’ Journal.
- **2004-NOW:** Associate Editor of the International Journal of Innovative Computing, Information and Control (IJICIC).
- **2006-NOW:** Member of the Editorial Board of Trends in Applied Sciences Research publication.
- **2006-NOW:** Member of the Editorial Board of the Journal of Mathematical Control Science and Applications (JMCSA).
- **2007-NOW:** Regional Editor (Middle East and Africa), International Journal of Systems, Control and Communications (JSCC), INDERSCIENCE Publishers.

## **FUNDED RESEARCH GRANTS**

- **1977:** Fund acquired from Academy of Scientific Research and Technology, Egypt (Modeling the Lake Nasser Ecosystem). Duration: 1.5 years - **EL 80,000.**
- **1981:** Kuwait University Research Administration, Kuwait (Approximate Methods for the control of Complex Systems); Assistant Support: 1 Research Assistant. Duration: 1 year. - **KD 11,000.**
- **1982:** Kuwait University Research Administration, Kuwait (Hierarchical Modeling of Oil Refinery: A Pilot Study). Duration: 1/2 year. - **KD 4,000.**
- **1987:** Energy Research Center, Cairo University, EGYPT (Simulation Modeling of the National Energy System); Student Support: 1 M. Sc. Student. Duration: 1.5 years. - **EL 30,000.**
- **1988:** Kuwait Institute for Scientific Research, Kuwait (Coordinated Robotic Systems); Assistant Support: 1 Research Assistant. Duration: 1 year. - **KD 6,000.**
- **1988:** Kuwait Institute for Scientific Research, Kuwait (An Integrated Model for Flexible Manufacturing Systems); Assistant Support: 2 Research Assistants. Duration: 2 years. - **KD 21,000.**
- **1989:** Kuwait Institute for Scientific Research, Kuwait (Decentralized Water Pollution Control); Assistant Support: 2 Research Assistants. Duration: 2 years. - **KD 30,000.**
- **1989:** Kuwait University Research Administration, Kuwait (Computer-Control of Production Systems); Assistant Support: 2 Research Assistants. Duration: 2 years.- **KD 40,000.**
- **1990:** Kuwait University Research Administration, Kuwait (Adaptive Control of Nonlinear Systems with Applications to Robotics); Assistant Support: 2 Research Assistants and 1 M. Sc. student. Duration: 3 years. - **KD 52,000.**
- **1991:** Kuwait University Research Administration, Kuwait (Design of Intelligent Controllers); Student Support: 1 M. Sc. student Duration: 1/2 year. - **KD 5,200**
- **1993:** Kuwait University Research Administration, Kuwait (Design of Reliable Controllers for Industrial Processes); Assistant Support: 2 Research Assistants. Duration: 3 years. - **KD 40,000.**
- **2003:** Research Affairs, UAE University, UAE (Design of Controllers for Jumping Time-Delay Systems); Assistant Support: 2 Research Assistants. Duration: 1 year. - **DH 21,000.**
- **2003:** Research Affairs, UAE University, UAE (Robust Design Consideration of Desalination Plants); with Prof. Abdulla Ismail, Assistant Support: 2 Research Assistants. Duration: 1 year. - **DH 26,000.**
- **2007:** Deanship of Scientific Research, King Fahd University of Petroleum and Minerals, Saudi Arabia, (Improved Stabilization Methods for Dynamical Systems with State and Input Delays); with Prof. Fouad AL-Sunni, Assistant Support: 2 Research Assistants. Duration: 1 1/2 years, - **SR 72,960.**

- **2007:** Deanship of Scientific Research, King Fahd University of Petroleum and Minerals, Saudi Arabia, (Robust State Estimation for Uncertain Systems: A Comparative Investigation); with Prof. Hosam E. Emara-Shabaik, Assistant Support: 2 Research Assistants. Duration: 2 years.- **SR 82,800.**

