

RESUME

PERSONAL DATA

Name: MOHAMED RIZK MOHAMED RIZK
Position: Associate Professor
email: mrmrzk@alex.edu.eg
mrmrzk@ieee.org

Phone number: 0101545412
Languages: Arabic, English and French
Business Address: Electrical Engineering Department
Faculty of Engineering
Alexandria University
Hadara, Alexandria 21544

EDUCATION

Alexandria University, Egypt

<u>Year</u>	<u>Award</u>	<u>Faculty</u>	<u>Subject</u>
1971	B.Sc.(Hon.)	Engineering	Elect. Eng.

McMaster University, Canada

<u>Subject</u>	<u>Year</u>	<u>Award</u>	<u>Faculty</u>	
	1975	M.Eng.	Engineering	Elect. Eng.
	1979	Ph.D.	Engineering	Elect. Eng.

M.Eng. Thesis

Efficient simulation of networks for amplitude and delay optimization in the frequency domain, 1975.

Ph.D. Thesis

Advances in simulation and optimization of electrical networks, 1979.

AWARDS

Egyptian Government Award (Sept. 1966 - June 1971)
Assistantship McMaster University (Sept. 1973 - Dec. 1978)
Natural Sciences and Engineering Research Council of Canada
Postdoctoral Fellowship (1979).

Professional Memberships

Student member IEEE (1975), Member IEEE (1979), Senior Member IEEE (1992), Engineering Syndicate of Egypt (1971)

EXPERIENCE

- (1) Summer Training: Standard Telephone and Cables, London, England**
Dates: Summer 1968
- (2) Summer Training: Sulzer's Brothers Electrical Department, Winterthur, Switzerland**
Dates: Summer 1970
- (3) Department of Engineering Physics and Mathematics, Faculty of Engineering, Alexandria University**
Dates: Sept. 1971 - June 1972
Position: Teaching Assistant
Work: Demonstrating Applied Mathematics Courses
- (4) Department of Electrical Engineering, Faculty of Engineering, Alexandria University**
Dates: Sept. 1972 - Aug. 1973
Position: Teaching Assistant
Work: Demonstrating Electronics Laboratory Courses
- (5) Department of Electrical Engineering, McMaster University, Hamilton, Ontario, Canada**
Dates: Sept. 1973 - Dec. 1978
Position: Graduate Student (Teaching and Research Assistant)
Work: Computer-Aided Analysis and Design of Electrical Networks
- (6) Department of Electrical Engineering, McMaster University, Hamilton, Ontario, Canada**
Dates: Jan. 1979 - April 1979
Position: Lecturer
Work: Teaching "Computational Methods and Design II"
- (7) Department of Electrical and Computer Engineering, McMaster University, Hamilton, Ontario, Canada**
Dates: June 1979 - Feb. 1981
Position: Assistant Professor
Work: Teaching
 - "Computational Methods and Design I" (Third year),
 - "Computational Methods and Design II" (Fourth year),
 - "Electronics Laboratory" (Second year),
 - "Computer-Aided Design" (Graduate)**Committees: Undergraduate Curriculum, High School Students Liaison, Library Representative**
- (8) Department of Electrical Engineering, Faculty of Engineering, Alexandria University**
Dates: March 1981 - Nov. 1987, May 1993 - Present
Position: Associate Professor

Work:**Teaching**

- "Solid State Physics" (Second year), (Third year),
- "Electrical Circuits" (Second year),
- "Computers" (Third year),
- "Applied Mathematics" (Fourth year),
- "Fiber Optics" (Fourth year),
- "Microcomputer Interfacing and Applications" (Fourth year),
- "Digital Integrated Circuits" (Fourth year),
- "Computer Aided Design" (Graduate),
- "Computer Networks" (Graduate),
- "Microwave Engineering" (Graduate),
- "Teletraffic" (Graduate)
- "Digital Integrated Circuits" (Graduate, 2nd year Diploma)
- "Computer Architecture" (Fourth year)

Supervision: Ph.D. Theses:

