Tarek M. Sobh, Ph.D., P.E., CMfgE

Vice President for Graduate Studies and Research Dean, School of Engineering Distinguished Professor of Engineering and Computer Science University of Bridgeport Fellow, African Academy of Sciences Member, The Connecticut Academy of Science and Engineering

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EDUCATION

Ph.D. Computer and Information Science, December 1991. General Robotics and Active Sensory Perception (GRASP) Laboratory. School of Engineering and Applied Science, University of Pennsylvania. Thesis: Active Observer: A Discrete Event Dynamic System Model for Controlling an Observer Under Uncertainty. **M.S.** in Engineering, Computer and Information Science, August 1989 (GPA 4.0). School of Engineering and Applied Science, University of Pennsylvania. P.E. Licensed Professional Electrical Engineer, State of Utah, since February 1994. **CMfgE** Certified Manufacturing Engineer, Society of Manufacturing Engineers, since January 1997. C.R.E. Certified Reliability Engineer, American Society of Quality Control, since October 1996. **C.M.** Certified Professional Manager, Institute of Certified Professional Managers, James Madison University, since May 1996. **B.Sc.** in Engineering, with Honors, Computer Science and Automatic Control, June 1988, School of Engineering, Alexandria University. General Certificate of Education, 5 Advanced and 8 Ordinary Level Subjects, With Distinction, University of London, England, January 1983 - June 1985. Attended Victoria

ACADEMIC EXPERIENCE

College, Alexandria, from 1977 - 1983.

Administrative Experience:

Vice President for Graduate Studies and Research [2008–present]

University of Bridgeport

Launched the Division of Graduate Studies and Research to promote inter-disciplinary program development and research capabilities. Leads all aspects of management,

development, strategic planning and implementation at the division level, which includes the School of Engineering, School of Business, School of Education and Human Resources and enrolls over 75 percent of all UB graduate students. Identifies activities needed and secures budget approval to support the addition of division-level academic programs, university-wide graduate student academic support, and research infrastructure. Established and implemented the use of a matrix with measurable outcomes to quantify faculty participation in sponsored research projects and scholarly and creative activities, to include the number of: funding proposals submitted, articles published in refereed journal publications, conference papers published, book or book chapters published, faculty to serve as journal editors, faculty to serve on conference technical committees, faculty to chair conference, workshop, technical committees or sessions thereof, faculty to serve as peer reviewers for external funding agencies.

Initiated activities to strengthen collaborations with industry and funding agencies within the areas of interdisciplinary research, emerging technologies, and sponsored projects. Developed the matrix and measurable outcomes to quantify the number of: students participating in a co-op or internship, faculty research proposals submitted to industry and other agencies, research proposals currently funded by industry and other agencies; the total dollars of current industry and other agency-sponsored research projects. Further developed the advisory board membership standards for the School of Engineering, School of Business, and School of Education and Human Resources. Clarified membership obligations and expectations to include dollar or in-kind contributions to UB research and guaranteed co-op student employment.

Established and supervises new division departments and associated personnel, including the associate dean for business development and outreach, and the managing coordinator, office of sponsored research. Supervises the development of a new "business incubator" through the office of development and outreach. Established and supervises a faculty research council, graduate council, intellectual property board. Expanded the membership and initiated policy and procedures development to meet federal requirements for the institutional review board. Supervised the drafting and approval of the intellectual property policy, the significant financial interest policy, the federally negotiated provisional facilities and administrative cost rate, and revisions to the graduate assistant policy. Secured funding for an inaugural seed money grant program for full-time faculty. Advised the development of a dedicated division website.

Established an M.S. in Biomedical Engineering Program. Initiated the establishment of a M.S. degree in Renewable Energy Engineering and Sustainable Development and Ph.D. in Technology Management. Initiated the establishment of research labs and associated equipment for the study of alternative energy and sustainable development.

Founder, CTech IncUBator [2010]

University of Bridgeport

Founded the CTech IncUBator, a high-tech business incubator, as a partnership between the University of Bridgeport (UB) and Connecticut Innovations (CI), the state's quasipublic authority for technology investing and innovation development. The CTech IncUBator is Fairfield County's first and only university-based incubator for high-tech start-ups.

Vice Provost for Graduate Studies and Research [2006 – 2008]

University of Bridgeport

Coordination of the graduate programs at the University of Bridgeport. Facilitating interschool collaborations for new program development and joint programming. Managing enrollment of the graduate programs. Providing leadership for fund-raising and grant writing. Fostering research and scholarship at the University.

Dean, School of Engineering

University of Bridgeport. [7/99 - present]

Established and designed the web-based electronic assessment system and software for performing assessment of the undergraduate engineering programs at UB, in addition to providing the system to other UB schools as a standard platform for performing program assessment of objectives and student outcomes. The e-assessment system has been fully developed, implemented and coded at the School of Engineering. Coordinating school and accreditation activities for various departments, fund raising, pursuing corporate relationships, industry advisory board development, and international program development with other institutions (domestic and international). Managing and developing the school budget. Facilities and space management and enhancement. Coordinating personnel reviews, the yearly professional review, recruiting, and RPT committees. Restructuring the Electrical Engineering and Mechanical Engineering majors, pursuing and securing ABET accreditation, expanding external and nontraditional program offerings, revamping the M.S. programs in Management of Technology, CS and CpE. Integrating the industrial design department offerings into existing engineering programs, interdisciplinary and inter-schools projects and innovative syllabi development, establishing admission, language and bridge courses criteria, and continuing school web site development for the academic departments. Initiating and finalizing the web-based e-content project for all course work at UB's Engineering School. Undergraduate and graduate curriculum development and structuring the Ph.D. program. Initiating proposals for distance learning education and internet-based continuing education classes at the dept. of computer science and engineering.

Interim Dean, School of Business

School of Business, University of Bridgeport [2/2006 – 10/2006]

Interim Chairman, Department of Technology Management

Department of Technology Management, School of Engineering, University of Bridgeport [5/2005 – 3/2006]

Interim Chairman of Computer Science and Engineering

Department of Computer Science and Engineering, School of Engineering, University of Bridgeport. [5/98 – 1/99]

Director, External Engineering Programs

School of Engineering, University of Bridgeport. [10/97 – 6/99]

Establishing, managing and coordinating the Engineering Weekend programs. Implementing distance learning regular classes and continuing education classes. Establishing on-site educational classes and programs for industry. Coordinating continuing professional education classes for the local industry.

Founding Director, Robotics, Intelligent Sensing and Control (RISC) Laboratory

Department of Computer Science and Engineering, School of Engineering, University of Bridgeport. [Since 9/95]

Research on mobile manipulation, PC-based software packages for controlling/simulating/monitoring of manipulators, service robots, prototyping and synthesis of controllers, simulators, and monitors, calibration of manipulators and singularity determination for generic robots, and algorithms for uncertainty computation from sense data.

Academic Appointments:

Distinguished Professor of Engineering and computer Science

University of Bridgeport [Since 2010]

Named as Distinguished Professor of Engineering and Computer Science in recognition of extensive scholarly achievements and contributions to the fields of robotics, automation, sensing and computer vision, systems engineering, computer science, on-line engineering and engineering education. Unanimously approved by the University of Bridgeport Board of Trustees on February 26, 2010.

Professor of Computer Science and Computer Engineering

Department of Computer Science and Engineering, School of Engineering, University of Bridgeport. [Since 8/2000]

Teaching classes in information technology, operating systems, engineering economics and management of engineering projects, e-commerce project management, robotics, automation, manufacturing and sensing. Research on web-based automation and prototyping, sensing for advanced manufacturing, assembly, scheduling and rapid prototyping of parts and electromechanical systems, and web-based autonomous agents.

Professor of Electrical Engineering and Mechanical Engineering

School of Engineering, University of Bridgeport, by courtesy. [Since 8/2001] Teaching classes and seminars in Robotics, Automation and Sensing. Performing research within the area of web-based virtual robot prototyping and manufacturing.

Associate Professor of Computer Science and Computer Engineering

Department of Computer Science and Engineering, School of Engineering, University of Bridgeport. Tenured in 1998. [9/95 – 8/2000]

Establishing a robotics, automation, and sensing track of classes at the undergraduate and graduate levels. Research on tolerance representation and determination for inspection and manufacturing, internet-based tele-control of robotic manipulators, hybrid controllers for robotics and automation, and sensor-based distributed control schemes for mobile robots.

Research Assistant Professor of Computer Science

Department of Computer Science, College of Engineering, University of Utah. [2/92 – 8/95]

Research on reverse engineering and inspection, design and real-time control of electromechanical systems, Discrete Event Dynamic Systems, object-oriented prototyping environments, CAD/CAM, robotics, and computation of manufacturing tolerances from sense data.

