Curriculum Vitae: Professor Dr. Ebrahim A. Mattar

CONTACT INFORMATION

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Currently: Chair of the University of bahrain Central Academic Promotion Committee. College of Engineering Postgraduate committee Head. Member of the University Postgraduate Studies Council.

RESEARCH INTERESTS

Research Interests: Robotics, Artificial Intelligence, Cybernetics, Working on building AI-Based models for Imaginary analysis, Electroencephalography (EEG) Decoding; to Enhance Robotics Cognition. This is used for the Robotics in the Healthcare/Medicine applications and sectors.

1999-2000
University of Virginia:
Charlottesville, USA.
The Gulf Executive Development Program. Nine Months Program, May-1999 to February-2000
Darden School of Business - University of Virginia. Scholarship was financed by University of Bahrain.
January-2000.

EDUCATION

1989-1995
University of Reading:
Reading, Berkshire, United Kingdom.
Doctoral Degree in Cybernetics, January-1995 Dissertation Topic: "Task Space Robot Hand Manipulation and Optimal Distribution of Fingertip Force Functions". Supervision: Thesis was written under the supervision of Professor K. Warwick, University of Reading, UK.
January-1995.

1988-1989
University of Southampton:
Southampton, United Kingdom.
M.Sc. program, in Electronics, September-1989. Dissertation Topic: "CMOS Transistor Measurement in Semiconductors Fabrication", University of Southampton, UK.
September-1989.

1980-1986
University of Bahrain:
Isa Town, Kingdom of Bahrain.
B.Sc. in Electrical Engineering, University of Bahrain, Bahrain.
August-1986.

PRIME HONORS AND AWARDS

1995: Late Amir H.H. Shaikh Isa Bin Salman Al Khalifa (Eid Ailm Award), for Ph.D. Award, 1995.
2018: IEEE-EPSCICON-2018, Appreciation Award, EPSCICON 2018, Thrissur, 5-9 January, India, 2018.

ACADEMIC EXPERIENCE

University of Bahrain, College of Engineering, Kingdom of Bahrain.

Academic Staff Member **1996-present**
Since I joined University of Bahrain during 1996, I have been involved for a number of duties. Duties included academic responsibilities, lecturing, university duties, community duties, research, research and involvement in postgraduate teaching. This included the current Ph.D. research, Masters level course-works and research/consulting projects.
Major teaching duties: Duties included shared administrative responsibilities with faculty instructor, fielding of all student inquiries, and oversight of graduate student teaching assistants and graders. Duties at various times have included office hours and leading weekly laboratories and engineering design exercises.

University of Reading, Department of Cybernetics, UK.
Instructor during Ph.D. Study **1989-1995**
During the Ph.D. thesis work at University of Reading, I have been involved for teaching in laboratories, tutorials, and homework assignments. Courses included:

- Electronics, Control, and Robotics, Spring 1989-1995.

University of Bahrain, College of Engineering, Kingdom of Bahrain.
Part Time Teaching Assistance   **1986-1988**
After B.Sc. graduation, i.e. during 1988, I was involved in teaching in part time basis few courses related to principles of Electrical Engineering. Courses included:

- Electronics, Electrical Circuits, and Control, Spring 1986-1988.

RESEARCH LINKS	Researchgate Online: `https://www.researchgate.net/profile/Ebrahim_Mattar`, (19.53).

RESEARCH LINKS

Researchgate Online: `https://www.researchgate.net/profile/Ebrahim_Mattar`, (19.53).
Scopus Record: `https://www.scopus.com/authid/detail.uri?authorId=37661782600`
Orcid: `https://orcid.org/0000-0002-1536-1074`
Google Citations: `https://scholar.google.com/citations?user=Zj3wnrgAAAAJ&hl=en`, (h-index=15, i10-index=16).

COMPUTATIONAL SKILLS

Computational Packages: Expert in using computational packages like Matlab, Mathematica, Labview,; NaG (Library). Languages: C++, Opencv, extensive use of C++ and Fortran libraries (as for ISML libraries), Object Oriented Programming skills. Applications: LaTex, and presentation software. Algorithms: Experience programming for a number of AI related Algorithms. Operating Systems: Skills for both Linux and Windows.