- "Minimal Rank State Space Representation of Multidimensional Digital Filters"
- "Design of a Robust Controller for a Command Guidance System"
- "Fault Diagnosis of Electrical Circuits"
- "Stability of Fuzzy Control Systems"

M. Sc. Theses:

- "Reduced Worst Case Problem in Network Design",
- "Fault Analysis with Microcomputers",
- "Application of Microprocessors in Biomedical Engineering",
- "Cryptography for Computer security",
- "Environmental Studies on Solar Panels",
- "Modeling of Microwave MESFET",
- "Microprocessor controlled Systems" ,
- "Fuzzy Logic Control",
- "Pattern Recognition",
- "Computer Networks :Fuzzy ATM Policer",
- "Robot Vision",
- "Applications of Artificial Neural Networks In Pattern Recognition",
- "VLSI Design of Face Recognition Systems using Principal Component Analysis",
- "Applications of Fuzzy Logic and Tabu Search in Missile Guidance Systems
- "Hardware Implementation of Advanced Encryption Standard on Field Programmable Gate Array"
- "Enhancing the Performance of a Multipath Routing Protocol in ADHOC Networks"
- "VLSI Design of DCT using Distributed Arithmetic"
- "Configurable Embedded Systems"

(9) Air Defense College, Alexandria, Egypt

Dates: Sept. 1981 - June 1987, September 1994 – Sept. 1998

Work: Teaching

- "Solid State Physics" (Third year),
- "Computer-Aided Design" (Fifth year),
- "Pulse Techniques" (Fourth year),
- "Digital Systems" (Second year),
- "Computers" (Fourth year)

(10) University of Alexandria Research Center, Alexandria, Egypt

Dates: Jan. 1982 - Nov. 1987

Work: Research in the Field of Solar Cell Panel Fabrication (Joint project between Alexandria University and The University of Eindhoven, Holland)

(11) Kima High Institute of Technology, Asswan, Egypt

Dates: 1983 - 1987

Work: Visiting Ass .& Assoc. Professor, Teaching "Electronics" (Second year), (Third year)

(12) Beirut Arab University, Beirut, Lebanon

Dates: 1985, 1987, 1997, 1998

Work: Visiting Ass. & Assoc. Professor,
Teaching

- "Electromagnetics" (Third year),
- "Numerical Methods" (Graduate) ,
- "Computers" (Fourth year),
- "Logic Circuits and Logic Design" (Third Year)

(13) Arab Academy for Science and Technology, Alexandria, Egypt

Dates: Aug. 1985 -Sept. 1987, 1994 - Present

Work: Teaching

- "Communications" (Third year),
- "Electrical Measurements"(Third year),
- "Digital Electronics"(Fourth year) ,
- "Microwave Electronics",
- "Microwave Measurements" (Fourth year),
- "Int. to Microprocessors" (Fourth year),
- "Microprocessor based system design" (Fourth year),
- "CAD of VLSI" (Fourth year),
- "Logic circuit design" (Second year)
- "Computer Architecture" (Third year)

(14) Sultan Qaboos University, Muscat, Oman

Dates: Nov. 1987 - April 1994

Position: Associate Professor, Visiting Prof. (Feb 1996)

Work: Choosing the Equipment for, and Setting up the following laboratories: "Electronics", "Digital Electronics", "Microprocessors",

"Solar Energy".

Teaching:

- "Basic Electricity" (Sem. 4),
- "Basic Electronics" (Sem. 5),
- "Digital Systems and Microprocessors I" (Sem. 7),
- "Digital Systems and Microprocessors II" (Sem. 8),
- "Microprocessors and Microcomputers" (Sem. 10),
- "Electrical Measurements" (Sem 6)

Committees: College Computer Subcommittee, University Computer Users Committee, University Academic Policy Committee.

