RESUME

PERSONAL DATA

Name:	**MOHAMED RIZK MOHAMED RIZK**
Position:	**Associate Professor**
email:	**mrmrizk@ieee.org**
	mohamed.rizk@alexu.edu.eg

Phone number:	**01001545412**
Languages:	**Arabic, English and French**
Business Address:	**Electrical Engineering Department**
	Faculty of Engineering
	Alexandria University
	Hadara, Alexandria 21544

EDUCATION

Alexandria University, Egypt

Year	Award	Faculty	Subject
1971	B.Sc.(Hon.)	Engineering	Elect. Eng.

McMaster University, Canada

Year	Award	Faculty	Subject
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)
- "Advanced Computer Architecture" (Graduate)

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"
- "Medium Access Control for Multimedia Wireless Systems"
- "Optimum Receiver Front-End Design for Modern Radars"
- "Matched Chaotic Maps for Generation of Perfect Random Sequences and their Application to Multimedia Watermarking and Authentication"
- "Data Encryption: New Algorithms in Elliptic Curve Cryptography"
- "Digital Communication Signal Classification Using Higher Order Statistics and Artificial Intelligence Techniques with Application to Cognitive Radio"
- "Design of New Algorithms in Data Cryptography"
- "Semantic Content Based Medical Image Retrieval using Invariant Contourlet Features with Relevance Feedback Techniques"

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"
- "Design of an Ultra Wideband Radio Frequency Identification Bow-Tie Antenna"
- "Improved Ant Colony Optimization Algorithm and its Application for solving Combinatorial Optimization Problems"
- "Improved Digital Image Watermarking Technique Based on Discrete Wavelet Transform and Fuzzy Logic Techniques"
- "Identification Method for Micro-Doppler Signature and Target Image in Pulse Tracking Radar"
- "Optimized Design Of One Port Surface Acoustic Wave Resonator"

(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","DigitalElectronics","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**

(16) Virginia Tech, (Virginia Polytechnic and State University),U.S.A
Dates: **January. 2011, May 2011**
Work: **Adjunct Professor, teaching "Signals and Systems"**
"Digital Signal Processing and Filter Design" (Graduate VT-MENA)
Serving in the Ph.D. advisory committee of (degree obtained):
Mohamed Morsi Farag, "Design and Formal Verification of Configurable Hardware-Assisted Rule Enforcement, with Application to Cognitive Radios".
Yasmine N. El-Glaly, "Spatial Reading System for Individuals with Blindness".
Mohamed Azab, "Cooperative Autonomous Resilient Defense Platform for Cyber Physical Systems".
Bassem Mokhtar, "Memory-Enabled Networking".
Mohamed El-Shembakey, "Real Time Software Transactional Memory".
Mostafa Taha, "New Directions in Side-Channel Analysis".

Serving in the Ph.D. advisory committee of (in progress):
Mohamed Mohamedin, "BytesSTM: Java Software Transactional Memory at the Virtual Machine Level".

Journal Papers and Reports

1. **J.W. Bandler, M.R.M. Rizk and H. Tromp, "Efficient calculation of exact group delay sensitivities", <u>IEEE</u> <u>Trans.</u> <u>Microwave</u> <u>Theory</u> <u>Tech.</u>, 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", <u>J. Franklin Institute</u>, 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", <u>IEEE Trans. Microwave Theory Tech.,</u> vol. MTT-26, 1978, pp. 963-972.

4. J.W. Bandler, M.R.M. Rizk, "Optimization of electrical circuits", <u>Mathematical Programming Study on Engineering Optimization</u>, Study 11, 1979, pp. 1-64.

5. J.W. Bandler and M.R.M. Rizk, "Tolerance analysis of cascaded structures", <u>IEEE Trans. Microwave Theory Tech.,</u> 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", <u>Int. J. Circuit Theory and Applications</u>, vol. 8, 1980, pp. 445-455.