OTHER CERTIFICATIONS, DATES/GRANTING

2019, Certificate for "Microsoft Azure Machine Learning Workshop".
2014, Certificate for "Reflective Academic Practice Portfolio (RAPP), University of Bahrain.
2013, Certificate for "University Academic Integrity and Plagiarism", University of Bahrain.
2012, Certificate for "First Aids Workshop, The College of Health Sciences - University of Bahrain.
2012, Certificate for "Good Apprenticeship Policy and Practice, UK Study Tour", British Council-London, 30th January - 2nd February 2012. Grant was through Ministry of Education - Bahrain.
2012, Certificate for "Middle East Tech Education", Sudan 9-12 April 2012 via ICESCO. Grant was through Ministry of Education - Bahrain.
2011, Certificate for "Building Effective Employer Engagement in Vocational Education", Tunisia - British Council-December 2011. Grant was through Ministry of Education - Bahrain.
2008, National Instruments LABVIEW Certificate of Programming Level-1, Lebanon.
2008, National Instruments LABVIEW Certificate of Advanced LABVIEW Programming, Lebanon.
2002, British Council Certificate, Education and Industry Working Together, University of Birmingham, UK.
2001, Certificate of Internet Web Design, the University of Iowa-University of Bahrain.
1997, Certificate of Academic Teaching Development, University of Bahrain, Bahrain.
1989, Certificate of "English for Academic Practices", University of Southampton, UK.

PROFESSION/ADMIN POSITIONS

During my academic career, I have been involved in a number of administration duties, as listed below:
newline 1996, Appointed as Assistant Professor at College of Engineering, University of Bahrain.
1998, Director of Continuing Eng. Education Dept., University of Bahrain, 1998-2002.
2004, Promoted to rank of Associate Professor at College of Engineering, University of Bahrain.
2004, Chairing Electrical and Electronics Engineering Dept., University of Bahrain, 2004-2009.
2011, While at UOB, I was also seconded as the DG - Director General - of Bahrain Training Institute, (BTI).
2011, Chairing of Electrical and Electronics Engineering Dept., University of Bahrain, 2011-2013.
2014, Member of Bahrain National Higher Education Skills-Innovation Steering Committee, 2014-2016.
2019, Member of Muharraq Governorate Council Consultation Board, as in HH Prime Minister Decree, 2019-2023.
2021, Promoted to the rank of Professor at College of Engineering, University of Bahrain.

UNIVERSITY SERVICES

Contributed to University of Bahrain, and Bahrain Training Institute (BTI during my seconded position as GD), with quite large number of administration duties, committees, and assigned duties.

COMMUNITY SERVICES

Contributed to the community with large number of professional activities, duties, and professional committees works.

PROFESSION APPRECIATIONS

Received a number of appreciations. These are few selections.

1999, University of Bahrain, "UOB Deanship" Best Funded Research Award.
2001, University of Bahrain, "College of Engineering" Best Funded Research Award.
2001, Kuwait University, GGC Deanships for Continuing Education, Award.
2001, University of Bahrain, Best Engineering Graduating Project Award.
2007, Bahrain Society of Engineers, Society Contributions.
2012, General Directorate of Traffic Dept. (Ministry of Interior) Award.
2012, Ministry of Education Appreciation, MOE Minister, (Ministry of Education).

2014, IEEE-EPSCICON-2014, Appreciation Award, EPSCICON 2014, Thrissur, 8-10 January, India.
2014, Appreciation Award from the Bahrain Royal Filed Force Engineers.
2014, ABET Achievement and Accreditation Award, University of Bahrain.
2015, Bahrain Parliament Appreciation.
2015, Appreciation from VEX Robotics Competition.
2015, Recognition from IEEE ESEC-2015 Steering committee for the Engineering Ethics Competition.
2015, Bahrain Higher Education Appreciation, 2015.
2015, University of Bahrain President Appreciation.
2017, University of Bahrain Award. UOB winning Hackathon.
2018, IEEE-EPSCICON-2018, Appreciation Award, EPSCICON 2018, Thrissur, 5-9 January, India.
2018, Appreciation for active volunteering from the IET- The Institution of Engineering and Technology,UK.
2019, Appreciation from Canadian University Dubai, for chairing the 5th IET GCC Robotics Challenge.

IET PROFESSIONAL
MEMBERSHIPS AND
AFFILIATION

IET: Member of Institute of Engineering and Technology (IET,UK), from 1991-Till now. In addition, a member in IET professional networks (TN): like (Control-Automation), (Robotics and Mechatronics), (Image Processing and Pattern Recognition). Bahrain local network chair, and IET Europe Middle East Africa Regional Board Member for two sessions, (2009-2012),(2016-2019), MIET. I am an active volunteering member with the IET, where I am responsible in organizing several forums, symposiums, events, and local events.

IEE PROFESSIONAL
MEMBERSHIPS AND
AFFILIATION

IEEE Senior Member of Institution of Electrical and Electronics Engineering, (1991- until now). In addition, member in (Robotics and Automation Society, System-Man Cybernetics Society, Fuzzy Systems Society, Artificial Neural Network Society, Mechatronics Society, Control System Society, and Control Education Society), MIEEE. Member of Institute of Engineering and Technology (IET, UK), from 1991-till now.

