

Name

Prof. Dr. A.M. Sharaf, P.Eng- SMIEEE (1984) Sharaf Energy Systems, Inc. Fredericton, NB -Canada E3C2P2 Tel-1-506-999-2780 Cell- 1-506-206-3267 www.sharafenergysystems.com

Specialization (Major-Minor)

Electric Utility-Power Systems, Power Electronics and Electro-Technology, FACTS, Renewable and Green Energy Systems, Power Quality, AI- Soft Computing Applications and Environmental Engineering Systems.

Background & Experience

Dr. Sharaf obtained his B.Sc. degree in Electrical Engineering from Cairo University in 1971. He completed a M.Sc. degree in Electrical engineering in 1976 and Ph.D. degree in 1979 from the University of Manitoba, Canada and was employed by Manitoba Hydro as Special Studies Engineer, responsible for engineering and economic feasibility studies in Electrical Distribution System Planning and Expansion. Dr. Sharaf was selected as NSERC-Canada Research-Assistant Professor in 1980 at University of Manitoba. He joined the University of New Brunswick in 1981 an Assistant professor and he was promoted to Associate Professor in 1983, awarded tenure in 1986, and the full professorship in 1987. Dr. Sharaf has extensive industrial and consulting experience with Electric Utilities in Canada and Abroad.

He authored and co-authored Three Book chapters, Over 700 Scholarly Technical Journal, Referred Conference Papers and Engineering Reports. In power systems control, stability, protection, power quality, renewable green-energy, electro-technology and environmental devices He supervised over (51) Graduate Student (37-M.Sc &14-Ph.D.)since joining Academia in July-1981.

Business and Consulting

He is the President & Technical Director of both Sharaf Energy Systems Inc. & Intelligent Environmental Energy Systems, Canada Inc. of Fredericton, New Brunswick, Canada.

Research Interest

Research areas include Smart Grid, Emerging Energy systems, Power Systems and Electrochnology, FACTS Control, Protection, HVDC Transmission, Renewable/Alternate Energy/Storage Systems, Electric Motor Drives, Harmonics and Power Quality, Protection, Industrial Electronics, Power Electronics, A.I-Soft Computing. (PSO, fuzzy logic, neutral networks, genetic algorithms applications in electrical systems), Multimedia/Internet based Learning, Computer Based Learning(CBL), Self-Based Learning (SBL),Laboratory Based Learning, Electrical Apparatus & Systems & Energy Delivery, Electrical Measurements, Energy Efficiency, Electric Utility Grid Systems (Planning, Operation, Control & Protection and Security) and Pollution Abatement devices & Systems.

CURRICULUM VITAE

PERSONAL DATA

NAME:	Adel M. Sharaf	
ADDRESS:	Sharaf Energy Systems Incorporated 147 Berkley Drive, New Maryland Fredericton, NB Canada E3C2P2	
CITIZENSHIP:	Canadian	
TELEPHONE: Office	1-506-999-2780 Fax: 1-506-206-3267	7
EMAIL:	<u>sharaf@unb.ca, profdramsharaf@yaho</u> profdramsharaf@gmail.com, profdram	
APPOINTED AT UNB:		July 01, 1981
DATE OF PROMOTION TO DATE TENURE GRANTED:	FULL PROFESSOR:	July 1, 1987 July 1986 (tenured)
DATE OF PROMOTION TO	ASSOCIATE PROFESSOR:	July 1983
INITIAL APPOINTMENT AT EARLY RETIREMENT		July 1, 1981 ember 1, 2010
 SABBATICAL LEAVES: i. July-December 2007 (six months) Egypt and Canada ii. July-December 2003 (six months) Egypt and Canada iii. January-June 30, 1993 visiting Professor, NTU Nanyang- Technological University, (six months) Singapore iv. July-December 1992 Singapore (six months) 		
LEAVE OF ABSENCES:	v. July 1987 Kuwait (one year)	
* February 15 – May 15, 2010		
* September 15 2009-December	er 15 2009	
* September 15 2008-May 15	2009	
* September 1998-June 2000	Chairman, EE Department - UAE Univ	versity

*September 1996 to May 1998 Visiting Professor & Department Chairman, EE Department * UAE University, Al-Ain, United Arab Emirates (without pay)

* june 2008- April 2012 UTT-Trinidad & Tobago,

ACADEMIC QUALIFICATIONS

October 1979	PhD, Electrical Engineering, University of Manitoba, Winnipeg, MB, Canada
October 1976	M.Sc., Electrical Engineering, University of Manitoba, Winnipeg, MB, Canada
June 1972	Egypt Air, Boeing B707 Maintenance Training Certificates
	in Control and Engineering Instrumentation
May 1971	B.Sc. Electrical Engineering, Cairo University, Cairo, Egypt
	(Electric Power Systems and Machines Section) Project Grade (very good)

SPECIALIZED TRAINING COURSES, SEMINARS AND WORKSHOPS

- 1. National Instruments NI-Lab view, UNB Workshop, April 2007.
- 2. Workplace Supervisory and Communication Skills, UNB Workshop April 19 and 20, 2006.
- 3. Image Builder Software UNB CS Workshop, March 12, 2004.
- 4. Illustrator Software UNB CS Workshop, March 19, 2004.
- 5. Dream Weaver Software UNB CS Workshop, March 24, 2004.
- 6. Transition to Supervision Workshop April 29-30, 2002, UNB.
- 7. Scholarly Teaching Workshop, Effective Teaching Institute, April 2002, UNB.
- 8. Transition to Supervision Workshop, UNB (1 day) November 2002.
- 9. Workplace Supervisory and Communication Skills Workshop, UNB November 6, 2002.
- 10. Avoiding Harassment Complaints: Mediation in the Workplace Workshop, UNB (4 days), December 2002.
- 11. National Instruments Workshop, April 2001.
- 12. Effective Interpersonal Communications Workshops, UNB, November 2000.
- 13. Effective Teaching Workshop, UNB September 1994.
- 14. UNB Workshop on Active and Problem Based Learning, June 7, 1994.
- 15. Management Sciences Course, UNB Faculty of Administration, May 1994.
- 16. Programming Language, UNB Faculty of Computer Science, May 1994.
- 17. UNB Effective Teaching Workshop, April 1994.
- 18. Microsoft Power Point, Presentation 2.0, Author-Ware, Mosaic, and Gofer Workshops, UNB Computer Science.
- 19. Artificial Intelligence IEEE Course, UNB, November 1988.
- 20. IEEE Expert Systems Workshop, 1987, UNB.
- 21. Transient Voltage Suppression Seminar, High Tech. Show, Ottawa, May 5, 1987.
- 22. Artificial Intelligence Seminar, High Tech. Show, Ottawa, May 5, 1987.

- 23. Desktop Publishing, Costs and Benefits Seminar, May 6, 1987.
- 24. Computer courses in Auto-Cad, Lotus 123, and Database III software packages.
- 25. Eneroptions and Energy Management Seminar (one day), Moncton, NB, April 1986.
- 26. Texas Instruments new DSP-32020 Digital Processor Workshop (3 days), Ottawa, ON Canada, November 1986.
- 27. IEEE Tutorial, Fibre optics applications in power systems, IEEE, PES, WPG, New York (one day), February 1986.
- 28. Intel Corp. "Introduction to Microprocessors" Workshop (4 days), January 1985.
- 29. Intel Corp. "IAPX 86, 88, 186 Microprocessors Part 1" Workshop (5 days), January30. 1985.
 - Allan Crawford/Gould Seminar on measurement techniques, signal conditioning and
- 31. Wave form digitizers (one day), May 1985.
- 32. Allan Crawford seminar on Cybord-Data Acquisition and Control (one day), June 1985
- 33. Intel Corp. "IAPX-286" Workshop (5 days), June 1985.
 - IEEE Fibre Optics Seminar, 1985, UNB.
- 34. IEEE PAS Course "Power system reliability evaluation" 82EH0195-8-PWR, (1 day), 35. 1982.
- 36. Attended five UNB Effective Teaching Workshops (1983, 1984, 1985, 1986, 1990).
- 37. IEEE PAS Course, "Digital simulation of electrical transient phenomena", 81 EH0173-5 PWR, (one day), 1981.

ACADEMIC HONOURS, MERIT AWARDS & RESEARCH FELLOWSHIPS

- 1. University of New Brunswick Research Professorship (nominated 2002-2005; 3 times) Nominated <u>four times</u> for the Merit Award; Awarded UNB Merit Award twice.
- 2. Visiting Professor, Helwan University, Menofia University, Egypt, July-August 2004.
- 3. University of New Brunswick Fourth Nomination for the Merit Award, 2004.
- 4. Visiting Professor& Chairman, EE Dept, UAE University, September 1998-June 2000.
- 5. Visiting Professor, Menuofia University, Egypt, June-September 1998.
- 6. Visiting Professor, Assiut University Egypt, May-June 1995, June 1996 (two months).
- 7. Visiting Professor & Chairman, EE Department, UAE University, 1995-97 (20 months).
- 8. Visiting Professor, Ain-shams, Cairo and Menofia Universities, Egypt, June-July 1993, August-September 1994 and April-July 1995.
- 9. University of New Brunswick Merit Award, 1995.
- 10. Visiting Professor, Nanyang Technological University, Singapore, 1992-1993.
- 11. University of New Brunswick (4) Nomination for Merit Award, 1991. Awarded Twice
- 12. Visiting Professor and Consultant, Kuwait University, Kuwait and Menuofia University, Egypt, April 1990 and August 1990, respectively.
- 13. Visiting Professor, TU Delft University, Holland, June-August, 1990.
- 14. Visiting Professor, Royal Institute of Technology, Sweden, May & June 1989.
- 15. Visiting Research Fellow, Brown-Boveri and Company, Baden Switzerland, Invited 1987-1988.
- 16. Visiting Professor and Research Collaborator, Cairo University and Menuofia University, Egypt, 1987 and 1988.

- 17. Visiting Professor and Curriculum Consultant, Kuwait University, Kuwait, 1987-1988.
- 18. Visiting Research Fellow, Japan Society for the Promotion of Science (JSPS) and Central Research Institute of Electric Power Industry, Japan (1986).
- 19. University of New Brunswick Merit Award (1985) for Excellence in Teaching, Research and Service at UNB.
- 20. Swiss National Research Council (NF) International Post-Doctoral Fellowship (1984).
- 21. Senior Member, Institute of Electrical and Electronics Engineers, Since 1984.
- 22. Canada Natural Sciences and Engineering Research Council (NSERC) First Selected Engineering Research Assistant Professor, 1980-81, University of Manitoba.
- 23. University of Manitoba Graduate Research Fellowships (1975, 1976).
- 24. Egyptian Government Undergraduate Distinction Fellowships (1966-1970).

FIELD OF SPECIALIZATION

Smart Grid, renewable Energy, Electric Power Utility, Power Electronics, Electrotechnology, Motor Drives

Smart electric Grids, Emerging/sustainable Energy Systems, Power apparatus and electric energy systems; power electronics and motor drives; A.I. technologies, smart engineering applications in power systems; power quality and harmonics; power system simulation; power systems control; intelligent sensors and computer monitoring systems; and non-invasive diagnostics and monitoring of power apparatus anomaly/failure; process drive control; energy management and conservation; renewable distributed electrical hybrid green energy systems (wind, solar, mini-hydro, fuel cell, hybrid); NUG-generators utilization and interface to electric utility systems; digital protection; soft computing; A.I. (Fuzzy, ES, neural network) applications in power systems and motor drives; electro technical systems; power electronics and FACTS; interactive multi-media; computer based education (CBE); computer based training (CBT); environmental devices for pollution abatement using electromagnetic/electrostatic systems and devices.

INDUSTRIAL and ACADEMIC EXPERIENCE

April 2012-Now

President and Technical Director of Both SHARAF ENERGY SYSTEMS, INC, and InTELLIGENT ENVIRONMENTAL ENERGY SYSTEMS, INC. a Research and Development, Electrical Engineering Consulting Company, incorporated in the Province of New Brunswick Incorporated in the Province of New Brunswick-Canada in (1985 and 1995).

June 2008-April 2012

Vice Provost for Post Graduate Studies & Research and Professor of Energy Systems Administrative responsibilities include supervision of all University Research and Development Activities, Research - Centers, Graduate Studies and Post Graduate Programs and Internationalization and Managing the University Energy Centre-Research and Development.

1998-2000 - University Wide Committee member for ABET Accreditation Liaison Committee for

the Engineering Program at UAE University. Full ABET Accreditation for 6 years was awarded in 2000.

1996-1997 and 1998-2000 (two full 2-year terms-Leave of Absence from UNB)

Chairman - Electrical Engineering Department, United Arab Emirates University (UAE), Administrative duties and membership in Faculty Council and various university committees at UAE University. Chair of the EE DepartmentUS-ABET Accreditation Steering- Committee. July 1987-June 2010

Tenured Professor of Electrical Engineering Department, University of New Brunswick, Fredericton, NB.