Manager, NSF CISE Infrastructure Award

Department of Computer Science, College of Engineering, University of Utah. [2/92 - 8/95]

Managing and co-coordinating the efforts of the different groups involved within the CISE computer-aided prototyping projects; including the Robot Prototyping Environment Project and the Reverse Engineering Project.

Postdoctoral Research Fellow

General Robotics and Active Sensory Perception (GRASP) Laboratory, Department of Computer and Information Science, University of Pennsylvania. [12/91 - 2/92] Research on uncertainty modeling, representing, controlling, and observing interactive robotic agents in unstructured environments.

Research Fellow

GRASP laboratory, Department of Computer and Information Science, University of Pennsylvania. [6/89 – 12/91]

Research in vision and robotics on the recovery of 3-D shape from motion, static and dynamic camera calibration, target tracking with a moving camera and hybrid dynamic systems for observing and guiding moving agents and controlling and observing discrete event systems.

Teaching Fellow

Department of Computer and Information Science, University of Pennsylvania. [9/88 – 5/90]

Teaching undergraduate courses in Programming Languages (Fall'88), Computer Architecture and Organization (Spring'89) and two graduate courses in Theory of Computation (Fall'89) and Computer Architecture (Spring'90).

Graduate Student

Department of Computer and Information Science, University of Pennsylvania. [9/88 – 12/91]

Research in computer vision on the analysis of time-varying imagery and the determination of the optical flow, research in algorithms for parallel architectures, filtering algorithms for noise reduction in sense data, communication networks, control theory and in adaptive digital signal processing.

Mathematics Tutor

Department of Mathematics, University of Pennsylvania. [9/88 – 5/90]

Tutoring undergraduate and graduate courses in Calculus, Modern Algebra, Algebra, Linear Algebra, Advanced Calculus, Probability, Statistics, Numerical Analysis and Differential Equations.

Seminar Organizer

School of Engineering, Alexandria University, Alexandria, Egypt. [9/86 - 6/87]Structured, organized and lectured two seminars on Models for Computational Complexity and Two - Dimensional Signal Processing: Low - Level Image Processing for engineers and engineering students.

Research Programmer

Artificial Intelligence Laboratory, Department of Computer Science, College of Engineering, University of Utah. [7/86 – 9/86 and 6/87 – 9/87]

Developing a paper-less document reviewing system by the customization of the GNU EMACS editing environment to contain 2 new modes for commenting and authorizing documents.

Research Assistant

Department of Computer Science, Alexandria University, Alexandria, Egypt. [6/85 - 8/85]

Doing numerical analysis for the computation of the singular value decomposition of a matrix with some applications related to linear control systems.

Full-Time Industrial Positions

Visiting Research Scientist

Autonomous Systems Department, Philips Laboratories, North American Philips Corporation, New York. [5/90 – 10/90]

Research in adaptive goal-directed robotic sensing for performing visual recognition and inspection of industrial electronic components.

System Designer

[6/88 - 9/88]

Designing and implementing a system for solving structural frames and trusses for civil engineering applications, (Ref. M. Islander, P.E.), Alexandria, Egypt.

PUBLICATIONS

Book Chapters:

- 1. Ayssam Elkady, Mohammed Mohammed, Eslam Gebriel, and Tarek Sobh, *"Intelligent Behavior Modelling and Control for Mobile Manipulators"*, in "Pervasive Computing Innovations in Intelligent Multimedia and Applications" Series: Computer Communications and Networks published by Springer Verlag, 2009, ISBN: 978-1-84882-598-7.
- Ayssam Elkady and Tarek Sobh, "Web-Based Control of Mobile Manipulation Platforms via Sensor Fusion" in Web-based Control and Robotics Education, in Series: Intelligent Systems, Control and Automation: Science and Engineering, Vol. 38. Editor: Tzafestas, Spyros G., 2009, ISBN: 978-90-481-2504-3.
- Ayssam Elkady, Galal Elkobrosy, Sarwat Hanna and Tarek Sobh, "Cartesian Parallel Manipulator Modeling, Control and Simulation", in "Parallel Manipulators, Towards New Applications", April 2008, ISBN 978-3-902613-40-0,
- 4. Sarosh Patel, Rajeev Sanyal and Tarek Sobh, "*RISCBOT: A WWW Enabled Mobile Surveillance Telerobotic System.*", in "New Developments in Robotics Research", 2006, Nova Publishers, ISBN: 1-59454-593-6.
- 5. Tarek Sobh, Kurt Coble and Bei Wang, "*Experimental Robot Musician*", in "Mobile Robotics Towards New Applications", pages 545-558, Verlag publishers, 2007.
- 6. Elleithy, K. and Sobh, Tarek M., "A Framework for Reverse Engineering VLSI Chips," in "Intelligent Systems and Signal Processing", Elsevier Science, 2003.

- T. Sobh, R. Mihali, P. Batra, A. Singh, S. Pathak, T. Vitulskis, and A. Rosca, "Case Studies in Web-Controlled Devices and Remote Manipulation: Laboratory- Based Distance Learning, in "TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications", Volume 12, 2002.
- R. Mihali and T. M. Sobh, "Effective Simulation and Control Techniques for Alleviating Problems in Accessing High-Cost Manipulators. Wireless Control Perspectives." In "TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications", Volume 12, 2002.
- T. M. Sobh, R. Mihali and A. Sachenko, "Fully Autonomous Web Based Virtual Robot Prototyping and Manufacturing", in "TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications", Volume 12, 2002.
- M. Grigorian and T. M. Sobh, "Design-Simulation-Optimization Package for a Generic 6-DOF Manipulator with a Spherical Wrist", in "TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications, Volume 10, pp. 413-420, 2000.
- 11. R. Mihali M. Grigorian and T. M. Sobh, "An Application of Robotic Optimization: Design for a Tire Changing Robot," in TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications, Volume 10, pp. 421-428, 2000.
- Tarek M. Sobh and Abdelshakour A. Abuzneid, "A Generic Simulator/Controller for Robot Manipulators," in Recent Advances in Mechcatronics, Springer Verlag, pp. 575-589, 1999.
- 13. T. M. Sobh, J. Owen, and M. Dekhil, "Techniques in the Reverse Engineering and Inspection of Machined Parts in Manufacturing Systems," in Computer Aided and Integrated Manufacturing Systems Techniques and Applications. Gordon and Breach International Series in Engineering, Technology and Applied Science, 1998.
- 14. T. M. Sobh, M. Dekhil, and A. A. Efros, "*Robust Sensing for Mobile Robot Control*," in Robot Control, Book Chapter, Elsevier Science, 1997.
- 15. Tarek M. Sobh and Xiao Hong Zhu, "Visualization of Tolerance for Manufacturing," 14th Triennial IFAC Congress, Book Chapter, Elsevier Science Publishers, 1999.
- 16. Tarek M. Sobh, Xiao Hong Zhu, and Beat Bruderlin, "Analysis of Tolerance for Manufacturing Geometric Objects from Sensed Data," 14th Triennial IFAC Congress, Book Chapter, Elsevier Science Publishers, 1999.
- Tarek M. Sobh and Abdelshakour A Abuzneid, "PC-Based Simulation and Control of Manipulators," in TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications, Volume 7, pp. 441-446, 1998.
- T. M. Sobh, T. C. Henderson, and F. Zana, "Tolerance Specification in Sensing, Design and Manufacturing," in ASME Press Series on Robotics and Manufacturing; Recent Trends in Research and Applications, Volume 7, pp. 691-698, 1998.

- T. M. Sobh, M. Dekhil, and A. A. Efros, "Sensing Under Uncertainty for Mobile Robots," in TSI Press Series on Robotic and Manufacturing Systems; Recent Results in Research, Development and Applications, Volume 3, pp. 747-752, 1996.
- 20. T. M. Sobh, M. Dekhil, T. C. Henderson, and A. Sabbavarapu, "Prototyping a Three-link Robot Manipulator," in ASME Press Series on Robotics and Manufacturing; Recent Trends in Research and Applications, Volume 6, pp. 781-786, 1996.
- 21. T. M. Sobh, "Hybrid Systems and Control," in *Handbook on Industrial Electronics*, Book Chapter, CRC Press, Florida, 1995.
- 22. T. M. Sobh, C. Jaynes, M. Dekhil, and T. C. Henderson, "Automated Inspection and Reverse Engineering," in Intelligent Systems: Safety, Reliability, and Maintainability Issues, O. Kaynak, G. Honderd and E. Grant (Eds.), Springer-Verlag, Berlin, pp. 95-122, 1993.
- 23. T. M. Sobh and R. Bajcsy, "Visual Observation of a Moving Agent," in Engineering Systems with Intelligence; Concepts, Tools, and Applications, Kluwer Academic Publishers, 1991.