## **THESES & DISSERTATIONS**

### **Master of Science Theses**

- "Feedback Control Design via Order-Reduction Techniques", By Mihra Mohamed Salama, Cairo University, January 1980.
- "Closed-Loop Control and Stabilization of Multi-area Power Systems", By Faten Hosny Fahmy, Cairo University, April 1980.
- "Circuit Design Using Dynamic Optimization", By Salwa Mohamed El-Said, Cairo University, May 1980.
- "Power System Control: Hierarchical Approach", By Mohie El-Din Azzam, Assiut University, April 1980.
- "Control Modeling and Optimization of the National Economy", By Magdi Tawfiq Hanna, Cairo University, May 1980.
- "Decentralized Optimization by Nonlinear Control Applied to Guidance Systems", By Hassan Mahgoub, Military Technical College (Cairo), July 1980.
- "The Multiple Projection Algorithm for Parameter Estimation in Large-Scale Systems", By Michael P. Spathopoulos, UMIST Control Systems Center, March 1981.
- "Microcomputer Modeling and Simulation with Application to Energy Systems", By Ahmed M. El-Dieb, Cairo University, February 1988.
- "Digital Control of Electric Drives", By Kamel A. Rahoumat, Cairo University, March 1988.
- "Knowledge-Based Control Systems", By Ahmed A. Abou-Elsoud, Cairo University, December 1988.
- "Optimal Variable Structure Controller for Multivariable Systems", By Mahmoud M. Abdel-Karim, Cairo University, July 1989.
- "Adaptive Design Methods for the Control of Robotic Manipulators", By Magda A. Al-Daghistani, Cairo University, June 1991.
- "Priority Analysis in Queuing Systems", By Khalid Farouk Abdel-halim, Cairo University, April 1992.
- "Adaptive and Robust Control of Robotic Manipulators", By Husam Y. Hajeer, Kuwait University, June 1992.

### **Doctor of Philosophy Dissertations**

- "Adaptive Alternative Routing in Telephone Networks", By Hany M. ElSayed, Cairo University, May 1988.
- "Stabilization and Control of Partially-Known Dynamical Systems", By Ahmed A. Bahnasawi, Cairo University, May 1988.
- "Expert System Approach to Control Engineering Design", By Rashad H. Abdel-Rahman, Cairo University, January 1989.
- "Interactive Computer-Assisted Techniques for Modeling and Control of Multivariable Systems", By Fathi A. Saleh, Cairo University, July 1990.

- "Dynamic Algorithms for Scheduling in Computer Networks", By Hanan A. Kamal, Cairo University, April 1991.

## **ADMINISTRATIVE MANAGEMENT**

- \* Academic Coordinator of the systems engineering group at Kuwait University, **Kuwait**, over the period (1984-1999), leads and oversees the academic affairs of the group as well as develops and monitors the implementation of an academic strategic plan that includes performance objectives and key initiatives of the EE control faculty.
- \* Head of the Applied Systems Department of KISR, **Kuwait**, (1988-1989), provides effective leadership in developing and managing policies while working with a multitude of constituencies as well as refining and articulating the overall strategy for the department including attention to different research styles and ensure an effective delivery process.
- \* Dean of Engineering at MSA University, **Egypt**, (2000-2001), developing and administering all aspects of the academic affairs budget, attracting and retaining outstanding and diverse faculty and academic staff as well as aligning and developing the educational team and providing instructional leadership.
- \* Founding Dean of the Canadian International College (CIC), **Egypt**, (2004-2006), servicing in a leading role in coordinating the CIC academic policy and objectives, responsible for delivery of all academic programs and requirements, facilitating and implementing initiatives designed to continuously improve the quality of teaching, learning and curricular programs in the college (both engineering and business programs), reviewing departmental recommendations relative to issues as new appointments, performance evaluations, and promotion and over-viewing the academic work of instructors and professors.

## **ACADEMIC MANAGEMENT**

Chairperson of planning and academic development committees at worldwide institutions to upgrade the course syllabi, establish guidelines for new programs and maintain high quality education. The institutions include

- Cairo University, **Egypt**, (1971-1975, 1977-1980, 1986-1988)
- The American University in Cairo, **Egypt**, (1973-1980)
- Arab Academy for Sciences and Technology, **Egypt**, (2001-2002)
- Nanyang Technological University, **Singapore**, (1997-1998)
- UAE University, Al-Ain, **United Arab Emirates**, (2002-2004)

## EDUCATIONAL DEVELOPMENTS

- Planned and developed Canadian-based curricula for undergraduate studies in engineering as well as business administration and business technology at CIC, **Egypt**, (2004-2006).
- Participated in the development of ABET-format educational programs at Kuwait University (1989-1999) and UAE University (2002-2004).
- Led a team of experts for the design of course syllabus and documentation of undergraduate and postgraduate engineering studies at the Egyptian Air Academy, **Egypt**, (1986-1988)
- Chaired a technical group for the preparation and provision of customized training programs to various engineering and management institutions through C-Group Technical Consultants.