IFAC AND BSE
PROFESSIONAL
MEMBERSHIPS AND
AFFILIATION

Affiliate Member of the European IFAC (1995-until now), AIFAC. Member of Bahrain Society of Engineers (BSE), (1995-until now), MBSE. Member of International Neural Network Society (INNS), (1995- until now).
Previous Memberships: Member of American Society for Mechanical Engineers (ASME), Automatic Control Division (1995-1998). Board Member of Bahrain Academic Society, Bahrain (2005-2008). Board Member of Technology Transfer Society, Bahrain (2006-2008).

ACADEMIC TEACHING
ACTIVITIES

I have been involved in academic lecturing with substantial materials.
(*a.*) Before Ph.D., during 1989-1994, during Ph.D. thesis works, I was assisting teaching related for undergraduate students laboratories at (University of Reading, UK)). This involved electronics, control, robotics, experiments, and tutorials.

University of Bahrain Academic Lecturing:
Courses for B.Sc. Studies:
EENG205 *Numerical Methods*, EENG271 *Signals and Systems*, EENG381 *Control Systems*, EENG400 *Engineering Ethics*, EENG482 *Robotics and Automation*, EENG483 *Discrete-Time Systems*, EENG485 *Nonlinear Systems*, EENG486 *Intelligent Systems*.

POSTGRADUATE PROGRAM:
Courses for M.Sc. Studies:
EEG580 *Linear and Nonlinear Dynamics*, EEG581 *Intelligent Systems*, EEG582 *Digital Control Systems*, EEG583 *Optimal Control Systems*, EEG586 *Machine Vision*, EEG570 *Probability and Stochastic Processes*, EEM600 *Principles of Artificial Intelligence*, AIE605 *Special Topics in Artificial Intelligence*. CSCI650 *Computer Algorithm Concepts*, CSCI635 *Probability and Stochastic Processes*, CSCI720 *Discrete-Time Control Systems*, CSCI741 *Computer Architectures*.

Doctor of Philosophy in Engineering:
Courses for Ph.D. Studies:
ENGG701 *Advanced Numerical Methods*, ENGG702 *Finite Element Methods*, ENGG703 *Optimization Techniques*, ENGG791 *Research Methodologies*.

More details and contents are found over the website link:
https://www.dr-e-mattar-uob.com/

(*e.*) THESIS SUPERVISION - M.Sc., and Ph.D. thesis titles:
Fuzzy Modelling and Analysis for Nonlinear Dynamic Systems Multivariable Neuro-fuzzy Model Predictive Systems Systems Optimization via Fuzzy Logic System Neuro-Fuzzy Architectures Based Energy Optimization Predication with an Evolving ANN Structures - Evolutionary Programming Deep Learning based Robotic Recognition System for Crowd Management Adaptive Fuzzy-Neural-Approach Hinf Sliding Mode Control of Induction Generator- Motor

Electroencephalography Emotional Enhancements of Detection, and Classification Integrating GIS and Decision Based Systems in Energy Management Systems Deep Learning Topology in Islanding Detection for Distributed Generation Sags-Swells.

For details, visit the link: `https://www.dr-e-mattar-uob.com/`

SUPERVISION - UNDERGRADUATE PROJECTS

I have been involved in supervising a number of graduating projects. Some of these projects have received the best project awards by UOB. Below are few samples of these projects:

(*a.*) Neural Network for Nonlinear Control Systems. (*b.*) LMI-Based Fuzzy Gain-Scheduling For a Nonlinear Benchmark Control Problem. (*c.*) Fuzzy Intelligent House, (*d.*) Gain Scheduled Hinf Control of a Nonlinear System via Linear Matrix Inequalities. (*e.*) Nonlinear Systems Genetics Identification. (*f.*) Iris and Face Recognition System, (*g.*) Robust Optimal Neural Network Control of Robots. (*h.*) Fuzzy Control of Home Built Robotics Arm system, (*i.*) RBF for Visual Hand Control. (*j.*) Visual Servoing using Artificial Neural Networks. (*k.*) Visual Servoing ANN Based for Learning Jacobian Nonlinearity Approximation. (*l.*) High Speed Vehicle Speed Detection, m. Stereo-Vision Based Mobile Robot Navigation. (*n.*) EEG Brainwaves Based Robotics Grasping. (*o.*) SVM Based Electroencephalography (EEG) Analysis for Eye Movement. (*p.*) Electroencephalography (EEG) Analysis for Hand Movement: Events Features Detection, Classification, for Cybernetics and Robotics Applications.(*q.*) Eye-Electroencephalography Analysis and Understanding, Towards Robotics Learning. (*r.*) EEG Based Robotics System with Common Spatial Patterns and Adaptive Boosting Algorithms. Gradient Boosting Machines Learning for Discrete Wavelet Classification of EEG Patterns. (*t.*) LDA - Power Spectral Density Based EEG Classification Applied for Facial Recognition System.