(15) Beirut Arab University, Beirut, Lebanon

Dates: Sept. 1998, Sept. 2002

Work: Teaching

- "Electromagnetic Fundamentals" (Third year, Elec.),
- "Signal Processing" (Fourth year, Comm.),
- "Data Transmission and Computer Communications" (Fifth year, Comp.),
- "Digital Circuits and Digital Design" (Third year, Elec.),
- "Computer Interfacing" (Fifth year, Comp.),
- "Communication Theory and Systems" (Fifth year, Comp.),
- "Digital Integrated Circuits" (Fifth year, Comm.),
- "Intr. To Microprocessors" (Fourth year, Comp. Sc.),
- "Computer Networks" (Graduate),
- "Asynchronous Transfer Mode" (Graduate),
- "Microprocessor Based Systems" (Graduate),
- "Analysis and Design of Digital Integrated Circuits" (Graduate)",
- "Advanced Communication Theory" (Graduate).

Supervision: M. Sc. Theses:

- Optimum Routing of Telephone Network
- Analysis and design of interactive multimedia multipoint Distribution network
- Management of SDH Network
- The Use of PLC in the Control of Power Plant
- Cryptography; Secure Communications

Journal Papers and Reports

1. J.W. Bandler, M.R.M. Rizk and H. Tromp, "Efficient calculation of exact group delay sensitivities", IEEE Trans. Microwave Theory Tech., vol. MTT-24, 1976, pp. 188-194.
2. J.W. Bandler, P.B. Johns and M.R.M. Rizk, "Transmission-line modeling and sensitivity evaluation for lumped network simulation and design in the time domain", J. Franklin Institute, vol. 304, No. 1, 1977, pp. 15-32.
3. J.W. Bandler, M.R.M. Rizk and H.L. Abdel-Malek, "New results in network simulation, sensitivity and tolerance analysis for cascaded structures", IEEE Trans. Microwave Theory Tech., vol. MTT-26, 1978, pp. 963-972.
4. J.W. Bandler, M.R.M. Rizk, "Optimization of electrical circuits", Mathematical Programming Study on Engineering Optimization, Study 11, 1979, pp. 1-64.
5. J.W. Bandler and M.R.M. Rizk, "Tolerance analysis of cascaded structures", IEEE Trans. Microwave Theory Tech., vol. MTT-28, 1980, pp. 935-938.
6. J.W. Bandler, R.M. Biernacki and M.R.M. Rizk, "The impact of generalized symmetry on computer aided-design of cascaded structures", Int. J. Circuit Theory and Applications, vol. 8, 1980, pp. 445-455.
7. J.W. Bandler and M.R.M. Rizk, "Analysis and sensitivity evaluation of 2p-port cascaded networks", IEEE Trans. Microwave Theory Tech., MTT-29, July 1981, pp. 719-723.
8. M.M. Elsherbiny and M.R.M. Rizk, "Photovoltaic panels performance in Egypt, Egyptian made solar cell panels", Workshop on Photovoltaic Energy Proc. (Alexandria, Egypt, Oct. 1983), and Bulletin of the Fac. of Eng., Alexandria Univ., vol. XXIV, 1985, pp. 147-164.
9. M.M. Elsherbiny, H.F. Ragaei and M.R.M. Rizk, "Series resistance of solar cells : measurements and optimiz", Workshop on Photovoltaic Energy Proc. (Alexandria, Egypt, Oct. 19), and Bulletin of the Fac. of Eng., Alexandria Univ., vol. XXIV, 1985, pp. 127-145.
10. M.R.M. Rizk, H.N. Keirallah, H.A. Elkamchouchy and A.K. Aboulseoud, "Statistical study of refractive index in Mersa- Matrouh", Bulletin of the Fac. of Eng., Alexandria Univ., vol. XXIV, 1985, pp. 165-182.
11. M.B. Saleh, M.R.M. Rizk and N.G. Gomaa , "Controllable diffusion parameters with chemical deposition for p-n junction silicon solar cells", Bulletin of the Fac. of Eng., Alexandria Univ., vol. XXV 1986 and XXVI 1987, pp. 35-52, Journal of Materials Science, vol. 25, 1990, pp. 2077-2081.
12. H.N. Kheirallah and M.R.M. Rizk, "2-year refractivity statistics for Mersa Matruh, Egypt", Electronics Letters, vol. 24, No. 1, Jan. 1988, pp. 55,56.
13. H.N. Kheirallah and M.R.M. Rizk, "Refractivity statistics for two countries in the middle east", Eng. Journal of Qatar Univ., vol. 2, 1988, pp. 333-349.
14. M.R.M. Rizk, A. Khalifa and A.A. Abo Ouf, "The design of an analog by digital multiplier for electrocardiogram signal processing", Alex. Eng. Journal, Alex. Univ., vol. 27 no.2, Apr. 1988, pp. 55-68.
15. A.N. El-Kassar, M.R.M. Rizk, N. Mirza and .Y. Awad, " El-Gamal Public Key Crypto-System in The Domain of Gaussian Integers", Internal Journal of Applied Mathematics, vol. 7, No. 4, 2001, pp. 405-412.