7. J.W. Bandler and M.R.M. Rizk, "Analysis and sensitivity evaluation of 2p-port cascaded networks", <u>IEEE Trans. Microwave Theory Tech.,</u> 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", <u>Workshop on Photovoltaic Energy Proc.</u> (Alexandria, Egypt, Oct. 1983), and <u>Bulletin of the Fac. of Eng., Alexandria Univ.,</u> 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 optimization", <u>Workshop on Photovoltaic Energy Proc.</u> (Alexandria, Egypt, Oct. 19), and <u>Bulletin of the Fac. of Eng., Alexandria Univ.,</u> 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", <u>Bulletin of the Fac. of Eng., Alexandria Univ.,</u> 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", <u>Bulletin of the Fac. of Eng., Alexandria</u>   Univ., vol. XXV 1986 and XXVI 1987, pp. 35-52, <u>Journal of Materials Science</u> ,vol. 25,1990 pp.2077-2081.

12. H.N. Kheirallah and M.R.M. Rizk, "2-year refractivity statistics for Mersa   Matruh, Egypt", <u>Electronics Letters,</u>   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", <u>Eng. Journal of Qatar Univ.,</u> 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", <u>Alex. Eng. Journal, Alex. Univ.</u>, 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", <u>Internal Journal of Applied Mathematics,</u> 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 "<u>Ubiquitous Computing and communication Journal UBICC,</u> vol. 2, No. 5, 2007, pp. 79-85.**

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 "<u>Ubiquitous Computing and communication Journal UBICC,</u> vol. 2, No. 5, 2007, pp. 113-124.**

18. **M.R.M. Rizk , M.I. Dessouky, Sami A. El-Dolil , Mohammed Abd-Elnaby, "Near optimal fair delay based resource allocation for video traffic over wireless multimedia system", <u>Computer Communications Journal, Elsevier,</u> vol.31, issue 10, June 2008, pp.2360-2366, and in <u>the International Journal of Wireless Personal Communications</u>, vol. 48, pp. 551-568, 2009, Springer.**

19. **M. R. Rizk, M. I. Dessouky, Sami. A. El-Dolil, and Mohammed Abd-Elnaby "Fairness And Throughput Enhancement-Based Random Access Using Fuzzy Controlled Backoff Interval" <u>International Journal of Computers and Applications</u>, vol. 31, issue 1, 2009, ACTA Press.**

20. **M. R. Rizk, M. I. Dessouky, Sami. A. El-Dolil, and Mohammed Abd-Elnaby "A Novel Fair Random Access Scheme with Throughput Optimization Using Fuzzy Controller for Wireless Systems" <u>International Journal of Network Management</u>, vol. 19, Issue 4, pp. 305-314, July/August 2009, Wiley.**

21. **M. R. M. Rizk, M. I. Dessouky, Sami. A. El-Dolil, and Mohammed Abd-Elnaby "Efficient Sharing Based Contention Resolution Scheme for Wireless Local Area Networks" submitted to the <u>International Journal of Wireless Personal Communications</u>, Springer.**

22. **A. Hafez, M. Nassar and M. R. M. Rizk," A Dynamic RF Front-End for Modern Radars" <u>Journal of Communication and Computer</u>, vol. 7 No. 5, pp. 78-82, May 2010.**

23. **S.E. El-Khamy, H.A. Elsayed and M.R.M. Rizk, "Neural Network for Classification of Multi-User Chirp Modulation Signals Using Wavelet Higher Order Statistics Features", <u>International Journal of Emerging Technology and Advanced Engineering</u>, vol. 2, Issue 8, August 2012.**

24. Hassan Fayed, M.R.M. Rizk and A. Aboulseoud, " Improved Medical Image Retrieval Using Contourlet Techniques Based Interest Points Detector", <u>Canadian Journal on Image Processing and Computer Vision</u>, vol.4 No.2, Feb. 2013, pp. 22- 27.