GRANTS AND FUNDED PROJECT

During my academic career, I have worked on a number of granted research projects. These are funded projects by different funding bodies including UoB. This is indicated in the below list:

(*a.*) *UN-DEP. Energy Saving in Bahrain*: Technical Report submitted to the University of Bahrain and UN-DEP in Bahrain. Funding Body: United Nation -DEP, Bahrain Qamber I. and Mattar E., 1998.

(*b.*) *Energy Saving and Intelligent House Automation*: Study Report submitted to the University of Bahrain, Deanship for Scientific Research. Funding Body: Deanship for Scientific Research, University of Bahrain Mattar E., 1998.

(*c.*) *Bahrain Social-Cultural and Educational-Training Dimensions in Flattering Job Creation Educational, Cultural and Social.* Prospects with Restructuring Policies, Technical Report of DARDEN School of Business Visit. Darden Business School, University of Virginia, USA. Mattar E., Bosera A. and Al-Hashimi A. and Amin K., 1999.

(*d.*) *Extruded Insulation and Their Accessories for Rated Voltages.* Ministry of Industry. ABOVE 150 kV (Um = 170 kV) up to 500 kV (Um = 550 kV). TEST METHODS AND REQUIREMENTS.

(*e.*) *Gulf Executive Program in Management in Darden.* Technical Report of DARDEN School of Business visit submitted to University of Bahrain Funding Body: University of Bahrain. Mattar E., 2000.

(*f.*) *Neural Network Face Recognition Via (PCA) Principle Components Analysis.* Research project submitted to Deanship of Scientific Research. Sponsorship: Deanship for Scientific Research, University of Bahrain. Mattar E. and Al-Ruwihi K.,2000.

(*g.*) *Engineering Job Creation in Bahrain Over the Coming Ten Years.* Research study submitted to the Deanship of Scientific Research, Funding Body: Deanship for Scientific Research, University of Bahrain. Mattar E. and Al-Ruwihi K.,2000.

(*h.*) *Neural Network Financial Stock Market Predication.* Technical research submitted to Deanship of Scientific Research. Funding Body: Deanship for Scientific Research, University of Bahrain. Mattar E. and Al-Mutawia S. (Cairo University, Egypt). 1998.

(*i.*) *Designing a 3-DOF Robotics Arm System for UOB.* Research work submitted to UOB. Funding Body: Sponsored by UOB and External Company in Bahrain, Mattar E., 2000.

(*j.*) *Designing a Mobile Robot Navigation System.* Research work submitted to UOB. Mattar E., 2004.

(*k.*) *Modeling of Materials Internal Physical Parameters*, Project Report submitted to Bahrain Welding Wire Products Funding Body: Sponsored by Bahrain Welding Wire Products, Bahrain, Mattar E. 2007.

(*l.*) *Aluminum Rod Bar Micro-Ohm Resistance Measurements.* Project Report for a funded research work to measure Aluminum Rod Bar Micro-Ohm Resistance. Mattar E. 2008.

(*m.*) *Intelligent Mobile Robotics System: Intelligent Interaction Capabilities with an Active Stereo Vision: Path Planning Navigation in Unstructured Hazardous Environments*, Al Mutib K., Mattar E. Ramdane H., Al Sulaiman M., Abdsemed F., Mathkour H. and Arafah M., 2010. Funding Body: Sponsored by King A. Aziz City for Science and Technology, Kingdom of Saudi Arabia.

(*n.*) *Fingerprint Patten Recognition System*, Sponsored by King A. Aziz City For Science and Technology, Kingdom of Saudi Arabia. Al Mutib K., Mattar E. Ramdane H., Al Sulaiman M., Abdsemed F., Mathkour H. and Arafah M., 2008. Funding Body: Sponsored by King A. Aziz City for Science and Technology, Kingdom of Saudi Arabia.

(*o.*) *High Speed Visual Vehicle Detection on Bahrain Highways.* Project Report submitted to Deanship of Scientific Research. Funding Body: Deanship for Scientific Research, University of Bahrain. Mattar E., 2010.

INVITED TALKS - SELECTED SAMPLES

I have been invited for a number of Technical Content Talks. Some of which were locally presented and some were presented out of Bahrain. Below are few selections.