Under- Graduate and Graduate Teaching, Curriculum development, research and development and engineering consulting.

July 1987

Full Professor awarded after six years of full time service at UNB.

July 1986 Tenure Awarded.

July 1983-July 1987

Associate Professor of Electrical Engineering Department, University of New Brunswick, Fredericton, NB, Canada.

Teaching undergraduate and graduate level courses, student advising, sponsored research and engineering consulting.

July 1981-July 1983

Assistant Professor (tenure track) - Electrical Engineering, University of New Brunswick, Fredericton, NB Canada.

Teaching Undergraduate & Graduate, curriculum development, research and engineering consulting.

December 1980-July 1981

Research - Assistant Professor and NSERC Engineering Research Fellow (term appointment), Electrical Engineering Department, University of Manitoba, Winnipeg, MB.

July 1979-December 1980

Electrical-Inductive Coordination and System Planning Engineer. Power system planning and power quality engineer, Trans. Alta Utilities Corporation, Calgary, AB, Canada.

February 1977-July 1979

Special Studies Engineer, economic feasibility and technical assessment studies; distribution and sub transmission systems planning, Manitoba Hydro, Winnipeg, MB.

September 1974-February 1977

Research and Lab Assistant, Electrical Engineering Department, University of Manitoba, Winnipeg, MB Canada. Power systems, control, modeling and computer aided designs, integrated AC-DC systems, and undergraduate laboratory assistants in electric machines, power systems and power electronics laboratories.

December 1971 - September 1974

Instrumentation and Controls Engineer, Egypt Air Company, Cairo, Egypt. Specialized in the Boeing 707 jet aircraft, electronic control autopilot and instrumentation systems.

BUSINESS, INDUSTRY, ENGINEERING- CONSULTING, R&D EXPERIENCES

President and Technical Director of SES Inc. and IEES Inc., Engineering Consulting and Research and Development incorporated companies in New Brunswick, Canada.

Incorporated two R&D engineering companies and continued to work as the President and Technical Director of both Sharaf Energy Systems and Intelligent Environmental Energy Systems Inc. of Fredericton, New Brunswick Canada. An engineering, design, consulting and R&D companies in environmental and electro technical energy systems control, protection power systems, instrumentation, power quality (PQ) and harmonic mitigation, efficient variable adjustable speed (ASD) motor drives, demand side control, energy management and electric energy utilization and conservation, planning, technical feasibility studies, research and product development, renewable energy (wind, PV, hybrid renewable system) electric energy utilization, forensic engineering, intelligent fault diagnostic software systems, A.I. systems monitoring, diagnostics, specialized technical training courses, computer based education (CBE), multi-media interactive courseware development. The two companies are Engineering Consulting and R&D Innovation and Research Center and have overseas links for technology transfer of specialized smart energy management/power quality, environmental control equipment and renewable energy (wind, PV, small hydro, hybrid) hybrid distributed interface schemes. The two companies have a number of inventions and patent pending devices for environmental control/pollution abatement and electric energy efficiency / utilization enhancements.

RESEARCH GRANTS HELD

2008-2011 ACF-EU -CFCF Drying TECHNOLOGY	Euro
2000 2011 Her De er er brynig i Deini (öbögi	\$870,000.00
2007 UNB Research Grant	\$19,900.00
2006 SEED Student Summer Research Grant	\$3,000.00
2006 UNB Research Grant	\$19,500.00
2005 UNB Research Grant	\$19,300.00
2004 UNB Research Grant	\$19,300.00
2003 Employment Canada SEED Grant	\$2,750.00
2003 UNB Research Grant	\$19,340.00
2002 UNB Research Grant	\$14,500.00
2001 UNB Research Grant	\$12,000.00
2000 UNB Research Grant	\$4,000.00
*1998/2000 U.A.E. University (group) Electromagnetic Based Germicidal	
Control of Camel Milk	(Dhs) 200,000.00
1998/1999 U.A.E. University (PI)	(Dhs) 27,500.00
*1998/1999 U.A.E. University Co-investigator 3 projects	(Dhs) 47,000.00
*1998-2000 U.A.E. University (group) Smart Building Interdisciplinary	(Dhs) 160,000.00
1998/1999 Egyptian Government Academic Link Grant (collaborative research)	(Dhs) 8,000.00
1995/1996 U.A.E. University (3 research projects) AWARDED	(Dhs) 45,000.00
1995 NB Research Grant (in lieu of salary)	\$12,000.00
1995 UNB Second Merit Award (in lieu of research)	\$3,500.00
1995 UNBRF Fund	\$1,550.00
1994 UNBRF Fund	\$1,800.00
1994 CEA Contract Group	\$20,000.00
1993/1994 NSERC Operating Grant	\$15,000.00
1993 Egyptian Government CO11 Academic Channel Grant	\$9,990.00
1993 NSERC Germany Bilateral (awarded)	\$14,000.00
1992 UNB Futures Fund	\$6,500.00
1992/1993 NSERC Operating Grant	\$15,750.00
1991 CEA Canadian Electrical Assoc., subcontract (wind diesel)	\$5,000.00
1991 NSERC Equipment (individual research support grant)	\$69,093.00
1991 EMR Canada (group) Energy Mines & Resources Canada	\$7,000.00
1991 Challenge Program (Employment & Immigration)	\$1,250.00
1991 EMR Canada (group), Second Installment	\$7,200.00
1991/1992 NSERC Operating Grant	\$15,750.00
1990/1993 NSERC Operating Grant	\$15,750.00
1990 EMR Canada (group), First installment	\$22,400.00
1990 NSEC Collaborative Research - Holland	\$4,500.00
1990 AUCC - CIDA Micro fund I - Egypt	\$3,950.00
*1989/1990 EMR Grant (group)	\$20,000.00

1989/1990 NSERC (operating)	\$16,500.00
*1989/1990 CEA Grant (group)	\$59,900.00
1989 Challenge Program	\$2,773.00
1988 EMR Canada Contract (Project 3 Associated Research)	\$7,000.00
*1988/1989 EMR Canada, 2 nd installment, Project (1)	\$20,000.00
*1988/1989 EMR Canada, 2 nd Installment, Project (2)	\$10,000.00
** 1987 NSERC Collaborative Travel Grant	\$3,950.00
**1987/1989 EMR Canada 2st installment project	\$16,000.00
*1987/1989 EMR Canada 1 st installment project	\$29,000.00
1987-1988 CEA Canadian Electrical Association Contract (group)	\$99,000.00
**1987/1988 Research Grant-Kuwait University /PV Solar Energy Schemes	\$11,500.00
**1987 EMR Canada Contract (supplementary funds)	\$7,500.00
1986-1987 UNBRF Research Fund	\$1,000.00
1986 Challenge Program, Employment Canada	\$2,432.00
**1986 NSERC Bilateral Collaborative Exchange Grant	\$2,700.00
**1986 JSPS Japanese Research Fellowship - Awarded	\$9,000.00
1986-1988 NSERC (individual) Operating Grant (3 years)	\$49,500.00
1985 UNB Merit Award (awarded)	\$1,500.00
*1985-1986 NSERC (Strategic Group) 3 rd Installment	\$41,976.00
1985-1986 NSERC (individual)	\$16,139.00
**1984-1985 Swiss National Research Council SF - Research Fellowship	\$3,600.00
1984-1985 UNBRF Research Fund Grant	\$1,000.00
1985 Challenge Program, Employment Canada	\$2,664.89
1985 Canadian Electrical Association (CEA) Group	\$47,541.00
1985-1986 UNBRF Research Fund	\$2,000.00
*1984-1985 NSERC (Strategic Group) second installment	\$41,976.00
1984-1985 NSERC Collaborative Scientific Exchange Grant	\$1,939.00
1984 CDEI Summer Internship, Dept. of Employment	\$1,958.00
1984-1985 NSERC (individual)	\$15,370.00
1983-1984 UNBRF Research Fund Grant	\$2,500.00
*1983-1984 NSERC (strategic group) first installment (3 year)	\$31,200.00
1983-1984 NSERC (individual)	\$14,500.00
1982-1983 NSERC (individual)	\$12,700.00
1981-1982 NSERC (individual)	\$11,000.00
1980-1981 NSERC (individual)	\$10,000.00
Applied: CFCAS (2 years budget)	\$239,000.00
* = Principal Investigator (group)	,
** – Invited Collaborative and International Research Fellowships	

** = Invited Collaborative and International Research Fellowships

EXPERTISE AND RESEARCH AREAS

- 1 Computer aided power system design, planning and operation.
- 2 Electric utilities load flow, stability, short circuit, feeder planning, and load survey, switching transients, transformer load management, harmonic voltage induction, computer studies and digital simulation.
- 3 HVDC and flexible AC transmission systems: FACTS system simulation, system security, control, protection and operational experience.
- 4 AI-Applications in power system control, protection and digital relaying, load forecasting, planning of power apparatus and systems, economic operation of interconnected AC-DC power systems.
- 5 Distribution systems planning, automation and economic utilization.
- 6 Harmonic interference phenomena, noise mitigation, harmonic penetration studies, electrical coordination and harmonic model estimation.
- 7 Efficient solid state variable speed variable frequency motor drives, industrial motor drive control and protection.
- 8 Electric energy conservation and efficient utilization electro technical systems.
- 9 Reliability assessment of power systems and components.
- 10 Control applications in power system and processes.
- 11 Energy conservation systems analysis, alternative and renewable green energy (wind, PV, hybrid, fuel cell, hybrid) energy systems, energy efficiency and demand-side sustainable management.
- 12 Robotics and microcomputer actuator position control.
- 13 Power quality (PQ), harmonics, inductive interference and EMC noise compatibility.
- 14 Non-invasive failure/anomaly diagnostics in power apparatus and protection systems.
- 15 Expert system (ES) applications in stability and security of electric energy systems.
- 16 Energy management, efficient utilization and energy conservation.
- 17 A.I. (ES, fuzzy logic, ANN, GA, elastic) applications in power system planning and electric utility operation.
- 18 Training courses and seminars in power system analysis, planning, and computer aided design, renewable energy utilization, demand side management, energy conservation control, protection and economic studies.
- 19 Curriculum consultancy and engineering course development.
- 20 Environmental pollution abatement using electromagnetic and electrostatic control devices.
- 21 Computer based technical training (CBT) interactive multi-media based courseware development.
- 22 A.I. smart engineering systems and applications in control, protection, soft computing, decision making/logistics/predictive forecasting and diagnostic protection systems.
- 23 Environmental, water germicidal and air pollution control devices and electric energy efficient systems.
- 24 Engineering consulting in electric power quality, energy conservation, demand-side management, renewable green energy, motor drives, power electronic converters and intelligent A.I. based control.
- 25 Fossil fuel efficiency enhancement (EM/ES) based devices for boilers and internal combustion engines.
- 26 Application of electromagnetic and electrostatic fields (EMIES) in bio-filter germicidal control technology and odor control using enhanced EM/ES zeolite adsorption filters.
- 27 Electro technology.

Updated May 27, 2015

28. Hybrid Renewable Energy and Green Technology.

MEMBERSHIPS-(Past & Present)

- 1. Life-Senior Member IEEE Institute of Electrical and Electronics Engineers (since 1983).
- 2. Associate Member "University" Canadian Electrical Association (CEA), since 1984.
- Active member, Associations of Professional Engineers of Ontario and New Brunswick (<u>P.Eng</u>).
 Formerly P.Eng. with the Provinces of Manitoba & Alberta Professional Associations (1977,1979).
- 2. Association of Professional Engineers of Egypt (since 1971).
- 3. Previous member of the Editorial Review Board of the International Association of Science and Technology for Development (IASTED), Canada, USA and Switzerland.
- 6. Previous memberships in Canadian Society of Electrical Engineers (CSEE), AMSE France, Engineering Institute of Canada (EIC), New York Academy of Sciences and numerous national and international engineering and research committees.

SERVICES TO ENGINEERINGPROFESSION

(Past & Presnt)

Technical and Engineering Services included:

- *1. Services to International Technical Committees
 - a. Member of IEEE working group 80.2 "DC converters for storage systems and alternate power systems", IEEE Power Engineering Society (Substation Committee).
 - b. Member, University Academic Standards and Procedures Committee, 1994.
 - c. Session organizer and Chairman, MSC Conference, Pittsburgh, April 1987.
 - d. Member of IEEE Working Group on "Harmonic aspects of DC transmission".
 - e. Member of IEEE "Audible Noise" working group.
 - f. Member of IEEE "Power System Harmonics" working group.
 - g. Member of IEEE Working Group 15.05.02 "Dynamic performance and modeling of DC systems".
 - h. Member of IEEE Working Group 15.05.04 "Multi terminal DC systems".
 - i. Member of IEEE SCC23 Working Group "IEEE utility test code for power conditioning units".
 - j. Member IEEE PES Induction Machinery Sub-Committee.
 - k. Member, IEEE Standards Development Committee.
 - 1. Member IEEE W.G. "Test code for power conditioning units".
- *2. Service to Canadian Technical Committee
 - a. Member CEA Electrical Coordination Committee.
 - b. Member CEA Distribution Committee.
 - c. Member CEA Electrical Apparatus Committee.
 - d. Member of Faculty Power System Planning and Operation Committee.
 - e. Member CEA Engineering Education Committee.