Journal Papers:

- 1. T. M. Sobh, J. C. Owen, K. P. Valavanis, and D. Gracanin, "A Subject-Indexed Bibliography of Discrete Event Dynamic Systems", in the *IEEE Magazine on Robotics and Automation*, Vol. 1, No. 2, June 1994.
- 2. T. M. Sobh, J. C. Owen, and M. Dekhil, "A Dynamic Recursive Approach for Autonomous Inspection and Reverse Engineering", in *Journal of Robotics and Autonomous Systems*, 13: 153-171, October 1994.
- 3. T. M. Sobh and K. P. Valavanis, "Discrete Event systems in Robotics and Automation" in *Journal of Robotics and Autonomous Systems*, 13: 151-152, October 1994.
- 4. T. M. Sobh and T. Alameldin, "Compressed Transmission Mode: An Optimizing Decision Tool," in *Informatica*, The International Journal of Computing and Informatics, Volume 18, Number 3, November 1994.
- 5. T. M. Sobh, "Recovering 3-D Motion and Structure," in *Informatica*, The International Journal of Computing and Informatics, Volume 18, Number 4, December 1994.
- T. M. Sobh, J. C. Owen, M. Dekhil, and T. C. Henderson, "Industrial Inspection and Reverse Engineering," in *Computer Vision, Graphics, and Image Processing* (*CVGIP*), Image Understanding Journal, Special Issue on Model-Based Vision, May 1995.
- T. M. Sobh and J. C. Owen, "A Sensing Strategy for the Reverse Engineering of Machined Parts", in the *Journal of Intelligent and Robotic Systems*, 14: 323-340, 1995.

- 8. T. M. Sobh and R. Bajcsy, "A Discrete Event Framework for Autonomous Observation Under Uncertainty" in the *Journal of Intelligent and Robotic Systems*, 16: 315-385, 1996.
- 9. M. Dekhil, T. M. Sobh, T. C. Henderson, and R. Mecklenburg, "UPE: Utah Prototyping Environment for Robot Manipulators", in the *Journal of Intelligent and Robotic Systems*, 17: 31-60, 1996.
- 10. T. M. Sobh and B. Benhabib, "Discrete Event and Hybrid Systems in Robotics and Automation", in the *IEEE Magazine on Robotics and Automation*, June 1997.
- 11. A. Mahmood, Y. Chu, and T. M. Sobh, "Parallel SOLVE for Direct Circuit Simulation on a Transputer Array," in the *IEEE Proceedings on Circuits, Devices and Systems*, Vol. 144, No. 6, December 1997.
- 12. T. M. Sobh, "Analyzing Manufacturing Tolerances for Sensing and Inspection", in the *International Journal of Science and Technology*, Special Issue on Automation and Robotics, Spring 1998.
- 13. T. M. Sobh, T. C. Henderson, and F. Zana, "Tolerance Representation and Analysis in Industrial Inspection", in the *Journal of Intelligent and Robotic Systems*, 24: 87-401, 1999.
- 14. T. M. Sobh and M. Dekhil, "Sensing Under Uncertainty for Mobile Robot", in the *Journal of Intelligent and Robotic Systems*, 25: 1-25, 1999.
- 15. T. M. Sobh, M. Dekhil, T. C. Henderson, and A. Sabbavarapu, "Prototyping a Threelink Robot Manipulator", in the *International Journal of Robotics Automation*, Volume 14, Issue 2, 61-67, 1999.
- 16. M. Dekhil, T. M. Sobh, and A. A. Efros, "Commanding Sensors and Controlling Indoor Autonomous Mobile Robots," In the *International Journal of Intelligent Control and Systems*, Volume 3, Issue 1, 105-116, March 1999.
- 17. R. Mihali and T. M. Sobh, "The Formula One Tire Changing Robot (F1-T.C.R.)," In the *Journal of Intelligent and Robotic Systems*, 27: 171-193, 2000.
- R. Mihali M. Grigorian and T. M. Sobh, "Robotic Optimization for the Formula One Tire Changing Robot (F1-T.C.R.)," In the *Journal of Intelligent and Robotic Systems*, 29: 277-294, 2000.
- 19. R. Mihali, M. Grigorian and T. M. Sobh, "An Application of Robotic Optimization: Design for a Tire-Changing Robot," In the *International Journal of Science and Technology*, Volume 12, 1: 28-36, 2000.
- T. M. Sobh, X. Zhu, B. Bruderlin and R. Mihali, "Analysis of Tolerance for Manufacturing Geometric Objects from Sensed Data." In the *Journal of Intelligent* and Robotic Systems, 30: 143-153, 2001.
- T. M. Sobh, M. Dekhil, A. A. Efros and R. Mihali, "Logical Control for Mobile Robots." In the *International Journal of Robotics Automation*, Volume 16, Number 2, 74-82, 2001.
- 22. K. Lee and T. Sobh, "Advances in Prototyping," In the *IEEE Magazine on Robotics and Automation*, Volume 8, Number 3, 6-8, September 2001.
- 23. K. Lee and T. Sobh, "Visionary Prototyping: New Trends in Prototyping Design and Automation," In the *IEEE Magazine on Robotics and Automation*, Volume 8, Number 3, 15-24, September 2001.

- 24. Tarek M. Sobh and Abdelshakour A. Abuzneid, "A PC-Based Simulator/Controller/Monitor Software for Manipulators and Electromechanical Systems." In the *Journal of Intelligent and Robotic Systems*, 31: 355-377, 2001.
- 25. T. M. Sobh, M. Dekhil, T. C. Henderson, A. Sabbavarapu and R. Mihali, "Concurrent Design of a Three-link Manipulator Prototype," In *Computers Electrical Engineering*, volume 27 (2001), issue #6, 445-458, November 2001.
- T. M. Sobh and A. Mahmood, "Recovering Structure Uncertainties from Noisy Sense Data," In *Computers Electrical Engineering*, volume 28 (2002), issue #2, 127--141, January 2002.
- 27. T. Sobh and K. Elleithy, "Internet-Based Robotics and Automation," In the *International Journal of Robotics Automation*, special issue on Web-based Automation, Volume 17, Number 3, 103-105, 2002.
- 28. T. Sobh, R. Mihali, P. Batra, G. Gosine, K. Vovk, and B. Ghimire, "Laboratory-Based Distance Learning, Case Studies in Web-Controlled Devices and Remote Manipulation," In the *International Journal of Robotics Automation*, special issue on Web-based Automation, Volume 17, Number 3, 120-127, 2002.
- 29. H. Hagras and T. Sobh, "Intelligent Learning and Control of Autonomous Robotic Agents Operating in Unstructured Environments," In the *Information Science Journal*, Volume 145, issue #1--2, pp 1--12, Elsevier Science Inc., August 2002.
- 30. T. Sobh, R. Mihali, B. Ghimire, K. Vovk, G. Gosine, P. Batra, A. Singh, S. Pathak, and A. Rosca, "Case Studies in Web-Controlled Devices and Remote Manipulation," In the *Computing Journal*, Volume 1, issue 1, pp 56-63, August 2002.
- 31. R. Mihali, T. Sobh, V. Koval, T. Korkishko, A. Sachenko, and V. Kochan, "Web based Virtual Robot Prototyping and Manufacturing," In the *Computing Journal*, Volume 1, issue 2, pp 95-100, December 2002.
- W. Zhang and T. M. Sobh, "Obstacle Avoidance for Manipulators," In the *Journal of* Systems Analysis, Modeling, and Simulation, Volume 43, issue 1, pp 67-74, January 2003.
- 33. M. Grigorian and T. M. Sobh, "Design-Simulation-Optimization Package for a generic 6-DOF Manipulator with a Spherical Wrist," In the *Journal of Systems Analysis, Modeling, and Simulation*, Volume 43, issue #6, pp 759-769, June 2003.
- 34. Tarek M. Sobh, Bei Wang and Sarosh Patel, "A Mobile Wireless and Web-based Analysis Tool for Robot Design and Dynamic Control Simulation from Task Points Description," In the *Journal of Internet Technology*, Volume 4, issue # 1, pp 153-161, July 2003.
- 35. Tarek M. Sobh, Rajeev Sanyal and Bei Wang, "Web-Based Remote Mobile Robot Surveillance," In the *Journal of Internet Technology*, Volume 4, issue # 1, pp 179-184, July 2003.
- 36. M. Elchanani and T. Sobh, "Remote Learning: A World-Wide-Web Operated Robot Arm," in the *Computing Journal*, Volume 2, issue 1, pp 13-16, October 2003.
- T. Alameldin, N. Badler and T. Sobh, "A Computational Approach for Constructing the Reachable Workspaces for Redundant Manipulators," in the *Computing Journal*, Volume 2, issue 1, pp 48-52, October 2003.
- 38. Tarek M. Sobh, K. Coble and B. Wang, "Experimental Robot Musicians," in the *Journal of Intelligent and Robotic System*, Volume 38, issue 2, pp 197-212, November 2003.