Local Invited Talks:
(*a.*) Intelligent Stock Predication via Artificial Neural Networks, Business Administration College, University of Bahrain, 1996. (*b.*) Intelligent Controllers, University of Bahrain, 1996. (*c.*) Intelligent Robotics Systems, Global Institute 6th Annual Seminar, Global Institute, 1998. (*d.*) Genetic Algorithms for Optimization and Control Applications, University of Bahrain, 1998. (*e.*) Artificial Neural Networks Applications, Bahrain Society of Engineers, 1997. (*f.*) Intelligent Robotics Systems, IEE-Bahrain Section, Bahrain, 1999, *g.* Welding Robotics Control System, Gulf-Matech Conference, (Keynote Lecture), 2002. (*h.*) LMI Based Robust Fuzzy Stabilization of a Nonlinear Dynamic System, University of Bahrain, 2003. (*i.*) Mathematica for Engineering Applications, University of Bahrain, 2005. (*j.*) Visual Servoing Nonlinearity Approximation Via an Intelligent Approach, University of Bahrain, 2007. (*k.*) IET Professional Society, BTI Bahrain, 2008. (*l.*) Iris Recognition System, Sheikh KHALIFA Institute of Technology, 2009. (*m.*) Digital Revolution: where we are Heading, Talk to Sri Lankan Engineering Society, 2013. (*n.*) Medical Robots for Disabled, Talk to Bahrain Mobility International, 2014. (*o.*) Ministry of Education 2016 Innovation Day (Future Scientists Training Program), 2016.

International Invited Talks:
(*a.*) Fuzzy Decision Based Mobile Mapping, King Saud University, KSA, 2013. (*b.*) Occupancy Grids and Stereo Vision SLAM Navigation: Neuro Occupancy Mapping, (Keynote Lecture), Presented at EPSCICON-2014, India, 2014. (*c.*) EEG Brainwaves for Robotics and Prosthesis Grasping and Motorization, (Keynote Lecture) Presented at ICKEA 2015, UAE, 2015. (*d.*) Michael Faraday IET International Summit-2015, (MFIIS 2015), an IET International Conference Focused Area Power-Control-Automation, September 12-13, 2015, Kolkata,India. Supported By: IET Control and Automation (UK), IET Power Electronics, Machines and Drives (UK), Technical Sponsor: Dept. of Applied Physics, University of Calcutta, India, 2015. (*e.*) EEG Complex Grasping Patterns Recognition for BMI Robotic and Prosthesis Motion Control, Keynote Lecture, MFIIS-2015, India, 2015. (*f.*) Electroencephalography Based Event Features Extraction for Robotics Advanced Learning, Mauritius, 2017. (*g.*) Workshop for Two Days about (Machine Learning Based Brainwaves Electroencephalography EEG Decoding and Understanding), during the FOURTH International -Conference- EPSCICON 2018 - IEEE, 3-4 January 2018, at Vidya Academy of Science and Technology. India 2018. (*h.*) Invited for Talk at the (2nd Annual Techno and Science) in the GCC 2018, 22-24 February 2018, (Al Hifof), KSA. (*i.*) Artificial Intelligence and Smart IoT Based Energy Conservation in Buildings: A Learning Paradigm Approach, UAE-2020.

WORKSHOPS, SUMMER SCHOOLS, SHORT COURSES ORGANIZATIONS:

During my academic career, I have been involved in organization of a number of technical /Workshops/Short Courses/ Summer School events. Below are few selections of these events:

(*a.*) Basic Web Technology Skills for Courseware Development (October 14-18, 2001) in cooperation with the UNESCO office. (*b.*) Power System Planning and Control", Short Course, University of Bahrain, 1998. (*c.*) Programmable Logic Controllers PLCs, University of Bahrain, Two weeks intensive course, 2000. (*d.*)Industrial Process Control, University of Bahrain, a four days Short-Course, 2000. (*e.*) Internet Technology for Non Expert staff, 2000. (*f.*) Responsible for organizing a Training Workshop (14-18 October 2001) for the UISCO Office on using internet for educational purposes, entitled" . Basic Web Technology Skills for Courseware Development ", 2001. (*g.*) MATLAB FOR ENGINEERS: A fully developed programming in Matlab Sessions for Students, 2003. (*h.*) Plant Automation and Control, Bahrain, three days intensive short course, 2005. (*i.*) Programmable Logic Controllers PLCs, Bahrain, Three days intensive course, 2005. (*j.*) Plant Automation and Control, in KSA, three days intensive short course, Kingdom of Saudi Arabia, 2007. (*k.*) Process Instrumentation and Control, a one week intensive workshop for ASRY, 2007. (*l.*) Plants Programmable Logic Controllers and Automation, 24th - 26th, November, Kingdom of Bahrain, 2009. (*m.*) Electrical Fundamentals, Bahrain Defense Force Trainee, 2010. (*n.*) Scientific Report Writing, for RE-

SEARCH METHODOLOGY AND ENTREPRENEURSHIP, 4-8 October 2015. (*o.*) IEEE 2016-Engineering Ethics Competition. (*p.*) IET GCC Annual Robotics Challenge. (*q.*) Annual IET Smart Cities Symposium.