*3. Services to the University (1981-1994)

- a. Member of UNB-TEP Senate Selected Teaching Excellence and Procedures TEP-Committee, 2006-2007 extended 2007-2010.
- b. Member-UNB Senate three year term (1994-1997) (resigned in 1995 due to an approved 20 month leave of absence without pay).
- c. Senate Representative Selection Committee Assoc. Dean of Business Admin.
- d. Member Faculty Library Committee.
- e. Electrical Engineering Department Bibliographer.
- f. Member of Department Committees (Budget, Planning, Graphics, Student, Undergraduate, Graduate, Assessment).
- g. Member Search Committee for Chairman of Electrical Engineering Dept.
- h. Member of University Academic Policy and Procedures (APP) Committee.
- i. Undergraduate Student Academic Counseling.
- j. IEEE Student Committee and IEEE-NB Chapter Liaison.
- k. Member, University Academic Standards and Procedures Committee (1994).
- 1. Chairman, Electrical Engineering Dept., UAE University, UAE (1996 and 1997).
- m. Member of faculty wide Promotion Committee, UAE University.
- n. Member of Awards Committee, UAE University, UAE (1996,1997).
- o. Chair, Student Innovation Research Centre, UAE University, UAE (1996,1997).
- p. Principal Coordinator and teacher of first year Freshman Lab I Course, UAE University, UAE (1996, 1997).
- q. Member of Curriculum Committee, ABET Accreditation and self learning Committee at UAE University, UAE (1996, 1997).
- r. Chairman Electrical Engineering Dept., UAE 1995-1997 & 1998-1999.
- *4. Service to Technical Journal and Conference Organizations
 - 1. Technical Co-Chair at International Symposium on INnovations in Intelligent Systems and
 - 2. Applications (INISTA) Conference, Trabzon Turkey, July 2009.
 - 3. Guest Editor for the International Journal of Energy Technology and Policy IJETP, 2005UK.
 - 4. Invited Associate Editor of the special issue on Power Electronics for Distributed and CoGeneration of the IJETP-International Journal of Energy Technology and Policy, Interscience Publication, 2004.
 - 5. Session Chair and Session Organizer, MEPCON 2003, Egypt.
 - 6. Conference Session Chair, 7th International Conference on Modeling Electronics Electrimacs 2002, Montreal, Quebec, Canada 2002.
 - 7. International Conference Organizer and Session Chair, MEPCON 2001, Cairo, Egypt.
 - 8. Member of Organizing and Technical Committee ICE 2000, The First International Energy Conference, May 7-9, 2000, Al-Ain, U.A.E.
 - 9. Member, Technical Organizing Committee International ICCCP & ICCCPOI Conference, Sultan Qabeos University, SQU, 1998, 2001.
 - 10. Conference organization and Technical Committee member of IACPS, UAE, Al-Ain, April 6-8, 1997.
 - 11. For the intelligent applications in communications and power systems conference, U.A.E.
 - 12. Session Chair, Paper Reviewer and member of Technical Organizing Committee, MEPCON Conference, Assiut, Egypt, Jan 1996.

- 13. Session Chair, Canadian Conference on Electrical and Computer Engineering CCECE 1994, Halifax, September 1994.
- 14. Member, International Technical Committee, IEEE/IAS Intelligent Vehicles '94, October 24-26, 1994, Paris France.
- 15. Member, International Steering Committee PEMC'94, Power Electronics, Motion Control, Sept 20-22, 1994, Warsaw, Poland.
- 16. Member, International Program Committee, IASTED International Symposium, Wakayama, Japan, Sept 12-16, 1994.
- 17. Session Chairman, IEEE-MEPCON, Cairo, Egypt, January 1994.
- 18. Session Chairman, IEEE-Power Tech, Athens, Greece, September 1993.
- 19. Session Chairman, ICEE'93, Tehran, Iran, May 1993.
- 20. Member, Technical Steering Committee, Session Chairman, IPEC 1991, Singapore, March 17-18, 1993.
- 21. Session Chairman, ICARV 1992, Singapore, September 15-18, 1992.
- 22. Session Chairman, National ISA Industrial Automation Conference, Montreal, June 1- 3, 1992.
- 23. Session Chairman, IASTED May 4-6 1992, Alexandria, Egypt.
- 24. Session Chairman, MEPCON January 1992, Assiut, Egypt.
- 25. Session Chairman, COMCONEL 90 Conference Cairo, Egypt, Dec 1990.
- 26. Session Organizer and Chair, IASTED ASM-87 Santa Barbara, CA May 1987.
- 27. Session Organizer and Chairman, MSC April 1987, Pittsburgh, USA.
- Conference Advisory, Session Organizer and Chairman, IEEE Regional Conference for Developing Countries, March 1987, Riyadh, Saudia Arabia. Session Organizer and Chairman, MSC Conference, Pittsburgh, April 24-25, 1986.
- 29. Session Organizer and Chairman, Applied Simulation and Modeling, ASM Vancouver, BC, Canada June 4-6, 1986.
- 30. Session Chairman, IASTED MECO Measurement and Control Conference, Istanbul, Turkey, July 23-25, 1985.
- 31. Session Chairman, Modeling & Simulation ASME'84, Athens Greece, June 1985.

PROFESSIONAL SERVICES, PARTNERSHIPS, COLLABORATION

- 1. Member of the Editorial Board of Inderscience Group, UK new International Journal in Electrical Power and Energy Conversion.
- 2. Member of the Editorial Board of the International Journal of Electrical Engineering, Serial Publications, New Delhi, India.
- 3. Member of the Editorial Board of the new IEEE Journal of Electronic and Electrical Engineering IEEE, USA.
- 4. Guest Editor, Inderscience Enterprises Ltd. Publications, Power Electronics for Distributed and Cogeneration, International Journal Energy Technology and Policy, 2006.
- 5. Collaboration with the New Egypt ETRC Helwan Energy Technologies Research Centre.
- 6. Negotiated four new College wide and University wide new academic links with Ain Shams, Tanta, Menofia and Alexandria Universities, Egypt (under consideration).
- 7. Established a University Wide Academic Agreements between UNB and Helwan University, Egypt, signed March 2003.

- 8. Established an academic research link with Tallin Technical University, TTU, Tallin, Estonia, 1998.
- 9. Established a new academic link with Technical University of Warsaw, Poland, 1998.
- 10. 1995 Established academic research link, UAE University, United Arab Emirates.
- 11. 1995 Academic collaborative links and channels Al Mansoura University, Egypt.
- 12. 1995 Academic collaborative links and channels, Electronics Research Institute, Cairo, Egypt.
- 13. 1995 Academic collaborative links and channels, National Technical University of Athens, Greece (initiated).
- 14. 1995 Academic collaborative links & channels, National Research Institute, Indonesia.
- 15. 1995 Academic channel links Zagazig University, Egypt (initiated).
- 16. 1995 Academic channel link, Shoubra Faculty of Engineering, Egypt (initiated).
- 17. 1995 Academic and research link, Agency for the Assessment and Application of Technology (BPP Teknologi), Indonesia (initiated).
- 18. 1994 Started academic links with Tempere University, Finland, Prof. E. Lakervi.
- 19. 1991 -Iinitiated academic research collaboration with Cairo University, Egypt with CIDA-Canada support (pending formal approval).
- 20. 1989 Initiated academic research links with TU-Delft, Holland, Nanyang Technological University, Singapore and Technical University of Wroclaw, Poland (pending formal approval).
- 21. 1989 Established academic link with the technical university of Istanbul, Turkey, Prof. Dr. N.H. Yukseler.
- 22. 1988 Established collaborative research links with numerous Egyptian Universities (Menofia, Mansoura, Ainshams and Assuit Universities) for support of PhD student exchanges, research collaboration and community development
- 23. 1987 Established academic link with Technical Education and Vocational Training General Organization, Saudi Arabia.
- 24. 1987 Initiated an academic R&D link with University of Bologna, Italy, Prof. Dr. Gian Carlo Montanari, Institute de Electrotechnica Ind.
- 25. 1987 Initiated a research link with Warsaw University of Technology (Institute of Control and Industrial Electronics), Prof. W. Koczara- Chair.

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- October 1979 (Ph.D.) "Modeling of Integrated Multi-Area Multi-Terminal DC-AC Systems and the Design of Stabilizing Loops in DC Controls", PhD Thesis, University of Manitoba, Winnipeg, MB, Canada.
- Oct.1976 (MSc.E.) "Harmonic Phenomena on the DC Side of HVDC Converter Schemes", M.Sc. Thesis University of Manitoba, Winnipeg, MB, Canada.
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- Reviewed a technical paper, "A Fuzzy Logic Based Excitation Controller for a Stand Alone Synchronous Generator", Ismail H. Altas, Journal of Intelligent and Fuzzy Systems; Editor Dr. R. Langarai, May 2006.
- Reviewed a technical paper, "Optimal Deisgn of Self Excited Cage Induction Generator UsingParticle Swarm Optimization', Iranian Journal of Electrical and Computer Engineering, Feb 2006.
- Reviewed a paper titled, "Improved Genetic Algorithm for Voltage Security Constrained Optimal Power Flow Problem", International Journal of Energy Technology and Policy (IJETP) Editor: Dr. Walmir Freitas, May 2006.
- Reviewed a technical paper, "A Novel Approach for ATC Computation in Deregulated Environment", Editor: Dr. Lalit Goel, EPSR Journal of Electric Power Systems Research, May 2006.
- Reviewed a technical paper, "A Novel DC link Voltage Control of PWM Switched Cascade Cell Multi Level Inverter Applied to STSTCOM", IEEE IAS Transactions, Editor: Dr. Urak Ozpineci, April 2006.
- Antonio Griffo, Davide Lauria, "Two-Leg Three-Phase Inverter Control For STATCOM and SSSC Applications", IEEE Transactions on Power Delivery, 00469-2006.
- Ahmed G Abo-Khalil, et al, "Maximum Power Point Tracking Controller Connecting PV System to Grid", Journal of Power Electronics, Volume 6, No. 3, July 2006.
- "The Application of FACTS for the Stable Operation of the Power System with Wind
- Farms", Electric Power Systems Research Journal, 2006.
- "Investigation of Performance of UPFC without DC Link Capacitor". Electric Power Systems Research Journal, 2006.
- Reviewed a Technical Paper, "Identification of Three Phase Transformer Abnormal Conditions Using Wavelet Entropy", W. Abu-Elhaija, M. Alomoush and A. AlZaban, IASTED-ACTA, Press Publications, May 2005.
- Reviewed a Journal Paper, "A Novel Approach for ATC Computation in Deregulated Environment", Electric Power System Research EPSR, May 2005.
- Reviewed a Journal Paper, "Performance Analysis of Self Excited Induction Generator using Artificial Neural Network", Iranian Journal of Electrical and Computer Engineering, Iran.
- Reviewed a technical paper, "Design of a Fuzzy Logic Controller for a Radar Tracking System", I.H. Atlas and H.I. Okumus for the AutoSoft Journal, Editor International Journal on Intelligent Automation and Soft Computing.
- Reviewed a technical paper, Giuseppe Tina, "Operation Planning Optimization for Small Size Integrated Generation Systems by Fuzzy Logic Based Management", IEEE Transactions on Energy Conversion, paper TEC-00196-2003.
- Reviewed a technical paper "A Robust Adaptive Voltage and Speed Regulator for
- Multimachine Power Systems" by Francis A. Okou, Louis A. Dessaint and Q. Akhrif. CEEJ Canadian Electrical and Computer Engineering Journal Editor Dr. Ashoka K.S. Bhat,

2003.