- 39. T. Sobh, R. Mihali, P. Batra, A. Singh, S. Pathak, T. Vitulskis, A. Rosca, "E-Learning: Case Studies in Web-Controlled Devices and Remote Manipulation." In the Computing Journal, Volume 2, issue 3, pp 123--131, December 2003.
- 40. T. Chen, T. Sobh and A. Tibrewal, "A Tool for Data Structure Visualization and User-Defined Algorithm Animation." In the Journal of STEM Education: Innovations and Research, Volume 4, issues 3&4, pp 33--41, December 2003.
- 41. R. Mihali, T. Sobh and D. Vamoser, "SKED: A Course Scheduling and Advising Software." In the Journal of Computer Applications in Engineering Education, Volume 12, issue 1, pp 1--19, May 2004.
- 42. Sobh, Tarek M. and Toundykov, Daniel Y., "Kinematic Synthesis of Robotic Manipulators From Task Descriptions." In the IEEE Magazine on Robotics and Automation (IEEE RAM), Volume 11, No. 2, pp 78-85, June 2004.
- 43. V. Vacic and T. Sobh, "The Vehicle Routing Problem with Time Windows." In the Computing Journal, Volume 3, issue 2, pp 72-80, November 2004.
- 44. B. Wang, D. Hoang, I. Daiz, C. Okpala and T. M. Sobh, "An Experimental Collective Intelligence Research Tool." In the Computing Journal, Volume 3, issue 3, pp 40-50, April 2005.
- 45. R. Mihali and T. Sobh, "Effective Simulation and Control techniques for Alleviating the Access to High Cost Manipulators." In the Journal of STEM Education: Innovations and Research, Volume 6, issues 3&4, pp 21--28, December 2005.
- 46. Tarek Sobh, Rajeev Sanyal and Sarosh Patel, "RISCBOT: A Web-Enabled Mobile Platform." In Servo Magazine, pp 37-41, March 2006.
- 47. Sarosh Patel, Rajeev Sanyal and Tarek Sobh, "RISCBOT: A WWW-Enabled Mobile Surveillance and Identification Robot." In the Journal of Intelligent and Robotic Systems, Volume 45, Number 1, pp 15-30, May 2006.
- 48. S. Patel and T. Sobh, "Online Automation and Control: An Experiment in Distance Engineering Education", in the Journal of Online Engineering, Volume 2, Number 3, August 2006.
- 49. S. Patel and T. Sobh, "Laboratory Corner Paper: Online Automation and Control; An Experiment in Distance Engineering Education." In the IEEE Magazine on Robotics and Automation, Volume 13, Number 4, pp 91-95, December 2006.
- R. Petrova, A. Tibrewal, and Tarek M. Sobh, "An Electronic Web-Based Assessment System." In the Journal of STEM Education: Innovations and Research, Volume 7, Issues 3 & 4, pp 44-57, December 2006.
- 51. T. Sobh and A. Tibrewal, "Parametric Optimization of Some Critical Operating System Functions - An Alternate Approach to the Study of Operating Systems Design." In the Journal of STEM Education: Innovations and Research, Volume 7, Issues 3 & 4, pp 58-79, December 2006.
- T. Sobh, K. Elleithy and S. Patel, "Reverse Engineering of VLSI Chips: A Roadmap," In the Journal of Engineering and Applied Sciences, Volume 2, number 2, pp 290-298, 2007.
- T. Sobh, X. Zhu and S. Patel, "Visualization of Tolerance for Manufacturing," In the Journal of Engineering and Applied Sciences, Volume 2, number 2, pp 299-304, 2007.

- 54. T. Sobh, R. Cousens and S. Patel, "Course Scheduler: An Automated Schedule Generator," In the Journal of Advances in Computer Science and Engineering, Volume 1, issue 1, pp 25-46, March 2007.
- 55. T. Sobh, "A Randomized Parallel Algorithm for Computing a Complete Histogram of an Image in Log(n) Steps with Optimal Memory Requirements Using Hypercubes," In Advances in Computer Science and Engineering, Volume 1, issue 1, pp 47-59, March 2007.
- 56. E. Kongar, A. Abu Zaghleh and T. Sobh, "Online Customization and Enrollment Application Network (OCEAN)," In the International Journal of Emerging Technologies in Learning, Volume 2, Number 3, September 2007.
- 57. T. Sobh and K. Elleithy, "Advances in Computer, Information, and Systems Sciences, and Engineering", In the Journal of New Mathematics and Natural Computation, Volume 3, issue 3, pp 366-369, November 2007.
- 58. Memushaj and T. Sobh, "Using Grapheme n-grams in Spelling Correction and Augmentative Typing Systems," In the Journal of New Mathematics and Natural Computation, Volume 4, issue 1, pp 87-106, March 2008.
- 59. T. Sobh and S. Patel,"On-line Virtual Real Time E-Collaboration: An Innovative Case Study on Research Teleconferencing Management," In the International Journal of Online Engineering, Volume 4, Number 4, pp 57-59, November 2008.
- 60. M. Mohammed, V. Babriya and T. Sobh, "Modeling a Deburring process Using Delmia," In the Journal of Engineering and Applied Sciences, Volume 3, number 11, pp 835-847, 2008.
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Technical Reports:

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A SAMPLE OF PROFESSIONAL ACTIVITIES

- Establishing and designing the web-based electronic assessment system for performing assessment of the undergraduate engineering programs at UB, in addition to providing the system to other UB schools as a standard platform for performing program assessment of objectives and student outcomes. The e-assessment system has been fully developed, implemented and coded at the School of Engineering.
- Participated in drafting the workshop report and presentation on the future of engineering education in Egypt. The Egyptian engineering sector council conference, Cairo, Egypt, October 2009.
- Founding and managing the Weekend Masters program in Computer Science at the Stamford campus of UB.
- Participating in restructuring and developing the new curriculum and requirements for the Masters of Science programs in Computer Science, Computer Engineering, Mechanical Engineering, Technology Management and Bio-Medical Engineering at the University of Bridgeport.
- Establishing the electronic content project at the School of Engineering for storing all course materials for all the classes offered by the School.

- Developing a concentration track (and class sequence) in Robotics and Automation for the Masters of Science programs in Computer Science and Computer Engineering, at the Department of Computer Science and Engineering, University of Bridgeport.
- Initiating the efforts to establish 2 internet-based M.S. programs in Computer Science and Technology Management as distance-learning degrees at the University of Bridgeport.
- Developing Web-based control of robotic manipulators at the University of Bridgeport as a tool for distance learning (regular degree and certificate programs) and continuing education classes to be offered. The tele-operated robot global control allows the introduction of laboratory-based classes like control, robotics, and automation into a distance-learning curriculum.
- Creating the interdisciplinary laboratory: "Robotics, Intelligent Sensing, and Control (RISC)," at the Department of Computer Science and Engineering, University of Bridgeport.
- Starting up development activities for a number of projects with commercial potential, with the eventual goal of marketing the product or service. The projects include: controller/simulator/monitor software package and prototyping systems for manipulators, the reverse engineering and inspection center, the graphical objects software package, a tire-changing robotic manipulator, reverse engineering applications in dentistry, a class scheduling tool, and several others.
- Initiating and starting up continuing technical education classes (on and off-site) at the Department of Computer Science and Engineering, University of Bridgeport, for industry professionals. Classes included: "Electronic Printing and Postscript," "Digital System Design Using VHDL," "JAVA Programming," "Object Oriented Programming Using C++ and Visual C++," "Networks Basics," and "Factory Automation and Robotics in Industrial Applications".
- Leading the efforts to define a vision statement, mission, goals, objectives and a strategic plan for Engineering at the University of Bridgeport.
- Leading the efforts to assess the technology and computing needs at the University of Bridgeport and formulating a technology Master plan, currently adopted by the University.
- Established a technical report series for the University of Bridgeport.
- Starting up a joint project with the Polytechnic University (New York), Civil and Environmental Engineering Department, on Robotics and Automation in Support of Construction Engineering Research (Basic and Applied).
- Developing funding programs, research and development cooperation activities, donations, co-op and internships programs with many companies and industries.
- Establishing Student recruiting and joint research and development activities with the cultural missions of the embassies of Turkey, Oman, Qatar, Bahrain, Saudi Arabia, Kuwait, United Arab Emirates, Egypt, Jordan, China and Libya.
- Work on developing international sites for the University of Bridgeport in Dubai (United Arab Emirates), Saudi Arabia, India, Egypt, Jordan, China and Libya for "assisted" distance learning, 2 plus 2 programs and graduate distance learning (Computer Science and Technology Management).