16. M. R. M. Rizk, M. I. Dessouky, Sami A. El-Dolil, and Mohammed Abd-Elnaby, "Fair Delay Optimization-Based Resource Allocation Algorithm for Video Traffic over Wireless Multimedia System "Ubiquitous Computing and communication Journal UBICC, vol. 2, No. 5, 2007.
17. M. R. M. Rizk, M. I. Dessouky, Sami A. El-Dolil, and Mohammed Abd-Elnaby, "Fair Queue Optimization-Based Resource Allocation Algorithm for Video Traffic over Wireless Multimedia System "Ubiquitous Computing and communication Journal UBICC, vol. 2, No. 5, 2007.

Conference Papers

1. J.W. Bandler, M.R.M. Rizk and H. Tromp, "Efficient calculation of exact group delay sensitivities", Proc. 13th Annual Allerton Conf. on Circuit and System Theory (Urbana, IL, Oct. 1975), pp. 643-652.
2. J.W. Bandler, H.L. Abdel-Malek, P.B. Johns and M.R.M. Rizk, "Optimal design via modeling and approximation", (invited), Proc. IEEE Int. Symp. Circuits and Systems (Munich, Germany, Apr. 1976), pp. 767-770.
3. J.W. Bandler, P.B. Johns and M.R.M. Rizk, "Transmission-line modeling and sensitivity evaluation for lumped network simulation and design in the time domain", Conf. Computer- Aided Design of Electronic and Microwave Circuits and Systems (Hull, England, July 1977), pp. 109-114.
4. J.W. Bandler, H.L. Abdel-Malek, P. Dalsgaard, Z.S. El-Razaz and M.R.M. Rizk, "Optimization and design centering of active and nonlinear circuits including component tolerances and model uncertainties", Proc. 2nd Int. Symp. Large Engineering Systems (Waterloo, Canada, May 1978), pp. 127-132.
5. J.W. Bandler, M.R.M. Rizk and H.L. Abdel-Malek, "New results in network simulation, sensitivity and tolerance analysis for cascaded structures", IEEE Microwave Symp. Digest (Ottawa, Canada, June 1978), pp. 79-81.
6. J.W. Bandler, R.M. Biernacki and M.R.M. Rizk, "The impact of generalized symmetry on computer-aided design of cascaded structures", IEEE Int. Microwave Symp. Digest (Orlando, FL, Apr.-May 1979), pp. 356-358.
7. J.W. Bandler and M.R.M. Rizk, "Algorithms for tolerance and second-order sensitivities of cascaded structures", Proc. IEEE Int. Symp. Circuits and Systems (Tokyo, Japan, July 1979), pp. 1056-1059.
8. J.W. Bandler and M.R.M. Rizk, "Analysis and sensitivity evaluation of 2p-port cascaded networks", IEEE Int. Microwave Symp. Digest (Washington, DC, May 1980), pp. 404- 406.
9. J.W. Bandler, M.R.M. Rizk and A.E. Salama, "An interactive optimal postproduction tuning technique utilizing simulated sensitivities and response measurements", IEEE Int. Microwave Symp. Digest (Los Angeles, CA, June 1981).
10. M.M. Elsherbiny, F. Van Vliet, M.R.M. Rizk, M.M. Shabana, T.M. Mostafa and A.H.M. Kipperman, "New approach for fabricating reparable PV modules", Proc. Sixth E.C. Photovoltaic Solar Energy Conf. (London, U.K., Apr. 1985) pp. 333-336.
11. Z. El-Gazaerly and M.R.M. Rizk, "Algorithms for minimal state space representation of two and three dimensional recursive digital filters", Proc.