- Reviewed Draft Textbook "Energy Conversion and Motor Control", Pearson Publishers -Higher Education (Mr. A. Luengo, Editor, Toronto, Ontario, Canada).
- Reviewed a technical paper for the International Journal Control & Power Editor Dr. M. Jamshidi, New Mexico, "On Efficient Variable Voltage Linear Power Supplies", by K. Natarajan.
- Reviewed a technical paper for the Journal of King Saud University [Engineering Sciences] entitled "New Recursive Formulas for Eigenvalue Sensitivity Analysis", July 1996, Editor Prof. M. Alhaider.
- Reviewed a technical paper entitled "A Fast and Accurate Load Forecasting System Using Fuzzy Logic and Neural Networks", by P.K. Dash and S. Rahman, Journal of Intelligent Systems, Editor Professor M.J. Wright.
- Reviewed a technical paper entitled "Analysis and Implementation of a Tubular Motor with Halbach Magnet Array", for IEEE Transactions on Industry Applications" Electrical Machines Committee Editor IAS Chairman Nady Boules, July 1996.
- Reviewed a technical paper entitled "Dynamic Analysis of LCC-Type Parallel Resonant Converter Operating in Discontinuous Current Mode", Canadian Electrical and Computer Engineering Journal, Editor Prof. O.P. Malik (July, 1996).
- Reviewed two papers for the IEEE-PES Induction Machinery Committee Publications, Sept. 1994. Editor J. Glenn Karoly:
- "Pseudo locked-rotor test for induction motor parameter measurement", by C.L. Chen, Y.N. Lin.
- "Dynamic analysis of induction motors with saturable inductances", by J. Faiz and A.R. Serifi.
- Reviewed eleven abstract papers for the IEEE Southeastern Symposium on System theory, March 20-22, 1994, Athens, Ohio.
- Reviewed a paper entitled, "Intelligent Hierarchical Control of Traffic Networks" for the American Control Conference, ACC, 1994.
- Reviewed IEEE std 252-1994 "IEEE Test Procedure for Polyphase Induction Motors Having Liquid in the Magnetic Gap", Sponsored by the Electric Machinery Committee of the IEEE Power Engineering Society.
- Reviewed two papers, December 1993 for the Canadian Electrical and Computer Engineering Journal.
- "An Expert System for Long and Short-Term Voltage Control and Loss Reduction in a Radial Distribution System", by J.R.P.R. Laframboise, A. Y. Chikani, G. Ferland, D.R. Smith and M.M. Salama"
- "Modelling the Interaction of Multiple Small Harmonic Current Sources in an Isolated Power Distribution System", by R. Hudson, A.Y. Chikani, G. Ferland and D.R. Smith"
- Reviewed twenty papers for the Int'l Power Electronics Conf., IPEC'93, Singapore, 1993.
- Reviewed six papers for the 3rd International Symposium on Electricity Distribution and Energy Management, ISEDEM'93, October, 1993.
- Reviewed two papers for the Canadian Electrical and Computer Engineering Journal
- "Modeling the Interaction of multiple small harmonic current sources in an isolated power distribution system"
- "An expert system for long and short-term voltage control and loss reduction in radial

distribution systems"

- Review of NSERC Operating, Equipment and Conference Grant Applications.
- Reviewed and contributed to IEEE Guide "IEEE standard for the measurement of audible noise from overhead transmission lines", issued as a full standard by IEEE Standards Committee.
- Contributed to the newly issued IEEE 519 Guidelines & Standards. Guide for Harmonic Control and Reactive Compensation of Static Power Converters, 1992.
- Reviewed a number of NSERC Canada Natural Sciences and Engineering Research Council Conference and research partnership application grants, during 1990, 1991.
- Reviewed a textbook entitled "introduction to Electrical Science", by R. Findlay, Prentice Hall, Canada, Publishing company, Editor, D. Wolf.
- Reviewed a technical paper, "Speed controller design of a vector-controlled permanent magnet synchronous motor drive with parameter variations", for IEEE-IAS Society, M. Rahman, Editor, September, 1990.
- Reviewed a technical paper, "A procedure for the Design of Motor and Coupling for DC Servo Applications" by N. A. Shneydor, July 1989, IEEE, IAS, M. A. Rahman, IEEE T-C paper reviews.
- Reviewed a technical paper, "A Novel Control Scheme for A Brushless DC Motor Fed From A Current Source Inventer: July 1989. IEEE, IAS, M. A. Rahman, Chairman, T. C. paper reviews.
- Reviewed a technical paper, "The Protection of Broken Bars In The Cage Rotor of An Induction Machine" by N. M. EL Kasabgz. A. R. Eastham and G. E. Dawson, July 1989. IEEE, IAS, Editor, M. A. Rahman, Chairman, T. C. Paper reviews.
- Reviewed a technical paper, "An interactive power system simulator with enhanced features", by A. Semlyen and D. Corovic, CECEJ, Editor O.P. Malik. (April 1989).
- Reviewed a technical paper, "Microprocessor controlled tuned fault current limiter", by M. Salama, et al., The International Journal of Microcomputer Applications, Editor M. Hamza. (April 1989).
- Reviewed a technical paper, "Microprocessor controlled tuned fault current limiter" by M. Salama, et al., IASTED Journal, Editor M. Hamza, March 1989.
- Reviewed a technical paper entitled, "An interactive power system simulator with enhanced features" by A. Semlyen and D. Corovic, Canadian Electrical and Computer Eng. Journal, Editor O. Malik, March 1989.
- Reviewed a technical paper, "Stability problem in induction motor drive systems", IEEE-IAS Transactions, IEEE-EMC Committee, Dec. 1988.
- Reviewed a technical paper, "Design of a clamped series inverter for induction heating", CEEJ Journal, Editor O.P. Malik, Dec. 1988.
- Reviewed a technical paper, "More exact method for determining the weighting matrix for micromachine laboratory implementation", IASTED Journal, Editor T. Teskey, Nov. 1988.
- Reviewed a technical paper, "Steady state torque components of current-source inverterfed induction machines by means of 1-2-0 coordinate system", IEEE IAS Committee, Nov. 1988.
- Reviewed a technical paper "Single phase induction motor with an electronically controlled capacitor", by T.M. Lettenmaie, W. Novotny, T.A. Lipo, Electric Machines Committee, IEEE, 1988, EMC Committee.

- Reviewed a book "The General Theory of AC Machines by R. G. Harely, Chapman & Hall, London, Editor Ms. M. Dunn, 1987.
- Reviewed the Scientific Publication Grants Application for Natural Sciences and Engineering Research Council for the International Journal of Modelling and Simulation, February 1987.
- Review paper # 87SM07 "Reduced order model for single and double cage induction motors during start up" for IEEE, IM Committee Chairman, S.B. Kuznetsov, 1987.Reviewed a total of fifteen (15) papers for the first IEEE-Region 8 Conference on Power Systems in Developing Countries, Riaydh, Saudi Arabia, March 1987 (Conference Organizing Committee).
- Reviewed a research project No. C3-1-3 for the West Virginia University Energy Research Center entitled "Active and reactive power modulation controllers for multi-terminal ac/dc power systems" by Dr. M.A. Choudhry, January 1987.
- Reviewed a technical paper entitled "Analysis of the audible noise of three phase squirrel cage induction motors supplied by inverters", by R. Bellman, et. al. for IEEE Industry Applications Society IAS, Editor: Dr. D.W. Novotny, September 1986.
- Reviewed proposed new textbook "Static power converters and their applications by M.H. Rashid, Purdue University, Publisher, J.S. Green, Longman House, Essex, England, May 1986.
- Reviewed a research project for the Energy Research Center, West Virginia University, USA, proposal number D3-1, "Stability enhancement in multi- terminal AC-DC power systems", M.A. Choudhry, G.D. Galanis, December 1985.
- Reviewed a technical paper for Canadian Electrical Journal CEEJ, Editor Dr. V. Ramachandran, Nov. 1985, "Long term operation of series-parallel reservoirs for critical period with specified monthly generation", by S. A. Soliman and G. Christensen.
- Reviewed a technical paper for the IEEE, PES Engineering Society, September 1985, "The concept of figure of merit applied to protection system coordination", by J. Juves, R. Johnson, E. Mayer, S. Waters.
- Reviewed a Research Project for the Energy Research Center, West Virginia University, USA, proposal number 7 Power Electronics Research Center, August, 1985.
- Reviewed a new text book, "Principles of electric machines with power electronics applications", by M. El-Hawary, Reston Publishing Company, Editor: Mr. E. Ennamorati, May 1985, to be published in 1986.
- Reviewed a technical paper for Canadian Electrical Engineering Journal CEEJ, Editor: Dr. V. Ramachandran, May 1985, "New analytical approach for long-term optimal operation of a parallel multiservoir power systems based on functional analysis".
- Reviewed technical paper for Canadian Electrical Association Journal DEEJ, Editor Dr. Ramachandran, Nov. 1985, "New analytical approach for long-term optimal operation of a parallel multireservoir power system Based on Functional Analysis" by /G.S. Christensen and S.A. Soliman.
- Reviewed technical paper #W85-12 for IEEE PES Committee September, 1984, "Decomposed, reduced order model of double cage induction machines".
- Reviewed technical paper #W85-11 for IEEE PES Committee September 1984, "Speed control system for brushless cascade induction motors in control range $S_1 \square 1$, $S_2 \square 1$ ".
- Reviewed technical paper for the International Association for Science and Technology for

Development IASTED, February 1984, "Digital computer simulation and modulation of multi-terminal hvdc systems", by M.A. Choudhry and A.S. Emarah. Editor: Dr. M. Hamza, Publisher: ACTA Press, Calgary, Alberta, Canada.

- Reviewed technical paper for Canadian Electrical Engineering Journal CEEJ, November 1983, "Optimum load frequency control of multi-area interconnected power systems", by A. Abdel-Halim, G. Christensen, D. Kelly. Editor: Dr. V. Ramachandran, Publisher: CSEE Canadian Society of Electrical Engineers, Montreal, Canada.
- *Reviewed and contributed to the CEA Distribution Manual, "A guide for ferroresonance, harmonics and inductive coordination in distribution systems", (Issued to Canadian Electric Utilities 1982). Guide issued to Canadian and North American Electric Utilities.
- Reviewed the "IEEE hvdc harmonic induction test system", Dr. F.S. Prabhakara for IEEE Working Group 05.09, (To be issued).
- Contributions to Books, Standards, Guidelines.

SERVICES AS INTERNATIONAL REVIEWER

- 1. AEAS Scientific Reviewer Faculty Promotion Process; the Ministry of Higher Education in Egypt.
- 2. International Referee for the National Science Fund Republic of Bulgaria, Ministry of Education and Science in Bulgaria.

SABBATICAL LEAVES & INTERNATIONAL VISITING PROFESSORSHIPS

2007 (6 months) 2003 (6 months) 1998-2000	July 1-December 31, 2007 – Egypt and Canada July 1-December 31, 2003 - Egypt (Helwan and Menofia Universities) Visiting Professor and EE Department Chair, United Arab Emirates				
	University, Al-Ain, UAE				
1987-1988	Visiting Professor and Research Fellow, Kuwait University, Kuwait				
1996-1997	Visiting Professor and Department Chair, Collaborative Research, United				
	Arab Emirates University, Al-Ain, UAE				
1995-1997	Self Directed 20-Month leave (without pay) Research and R&D				
	Development of patents of Novel Environmental and Energy Efficient				
	Devices (Egypt, UAE, and Canada)				
1992-1993	Visiting Professor and Research Fellow, Nanyang Technological				
	University, Singapore				

RESEARCH – SPECIAL LEAVE OF ABSENCE (without pay)

- September 1998-June 2000
 Self directed leave of absence without pay. Research R&D in electric energy efficiency enhancement devices and electromagnetic based environmental devices, as well as Chair, Department of Electrical Engineering, United Arab Emirates (UAE, Egypt, and Canada).
- September 1, 1995 May 31, 1997 (20 months)
 Self-directed leave of absence without pay to develop a number of patented R&D environmental devices for Sharaf Energy Systems Inc. of Fredericton, NB, Canada.
- September 1996 to May 1998
 Visiting Professor & Department Chairman, EE Department, UAE University, Al-Ain, United Arab Emirates (without pay).
- iv. September 1998-June 2000
- * September 15 2008-May 15 2009
- * September 15 2009-December 15 2009 Chairman, EE Department - UAE University

CURRICULUM CONSULTANT & REVIEWER EXAMINER

- a. External Reviewer for DSC Award for Professor Dr. P.K. Dash, awarded by Controller of Examinations Utkal University, Indian, May 2003.
- b. Registered IEEE Reviewing for PES Publications (toward, PESL, and Central Publications).
- c. External Reviewer/Referee Promotion for Dr. Andrew M. Knight from Assistant Professor to Associate Professor, August 2002, ECE, University of Alberta.
- d. External Reviewer/Referee Promotion for Dr. D. Thukaram from Associate Professor to Full Professor, Aguust 2002, Indian Institute of Science, ECE Department, Bangalore, India.
- e. External examiner and program consultant for the Universiti Sains Malaysia, Perak, Malaysia.
- f. Curriculum consultant for Electrical Engineering, Kuwait University.
- g. Curriculum consultant and academic examiner for Ain Shams, Menofia and Assuit Universities, Egypt.
- h Curriculum development, "Knowledge Technology Program" NBCC Miramichi, NB new program.

- i Referee, Faculty Promotion, King Saud University, Riyadh, Saudia Arabia.
- j Curriculum and program consultant, UAE University, United Arab Emirates (1995, 1996).
- k. Referee, faculty promotion Sultan Qaboos University, Muscat, Oman.
- 1 Reviewed faculty promotion of Dr. D. Thukaran's promotion from Associate Professor to Full Professor, Indian Institute of Science, Bangalore, India (Chair/Head - Dr. H.P. Khincha).