- Developing a Ph.D. Program in Computer Science and Computer Engineering at the Department of Computer Science and Engineering, University of Bridgeport.
- Cooperating with the APIC Group, Egypt, and the Swiss Manufacturing Precision Company, Switzerland, to construct a center for precise inspection and CAD model recovery from range data.
- Organizing a workshop (by invitation) on discrete event and hybrid systems for the IEEE International Conference on Robotics and Automation, Albuquerque, New Mexico, April 1997.
- Organizing a workshop (by invitation) on prototyping design and automation for the IEEE International Conference on Robotics and Automation, San Francisco, California, April 2000.
- Starting up "Misr Net," an Internet on-line service provider company, based in Cairo, Egypt.
- Developing the Utah Robotics Kit and Prototyping Environment, currently being used in Mechanical Engineering, Computer Engineering, and Computer Science classes and projects in Robotics, Automation, Control Theory, Systems Programming, Software Engineering, and Microprocessors.
- Leading the efforts to develop the commercial version of the Utah Robotic Kit (URK).
- Specifying a system for assisting brain surgery by localizing the 3-D position of the surgical instrument, Department of Surgery, University of Utah Hospital.
- Active Participation in the Following K-12 School Programs:

Gear-Up Upward Bound Project Lead the Way (PLTW) ConnCAP CPEP (Connecticut Pre-Engineering Program) CPEP Day Inroads NACME Science Fair – Yale University Bridgeport School District Science Fair LEGO League, First LEGO

- Presented weekend robotics seminars for Pre-Engineering Bridgeport Public High School students (ConnCAP Program).
- Consortium Member, European Union, Tempus Program, "Development of an Educational Web-Based Trans-National Laboratory Network".
- Organized the first Connecticut Engineering Deans Meeting at the University of Bridgeport: "Engineering Deans and Business Leaders", December 2004. Members of the School of Engineering Industry Advisory Board, the Engineering Deans of the other Universities in Connecticut, the Governor representatives and various Connecticut industries met at the University of Bridgeport to discuss and formalize plans for collaboration between the involved company representatives, Universities and the school districts that the Universities work with (in the areas of science, engineering, technology, math and computing education,)

- Developing articulation agreements with more than twenty universities in India, China, Taiwan, Egypt, England, Jordan, United Arab Emirates, Pakistan and Libya for joint programming, 2+2 programs, 4+1 programs, faculty exchange and other joint ventures.
- Reviewer for many Journals and Conferences on AI, Computer Vision, Robotics, Control and Automation.
- Reviewer for IEEE and ACM Multimedia Journals and Conferences.
- Reviewer for IEEE Press Books.
- Reviewer for the Encyclopedia of Life Support Systems (EOLSS).
- Surveyed the Discrete Event Dynamic Systems (DEDS) area for the IEEE Robotics and Automation Society Technical Committee on DEDS.
- Working with the Consulting Office for Integrated Systems (COINS) and the International Traders Group, Ltd. in defining a system for rapid prototyping for manufacturing and automation applications.
- Tau Beta Beta Utah Chapter (Utah Alpha) Advisor.
- Coordinating with the Science and Technology Satellite News agency in New York to broadcast a program on the Utah Robot Kit (URK) development.
- Reviewer for the quarterly Journal Digest of Middle East Studies (DOMES).
- Participant as an advisor in the undergraduate research opportunities program (UROP) at the University of Utah.
- Participant in the Faculty mentoring program at the University of Utah to help incoming freshmen.

PROFESSIONAL MEMBERSHIPS

- Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), 1988-1991 (Student Member), 1991-1997 (Member), 1997-present (Senior Member).
- Senior Member of the Society of Manufacturing Engineers (SME), 1996-present.
- Senior Member of the American Society of Quality Control (ASQC), 1995-1997 (Member), 1997-present (Senior Member).
- Founding Member, Society for Industrial Computing.
- Member of the Association for Computing Machinery (ACM), 1988-present.
- Member of the IEEE Computer Society, 1988-present.
- Member of the IEEE Robotics and Automation Society, 1988-present.
- Member of the IEEE Computer Society Technical Committee on Pattern Analysis and Machine Intelligence (PAMI).
- Member, the IEEE Control Systems Society (CSS) Computer-Aided Control Systems Design (CACSD) Technical Committee (TC) for investigating emerging languages, algorithms, tools, standards and processes to support industrial control systems engineering.
- Member of the Arab Science and Technology Foundation (ASTF), 2005-present.
- Member of the Association of Egyptian American Scholars, 2005-present.
- Member of the International Society for Optical Engineering (SPIE), 1988present.

LICENSES AND CERTIFICATIONS

- Licensed Professional Electrical Engineer, State of Utah. License Number 190683, since February 1994. Passed the Engineer-in-training Examination in April 1993, the Professional Electrical Engineering Examination in October 1993 and the Utah Engineering Law Examination in February 1994.
- Certified Professional Manager, Institute of Certified Professional Managers, James Madison University. Passed the personal, interpersonal, and administrative skills examinations in May 1996. Certification Number 06391.
- Certified Reliability Engineer, American Society of Quality Control. Passed the C.R.E. Examination in October 1996. Certification Number 4320.
- Certified Manufacturing Engineer, Society of Manufacturing Engineers. Passed the CMfgE Examination in January 1997. Certification Number 4100224.
- Licensed Engineer, Egyptian Engineers Association.
- Certificate of License, Alexandria Engineering Organization.

A Sample of University Committee Memberships:

- Committee member, Charles E. Reed Scholarship Award selection committee, University of Bridgeport, 1996, 1997 and 1998.
- Committee member, University of Bridgeport NEASC Self-Study Committee on University Planning and Evaluation, 1997-1998, and 2001-present.
- Committee member, Internship Program Director Search Committee, University of Bridgeport, 1997.
- Committee member, School of Engineering Committee on the Industry Advisory Board development, 1996-1998.
- Committee member, School of Engineering Distinguished Teacher Award Committee, 1998.
- Committee member, UB NEASC outcomes assessment committee, 1999-2000.
- Member, University of Bridgeport Graduate Academic Standards Committee, 1999-2000.
- Committee Member, Computer Science and Engineering Faculty Hiring Committee, 1996-1999.
- Committee Member, Mechanical Engineering Faculty Hiring Committee, 1999.
- Committee Member, School of Engineering Merit Pay Committee, 1998-1999.
- Member, University of Bridgeport Core Curriculum Commission, 1998-2000.
- Member, School of Professional and Continuing Education Dean Search Committee, 5 10/2001.
- Member, School of Arts and Sciences Dean Search Committee 2 12/2002.
- Member, University Senate (Senator), 1999-present.
- Member, University Senate Standing Committee on Development, 2002-present.
- Member, Provost Council, 2000-present.
- Member, Undergraduate Education Council, 2002-present.

- Member, University Planning Council, 2001-present.
- Member, President Advisory Council, 2000-present.
- Member, University Planning Review Board, 2002-present.
- Chair, University Technology Task Force, 2002-present.
- Member, UB Development Committee, 2004 2005.
- Search Committee Member, UB Director of Career Services, 2005.
- Search Committee Member, UB, Associate Dean, School of Business, 2005
- Committee Member, UB, Internationalization Committee, 2006 present
- Search Committee Chair, UB, Dean, School of Business, 2006.
- Member, University Faculty Research Council, 2007 present.
- Chair, University Graduate Council, 2007 present.
- Member, University Intellectual Property Board, 2008 present.
- Member, University of Bridgeport/CT Innovations Business Incubator Board, 2008 present.
- Member, President's Cabinet, 2008 present.
- Member, University Senate Executive Committee, 2009 present.