REVIEWING: JOURNALS, CONFERENCES, PROGRAM COMMITTEE, PROJECT PROPOSALS	Reviewing of scientific contributions was essential during my career. I have been involved in reviewing of manuscripts for a number of journals/conferences. Below are few selected samples:

(*a.*) International Journal of Advanced Robotic Systems. (*b.*) Robotik Journals, Germany (Editorial Advisory Board). (*c.*) International Journal of Intelligent and Robotic Systems, Springer. (*d.*) International Journal of Nonlinear Control, Springer. (*e.*) International Journal of Mechatronics, IFAC. (*f.*) Journal of Applied Informatics. (*g.*) International Journal of Robotics and Autonomous Systems, Springer. (*h.*) International Journal of Intelligent and Robotic Systems. (*i.*) Journal of Zhejiang University-SCIENCE. (*j.*) 3rd IEEE-GCC 2006 International Conference. (*k.*) IEEE International Conference on Signal Processing and Communication-2007. (*l.*) International Association of Science and Technology for Development, International conference on Optical Communications-2006. (*m.*) International Association of Science and Technology for Development. (*n.*) International Journal of Advanced Robotic Systems, Austria. (*o.*) International Journal of Sensors and Actuators: A. Physical, 2017. (*p.*) Journal of ScholarOne Advanced Robotics, 2017. (*q.*) IFAC, 12th IFAC Conference on Control Applications in Marine Systems, (*r.*) Robotics, and Vehicles 1st IFAC Workshop on Robot Control.

EDITORIAL BOARDS AND TECHNICAL COMMITTEES	During my academic career, I have been involved in specific editorials of manuscripts for a number of journals/conferences. These are few samples.

(*a.*) Technical Committee on Soft Computing,(2001-2004). (*b.*) IASTED Technical Committee of the International Conference on Intelligent Systems and Control,(2003). *c.* International Journal of Advanced Robotic Systems — InTech, (2010). (*d.*) IET SEISCON International Advisory Board,(2010). (*e.*) International Advisory Committee and Technical Reviewer of the ICTES-07,(2007). (*f.*) IET International Conference on Intelligent Systems,(2008). (*g.*) IET SESCON-2011, YPS Chennai,(2011). (*h.*) Consumer Electronics Times Journal,(2014). (*i.*) Research and Educational Society Editorial/Reviewer Board Member. (*j.*) Journal of Instrumentation, Automation and Systems,(2013). (*k.*) Journal of Frontiers Journal,(2014). (*l.*) Journal of Advances in Robotics and Automation,(2014). *m.* Reviewer and Technical Committee of Int. Conference on Mechatronics and Intelligent Manufacturing (ICMIM 2014), 2014. (*n.*) International Journal of modern Computer Science and Applications.

TECHNICAL SESSIONS CHAIRING	I have been involved in chairing technical sessions for a number of technical meetings/events/conferences.

(*a.*) Gulf Cooperation Council (GCC), Technical and Education Colleges Meeting, University of Bahrain, Bahrain meeting during 1998. (*b.*) Gulf Cooperation Council (GCC), Continuing Education and Community Services Colleges in GCC, University of Kuwait, Kuwait-2001. (*c.*) MDTCE-2001 Board of Members Meeting, Bahrain, 9th of April 2001. (*d.*) University and Industry Corporations in Information Technology Symposium), 25th May 2003. (*e.*) IET-International Conference on Intelligent Systems (ICIS-2008), 1-3 December, Bahrain 2008. (*f.*) MEST 2009 International Conference, Bahrain, 2009. (*g.*) IEEE-EPSCICON 2010, International Conference on Power, Signals, Control and Computation, India, January 2010. (*h.*) 14th UK-Sim AMSS (International Conference Modeling and Simulation), UKSim-2012, University of Cambridge, 28-30 March 2012. (*i.*) 14th UK-Sim AMSS (International Conference Modeling and Simulation), UKSim-2012, University of Cambridge- March 2012. (*j.*) Arabian for Education, Culture and Sciences Organization, ALECSO), Sudan, 9th of April 2012. (*k.*) 15th UK-Sim (International Conference Modeling and Simulation), UKSim-2013, at UKSim2013, University of Cambridge, April 2013. (*l.*) 5th International Conference Intelligent Systems, Modeling and Simulation, Malaysia, January 2014. (*m.*) Chairing a Technical Session-2016 17th WERNC, 2016. (*n.*) Chairing a Technical Session at, 2017 9th IEEE-GCC Conference and Exhibition (GCCCE), 2017. (*o.*) Chairing of a Technical Session (Smart Health Care) during the 1st IET Smart Cities Symposium, (SCS-2018), University of Bahrain, 2018. (*p.*) Chairing of a Technical Session (Machine Learning and Robotics) for IEEE-3ICT International Conference, (3ICT-2018), University of Bahrain, 2018. (*q.*) Chairing a Technical Session (Robotics Manipulators), at the IEEE ROBIO-RAS 2018, December 2018, Kuala Lumpur Malaysia. (*r.*) Chairing of a Technical Session (Smart Health Care), during the 2nd IET Smart Cities Symposium, (SCS-2019), University of Bahrain, 2019.