COLLABORATIVE RESEARCH AND JOINT RESEARCH DEVELOPMENT

- 1. Joint research on Electro Technology and green energy with KIU University, Turkey.
- 2. Joint research with Mansoura University, Egypt, on wind energy utilization, interfacing and voltage stabilization (Professor Dr. A. Osman and Professor Dr. M. Abdel Rahman).
- 3. Collaborative Research with Egyptian Universities (Cairo, Ain-Shams, Mansoura, Tanta, Menofia, Assuit).
- 4. Collaborative Research with Helwan University on renewable/sustainable electric energy systems.
- 5. Collaborative Research with Universities of Waterloo and Lakehead, Ontario Canada.
- 6. Research collaborations, Electrical Engineering Department, with Professors Hill, Smolinski, Burridge, Tranquilla, Luke, Doraiswami. This collaboration resulted in joint research contracts and a number of published refereed papers as well as graduate student cosupervisions.
- 7. Research collaboration with mechanical Engineering Department, Professors Venart and Sousa. Resulted in a number of strategic research submissions and research contract applications in the area of energy conservation and efficiency enhancement.
- 8. Research Collaboration with Cairo, Helwan and Menofia Universities in Egypt in Renewable Energy PV and wind utilization for new remote communities.
- 9. Research Collaboration, U.A.E. University, United Arab Emirates, 1995-1997, 1998-1999.
- 10. Research Collaboration and R&D development with Electronics Research Institute ERI Cairo, Egypt, Ministry of Scientific Research, 1995.
- 11. Research Collaboration with University of United Arab Emirates, Al-Ain, 1995-1996.
- 12. Technical consulting and research collaboration on A.I. technologies (fuzzy logic and neural network applications) in power systems, control protection and motor drives, Nanyang Technical University, NTU, Singapore 1992-1993.
- 13. Collaborative Research with Ain-Shams, Mansoura and Menofia Universities, Egypt on A.I. applications in electric power systems and renewable wind energy utilization.
- 14. Technical University of Delft-TU, the Netherlands, June-August, 1990. Research on "Expert system based power system stabilizers".
- 15. Menofia University, August 1990. Collaborative Research on renewable wind and solar energy utilization.
- 16. Royal Institute of Technology KTH, Stockholm, Sweden, 1989. Research on "Harmonic Instability in Interconnected HVAC/DC Systems.
- 17. Kuwait University, Kuwait, 1988, Research on efficient motor drives, solar systems interfacing and curriculum development.
- 18. ASEA-Brown Boveri, Baden, Switzerland, 1988, consulting on "Field Acceleration Method FAM-voltage controllers for asynchronous motor drives".

- 19. ASEA-Brown Boveri, Baden, Switzerland, 1987, consulting on "FAM-current controllers for asynchronous motor drives".
- 20. Kyushui Institute of Technology, Tobata, Japan. Consulting in microcomputer controlled motor drive systems, August 1986.
- 21. CRIEPI, Central Research Institute of Electric Power Industry, Japan. Consulting on Integrated AC-HVDC Systems Control and Protection, from June-August 1986.
- 22. Canadian Electrical Association, from July, 1985 to January 1986, consulting on power system harmonics and harmonic standards development, Contract 415-0474, Final report with Hill, Smolinski and Luke.
- 23. Brown Boveri & Company, Baden, Switzerland, (July-August 1984). Technical consultations on harmonic over voltage instabilities in interconnected AC-HVDC power systems.
- 24. New Brunswick Electric Power Commission NBEPC (June-August 1983). Technical consultations on negative-sequence over-voltages and harmonic interference problems.
- 25. New Brunswick Electric Power Commission (May-August 1982). Technical consultations on Techniques in power system simulation, tuning of excitation-control systems, over-voltages and harmonics interference.
- 26. Registered member of the IEEE Standards Activities Office.

SPONSORED COURSES & WORKSHOPS

- I. Soft Computing, "A.I. Applications in Power Systems", Seminar, UAE IEEE/Professional Engineers, United Arab Emirates, 1999.
- II. "Power Quality Problems and Solutions", invited Seminar/Workshop, Mansoura University, Egypt, and June 1995.
- III. "Renewable Energy (wind, PV) Schemes for Developing Countries", invited Seminar/ Workshop, Assuit University, May 1995.
- IV. "A.I. Applications in Power Industry and Electrotechnical Systems", Seminar/Workshop, IEEE, Singapore Section, June 25, 1993.
- V. Power System Harmonics and Power Capacity Workshop (3 days) sponsored by Canadian Electrical Association, 1990.
- VI. Power System Harmonics Workshop (3 day course) sponsored by Canadian Electrical Association, 1989.
- VII. Power Systems Planning & Harmonics Seminar, 2 days, Kuwait University, Kuwait, 1988.

INVITED WORKSHOPS / CONFERENCES

- Invited Keynote Speaker and Conference Co-Chairperson INISTA 2009, Trazbon, Turkey (June 29th-July 01st, 2009) – International Symposium on Innovations and Intelligent Systems and Applications.
- 2. Invited Keynote Speaker for the VIII Brazilian Conference on Power Quality, Blumenary

S.C. Brazil (August 2nd – August 5th, 2009).

- Keynote speaker "FACTS Technologies and Applications to Green Energy and Power Quality", Nov 26, 2007, 3rd International Millennium and Advanced Technologies of Energy Conference, Nov 25-27, 2007, HBRC, Cairo, Egypt.
- 4. Invited lecture/seminar, Helwan University, Faculty of Engineering, Dec 2, 2007 titled "Green Wind/Photovoltaic Renewable Energy Schemes".
- 5. Invited lecture/seminar, Cairo University Faculty of Engineering, Dec 10, 2007 on "Power
- 6. Invited Lecture, "Wind Energy Stand Alone Utilization Schemes", Arab Conference on Energy, October 5, 6, 2005, Cairo, Egypt.
- 7. Invited Lecture, "Electrotechnology in Energy and Environment, Acadia University, Wolfville, NS Canada, April 2005.
- 8. Invited Lecture, "Novel High Impedance Arc-Fault Detection and Relaying Schemes", Menofia University, Egypt, December 2003.
- 9. U.A.E. University, United Arab Emirates, "ANN based power system stabilizers", Invited Lecture, 1996.
- 10. Nanyang Technological University, NTU and IEEE-Singapore Chapter, Singapore. Invited speaker - Seminars on fuzzy logic and rule based control applications in motor drives and renewable energy systems, 1992.
- 11. Ain Shams University, Menuofia University, Assiut University, Invited Speaker, December 1991 January 1992 and July 1993.
- 12. Technical University of Delft-TU, The Netherlands, June 1990 August 1990. Presentation/Workshop, "Expert system based power system stabilizer designs", August 16, 1990.
- 13. Royal Institute of Technology KTH, Stockholm, Sweden, May June 1989. Two Presentations:
 - (i) Static Phase Shifter Applications In Power System Stability Enhancement.
 - (ii) "Wind Energy Interface Schemes for The Induction Generators."
- 14. ASEA Brown Boveri, July 1987, July 1988, three seminars.
 - (i) FAM-field acceleration methods for control of asynchronous motors.
 - (ii) Wind-energy schemes utilizing the asynchornous (induction) generators.
- 15. Kuwait University, 3-day Workshop, April 1988, "Power system planning & operation", Kuwait University Sponsored Course for Utilities Practicing Engineers.
- 16. Kuwait University, March 1988, a seminar entitled "Controller schemes for wind energy conversion using induction generators".
- 17. Kuwait College for Technological Studies, Kuwait, Feb. 1988, two seminars.
 - (i) FAM-field acceleration method principles.
 - (ii) Application of fan-current controller to asynchronous motor drives.
- 18. King Abd-Aziz University, December 1987, a seminar entitled "Wind energy conversion schemes".
- 19. Warsaw Institute of Technology-Power Electronics Department. Seminar on "Effective control designs for wind energy interfacing, June 1987.
- 20. Kyushui Institute of Technology, Tobata, Japan, two seminars on

- (i) "Digital implementation of robust linear multivariable controllers for current fed induction motor drives", August 6, 1986.
- (ii) Modelling, Design of induction generator based wind energy scheme, August 6, 1986.
- 21. Central Research Institute of Electric Power Industry CRIEPI, Japan, two Seminars on:
 - (i) "Electric power industry in Canada", August 21, 1986.
 - (ii) "Applications of static phase shifters in power systems", August 21, 1986.
- 22. Seminar on "Negative sequence problems causes and effects", Presented twice to NBEPC Engineering staff, September and October 1983.
- Presented a short course to New Brunswick Electric Power Commission, NBEPC, -Training School, "High voltage direct current transmission", June 18-22, 1982.
- 24. Seminar on "Harmonic instability in integrated HVDC-AC Systems", BBC Brown Boveri & Company, August 20, 1984, Turgi, Switzerland.

CURRICULUM UPDATING AND COURSE DEVELOPMENT

- 1. Updated and modified the new Drexel Model-Engineering Freshman Lab I course for engineering students at UAE University.
- 2. Developed a new senior course "Special Topics in Power Systems Engineering" UAE University, United Arab Emirates, 1996.
- 3. Developed a new course, EE3633 "Electric Machines" for the Electrical Engineering, Computer Option.
- 4. Updated Electric Machines and Electrical Engineering course EE3611, EE3622 and EE2683 mainstream Electrical Engineering students.
- 5. Developed two new courses in High Voltage Direct Current Transmission HVDC, EE6473, EE6483.
- 6. Developed a new course, Solid State Power Modulators, EE6623.
- 7. Developed a course in Rectifiers and Inverters, EE4652.
- 8. Developed a new course "Electric Machine Dynamics" EE6613, as a senior technical elective and graduate level course.
- 9. Modified and updated a course in "Electrical Design' EE4641.
- 10. Updated a technical elective course in "Power System Operation" EE4422.
- 11. Developed two new graduate courses: Design and Control of Low Voltage Electric Circuits (EE6633); and Transients in Electric Power Circuits (EE6643).
- 12, Developed two training workshop courses for electric utility practicing engineers (Kuwait, Canada): harmonic and reactive compensation on electric utility systems; and harmonics, sources, effects and mitigation.
- 13. Developed a new graduate course "AI Applications in Electrotechnical and Electric Power Utility Systems", introduced September 1995.
- 14. Developing a new project based learning (PBL) technical elective course, EE4653, Power

Electronics, winter term 2004.

- 15, Developed two project based learning courses (PBL) EE4411, EE 4422.
- Developed two graduate project based learning courses EE6633, EE6644
 "Design of Low Voltage Systems" and "Electric Transients in Power Systems"– Project Based Learning format.

TEACHING

Undergraduate Courses

- 1. Power Systems Analysis course and special topics in power systems, UAE University; taught two technical elective courses.
- 2. Electric Machines courses (U. Of Manitoba, 24-352; UNB EE3611, EE3622, EE3633).
- 3. Rectifiers and Inverters (EE 4652).
- 4. Electric Circuits (EE1713).
- 5. Power System Operation (EE4422).
- 6. Electrical System Design (EE4641).
- 7. Electric Circuits and Machines (for non-electricals) (EE2683).
- 8. Electric Circuits (E2001, NTU, Singapore).
- 9. Electric Machines, Power Systems & Power Electronic Courses (Kuwait 1988).
- 10. Power Electronics (EE4653).
- 11. Electrical Engineering for Non-Electrical (EE2683).
- 12. Power Quality
- 13. Renewable green Energy Systems
- 14. Power Systems Relaying
- 15. FACTS Technology & Applications

Graduate Courses

- 1. High voltage direct current transmission I, II (EE 6473, EE 6483).
- 2. Power modulators (EE 6623).
- 3. Design and control low voltage electric circuits (EE 6633).
- 4. Transients in electric power circuits (EE 6643).
- 5. Rotating machine dynamics (EE 6613).
- 6. Power system load flow studies and transient stability (EE6443, EE 6445).