- 29Midwest Symp. on Circuits and Systems (Lincoln, Nebraska, Aug. 1986) pp. 957-960.
12. M.M.M. Fahmy and M.R.M. Rizk , " A hardware design for solving the exponentiation equation as a base of a cipher chip", Proc. 9th National Computer Conf. and Exhib., (Riyadh, Saudi Arabia, Oct. 1986) pp.4-5-1,4-5-7.
 13. A.M. Khalifa, M.R.M. Rizk and A.A. Abo-Ouf, "A real-time microcomputer-based system convert body surface potentials to cardiac dipoles. ", Proc. 36th ISMM Int. Symp., Mini and Microcomputers and their applications, MIMI 88 (Sant Feliu, Spain, June 1988) pp. 565-567.
 14. M.R.M. Rizk, M.M. Shabana and S. Mokhtar, "Environmental studies on locally fabricated panels", Cairo International Symposium on Renewable Energy Sources, (Cairo, June, 1988).
 15. M.B. Saleh, M.M. Shabana and M.R.M. Rizk, "Environmental study of locally made PV modules in Egypt", ISES Solar World Congress 1991, (Denver, Colorado, U.S.A., Aug., 1991).pp. 52-55.
 16. M.R.M. Rizk, M.B. Saleh, A.K. Aboulseoud and A.Y. El-Sherif, "A new analytical model of GaAs MESFET's DC and sensitivity analysis", Proc. of the 35th Midwest Symposium on Circuits and Systems, (Washington, D.C., U.S.A, Aug. 1992).pp.404-407.
 17. M. Abdel-Rahim , M. El-Geneidy and M.R.M. Rizk, "Robust design of stochastic controller for guidance system of command guided missile", Proc. 1993 American Control Conference ,(San Francisco, U.S.A., June 1993), pp. 479-481.
 18. M.B. Saleh, A.Y. El-Sherif, A.K. Aboul-Seoud and M.R.M. Rizk, " Intrinsic GaAs MESFET equivalent circuit generated from a new analytical model",", Proc. of the 36th Midwest Symposium on Circuits and Systems, (Detroit, Michigan, U.S.A, Aug. 1993).pp.574-577.
 19. M. Farag and M.R.M. Rizk, "A built-in self-test scheme for programmable array of memory", Proc. of 12th Nat. Radio Science Conf. NRSC95, (Alexandria, Egypt, Mar. 95), vol. --, pp--.
 20. M.B. Saleh, A.Y. El-Sherif, M.R.M. Rizk and A.K. Aboul-Seoud, " Evaluation of Microwave GaAs MESFET Performance", Proc. of the 38th Midwest Symposium on Circuits and Systems, (Rio de Janeiro, Brazil, Aug. 1995).pp.1216-1219.
 21. A.M. Al-Naamany and M.R.M. Rizk, "A Fuzzy logic controller for a variable torque brushless DC motor drive", Proc. of the fifth Int. Middle East Power. System Conf. Mepcon 97, vol. 1, (Alexandria, Egypt, Jan. 97), pp. 47-51.
 22. S. El-Khamy, M.R.M. Rizk and M.M. Moselhy, " Software and hardware experiments on voice and image compression using the discrete wavelet transform", Proc. of the 14th Nat. Radio Sc. Conf. NRSC97, (Cairo, Egypt, Mar. 97),C12, pp. 1-11.
 23. M. Tayel, M.R.M. Rizk and H.A. Hagra, " Extracting the fuzzy membership functions for the fuel consumption in dry rotary cement kiln using genetic algorithms", Proc. of the 14th Nat. Radio Sc. Conf. NRSC97, (Cairo, Egypt, Mar. 97), C27, pp. 1-9.
 24. M. Tayel, M.R.M. Rizk and H.A. Hagra, "A fuzzy logic controller for a dry rotary cement kiln",Proc. of the 6th IEEE Int. Conf. on Fuzzy Systems, (Barcelona, Spain, July 97), pp. 1525- 1531.