Recent Editorial Duties and Appointments:

- Editorial Board Member, JEA Journal of Electrical Engineering (JEAJEE), since August 2010.
- Editorial Board Member, Journal of Advanced Research ElSevier, since February 2010.
- Associate Editor-in-Chief International Journal of Engineering Computer Science Journals, since November 2009.
- Associate Editor Journal of Online Engineering Education since October 2009
- Editorial Board Member The Journal of Global Development and Peace since 2008
- Editorial Board Member "Journal of Robotics", since 2008
- Editorial Review Board Scientific Journals International since July 2007
- Associate Editor, International Journal of Advanced Robotic Systems, since January 2007.
- Editorial Board Member International Journal of Online Engineering, since June 2006.
- Editorial Board Member Advances in Computer Science and Engineering, since December 2006.
- Member, Editorial Board, Journal of Computing, since 2002.
- Associate Editor of the International Journal of Science and Technology since 2000.
- Research Editor of the Journal Industrial Robot, published by MCB University Press, since January 1999.
- International Editorial Council Member of the Encyclopedia of Life Support Systems (EOLSS), since 1996.

- Guest Editor, Special issue of the International Journal of Online Engineering, Summer 2009.
- Guest Editor, Special Edition of the "Journal of New Mathematics and Natural Computing", November 2007.
- Editor, Special Issue of the International Journal of Robotics Automation on Webbased Automation, January 2002.
- Editor, Special Issue of the Information Science Journal on Intelligent Learning and Control of Robots in Unstructured Environments, Spring 2001.
- Editor, Special Issue of the IEEE Robotics and Automation Magazine on New trends in Prototyping for Robotics and Automation, Fall 2000.
- Editor, Special Issue of the International Journal of Science and Technology on CAD/CAM and CIM, Winter 1997.
- Editor, Special Issue of the International Journal of Science and Technology on Automation and Robotics, Fall 1996.
- Editor, Special Issue of the IEEE Robotics and Automation Magazine on Applications of Discrete Event and Hybrid Control Systems in Robotics and Automation, Fall 1996.
- Editor, Special Issue of the Journal of Robotics and Autonomous Systems on Discrete Event Dynamic Systems in Robotics and Automation, June 1994.

Recent Conferences, Symposia, Workshops, Panels and Sessions Duties:

- Member, International Program Committee (IPC). IASTED International Conference on Control and Applications (CA 2011), Vancouver, Canada, June 2011.
- General Chair, IASTED International Conference on Robotics and Applications (RA 2010), Cambridge, Massachusetts, November 2010.
- Member, International Program Committee (IPC), International Association of Science and Technology for Development (IASTED) conferences. IASTED International Conference on Robotics and Control (AsiaRC 2010), Bangkok, Thailand, November 2010.
- Member, International Program Committee (IPC), International Association of Science and Technology for Development (IASTED) conferences. IASTED International Conference on Robotics and Applications (RA 2010), Cambridge, Massachusetts, November 2010.
- Member, International Program Committee, IEEE Conference on Systems, Man and Cybernetics (SMC 2010), Istanbul, Turkey, October 2010.
- Organizer / Host, National Society of Black Engineers (NSBE) regional conference, Bridgeport, Connecticut, August 2010.
- Member, International Advisory Committee, 5th International Conference on Interactive Mobile and Computer Aided Learning (IMCL 2010), Sousse, Tunisia, July 2010.
- Member, International Program Committee (IPC), International Association of Science and Technology for Development (IASTED) conferences. IASTED

International Conference on Control and Applications (CA 2010), Banff, Canada, July, 2010.

- North American Liaison, Seventh International Conference on Remote Engineering and Virtual Instrumentation (REV 2010), Stockholm, Sweden, June 2010.
- International Program Committee Member, International Association of Science and Technology for Development (IASTED) conference, *International Conference on ACIT Control, Diagnostics and Automation, (ACIT-CDA 2009)*, Novosibirsk, Russia, June 2010.
- General Chair, International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2009), December 2009.
- International Program Committee Member, International Association of Science and Technology for Development (IASTED) conference, *International Conference on Robotics and Applications*, (RA 2009), Cambridge, Cambridge, Massachusetts, November, 2009.
- International Program Committee Member, International Association of Science and Technology for Development (IASTED) conference, *International Conference on Robotics, Telematics and Applications,* (RTA 2009), Beijing, China, October, 2009.
- International Program Committee Member, International Association of Science and Technology for Development (IASTED) conference, *International Conference on Identification, Control and Applications*, (ICA2009), Honolulu, Hawaii, August, 2009.
- International Program Committee Member, International Association of Science and Technology for Development (IASTED) conference, *International Conference on Control and Applications*, (CA2009), Cambridge, United Kingdom, July 2009.
- Chair, International Conference on Remote Engineering and Virtual Instrumentation, (REV2009), University of Bridgeport, CT, June, 2009.
- Program Committee Member, *International Conference on Advanced Robotics* (ICAR2009), Munich, Germany, June 2009.
- Chair, *American Society for Engineering Education*, (ASEE2009), Northeast Section Conference, University of Bridgeport, CT, April 2009.
- Technical Program Committee Member, *Robocomm 2009*, International Conference on Robot Communication and Coordination, Odense, Denmark, March 2009.
- Technical Committee Member, *IEEE International Conference on Computer, Control and Communication (IEEE-IC4, 2009)*, National University of Sciences and Technology (NUST) and The Genesis of Pakistan Marine Engineering College (PNET), Karachi, Pakistan, February, 2009.
- Technical Committee member, *Remote Engineering and Virtual Instrumentation* 2008 (*REV2008*) International Symposium, University of Applied Sciences, Dusseldorf, Germany, 2008.

- Member, International Program Committee (IPC), International Association of Science and Technology for Development (IASTED) conference. IASTED International Conference on Control and Applications (CA 2008), Quebec, Canada, 2008.
- General Chair, International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2008), December 2008.
- Technical Committee Member, 2008 IEEE International Conference on Systems, Man and Cybernetics (SMC2008), Singapore, October 2008.
- International Program Committee Member, *eLearning and eResearch Conference*, 5th Congress of Scientific Research Outlook in the Arab World: Scientific Innovation and Sustained Development, Arab Science and Technology Foundation (ASTF), Fez, Morocco, October 2008.
- Technical Program Committee Member, 10th IBIMA Conference, *Innovation and Knowledge Management*, Kuala Lumpur, Malaysia, June 2008.
- International Advisory Board Member, *Third International Conference on "Interactive Mobile and Computer Aided Learning (IMCL 2008),* Princess Sumaya University for Technology, Amman, Jordan, April 2008.
- Member, Conference Organizing Committee, ASEE Zone 1 Meeting, West Point, NY, March 2008.
- Chair, Session on Robotics and Automation, ASEE Zone 1 Meeting, West Point, NY, March 2008.
- Member, Student Paper Competition Committee, ASEE Zone 1 Meeting, West Point, NY, March 2008.
- Judge, Student Poster Committee, ASEE Zone 1 Meeting, West Point, NY, March 2008.
- Technical Committee Member, International Business Information Management Association, (IBIMA), 9th Annual Conference, Marrakech, Morocco, January 2008.
- General Chair, *Third International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2007), December 2007.*
- Technical Committee Member, *The First International Conference on Computer, Control & Communication*, Karachi, Pakistan, November, 2007
- International Advisory Committee Member, *The First International Conference* on Computer, Control & Communication, Karachi, Pakistan, November, 2007
- International Program Committee Member, *IEEE International conference on Systems, Man and Cybernetics* (SME 2007), Montreal, Canada, October 2007.
- International Program Committee Member, *Intelligent Data Acquisition and Advanced Computing Systems* (IDAACS 2007), Dortmund, Germany, September 2007.
- International Program Committee Member, *International Conference on Robotics and Applications*, (RA 2007), Wuerzburg, Germany, August 2007.
- International Program Committee Member, *European Control Conference* (ECC), Kos, Greece, July 2007.