- 7. Power system transients (EE 6633).
- 8. Load flow and power system stability (EE6443, EE6453).
- 9. Power system protection (EE6433).
- 10. Power system dynamics (EE6463).
- 11. Power Quality, Special Topics (EE6723).
- 12. Emerging Green Energy Utilization
- 13. FACTS_Smart Grid Applications

** INVENTIONS (Canada, Egypt, U.A.E.)

(** Prototypes are awaiting marketing and Patent Pending)

- 1. Smart electrical energy economisers/misers and Green Plug. Switched power filters for air conditioning and inrush current-motorized mechanical loads.
- 2. CNG/diesel/gasoline electromagnetic polarization fuel miser's polarizers, ionizers.
- 3. Electrical energy miser/saver for residential and commercial buildings.
- 4. Water/Milk germicidal and disinfectant units for residential, commercial and industrial applications with cyclical loads.
- 5. Zeolite based exhaust gaseous adsorption filters and mufflers for ICE engines and air filtration systems.
- 6. Harmonic based insect/rodent repellent systems for agricultural and warehouse storage use.
- 7. Skin magnetic germicidal therapeutic systems.
- 8. Magnetic disinfectant systems for meat/poultry/milk and food processing industry (E-coli, Coliform, etc.).
- 9. Smart power modulated filters for power factor/power quality (PQ) enhancement.
- 10. Electric fire hazard warning relay for commercial/residential systems using waveform distortion.
- 11. Magnetic Belt (Magi/belt) for weight loss and weight control.
- 12. A Novel desert (combined evaporation germ disinfectant) water cooling system for potable water tanks.
- 13. Electric machines (harmonics/power quality, PQ) monitoring system and relaying.
- 14. Novel pattern based electric utility distribution/utilization protection relaying schemes for HIF/Arc (high impedance faults) faults.
- 15. Fish Attraction Beacon (FAB) systems using EM/ES ripple fields.
- 16. Biofilter and germicidal control using EM/ES/UV field technology.
- 17. EM/ES/UV hybrid surgical disinfection systems.
- 18. Foot power electrostatic/electromagnetic electricity source.
- 19. Three phase, four wire $(3\Box 4w)$ Neutral Current Trap (NCT) for electric fire sentry and shock voltage reduction (residential/commercial/milk farm applications).
- 20. Smart Modulated-Active Power Filter and Green Plug for household residential and commercial applications.
- 21. Desert Water Condensation and PV-Powered Water Vapour Collection System.

UNDER-GRADUATE SUPERVISION & SENIOR THESIS PROJECTS

- 1. 2008 Ahmed Said, "Green Plug Filters for Electric Energy Conservation".
- 2. 2007 "Energy Conversion Devices", Hany El-Zharna and Muhammed Rashid (two students).
- 3. 2005 "EM/EM/ES Excited Gaseous Adsorption Zeolite Based Automotive Muffler Filter for Sox, Nox, CO and CO2 Gaseous Adsorption" Samer Arkhagha.
- 4. 2005 "Household Green Plug: Modulated/Switched Dynamic Filter Capacitor Compensator for Energy Efficiency and Savings" - Rene Rioux. (Energy Ambassador Award 2005)
- 5. 2005 "A Novel Foot Power Generator Using EM/ES Variable Reluctance Piezo Electric Energy Storage System" Paul Lennox and Martin Robichaud.
- 6. 2005 2 students "Electric Foot Power Generator (EFPG)".
- 7. 2004 Jehad Gader, "ELFS Electric Load Fire Sentry"
- 8. 2004 Perry Jason Hughes, "EM/ES Electromagnetic/Electrostatic Zeolite Based Biofilter"
- 9. 2003 Xuesong Nie, "Electrical Energy Miser/Economiser (Green Plug)"
- 10. 2002 Raman Verma and Boris Kosanic, "Photovoltaic Energy Conversion Schemes"
- 11. 2000 Andrew Griffith, "EM/EM/ES Desalting Descaling Water Filter"
- 12. 1998 5 students, "an Elemagnetic/Electrostatic Desalting/Descaling Irrigation Well Water Filters", UAE University
- 13. 1998 5 students, "Smart Power Quality Based Relaying Schemes", UAE University
- 14. 1997 5 students, "Neurofuzzy Controllers for Industrial DC Motor Drives, UAE University
- 15. 1996 5 students, "Smart Electrical Modulated Electric Power Filters and Energy Economizers Misers, UAE University, EE Department
- 16. 1995 "Electromagnetic Based Germicidal Unit for Potable Water Filtration, UAE University
- 17. 1994 2 students, "A High Power (500W-5000W) Commercial Rodent/Insect Repeller for Warehouse and Agricultural Use (UNB)
- 18. 1992-1993 Sabbatical Leave (Singapore) (no senior thesis supervision.
- 19. 1991 4 Students: "Application of Optimization Techniques in Power Systems Filter Design"; and "Expert System Failure Diagnostics for Induction Motor Drives.
- 20. 1990 (total 10 students)
 - -Solar Photovoltaic powered air conditioner (2 students).
 - -Electric radiant heating mat design and control (2 students)
 - -Dynamic models of power system components (1 student)

-Loss identification using three phase adaptable load flow program for radial electrical networks (2 students).

-Design of a MOSFET battery charger (1 student).

-3 Phase load flow software development (2 students).

20. 1987 (5 students)

-Paul Carrol, "Microprocessor based induction heating system".

-Tom Hicks "A microprocessor based controller for a single phase induction motor" -Jeff Stewart, "Signal acquisition and control".

-K. Lau, "An efficient PID microcomputer based controller for the three phase induction motor"

-V. Green, "Microcomputer based efficient induction heating system".

21. 1986 (11 students)

-Idowu O. Adelbubi, "Efficient microprocessor based votlage controller for low power induction motor"

-Greg Anderson, "Microprocessor based efficiency enhanced controller for an electric home heating system"

-Gary Bouzanne, "Harmonic modelling of AC machines".

-Pierre O. Chiasson, "Microprocessor based controller for residential electric heating system".

-G. Howard, "Energy management study at a small industrial plant".

-Rejean Lanteigne, "Microprocessor based efficiency controller for an electric home heating system".

-Canh Le, "Microprocessor based single phase induction motor efficiency control" -Marc LeBlanc, "Microprocessor based controller for residential electric heating system".

-Eric Martin, "Harmonic modelling of AC machines".

-Tai Quach, "Microprocessor based single phase induction motor efficiency control".

-King Sung Wong, "Software development for microprocessor based temperature controller".

22. 1985 (2 students)

-G. McFarlane, "Microprocessor controlled firing circuit for AC variable speed drive systems".

-R. Savard, "Microprocessor digital controller for a variable speed synchronous motor drive".

23. 1984 (3 students)

-M.C. Thomas, "Harmonic model estimation techniques".

-R.J. Tremblay, "Microprocessor control of DC motor".

-A.N. Larlee, "Transient stability improvement in power systems using modulated resistance and reactance".

24. 1983 (3 students)

-R.T. Gagnon, "A digital controller design for static phase shifters".

- -H.C. Spyrou, "Use of capacitors to improve the voltage profile of a feeder".
- -J.F. Steynor, "Applications of microprocessors in speed control of AC motors".

National Student Competition Awards (students supervised): *

1. Rene Rioux, "The Household Electric Green Plug", recipient of a 2005 NRC Canada Energy Ambassador Award, Ottawa, Ontario.

2. Robert LeBlanc, "The Energy Economizer-DSM Management Scheme", recipient of a 2006 NRC Canada Energy Ambassador Award, Vancouver, March 2006.

(* Note: Both designs are based on Dr. Sharaf's inventions. Energy Conservation and Green Plugs.)

GRADUATE THESIS SUPERVISION (Total 45)

Updated May 27, 2015

UTT Graduate Supervision

- 2010 UTT Mr. Stephen Debique "Bridging the Gap: An Examination of Energy Efficiency and Conservation Technology Diffusion in Trinidad and Tobago" (Master of Philosophy (M.Phil.) Student)
- 2010 UTT Ms. Helena Ali Victor
 "Enhances Zeolite-CO2 Adsorption Using EM/ES Electromagnetic -Electrostatic Ripple Fields". (Master of Philosophy (M.Phil.) Student)
- 2010 UTT Mr. Damion Crichlow AI – Soft Computing Facts Applications in Smart Grid Systems.
- 4) 2009-UTT Mr. David Ali (M. Phil. Student) "Novel Hybrid Renewable Energy Utilization Scheme" (Master of Philosophy)
- 5) 2009-UTT Ms. Amalia Hosein (M. Phil. Student) "Germicidal and Disinfection of Liquids using Combined Pulsed Electromagnetic/Electrostatic/Ultra-Sonic Techniques" (Master of Philosophy)
- 6) 2009-UTT Mr. Adrian Lutchman (M. Phil. Student)
 "Novel Green Filter Compensator Schemes for Power quality and Electric Energy Savings of Air-Conditioning and Nonlinear Loads"
 (Master of Philosophy)
- 2009-UTT Ms. Renee Ali (M. Phil. Student)
 "Potal water Disinfection Techniques using Electro-Chemical Low Frequency and High frequency Pulsing Techniques" (Master of Philosophy)
- 8) 2009 UTT Ms. Dianne Seepersad (M. Phil. Student)
 "Concrete installation condition monitoring using electric signature monitoring technologies" (Master of Philosophy)
- 9) 2009 UTT Ms. Tricia Jones (M. Phil. Student) "Water Treatment and Purification Technology" (Master of Philosophy)
- 10) 2009 UTT Mr. Dhanraj Lochan (Ph.D. Student)

"ESA Electrical Signal Analysis and Condition Monitoring" (Doctor of Philosophy)

- 11) 2009 UTT Mr. Ramlal Tagore (Ph.D. Student)
 "To develop a suitable cost effective method for on line detection, statistical assessment and mitigation of Trinidad and Tobago's power quality problem"
 (Doctor of Philosophy)
- 12) 2009 UTT Ms. Angelique Bayley (Ph.D. Student)
 "Biodiesel Production for Island Electricity Generation from Plants and Algae" (Doctor of Philosophy)

GRADUATE THESIS SUPERVISION (total 51)

(A) Supervised a total of 33 M.Sc. and M. Eng. Students since joining Academia in 1981

- Hae-il Jung, "Reactive Power Compensation for Wind Power Generators" UNB, <u>M.Sc. August 2009 – Co-Supervised with Dr. Y. Biletskiy.</u>
- 2. Tarek Aboul-Seoud, "Novel Applications of Interface Schemes for Renewable Wind/Tidal Green Energy" UNB, <u>M.Sc. August 2009</u>.
- 3. Ning Chang, "Monitoring and Identification Scheme for Power Quality Assessment", M.Sc. Thesis December 2007 (joint supervision with Dr.Y. Biletskiy).
- 4. C. Zhou, "Electric Novel Power Quality and Energy Conservation Schemes for Residential/Commercial and Industrial Loads", M.Eng Report, August 2007.
- 5. Abdualah S. Aljankany, "Distributed Dispersed Renewable Energy Systems and Novel Control Strategies", M.Sc., UNB, June 2007. (Submitted to UNB for examination.)
- 6. Weihua Wang, "FACTS Based Schemes For Distribution Networks With Dispersed Wind Energy", M.Sc., UNB, June 2007 (Submitted to UNB for examination.)
- Senaka Jayawardhane, "Novel Stand Alone Small Hydro Renewable Energy System", M.Eng. Report, UNB October 2005.
- 8. Liang Zhao, "Stand Alone Wind Energy Utilization Scheme and Novel Control Strategies", M.Sc.E., UNB, May 2005.
- 9. Liang Yang, "Low Cost Stand Alone Renewable Photovoltaic/Wind Energy Utiliation Schemes", M.Sc.E., UNB, May 2005.
- 10. Bo Yin, "Dynamic Filter Compensator Schemes for Monitoring and Damping Subsynchronous Resonance", M.Eng., UNB, September 2004.
- 11. Guosheng Wang, "Novel Control Strategies and Interface Converters for Stand Alone Wind Energy Conversion Schemes", M.Sc.E., UNB, May 2004.
- 12. Subramanian Kanthi Murugan, "Novel Switched Dynamic Power Filter/Voltage

Compensator for Distribution/Utilization of Non-Linear Loads", M.Sc.E., UNB, May 2004.

- 13. Syed Saleem, "Artificial Intelligence (AI) based Detection Schemes for Arc-type High Impedence Faults", M.Sc.E., UNB May 2004.
- 14. P. Kreidi, "Electric Power Quality Harmonic Reduction and Energy Saving Using Modulated Power Filters and Capacitor Compensators", M.Sc.E., April 2003, University of New Brunswick.
- 15. A.R.N.M. Reaz Haque, "Novel Maximum Power Tracking for Photovoltaic Energy Utilization Schemes", M.Sc., UNB November 2004.
- 16. Amir Nourizi, "Flexible ACV Transmission Systems: Theory, Control and Simulation of the STASTCOM and SSCC", M.Sc.E., University of New Brunswick, April 2003.
- 17. R. Chalet, "Single Phase Adjustable Power Filter for Motorized Nonlinear Loads", MScE 1998, The University of New Brunswick.
- 18. Caixia Guo, "Self-Adjusting Power Filter for Industrial Nonlinear Loads", MSCE, 1997, The University of New Brunswick.
- 19. R. B. Griffith, "Ultraviolet electromagnetic (UV/EM) enhanced germicidal unit, M. Eng., May 1997, The University of New Brunswick in collaboration with Civil Engineering Dept.
- 20. M. R. Dehbozorgi, "Smart modulated passive filter" Sept. 1995, The University of New Brunswick.
- 21. M. Pothier, (with Prof. D.M. Luke) "Analysis and design of FAM and chopper based controllers for induction motor drives", May 1993, The University of New Brunswick.
- 22. M. Wang, "DC (AC) motor drive system using photovoltaic source", MSCE, October 1992, University of New Brunswick.
- 23. Y. Farag, "An expert system software for planning loss minimization of electric utility radial distribution feeders", October 1992, University of New Brunswick.
- 24. M.M. Halim, "A universal power semiconductor converter scheme", MSCE, January 1991, University of New Brunswick.
- 25. M.K. Fahim, "Design and simulation of a PWM inverter for induction motor drive control applications", MSCE, January 1991, University of New Brunswick.
- 26. * Mr. M. Ryan, "Induction motor modelling and control for efficient power/energy operation", M.Eng., May 1988, Kuwait University.
- 27. Mr. Y. Yao, "A General Analysis For the Harmonics Generated By Line-Commutated Power Convertors" University of New Brunswick, M.Sc., May 1987.
- 28. Mr. S. Naganathan, "Microprocessor control of wind driven squirrel cage induction generator", University of New Brunswick, January 1986.
- 29. Mr. P.L. Gokul, "Microprocessor based protection of variable speed drives", University of New Brunswick, January 1986.
- 30. Mr. A. Saxena, "Design, simulation and implementation of a lqg controller for a synchronous motor drive", M.Sc., University of New Brunswick, September 1985.
- 31. Mr. R. Prakash, "Design and implementation of a digital optimal controller for an induction motor drive system", University of New Brunswick, M.Sc., August 1985.
- 32. Mr. Y. Xu, "Microprocessor-based control of a solid state variable speed dc motor to be finalized as a complementary course with the Faculty of Computer Science (Dr. B. Nickerson). drive system fed from a thyristor controlled six-pulse converter",

University of New Brunswick, M.Sc., June 1985.