25. S. El-Khamy, M.R.M. Rizk and M.M. Moselhy, "Efficient image compression, edge detection and noise filtering using the discrete wavelet transform", Proc. of the 7th Conf. on Computer theory and Applications, (Alexandria, Egypt, Sept. 1997), pp. 7-1, 7-5.
26. M.R.M. Rizk and M. Y. Yacout, "New approach for fault diagnosis of linear analog Networks", Proc. Of the 15th Nat. Radio Sc. Conf. NRSC98 , (Helwan, Egypt, Feb. 98) C40, pp. 1-10.
27. M.R.M. Rizk and M. H. Eltilety, "Generation of M sequence using microchip PIC16C84", Proc. Of the 15th Nat. Radio Sc. Conf. NRSC98, (Helwan, Egypt, Feb. 98) C4 pp. 1-8.
28. N.N. Sorial, M.R.M. Rizk and H.S. Khadam, " Fuzzy logic controller compared to conventional digital controller", Proc. Of the 8th ICCTA'98 International Conference Computers: Theory and Applications, (Alexandria, Egypt, Sept. 98).
29. O. A. Abdel-Alim, M.R.M. Rizk and M. M. Saii, " Position invariant detection based on principal component analysis", Proc. Of the 10th ICCTA'2000 Int. Conf. Of Computer Theory and Applications (Alexandria, Egypt, Aug. 2000).
30. M. Ayoub and M.R.M. Rizk, "In-Band microwave video distribution system (IB-MVDS): Network architecture", Proc. Of the 7th ICECS IEEE Int. Conf. On Electronics, Circuits and Systems (Kaslik, Lebanon, Dec. 2000), vol. 1 pp. 142-145.
31. M.R.M. Rizk and M. Abdel Rahim, "Robust stochastic controller for a missile guidance system", Proc. Of the 7th ICECS IEEE Int. Conf. On Electronics, Circuits and Systems (Kaslik, Lebanon, Dec. 2000), vol.2 pp.793-796.
32. I.F. El-Arabawy, M.R.M. Rizk and H.S. Khadam, "The effect of membership functions in fuzzy systems on the stability region", Proc. Of the 7th ICECS IEEE Int. Conf. On Electronics, Circuits and Systems (Kaslik, Lebanon, Dec. 2000), vol. 1, pp. 546-549.
33. M.R.M. Rizk, H. Rashwan and A Abdel Aziz , "A Modified asynchronous transfer mode fuzzy policer", Proc. Of the International conference on Communication, Computer and Power (ICCCP'01), (Muscat, Oman, Feb. 12-14,2001), pp. 24-28.
34. M. Ayoub and M.R.M. Rizk, "Out-Of-Band microwave video distribution system (OOB-MVDS): Network architecture", Proc. Of the International conference on Communication, Computer and Power (ICCCP'01), (Muscat, Oman, Feb. 12-14,2001), pp. 216-221.
35. I.F. El-Arabawy, M.R.M. Rizk and H.S. Khadam, "The genetic algorithm approach in stability analysis of fuzzy control systems", Proc. Of the International Natural & Artificial Intelligence System Organization (NAISO) On Information Science Innovations (ISI'2001), (Dubai, UAE, March 17-21,2001).
36. M.R.M. Rizk, I.F. El-Arabawy and H.S. Khadam, "An algorithm for optimum stability region of fuzzy control systems using genetic algorithms", to be presented in the 2001 American Control Conference (ACC01), (Arlington , Virginia, USA, June 25-27,2001).