- International Program Committee Member, *International REV (Remote Engineering and Virtual Instrumentation) Conference,* North American Liaison, Portugal, June 2007.
- Technical Committee Member, ASEE Regional Conference, URI, 2007.
- Member, Conference Organizing Committee, *ASEE New England Annual Conference*, University of Rhone Island, 2007.
- Judge, Student Poster Committee, ASEE New England Annual Conference, University of Rhone Island, 2007.
- Chair, Session on Robotics and Automation, *ASEE New England Annual Conference*, University of Rhone Island, 2007.
- Member, Student Paper Competition Committee, *ASEE New England Annual Conference*, University of Rhone Island, 2007.
- Session Chair, *International Conference on Interactive Computer-Aided Blended Learning*, Florianopolis, Brazil, May, 2007.
- Moderator, panel discussion, *International Conference on Interactive Computer-Aided Blended Learning*, "Social Web and E-Learning", Florianopolis, Brazil, May, 2007.
- Technical Committee Member, International Conference on Interactive Computer-Aided Blended Learning, Florianopolis, Brazil, May, 2007.
- International Program Committee Member, International Conference on Control and Applications, (CA 2007), Montreal, Canada, May 2007.
- International Program Committee Member, International Conference on Interactive Mobile and Computer Aided Learning, Amman, Jordan, April 2007.
- North American Liaison, International Conference on Remote Engineering and Virtual Instrumentation, (REV2007), Porto, Portugal.
- International Advisory Board Member, *International Conference on "Interactive Mobile and Computer Aided Learning (IMCL 2007)*, Princess Sumaya University for Technology, Amman, Jordan, 2007.
- General Chair, Second International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2006), December 2006 (http://www.cisse2006.org).
- International Program Committee Member, *IEEE International Conference on Systems, Man and Cybernetics* (SMC 2006), Taiwan, October 2006.
- International Program Committee Member, *IASTED International Conference on Robotics and Applications* (RA 2006), Honolulu, Hawaii, August 2006.
- Technical Program Committee Member, *Remote Engineering and Virtual Instrumentation (2006 REV) International Symposium*, Slovenia, June 2006.
- Moderator, Panel on Bologna Process: "Changes in Education Remote Engineering", Slovenia, June 2006.
- Technical Committee Member, ASEE Regional Conference, WPI, 2006.
- Session Chair, *The American Society for Engineering Education (ASEE) New England Section Conference*, Worcester Polytechnic Institute, chaired the session on "Automation", March 2006.

- Judge for Student Poster presentations, *The American Society for Engineering Education (ASEE) New England Section Conference*, Worcester Polytechnic Institute, March 2006.
- General Chair, International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2005), December 2005.
- Technical Program Committee Member, *The International Association of Science and Technology for Development (IASTED) Robotics and Applications* RA2005, Cambridge, MA, November 2005.
- International Program Committee Member, *IEEE International Conference on Systems, Man and Cybernetics* (SMC 2005), Hawaii, 2005.
- Panel participant, University of Bridgeport International College, panel on "Israel and Palestine – Looking Ahead 25 Years", October 2005.
- Session Chair, *IEEE International Symposium on Industrial Electronics, session on "Autonomous Mobile Robots*", Croatia, June 2005.
- Session Chair, *The International Association of Science and Technology for Development (IASTED) International Conference on Controls and Applications*, Robotics Session, CA 2005, Cancun, Mexico, May 2005.
- Technical Committee Member, ASEE Regional Conference, Fairfield, CT, 2005.
- Session Chair, *ASEE 2006 Regional Conference*, "Industrial Automation and Manufacturing" Session, Fairfield, CT, March 2005.
- Presented workshop on "Electronic Assessment", Assessment Conference Fall Forum, *The New England Educational Assessment Network (NEEAN) and New England Association of Schools and Colleges (NEASC)*, Fall Forum, Bentley College, November 2004.
- Technical program committee, *IEEE International Conference on Robotics and Automation (ICRA 2004)*, New Orleans, LA, May 2004.
- Member, Technical Committee, Second International Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS 2003), Foros, Crimea, Ukraine, July 2003.
- Technical program committee, 2003 World Multiconference on Systemics, Cybernetics and Informatics (SCI), Orlando, Florida, July 2003.
- Program committee, *The* 7th *International Conference on Automation Technology* (*Automation 2003*), Taipei, Taiwan, May 2003.
- Technical program committee, 2002 World Multiconference on Systemics, Cybernetics and Informatics (SCI), Orlando, Florida, July 2002.
- Invited session organizer, for the 2002 World Multiconference on Systemics, Cybernetics and Informatics, Orlando, Florida, July 2002.
- Co-Chair, 9th International Symposium on Robotics and Applications, ISORA 2002, Orlando, Florida, June 2002.
- Invited session chair, the 2002 IEEE International Conference on Robotics and Automation session on Inspection, Washington, D.C., May 2002.
- Technical program committee, IEEE International Conference on Robotics and Automation (ICRA 2002), Washington, D.C., May 2002.
- International Technical Committee, *International Congress on Autonomous Intelligent Systems (ICAIS)*, Melbourne, Australia, March 2002.

- General Chair and Chair of the International Organizing Committee, *International Conference on Industrial Electronics, Technology and Automation (IETA 2001)*, Cairo, Egypt, December 2001.
- Plenary Session Chair, the International Conference on Industrial Electronics, Technology and Automation (IETA 2001), Cairo, Egypt, December 2001.
- Session Chair, *Frontiers in Education Conference (FIE 2001)*, Session on Web Classroom Technology, Reno, Nevada, October 2001.
- Technical program committee, AMSE International Conference on Science, Technology and Entrepreneurship, Dearborn, Michigan, October 2001.
- Organizing committee member, AMSE International Conference on Science, Technology and Entrepreneurship, Dearborn, Michigan, October 2001.
- International Program Committee, *World Manufacturing Congress (WMC 2001)*, Rochester, New York, September 2001.
- International Program Committee, WSES (World Scientific Engineering Society) International Conference on: Robotics, Distance Learning and Intelligent Communication Systems 2001, Malta, September 2001.
- Member, Technical Committee, *First International Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS 2001)*, Foros, Crimea, Ukraine, July 2001.
- Technical program committee, 2001 World Multiconference on Systemics, Cybernetics and Informatics (SCI), Orlando, Florida, July 2001.
- Technical program committee, *European Workshop on Service and Humanoid Robots (SERVICEROB-2001)*, Santorini, Greece, June 2001.
- Technical program committee, *IEEE International Conference on Robotics and Automation (ICRA 2001)*, Seoul, Korea, April 2001.
- Technical program committee, *International Conference on Intelligent Automated Manufacturing (IAM 2001)*, American University in Dubai, Dubai, United Arab Emirates, March 2001.
- Technical program committee, *International Conference on Engineering of Natural and Artificial Intelligent Systems (ENAIS 2001)*, American University in Dubai, Dubai, United Arab Emirates, March 2001.
- Invited session/workshop organizer, for the International Congress on Information Science Innovations (ISI 2001), American University in Dubai, Dubai, United Arab Emirates, March 2001.
- Invited paper submission for the 2nd International Conference on Earth Observation and Environmental Information (EOEI 2000), Cairo, Egypt, November 2000.
- Invited session organizer (Robotics, Automation and Prototyping) for the AMSE International Conference on Science, Technology and Entrepreneurship, Washington, D.C., October 2000.
- Invited paper submission for the 2002 IEEE International Symposium on Intelligent Control (ISIC 2002), Vancouver, British Columbia, Canada, October, 2000.

- Invited Panel member on graduate education and opportunities for graduate students; *AMSE International Conference on Science, Technology and Entrepreneurship*, Washington, D.C., October 2000.
- Technical program committee, AMSE International Conference on Science, Technology and Entrepreneurship, Washington, D.C., October 2000.
- Organizing committee member, AMSE International Conference on Science, Technology and Entrepreneurship, Washington, D.C., October 2000.
- Invited session organizer, for the 2000 World Multiconference on Systemics, Cybernetics and Informatics, Orlando, Florida, July 2000.
- Session Chair, the 8th International Symposium on Robotics and Automation (ISORA 2000), session on Techniques and Applications in Service Robotics, Maui, Hawaii, May 2000.
- Invited Symposium Chair and Organizer, "New Trends in Prototyping Design and Automation," *IEEE International Conference on Robotics and Automation*, San Francisco, California, April 2000.
- Technical program committee, *IEEE International Conference on Robotics and Automation (ICRA 2000)*, San Francisco, California, April 2000.
- Program Committee, 23rd International Conference of the IEEE Industrial Electronics Society (IECON 2000).
- Technical program committee, AMSE International Conference on Science, Technology and Entrepreneurship, Washington, D.C., October 1999.
- Session Chair, the 1999 AMSE International Conference on Science, Technology and Entrepreneurship, Washington, D.C., Session on Mechanical Engineering, October, 1999.
- International Program Committee, *International Symposium on Manufacturing Systems (ISMS 99)*, Sunderland and Newcastle-upon Tyne, U.K., September 1999.
- International Program Committee, *International Symposium on Manufacturing Technology (ISMT 99)*, Sunderland and Newcastle-upon Tyne, U.K., September 1999.
- Invited paper submission for the *1999 European Control Conference (ECC)*, Karlsruhe, Germany, September 1999.
- Technical program committee, *Fifth Information Systems Analysis and Synthesis Conference (ISAS 99)*, Orlando, Florida, July 1999.
- Session Chair, the *Third International Conference on Industrial Automation* session on Robotics, Montreal, Canada, June 1999.
- Session Chair, the 1999 *IEEE International Conference on Robotics and Automation session on Calibration and Tolerances*, Detroit, Michigan, May 1999.
- Session Chair, the 1999 IEEE International Conference on Robotics and Automation session on Flexible Manipulators II, Detroit, Michigan, May 1999.
- Session Chair, the 1999 *IEEE* 2nd *International Conference on Recent Advances in Mechatronics (ICRAM 99)*, Istanbul, Turkey. Session on Analysis of Mechatronic Systems, May, 1999.
- Technical program committee, *IEEE International Conference on Robotics and Automation (ICRA 1999)*, Detroit, Michigan, May 1999.