## PROFESSIONAL ACHIEVEMENTS

- The principal author of twenty (**20**) books, inclusive book-chapters and the author/co-author of more than **400** peer-reviewed papers.
- The recipient of the 1978, 1986 *Science State Incentive Prizes* for outstanding research in engineering (**Egypt**); the 1986 *Abdul-Hameed Showman Prize for Young Arab Scientists* in engineering sciences, (**Jordan**) and the 1992 *Prestigious Award for Best Researcher* at Kuwait University, (**Kuwait**).
- Holder of the *State Medal of Science and Arts-first class*, 1979 (**Egypt**) and *the State Distinguished Award-first class*, 1995 (**Egypt**).
- Listed in the 1979 edition of *Who's Who in Technology Today* (**USA**), was vice-chairman of IFAC-SECOM working group on large-scale systems methodology and applications (1981-1986), an associate editor of *Large Scale Systems Journal* (1985-1988) and editor-at-large of the *EEE series*, Marcel-Dekker, **USA**.
- An associate editor of the *International Journal of Parallel and Distributed Systems of Networks*, IASTED, since 1997 and an Associate Editor of the *International Journal of Innovative Computing, Information and Control* (IJICIC) since 2004 and a member of the Editorial Board of *Trends in Applied Sciences Research* publications since 2006.
- A founding member of the Managerial Advisory Board of the *Mediterranean Journal of Measurement and Control* (MJMC) since 2004 and a member of the Board of International Editorial Advisors of 'Scientific Inquiry' Journal since 2005.
- A member of the New York Academy of Sciences, a fellow of the IEE, a senior member of the IEEE, a member of Sigma Xi, CEI (**UK**), Egyptian Engineers society, Kuwait Engineers society and a registered consultant engineer of information engineering and systems (**Egypt**).

## Part II: Resume From 09/2007

| Semester | Graduate   | Undergraduate                 |
|----------|--|-------------------------------|
| 071      | SE 514 Optimal Control                                     | SE 301 Numerical Methods      |
| 072      | SE 517 Nonlinear Control                                   | SE 435 Control Systems Design |
| 081      | SE 537 Adaptive Control                                    | CISE 315 Signals and Systems  |
| 082      | SE 517 Nonlinear Control<br>SE 650 Robust Feedback Control |                               |
| 091      | SE 509 Large Scale Systems<br>SE 514 Optimal Control       | SE 301 Numerical Methods      |

### A1-Teaching

Has taught two courses every semester and seven out of eight courses are distinct.  
The courses are tabulated above

### A2- KFUPM Funded Projects

**1-** “IMPROVED STABILIZATION METHODS FOR DYNAMICAL SYSTEMS WITH STATE AND INPUT DELAYS”

(as PI with Dr Fouad AL-Sunni as Co I. The duration of the project is 18 months-till October 2009)

**2-** “ROBUST STATE ESTIMATION FOR UNCERTAIN DESCRIPTOR SYSTEMS”

(As Co I with Dr Hosam E. Emara-Shabaik as PI. The duration of the project is 24 months, till April 2010)

**3-** “SWITCHED TIME-DELAY SYSTEMS”

(Sole author of book-writing with duration of 12 months. The book will be published by Springer, USA.)

**4-** DECENTRALIZED CONTROL AND FILTERING WITH LIMITED COMMUNICATIONS

(As sole author with duration of 18 months, from September 2009 till March 2011)

### A3-Graduate Student Supervision

So far, four (4) students are working with me for their M. Sc. Thesis. Three (3) have completed the thesis defense (One sole supervisor and two co-supervisor with Dr Sami Al-Ferik) and the fourth will defend his thesis in December 2009. There will be two Ph. D. candidates co-supervised with Dr Fouad AL-Sunni.

### A4-Research

The following papers have been developed and finalized since joining KFUPM.

## 1) Supported by Research Project IN080404

1. E. K. Boukas and **Magdi S. Mahmoud**, "A Practical Approach to Control of Nonlinear Discrete-Time State-Delay Systems", Journal of Optimal Control Applications and Methods, Vol. 28, No. 5, December 2007, pp. 397-417.
2. **Magdi S. Mahmoud**, and N. B. Almutairi, "Improved Resilient Filtering for Linear Discrete-Time Systems", Journal of Mathematical Control Science and Applications, Vol. 1, No. 2, December 2007, pp.351-364.
3. **Magdi S. Mahmoud**, P. Shi and Y. Shi, "Simultaneous  $H_2/H_{\infty}$  Control of Uncertain Jumping Systems with Functional Time-Delays", International Journal of Robust and Nonlinear Control, Vol. 18, No. 3, February 2008, pp. 296-318.
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## A5-Academic Invitations

- 1- Texas A & M University-Qatar, Electrical Engineering Department, April 23-30, 2009
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## Part III: Publications Up to 09/2007

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355. **Magdi S. Mahmoud**, and Abdulla Ismail, "Adaptive Schemes for a Class of Time-Delay Systems", Submitted to Automatica.
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357. **Magdi S. Mahmoud**, "Markovian Jumping Systems with Mode-dependent State-Delay", Submitted to IEEE Transactions Automatic Control.
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