25. Mohamed. R. M. Rizk, Mohamed A. Abdou and Sanaa S. Abd El-Dayem, "An Optimum Distributed Energt Balanced Algorithm for Wireless Sensor Networks", <u>Alexandria Engineering Journal</u>, vol. 52, 2013, pp. 13-18.

26. S. E. El-Khamy, M. R. M. Rizk, and R. K. Korayem, "Modified Bayesian Beamformer for Binning Error Elimination," <u>Progress In Electromagnetics Research C (PIERS C)</u>, vol. 43, 121-133, 2013.

27. Mohamed Rizk, Ahmed Hussein and Alaa El-Din Sayed Hafez, "A Fast and an Accurate CORDIC Modulus Extractor Implementation Using FPGA", <u>International Journal of Scientific and Engineering Reasearch (IJSER 2014)</u>, vol. 5, issue 3, March 2014.

28. Ola Hussein, Nayera M. Sadek, Said Elnoubi, and Mohamed R. M. Rizk, "Analytical Model of Multihop IEEE 802.15.4 with Unslotted CA/CSMA", <u>International Journal of Computer and Communication Engineering</u>, vol. 3, No. 3, May 2014.

Books
Mohamed Abdel-Naby, Mohamed Rizk and Sami El-Dolil, "Medium Access Control for Multimedia Wireless Systems" Lap Lambert Academic Publishing, 2013

Conference Papers

1. J.W. Bandler, M.R.M. Rizk and H. Tromp, "Efficient calculation of exact group delay sensitivities", <u>Proc. 13th Annual Allerton Conf. on Circuit and System Theory</u> (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), <u>Proc. IEEE Int. Symp. Circuits and Systems</u> (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", <u>Conf. Computer- Aided Design of Electronic and Microwave Circuits and Systems</u> (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", <u>Proc. 2nd Int. Symp. Large Engineering Systems</u> (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", <u>IEEE Microwave Symp. Digest</u> (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", <u>IEEE</u> <u>Int.</u> <u>Microwave</u> <u>Symp.</u> <u>Digest</u> (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", <u>Proc.</u> <u>IEEE</u> <u>Int.</u> <u>Symp.</u> <u>Circuits</u> <u>and</u> <u>Systems</u> (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", <u>IEEE</u> <u>Int.</u> <u>Microwave</u> <u>Symp.</u> <u>Digest</u> (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", <u>IEEE</u> <u>Int.</u> <u>Microwave</u> <u>Symp.</u> <u>Digest</u> (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", <u>Proc.</u> <u>Sixth</u> <u>E.C.</u> <u>Photovoltaic</u> <u>Solar</u> <u>Energy</u> <u>Conf.</u> (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", <u>Proc.</u> <u>29Midwest</u> <u>Symp.</u> <u>on</u> <u>Circuits</u> <u>and</u> <u>Systems</u> (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", <u>Proc.</u> <u>9th</u> <u>National</u> <u>Computer</u> <u>Conf.</u> <u>and</u> <u>Exhib.</u>, (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. ", <u>Proc.</u> <u>36th</u> <u>ISMM</u> <u>Int.</u> <u>Symp.,</u> <u>Mini</u> <u>and</u> <u>Microcomputers</u> <u>and</u> <u>their</u> <u>applications,</u> <u>MIMI</u> <u>88</u> (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", <u>Cairo</u> <u>International</u> <u>Symposium</u> <u>on</u> <u>Renewable</u> <u>Energy</u> <u>Sources,</u> (Cairo, June, 1988).