- 33. Mr. S. Sivakumar, "Power system control applications of static phase shifters", University of New Brunswick, M.Sc., July 1983.
- ** Refer to thesis in Kuwait, UAE, UTT Supervised

(B) **Ph.D. Supervision**

Supervised a total of 15 PhD students

* Emhemed Elbakush, "Flexible Control Strategies Using FACTS Schemes for Motor Drives and Smart Grid Applications", Ph.D.-UNB July 2015.

- 1. Syed M.A. Saleem, "Novel Soft Computing Based Relaying and Protection Schemes for Electric Power Systems", PhD.-UNB May 2008.
- 2. Mohamed Shawki El-Moursi, "Flexible AC Transmission FACTS Technology and Novel Control Strategies for Power System Stability Enhancement", Ph.D., UNB May 2005.
- 3. ** A M Hemeida, "Power System Transient Stability Enhancement Using Novel Control Strategies", Ph.D., July 2000. Assiut University, Egypt Academic Link Joint Academic Channel.
- 4. ** E.A. Ibrahim, "Advanced Control Techniques Based Power System Stabilizier", Ph.D., July 1996, Assiut University, Egypt, Academic Link Joint Channel.
- 5. Timothy Little, "Optimal use of energy storage for wind/diesel grid", Ph.D. (Cosupervised with Dr. R.E. Burridge), Nov. 1995, The University of New Brunswick.
- 6. ** Gaber El-Saady Taha, "New techniques for controlling three phase induction motors", Ph.D., May 1995, Assiut University, Academic link with Egypt.
- 7. ** H.M. Mashaly, "MicroComputer based artificial intelligent control strategies for wind and photovoltaic solar energy conversion and utility interface schemes", Ph.D., Dec. 1994, Ain-ShamsUniversity - Academic Link with Egypt.
- 8. ** F.M. El-Khouly, "Speed and position digital control strategy for direct current motor drives and robotic manipulators", Ph.D., Dec. 1994, Menuofiya University, Academic Link with Egypt.
- 9. I. Helal, "A fuzzy logic based model for power system reliability evaluation", Ph.D., May 1995, University of New Brunswick, Joint Supervision with E.F. Hill.
 ** Hussein Fahried El-Sayed Soliman, "Adaptive and predictive A.I. based control for DC motors", PhD, August 1994, Ain Shams University UNB Academic Channel Link.
- 10. Ismail H. Altas, "Control strategies for maximum power tracking and energy utilization of a stand-alone photovoltaic energy system", PhD, May 1993, The University of New Brunswick.
- 11. Rohin M. Hilloowala, "Control and interface of renewable energy systems", PhD,

December 1992, The University of New Brunswick.

- 12. **Ezzel-Din S. Abdin, PhD, "Microprocessor control of wind driven induction generator", Menoufia University, Academic Channel with the Republic of Egypt, Dec., 1988.
- 13. Mr. H.G. Hamed, PhD, "Microcomputer control of current-source inverter fed synchronous motor drive system", University of New Brunswick, March 1987.
- 14 Mr. S. Sivakumar, Ph.D., "Analysis, design and digital implementation of energy efficient multivariable controllers for current source inverter fed induction motor drives", University of New Brunswick, December 1986.
 - ** Academic-Channel Link Agreements with Egyptian Universities.

** Sabbatical Leave - Kuwait University, E.E. Dept. M.Sc. Supervision

*E. ElBakush, Ph.D. Thesis completed at UNB and Submitted to External Examiner –April-2015

(B) VISITING PROFESSORS, SCHOLARS - INTERNATIONAL COLLABORATIVE RESEARCH

- i. Dr. Ismail Altas, Turkey, June 2006.
- ii. Prof. Dr. M. El-Sadek, Assuit University, July-Aug 1999.
- iii. Professor Dr. S. A. Kandil, Ainshams University, Cairo, Egypt, April-May 1994
- iv. Drs. A. Shebl and S. Shokralla, Visiting Professors, Egypt Academic Channel,
- v. Menofia University, July-Sept 1994 (Egyptian Government Sponsorship)
- vi. Dr. A. Shebl, Menofia Unviersity, Egypt, Sept-Oct, 1993
- vii. Dr. M. Mansouer, Ainshams University, Cairo, Eypgt, Sept 1993
- viii. Prof. A. Abd Sattar, Ainshams University, Cairo, Egypt, Sept, 1993
- ix. Dr. M. Abu El-Magd, Visiting Professor, Cairo University, August 1993
- x. Professor P.K. Dash, 1989, India
- xi. Professor R.D. Begamudre India now a NB Resident retired Professor
- xii. Professor P.K. Dash, 1986, India
- xiii. Mr. Y. Chen, 1983, China

SERVICES AS EXTERNAL EXAMINER

1. Evaluation of Ph.D. Thesis, "Mining of Time-Series Data Using Fuzzy Neural Information Systems" by Mrs. Maya Nayak, BIJU PATNAIK University of Technology, ORISSA, Roukela, India, Ph.D. August 2009.

- 2. Evaluation of Ph.D. Thesis, "New Approaches for Economic Dispatch and Unit Commitment Problems in Power Systems" by K. Chandran, National University of Technology, Warangal, India, <u>Ph.D. August 2009.</u>
- 3. Mr. Mahendra V. Chilukuri, PhD., "Multiresolution Time-Frequency Analysis for Detection and Classificatoin of Power Quality Disturbances", <u>Ph.D. July 2007</u>, MultiMedia University, Malaysia.
- 4. "Power Systems Transient Stability Software Using Object-Oriented Design and Component-Based Development Methodology", Mr. Hadi Syuono, <u>Ph.D., May 2006</u>, University of Malaya, Malaysia.
- 5. "Load Flow Analysis and Planning of Radial Distribution Systems A New Approach of Load Modelling Load Forecasting and Feeder Planning", Mr. Ashvini Chaturvedi, <u>Ph.D., February 2006</u>, Multimedia University, Malaysia.
- 6. "Power System Planning for Bhutan 2006-2020", Mr. Kinlay Dorjee, <u>M.Eng., Jan</u> 2006.
- 7. "A Unity Power Factor Three Phase Controlled Rectifier", Eka Firmansyah, <u>M.Sc.</u>, <u>May 2005</u>, Nanyang Technological University, Singapore.
- 8. "Techniques for Power Quality Assessment and its Control", Mr. Ranjan Kuman Jena, <u>Ph.D., May 2005</u>, Sambalur University, Orissa, India.
- 9. "Damping of Inter-area and Torsional Oscillations Using Facts Devices", <u>Ph.D., May</u> 2005, Mr. Amer Adel Eldamaty, University of Saskatchewan, Canada.
- "Some Aspects of Voltage Stability Improvement in Planning and Operation of Power Systems", <u>Ph.D., August 2004</u>, Mr. K. Visakha, India Institute of Science, Bangalore, India.
- 11. "Techniques for Power Quality Assessment and Its Control", <u>Ph.D.</u>, Mr. Ranjan Kumar Jenna, Sambalpur University, Jyoti Vihar, India.
- 12. "A Unity Power Factor Three Phase Controlled Rectifier", <u>M.Sc.E., May 2005</u>, Mr. Eka Firmansyah, Nanyang Technological University.
- 13. "Vibration Control of Flexible Structure", M.Sc.E., Mr. Ruogu Wang, UNB, April 2005.
- 14. "Development of an Integrated Wind Turbine Controller", <u>M.Sc.E., May 2005</u>, Mr. Jiyong (John) Lian.
- 15. "Study of Bilateral Contracts in a Deregulated Power System Network", <u>Ph.D.</u>, <u>January 2004</u>, Mr. Ashikur Rahman Bhuiya, University of Saskatchewan, Canada.
- "Digital Protection and Artificial Intelligence Applications to Power Systems", D.SL, Prof. Dr. P.K. Dash Award of <u>D.Sc. Degree May 2003</u>, Utkal University, India, (Regd. No-1-DSc (Electrical Engineering).
- 17. A Novel MRAS-Based Adaptive Observer for Sensorless Induction Motor Drives", <u>Ph.D., April 2003</u>, Mr. Hossein Madadi Kojabadi.
- 18. "A current-regulated voltage controlled scheme for DC to AC voltage-source static power supplies", Mr. Naser M.B. Abdel-Rahim, <u>Ph.D.</u>, June 1995, Memorial University of Newfoundland, Canada.
- 19. "Power System Stabilizer Based on Fuzzy Logic", Mr. K.A.M. El-Metwally, <u>Ph.D.</u>, <u>June 1994</u>, Calgary University, Calgary, Alberta, Canada.
- 20. "Effect of Static VAR Compensators on the Performance of Multimachine Power System", Mr. Amal M.I. Khasab, <u>Ph.D., May 1991</u>, Ain Shams University, Cairo,

Egypt.

- 21. "Stability and Relative Stability Measurements of Feedback Control Systems, Hikmet Asmer, <u>M.Sc. December, 1990</u>, UNB.
- 22. "A Multiphase Harmonic Load Flow Solution Technique", Wenyuan Xu, University of British Columbia, <u>Ph.D., January, 1990</u>.
- 23. "Hydro-Thermal stochastic Optimal Power Flow Dispatch An Optimal Power Flow Approach", George A.N. MBAMALU,, Technical University of Nova Scotia, <u>Ph.D.</u>, <u>August 1989</u>.
- 24. "Determination of Permanent Magnet Synchronous Motor Parameters", by Mr. Li Wang, Memorial University of Newfoundland, <u>M.Sc., July 1989</u> (External Examiner).
- 25. "A practical Method for Short-Term Hydro-Thermal-Interchange Scheduling." R. Wu, University of New Brunswick, <u>Ph.D., February 1989.</u>
- 26. "Design and implementation of a real-time knowledge-based controller", by J. Jiang, University of New Brunswick, <u>Ph.D., March 1989.</u>
- 27. "Analysis of Dynamic Performance of Power Systems Using Thyristor Controlled Status VAR Compensator", by P.C. Panda, Samabalpur University, India, <u>Ph.D., Feb.</u> <u>1989.</u>
- 28. "Random superharmonic and subharmonic response of a duffing oscillator", Srivatsa Rajan, <u>Ph.D., May 1987.</u>
- 29. "Optimal digital control systems analysis and design", C. Diduch, University of New Brunswick, <u>Ph.D., March 1987.</u>
- 30. "A position control system with disturbance rejection using sliding mode", Mr. Mudit Kumar, McGill University, <u>M.Sc., 1986</u> (External Examiner)
- 31. "On the analysis of nonlinearities in power electronics circuits", Mr. Peter Sutherland, University of New Brunswick, <u>M.Sc.E., 1986.</u>
- 32. "Optimal economic dispath via a decomposition coordination approach", Mr. M. Mobarak, University of New Brunswick, <u>Ph.D., May 1986.</u>
- 33. "Optimal reactive power scheduling", Mr. O. Obadina, University of New Brunswick, <u>M.Sc.E., Sept. 1983.</u>
- 34. "Microprocessor-based distance protection by transmission lines", Mr. B. Jeyasurya, University of New Brunswick, <u>Ph.D., September 1983.</u>
- 35. "A microprocessor-based measuring instrument for investigation of the harmonic content of 3-phase ac systems", Mr. M. Bin Awan, University of New Brunswick, <u>M.Sc.E., 1983.</u>
- 36. "An on-line two stage system identification scheme using time-varying filter", Mr. J. Jiang, University of New Brunswick, <u>M.Sc.E., 1983</u>.
- 37. "Determination of transient apparent impedance of faulted transmission lines", Mr. H. Vu, University of New Brunswick, <u>M. Eng. 1982.</u>
- 38. "Economic dispatching using individual transmission line incremental rate", Mr. C. Huskilson, University of New Brunswick, <u>M.Sc.E., 1982.</u>
- 39. "Design of attitude control systems for a three-axis stabilizer satellite", Mr. J. Michael Savoie, University of New Brunswick, <u>M.Sc. 1982.</u>