UNIVERSITY ACADEMIC CONTRIBUTED MATTERS (FEW SELECTIONS)	I have been involved in university academic duties matters. Below are few selections:

(*a.*) Member of Committee for Electronics Colloquium Development, 1997-1998. (*b.*) Head of ABET Department

Accreditation Committee. (*c.*) Member of Department for research on Robotics, DSP Applications,(2009-Now). (*d.*) Member of Academic Committee, (2010-Now). (*e.*) Head of College of Engineering Information Committee,(1999-2003). (*f.*) Member of College of Engineering Task Force Strategic Committee, (1999-2002). (*g.*) Head of Organizing Committee for International Conference on (Millennium Dawn in Training and Continuing Education),(1999-2001). (*h.*) Head of College of Engineering Administration Staff Grievance Committee, (2005-2005). (*i.*) Member of College of Engineering Committee for (Summer Courses Regulations), (2005-2005). (*j.*) Head of College of Engineering Administration Staff Grievance Committee, (2006-2006). (*k.*) Member of University Strategy Committee for Planning the Community Service College, (1999-2001). (*l.*) Member of University Committee for Observation and Setting Standards for UOB Graduates. (*m.*) Member of (Industry-University Collaboration in Information Technology Forum organized by University of Bahrain, 2002-2003). (*n.*) Member of University of Bahrain Committee in providing a program for "Training and Employment of Bahrain Nationals". (*o.*) Member of Administration Staff Grievance Council, (2001-2003). (*p.*) Member of University Committee for IT and IT related Equipment, (2000-2003). (*q.*) Member of Research Deanship Information Technology Advisory Committee, (2000-2003). (*m.*) Head of UOB ACs and Power Cables Tender Selection Committee, (2007-2008). (*n.*) Member of UOB Scientific Research Funding Committee (A Part from the UOB Strategy Committee), (2010-2012). (*o.*) Member of Colloquium Development for the Ministry of Education, (1996-1999). (*p.*) Member in "Committee of Deans and Directors of CT's in GCC, (1998-2003). (*q.*) Member of GCC Deans of Community Services and Continuing Education Colleges. (*r.*) Member of GCC special task force committee for setting Technical Education Strategy in the GCC. (*s.*) Head of Quality Assurance Accreditation Committee, (2010-until now), responsible for preparing the quality reports. (*t.*) Head of Quality Assurance Accreditation Committee, (2010-until now), responsible for preparing the ABET engineering reports for three times. (*u.*) Head of Quality Assurance Accreditation Committee, (2017-until now), responsible for preparing the National Qualification Reports. (*v.*) Head of academic recruitment committees for a number of times.

Programs and Courses
Curriculum
Development

Prepared technical contents for the following Undergraduate Courses:
(*i.*) Automatic Control. (*ii.*) Electrical Measurement Systems, (*iii.*) Nonlinear Control System. *iv.* Robotics Systems. (*v.*) Intelligent Control Techniques.

In addition, I have contributed in preparing technical contents for a number of Postgraduate Courses. This includes: (*i.*) Linear and Nonlinear Dynamic Systems. *ii.* Discrete Time Control. (*iii.*) Optimal Control Theory. (*iv.*) Robust Multivariable Control System, (*v.*) Intelligent Control. (*vi.*) Principles of Artificial Intelligence. (*vii.*) Special Topics in Artificial Intelligence.