15. M.B. Saleh, M.M. Shabana and M.R.M. Rizk, "Environmental study of locally made PV modules in Egypt", <u>ISES</u> <u>Solar</u> <u>World</u> <u>Congress</u> <u>1991,</u> (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", <u>Proc.</u> <u>of</u> <u>the</u> <u>35th</u> <u>Midwest</u> <u>Symposium</u> <u>on</u> <u>Circuits</u> <u>and</u> <u>Systems,</u> (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", <u>Proc.</u> <u>1993 American Control Conference</u> ,(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'',", <u>Proc.</u> <u>of</u> <u>the</u> <u>36th</u> <u>Midwest</u> <u>Symposium</u> <u>on</u> <u>Circuits</u> <u>and</u> <u>Systems,</u> (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", <u>Proc. of 12th Nat. Radio Science Conf. NRSC95,</u> (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", <u>Proc. of the 38th Midwest Symposium on Circuits and Systems,</u> (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", <u>Proc. of the fifth Int. Middle East Power. System Conf. Mepcon 97,</u> 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", <u>Proc. of the 14th Nat. Radio Sc. Conf. NRSC97,</u> (Cairo, Egypt, Mar. 97),C12, pp. 1-11.

23. M. Tayel, M.R.M. Rizk and H.A. Hagras, " Extracting the fuzzy membership functions for the fuel consumption in dry rotary cement kiln using genetic algorithms", <u>Proc. of the 14th Nat. Radio Sc. Conf. NRSC97,</u> (Cairo, Egypt, Mar. 97), C27, pp. 1-9.

24. M. Tayel, M.R.M. Rizk and H.A. Hagras, "A fuzzy logic controller for a dry rotary cement kiln",<u>Proc. of the 6th IEEE Int. Conf. on Fuzzy Systems,</u> (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", <u>Proc. of the 7th Conf. on Computer theory and Applications,</u> (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", <u>Proc. Of the 15th Nat. Radio Sc. Conf. NRSC98 ,</u> (Helwan, Egypt, Feb. 98) C40, pp. 1-10.

27. M.R.M. Rizk and M. H. Eltilety, "Generation of M sequence using microchip PIC16C84", <u>Proc. Of the 15th Nat. Radio Sc. Conf. NRSC98,</u> (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", <u>Proc. Of the 8th ICCTA'98 International Conference Computers: Theory and Applications,</u> (Alexandria, Egypt, Sept. 98).

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<u>**Professional activities**</u>

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 Administration Building 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) 2006-2009.

Executive director of the Information Technology Projects of Alexandria University 2009-2011.

Alexandria University representative in the Egyptian Universities Network committee 2009-2011.

IT consultant of the faculty of Law, Commerce and Arts (Alexandria University) 2010.

Academic and Administrative Director of the Virginia Tech Middle East and North Africa Project for Graduate Studies and Research Center in Alexandria University 2007- present. Responsibilities:

- **Responsible for coordinating all academic aspects of the project.**
- **Position is appointed by AU with collaborative approval of Virginia Tech. AU will also be responsible for identifying and appointing all administrative, financial, and technical support staff with adequate consultation with Virginia Tech.**
- **Works in harmony and collaboration with the VT Resident Project Director, VTRD, to ensure smooth execution of the academic aspects of the project.**

1. **Reporting and supervision**
    a. **Report to VT-MENA project Director (VTRD) on progress**
    b. **Supervise Associate Director for Graduate Studies Program**
    c. **Co-Supervise Academic Assistant(s)**
    d. **Coordinate with the Faculty of Engineering academic departments regarding all academic matters**
1. **Publicity for the VT-MENA project**
    a. **PR and news releases**
    b. **Oversee project website and periodical newsletter**
2. **Student Affairs**
    a. **Liaise between VT-MENA and Missions (Academic and Administrative sides)**
    b. **interface with missions and students' employers (home universities) to resolve administrative and financial issues**
3. **Academic Faculty**
    a. **Nominate faculty for project participation**
    b. **Nominate faculty for VT-Adjunct status and sabbaticals**
    c. **Evaluate faculty performance and recommend status alterations**
    d. **Oversee visiting faculty logistical affairs**
    e. **Oversee project faculty affairs**

Teaching short courses:
Optimization Techniques
PV system design for Omani small village
Micro-Processors
Microcontrollers
Computer Networks

VLSI Design
CDMA, VOIP
RF IC Design