INTERNATIONAL UNIVERSITY & INDUSTRY RESEARCH LINKAGE

- 1. Consulting Services, Neill and Gunter Inc., Fredericton, NB Canada 2005.
- 2. Established a University-wide Academic Link with Helwan University, Cairo, Egypt, March 2003.
- 3. Established an Academic Research Link with the Technical University of Warsaw, Warsaw, Poland (1998)
- 4. Established an Academic Research Link with the Tallin Technical University TTU, Estonia (1998)
- 5. Collaborative Research, U.A.E. University, Pollution Abatement and Environmental Devices, United Arab Emirates, 1995/96.
- 6. Collaborative Research, Nanyang Technological University, Singapore, "A.I. technologies applications in power systems and motor drives", July 1992 June 1993.
- 7. Research collaboration with Ainshams, Cario, Assiut, Mansoura, Zagazig and Menuofia Universities in Egypt, since 1986 ongoing Academic Channels.
- 8. Technical University of Delft, TU-Delft, "Expert systems applications in power system stabilizer designs", June August 1990.
- 9. ASEA-Brown Boveri, Baden, Switzerland; "Efficient and robust controllers for the asynchronous motor drives", (1987-1988).
- 10. Central Research Institute of the Electric Power industry; CRIEPI, Tokyo, Japan; "Torsional instability in integrated HVAC-DC systems".
- 11. Energy, Mines and Resources, Canada; R & D Consulting on Energy Efficiency and Alternative Energy Systems (1986-1989).
- 12. Canadian Electrical Association, Canada; Harmonic Interference, Mechanisms and Assessment of Problems (1986-1988).
- 13. Kuwait University Research Administration; Efficient and economical Photovoltaic Systems for Domestic, Industrial and Hybrid Supply Applications (1988-1991).
- 14. Zagazig University, Egypt, Research on Neural and Neurofuzzy Applications in Voltage Stability Detection of Interconnected Systems (Drs. Z. El-Razaz, A. Alily)
- 15. Agency for the Assessment and Application of Technology (BPP Teknologi), Indonesia - Research on Renewable/Alternate Energy and Energy Conservation/Utilization (Dr. Rachwat Mulyadi)
- 16. Faculty of Engineering (Shoubra), Research on Renewable Energy Novel Interface and Control Techniques, (Dr. M. Abou-Saad).

ENGINEERING CONSULTING and RESERACH CONTRACTS

1. A.M. Sharaf and E.F. Hill, "Potential use of expert systems to improve system

operation", Canadian Electric Association, CEA Contract ST-484, (100 pages), Sept. 1994.

- 2. A.M. Sharaf with M. Lodge, A.B. Sturton and R. Sherwin, "Renewal energy interface with electric grid, CEA Project #833G686, Final Report Volume 1 (95) pages and Volume II (150 pages). 1993.
- 3. A.M. Sharaf and J. Heydeman, "Expert systems applications in power system stabilizer designs" (100 pages), 1990.
- 4. A.M. Sharaf, E.F.Hill, W. Smolinski, J.M. Tranquilla and Adam Semlyen, "Report on development of influence vector for the electrical coordination of power and telecommunication systems", Canadian Electrical Association, July 1989 (105 pages)--Final Report.
- 5. A.M. Sharaf, "Expert system based power system stabilizers", NTU Delft, Holland, 1990 (55 pages).
- A. M. Sharaf. "Preliminary Report on Damping Harmonic Instability In Interconnected HVAC-DC Systems" June 1989 (75 pages) Royal Institute of Technology and ASEA Brown Boveri; ABB Sweden
- 7. A.M. Sharaf, Report on FAM-voltage controller designs for asynchronous induction motors", (70 pages), ASEA-Brown Boveri, July 1988.
- 8. A.M. Sharaf, Report on FAM-voltage controller designs for asynchronous induction motors", (70 pages), ASEA-Brown Boveri, July 1988.
- 9. A.M. Sharaf, "Efficient low-power induction motors", Report on Research Grant, (264 pages), Kuwait University, May 1988.
- 10. A.M. Sharaf, Curriculum development and laboratory enhancement at Kuwait University", Consultant-Report, (18 pages), Kuwait University, May 1988.
- 11. Canadian Electrical Association, Canada; Harmonic Interference, Mechanisms and Assessment of Problems (1986-1988).
- 12. Kuwait University Research Administration; Efficient and economical Photovoltaic Systems for Domestic, Industrial and Hybrid Supply Applications (1988-1991).
- 13. A.M. Sharaf, "Efficient low-power induction motors", Report on Research Grant, (264 pages), Kuwait University, May 1988.
- 14. A.M. Sharaf, Curriculum development and laboratory enhancement at Kuwait University", Consultant-Report, (18 pages), Kuwait University, May 1988.
- (a) A.M. Sharaf^{*}, E.F. Hill, W.J. Smolinski, D.M. Luke, "Research report on fractional horsepower motors", Prepared for Supply and Services Canada, Energy, Mines & Resources, Canada, EMR Contract No. 23284-7-7/28/01-SS, March 1988 (54 pages).
 - (b) A.M. Sharaf^{*}, E.F. Hill, W.J. Smolinski, D.M. Luke, "Literary review of fractional horsepower motors", EMR agreement # 63 (40 pages).
 *Principal Investigator.
- 16. A.M. Sharaf, "FAM-controllers for induction motors" (67 pages) Brown Boveri, BBC, August 1987.
- 17. A.M. Sharaf, M. Takasaki, "Damping of torsional oscillations of nuclear generators using α-modulation of hvdc scheme", (25 pages), CRIEPI Japan, August 1986.
- 18. A.M. Sharaf with Hill, Smolinski and Luke, Report "Power system harmonics a review and assessment of problems", Contract 415 0474, Canadian Electrical

Association, Volume 1 - Technical Document, (150 pages) Volume 2 - List of References, (85 pages), Jan. 1986.

- 19. Final Summary Report on 3 year NSERC Strategic Grant G1095, "Energy efficient motor drives for industrial applications", (15 pages) Jan. 1986.
- 20. Report on "Hydro Quebec H.Q. Chateaguay second harmonic instability problem", Brown Boveri & Cie, Baden, Department IEE, August 1984, 40 pages.
- 21. A.M. Sharaf and E. Bourque, "Preliminary report on harmonic measurements at Eel River converter station", October 1983, 25 pages, NBEPC System.
- 22. A.M. Sharaf, "Harmonic measurements and negative sequence voltage unbalance at NBEPC-Dalhousie plant", October 1983, 45 pages, NBEPC, System Operations Department.
- 23. A.M. Sharaf and E. Bourque, "Harmonic measurements at CIL-Dalhousie plant", July 1983, 45 pages, NBEPC System Operations Department
- 24. A.M. Sharaf, "Preliminary report on harmonic measurements at Point Lepreau 345 KV bus", June 1983, 38 pages, NBEPC System Operations Department.
- 25. A.M. Sharaf, "Tuning power system stabilizers in NBEPC integrated power system", August 1982, 50 pages, NBEPC - System Operations Department.
- 26. A.M. Sharaf, "Negative sequence and harmonic measurements at NBEPC Plant and Eel River 230/138 kv system", June 1982, 45 pages, NBEPC System Operations Department, NBEPC System Operations Department.
- 27. A.M. Sharaf, "Dow Chemical harmonic interference problem", Trans. Alta Utilities Corporation, Calgary, Alberta, June 1980, 30 pages.
- 28. A.M. Sharaf, "A feasibility study of cost evaluation formulae based on reliability assessment techniques with specific emphasis on distribution transformers", Manitoba Hydro-Regional Services Department, September 1978, 23 pages.
- 29. A.M. Sharaf, "Application of statistical sampling techniques in the ground resistancetesting program", Manitoba Hydro Regional Services Department, July 1978, 24 pages.

Professor Dr. Adel M. Sharaf_List of References (full)

(1) Dr. Khaled A. Kamel Chair of Computer Science Texas Southern University (2) Dr. Ahmed F. Zobaa, Ph.D., SMIEEE, MIEE, MISES

	3100 Cleburne St., Houston, TX, 77004		Associate P	rofessor		
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			Camborne	School	of	Mines
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			United King	gdom		
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			Fax: +2012	390 4786		
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Statement of Suitability & Experience

Professor Dr. A.M. Sharaf, P.Eng.

(I) Management & Administration Skills

- a) Vice Provost for Post graduate Studies & Research-UTT (2008-Now).
- b) Utilities-Program Professor of Energy Systems at UTT.
- c) Department Chair / ECE Dept. The University of United Arab Emirates UAE (1996-2000)-During Sabbatical/Special Leave from UNB-Canada.
- d) Technical Director of Sharaf Energy Systems Inc. & President of Intelligent Environmental Energy Systems Incorporated, New Brunswick, Canada since 1985.
- e) UNB Senate membership and active involvement in Promotion, Assessment, Teaching Evaluation & Procedures and Selection Committees.
- f) Membership in numerous national & international Committees, Engineering and IEEE Standards Associations.

(II) Academic & Professional

- (a) Tenured Full Professor-UNB 1981 2010, NB-Canada.
- (b) Membership of numerous Professional Engineering Associations, Consulting and Selection Committees.
- (c) Professional Engineer status Canada (Ontario, New Brunswick) and Egypt.
- (d) Former Membership in Associations of Professional Engineers of Manitoba a and Alberta.
- (e) Published over 785 Technical Journal, Conference and Engineering Reports.
- (f) Member of Grant Selection Committees and Thesis Reviewer/Examiner.
- (g) Curriculum/Program/Laboratory Development Consultant.
- (h) Life Senior Member- IEEE since 1984
- (i) Editor in Chief of Three Scientific Journals.

(III) Interpersonal & Communication Skills

- (a) M.Sc. (37). & Ph.D. (15)- Supervision of 51- Graduate students since joining Academia in 1981..
- (b) Chair of EE- Dept. at UAEUniversity (1996-2000), United Arab Emirates.
- (c) President and Technical Director of two incorporated companies in the
- (d) Province of New Brunswick, Canada.
- (e) Established fifteen (15) International Collaborative-Research Links and
- (f) Agreements.
- (g) Nominated (4) times for UNB Excellence in Teaching & Research Merit Award-
- (h) Awarded Two Merit Awards for Excellence in Teaching, research and Services.
- (i) Senate membership at The University of New Brunswick.

(IV) Management Skills

- a) Leading the EE Department at UAEUniversity for full US-ABET Accreditation in the year 2000-full six (6) years maximum Accreditation-Limit.
- b) Program development-Curricula Consultant & Team-Leader-UAEUniversity.
- c) Multi-disciplinary national and international Research and Business Collaboration and Academic links.
- d) Involvement in the Planning, Staffing and Budgetary requirements of the ECE Department at UAE University, United Arab Emirates.
- e) President and Technical Director of two Engineering R & D Companies.
- Research Leader with 500 MS. & PhD Graduate students Supervision in the period of 1981-2004.
- g) Management Style is based on reaching Consensus, Brain-Storming, Consultative- Decision Making process, Situational- Management Style, Feedback and Quality Assurance.
- h) Establishment of Post Graduate Studies and Research Structure, Programns, Activities and Action Plan at UTT-University of Trinidad & Tobago, WI.
- i) Supervised over 51 Post graduate students for the period from July 1981-May 2015.
- j) Established Discovery Based/Self bases and Community Based Learning at UTT fot senior U/G Graduate and Post Graduate Students
- k) Established three Courses in Research Methodology, Ststistics and Data Mining at UTT as part of core P/G Course load.

(V) <u>Promotion & Funding</u>

- a) Attracted numerous funding grants from Government, University, Industry, Electric Utilities and Academic link exchanges both nationally & internationally (Total exceeds 1 Million dollars).
- b) Active involvement in Professional Associations, IEEE, Government Agencies.
- c) Membership in numerous Committees, Conference Organization and Professional Associations.
- d) Numerous international exchanges and collaboration projects (Switzerland, Sweden, Japan, Netherlands, Arab Countries, etc.

(VI) Financial & Budgetary Experience

- a) Responsible for all budgetary, planning & financial management of two Incorporated R & D Engineering Consulting Companies in Canada.
- b) Chairman of ECE Department at UAEUniversity with responsibilities for all planning, staffing, budgetary and financial requirements of the full department for over four (4) years.
- c) Management of Research and consulting funds from Governments, University and Grant Awarding Agencies.
- d) Engineering Consulting, Business, R & D Management of Sharaf Energy Systems and Intelligent Environmental Energy Systems, Both Incorporated in New Brunswick, Canada 1985 and 1995.