Technical
Conferences, Events
and Organizational
Committees

(*a.*) Organizing Head of the 5th Annual GCC Technical Collages Meeting, 2001. (*b.*) Organizing Head for the International Conference on (Millennium Dawn in Training and Continuing Education), 2001. (*c.*) Engineering Software Workshop-1, 2006, Mathematica for Engineering Applications. *d.* Engineering Software Workshop-2, 2007, MatLab for Engineering Applications. (*e.*) Member of the Organization Committee of the 1st Technology Transfer Conference, Bahrain, 2004. (*f.*) Member of the Organization Committee of the 2nd Technology Transfer Conference, Bahrain, 2006. (*g.*) Member of IEEE Control Systems Society, Technical Committee on Control Education. (*h.*) Technical Chair of IET ICIS-2008 International Conference on (Intelligent Systems), December 2008. (*i.*) Organizing committee of IET Colloquium and Forum (Wireless Communications Forum), Bahrain, 2008. (*j.*) Organizing committee of IET Colloquium and Forum (New Directions in Automatic Control: Theories and Applications), 2010. (*k.*) Gulf Research Conference Committee Members, 2010. *l.* Board Member of the IET Executive Control and Automation TPN Network, 2010. (*m.*) Head of organizing committee of IET Symposium (Robotics and Artificial Intelligence Applications in GCC), 2011. (*n.*) Organizing committee of IET Colloquium and Forum (New Directions in Automatic Control: Theories and Applications), 2012. (*o.*) Organizing committee of IET Colloquium and Forum, "Control and Automation Education: Exploring Automatic Control Education in Academia and Industry Associated with Control and Automation Show, 2014. (*p.*) IEEE Steering Committee Member of the GCC Engineering Ethics Competition, 2015, UAE. (*q.*) IEEE Steering Committee Member of the GCC Engineering Ethics Competition, 2016, Bahrain. (*r.*) Organizing Committee Member of IET Colloquium and Forum (Engineering Trends in Image Processing, Pattern Recognition Techniques, and Applications), Bahrain, 2016. (*s.*) Organizing Committee member of the 17th WREN Congress. (*t.*) Head of the Organizing Committee of 3rd IET/GCC Robotics Challenge, 21 April 2018. (*u.*) Organizing Committee member of IET/EMEA (Smart Cities Symposium), 22-23 April 2018. (*v.*) Organizing Committee member of International Conference on Fourth Industrial Revolution 19-21 February, Bahrain 2019. (*w.*) Organizing Committee member of IET-EMEA (2nd Smart Cities Symposium), 24-26 March 2019. (*x.*) 2021 6th International Conference on Robotics and Machine Vision (ICRMV 2021), China, Guangzhou.

IET Forums,
Volunteering, IET
Annual Smart Cities
and the IET GCC
Robotics Challenges:

I am a member with the IEE (now the IET) since 1990. I am an active member of the (IET) since 1995. I got more involved with IET volunteering during 2006. Since that time we have organized the first IET local forum in Bahrain during 2008. After that, during the next 10 years, we were able to organize annual events as local forums. Forums themes included (Control, Automation, AI, Image Processing, Renewable Energies, Robotics, IoT, ...).

By 2017, we stated to think differently and expand the thoughts of technical meetings and event. Smart Cities

and the IET GCC Robotics Challenges, are two main IET Annual events within the EMEA region, that have been proposed to the IET, to serve the young professionals, the academic communities, and industrial affiliates. Since that time, that have been started to run, theme of the two annual events do reflect on the advances and the development related to (Smart Solutions) and (Robotics).

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Tech-13: PROJECT REPORT: Face Recognition System Sponsored by King A. Aziz City For Science and Technology, Kingdom of Saudi Arabia Author: Al Mutib K., Mattar E. Ramdane H., Al Sulaiman M., Abdsemed F., Mathkour H. and Arafah M., 2008.

Tech-14: PROJECT REPORT: High Speed Vehicle Detection on Bahrain Highways. Technical Report submitted to Deanship of Scientific Research, Bahrain University. Author: Mattar E., 2010.

Tech-15: PROJECT REPORT: Co-Author of: Intelligent Mobile Robotics System: Intelligent Interaction Capabilities with an Active Stereo Vision-Path Planning Navigation in Unstructured Hazardous Environments ASTP-09, Submitted to National Plan for Science and Technology, King Saud University, KSA.

PUBLICATION LIST: (*v*): *Local Publications: Samples of Articles for Local Engineering Magazines*:
Local Publications

Eng-01: Robotics Technology, Publication of Bahrain Society of Engineers,Al-Muhandis Magazine.
Eng-02: Robotics and Tomorrow Technology, AKH Engineering Press, 1997.
Eng-03: A Robotics Arm System Built at University of Bahrain, Engineering News in, AYAM Press, 1996.
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Eng-06 : Face Value: ANN Based Face Recognition and Feature Control, UOB News and Views Magazine, 1999.
Eng-07 : Engineering of Robotics Arm Design, In UOB, News and Views Magazine,1997.
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Eng-18 : Scientific Research UOB, (News and Views Magazine), May 2004 Robotics Arm Control: Educational Example of Teaching Intelligence and Control, BSE, Magazine, February 2007.
Eng-19 : GCC Electronics Industry, Publication of Bahrain Society of Engineers, BSE Magazine, June 2007.
Eng-20 : Scientific Research in GCC, in Engineering, WD Press, 26th July, 2010 Bahrain Educational Platform, in Engineering, WD Press, 11th October, 2010.

OTHER ENGAGEMENTS AND HOBBIES: I do have other hobbies. This includes a number of sports, and in particular (football), and (long distance walking). In addition, I like reading about history.