37. M.R.M. Rizk and Mohamad Ayoub, "MVDDS Network Layers Adapted with DVB-RCS as a Terrestrial RS Solution", Proc. Of the 19th Nat. Radio Sc. Conf. NRSC'2002, (Alexandria, Egypt, March 19-21, 2002) F4 pp. 583-591.
38. M.R.M. Rizk and A. Taha, " Analysis of Neural Networks for Face Recognition Systems with Feature Extraction to Develop An Eye Localization Based Method", Proc. Of the 9th ICECS IEEE Int. Conf. On Electronics, Circuits and Systems, (Dubrovnik, Croatia, Sept. 15-18,2002), pp.847-850.
39. M. Ayoub and M.R.M. Rizk, " Optimized Bi-Directional Frequency Plan for Microwave Video and Data Distribution System "MVDDS"" , Proc. of the 9th ICECS IEEE Int. Conf. On Electronics, Circuits and Systems, (Dubrovnik, Croatia, Sept. 15-18, 2002), pp.1043-1046.
40. M. R. M. Rizk, O. Said and R. El-Sayed, "Wavelets and Neural Networks Based Face Recognition System", Proc. Of the 46th IEEE Int. Midwest Symposium on Circuits and Systems, (Cairo, Egypt, Dec. 27-30, 2003).
41. A. A. Helmy, M. R. M. Rizk , M. El-Sayed "Modeling and Optimization of Monolithic Spiral Inductors for VCO Applications", Proc. of the 22nd National Radio Science Conference (NRSC 2005), (Cairo, Egypt, Mar. 15-17, 2005), C28-1, C28-6.
42. A. E. Youssef , M. R. M. Rizk and S. E. El-Khamy " Two New Image Adaptive Watermarking Techniques Based on Multi-Scale Morphological Segmentation", to be presented at the National Radio Science Conference (NRSC 2006).
43. M. R. M. Rizk, A. E. Youssef and S. E. El-Khamy " Adaptive Watermarking Techniques Based on Multi-Scale Morphological Segmentation", Proc. of the 13th IEEE Mediterranean Electromechanical Conference (MELECON2006), (Malaga, Spain, May 16-19, 2006).
44. M. R. M. Rizk and E.M. Koosha, "A Comparison of Principal Component Analysis and Generalized Hebbian Algorithm for Image Compression and Face Recognition", Proc. of the 2006 International Conference on Computer Engineering & Systems (ICCES'06) ,(Cairo, Egypt Nov. 5-7, 2006).
45. M.R. M. Rizk and M. Ammar, "Low Power Small Area High Performance 2D-DCT architecture", Proc. of 2nd IEEE International Design and Test Workshop, IDT 2007, (Cairo, Egypt, Dec. 2007).
46. M.R.M. Rizk and M. Morsy, "Optimized Area and Optimized Speed Hardware Implementations of AES on FPGA", Proc. of 2nd IEEE International Design and Test Workshop, IDT 2007, (Cairo, Egypt, Dec. 2007).

Professional activities

Supervisor of:

- **Computer applications Labs, Faculty of Engineering. (8 Laboratories, 25 to 30 PC in each).**
- **VLSI design Lab., Faculty of Engineering. (Mentor Graphics software design lab. 5 Sun workstations)**
- **Computer Networks Lab. (Donation by Vodafone Egypt), Faculty of Engineering. (7 PCs with Opnet and NS2 software for network design and simulation)**
- **Microprocessors Lab., Faculty of Engineering.**

Deputy Principal Investigator of "the Enhancement of Universities Information Network Infrastructure" project of Alexandria University.

Design and supervising the installation of the telephone network of the faculty of engineering, and different faculty sites, Alexandria University.

Design of the Alexandria University LAN.

Design of the faculty of Dentistry LAN.

Design of the Research and Commercial studies center (Faculty of Commerce) Computer Network.

Design of the Executive MBA Center computer network (Faculty of commerce)

Design of several telephone networks for the Alexandria University.

Writing the specifications and commissioning of PABX for the University administration building and different faculties.

Information Technology consultant to Suzanne Mubarak Regional Center for Woman Health and Development (Alexandria).

Executive director of the Information Technology Projects of Alexandria University.

Teaching short courses:

Optimization Techniques

Micro-Processors

Microcontrollers

Computer Networks

VLSI Design

CDMA

VOIP

RF IC Design