- Invited paper submission for the 1999 IEEE International Conference on Robotics and Automation (ICRA 99), Detroit, Michigan, May 1999.
- Invited General Chair, 7th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 98), October 1998.
- Invited session organizer, for the 1998 World Multiconference on Systemics, Cybernetics and Informatics, Orlando, Florida, July 1998.
- Technical program committee, *International Symposium on Manufacturing with Applications (ISOMA 98)*, Anchorage, Alaska, May 1998.
- Invited session organizer for the *International Symposium on Manufacturing with Applications (ISOMA 98)*, Anchorage, Alaska, May 1998.
- Invited session organizer for the *Seventh International Symposium on Robotics* and Applications (ISORA 98), Anchorage, Alaska, May 1998.
- Invited session developer for the 1998 World Automation Congress (WAC 98), Alaska, May 1998.
- Invited Workshop organizer the 1998 World Automation Congress (WAC 98), Alaska, May 1998.
- Session Chair, the 1998 World Automation Congress. Session on Sensing and Recognition, Anchorage, Alaska, May 1998.
- International Program Committee, *World Manufacturing Congress (WMC 97)*, Auckland, New Zealand, November 1997.
- Invited Plenary talk on "Robotics and Automation," 6th International Computer Systems Symposium, Ixtapa, Mexico, October 1997.
- Invited session organizer for the 6th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 97), Tucson, Arizona, October 1997.
- Track Chair Discrete-Event/Hybrid Systems and Control Track at the 6th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 97), UCLA, CA, October, 1997.
- Chair, Session on Mobile Robots, *IFAC Fifth Symposium on Robot Control* (SYROCO '97), Nantes, France, September 1997.
- Invited session organizer, for the 1997 World Multiconference on Systemics, Cybernetics and Informatics, Caracas, Venezuela, July 1997.
- Invited Workshop Chair and Organizer, "Discrete Event and Hybrid Systems," *IEEE International Conference on Robotics and Automation*, Albuquerque, New Mexico, April 1997.
- Technical Committee, the 1997 Measurement Science Conference, Pasadena, California, January 1997.
- Session Chair, the 1997 Measurement Science Conference, session on Measuring Sense Data for Robotics and Automation, Pasadena, California, January 1997.
- Invited Panel member on Collaborative Power Engineering for the 1997 IEEE PICA Conference, Columbus, Ohio, 1997.
- Track Chair Discrete-Event/Hybrid Systems and Control Track at the 5th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 96), Kauai, Hawaii, November 1996.

- Program Committee, 22nd International Conference of the IEEE Industrial Electronics Society (IECON 96).
- Invited Panel member on "Innovative Tools and Techniques for Intelligent Control." 10th IEEE International Symposium on Intelligent Control (ISIC 95), Monterey, California, August 1995.
- Session Chair, the 1995 IEEE International Conference on Robotics and Automation session on Inspection, May 1995.
- Technical program committee, 1995 IEEE 10th International Symposium on Intelligent Control (ISIC 95).
- Session Chair, the 1994 IEEE International Conference on Robotics and Automation session on Discrete Event Dynamic Systems, May 1994.
- Chair, Session on Object Recognition, 1994 IEEE 2nd CAD-Based Vision Workshop, Pittsburgh, February 1994.
- Technical program committee, 1994 IEEE 9th International Symposium on Intelligent Control (ISIC 94).

IEEE Committee Duties:

- Chairperson and Founder of the Prototyping Technical Committee of the IEEE Robotics and Automation Society, 2000-2002.
- Chairperson and Founder of the Discrete Event Dynamic Systems (DEDS) Technical Committee of the IEEE Robotics and Automation Society, 1992-1999.
- Invited committee Member, the IEEE Control Systems Society (CSS) Computer-Aided Control Systems Design (CACSD) Technical Committee (TC) for investigating emerging languages, algorithms, tools, standards and processes to support industrial control systems engineering.
- Nominee, Administrative Committee (AdCom) of the IEEE Robotics and Automation Society, to serve three year terms starting January 1996, 97, 98, and 2001.

FEATURED BIOGRAPHIES, INTERVIEWS AND ARTICLES

- Interviewed in the Connecticut Business News Journal, September 5, 2010 "Leveraging Technology Transfer".
- Interviewed in the Connecticut Post Newspaper, August 9, 2010 "Engineering Jobs Outlook in the New Economy".
- Interviewed in the Connecticut Post Newspaper, July 11, 2010 "UB students reach for the moon".
- Interviewed in the Connecticut Business News Journal, May 10, 2010 "UB to host Tech Incubator".
- Interviewed in the Connecticut Post Newspaper, April 28, 2010 "UB, state team up to create high-tech jobs incubator".
- Interviewed by El Saa'a Satellite Channel on February 27, 2010 for a feature on the role of education in the lives of immigrants.

- Featured in the Connecticut Post Newspaper Editorial, February 10, 2010.
- Interviewed for Connecticut Post Newspaper, February 7, 2010 "UB Gets Crack at Flying Soda Can" UB helps Army create flying soda can.
- Interviewed for *Connecticut Post Newspaper*, December 6, 2009 "Engineers can design their own career paths".
- Interviewed for *Connecticut Post Newspaper*, November 19, 2009 "HealthNet takes months to report ID breach".
- Interviewed *for Connecticut Post Newspaper*, August 1, 2009 "Cars Cash Hits Snag".
- Interviewed and featured in the IEEE Control Systems Magazine, August 2009.
- Interviewed by *Indian Country Today*, March 13, 2009 Article on the Northeast American Society of Engineering Education Conference held at UB
- Interviewed for *Connecticut Post Newspaper*, January 15, 2009 "Nearly 600 Metro North Pass Holders Overcharged"
- Interviewed for *Fairfield County Business Journal*, May 5, 2008 featured in article on "Engineering Education".
- Interviewed for *Connecticut Post Newspaper*, March 19, 2008 "UB Discussion Is Not, Well, It Is Actually Rocket Science".
- Interviewed for *Connecticut Post Newspaper*, March 7, 2008 "LEGO to Hand Out \$5000 Awards to Creative Youngsters"
- Interviewed for *Connecticut Post Newspaper*, December 13, 2007 "UB to Offer Many Engineering Scholarships"
- Interviewed for *Connecticut Post Newspaper*, December 4, 2007 "Scholarships Offered to Future Engineers" CPEP Scholarships \$2.4 million
- Interviewed and featured in article, *Connecticut Post Newspaper*, November 22, 2007 "Engineering School Booming"
- Interviewed for *Connecticut Post Newspaper*, October 9, 2007 "Local Inventor Reaches Milestone"
- Interviewed for *Connecticut Business News Journal*, June 25, 2007, article on UB
- Interviewed for CT Post article, April 1, 2007, article on Women in Engineering
- Interviewed for *CT Post* article, January 13, 2007 "Engineer Assistance Available", State Grants Will Help Pay Off Student Loans
- Interviewed for *CT Post* article January 7, 2007 Education and Enrichment Guide,

"4 Students Blazing Trails in Inaugural Class of UB's Unique Engineering PhD program"

- Interviewed on WEBE 108, FM Radio, Westport, CT, September 25, 2006, regarding the University of Bridgeport and Graduate Interdisciplinary Programs.
- Interviewed for *CT Post* article, September 6, 2006 "Working from Home Works Well" Telecommuting
- Interviewed for *CT Post* article, August 29, 2006 "Green Energy May Bring Rewards"
- Interviewed for *CT Post* article, March 16, 2006 "Foreign Students Fade Before Tough VISA Rules"

- Interviewed for *CT Post* article, April 22, 2005 "State's Five Seats in Congress Safe Census Study ID Concerns"
- Interviewed for *CT Post* article, December 18, 2004 "Schools try to hike enrollment- Visibility may lure engineers"
- Interviewed for *CT Post* article, August 17, 2004 "Engineering Expert: Sikorsky Aircraft Moves Sparks Concern".
- Interviewed in *The Fairfield County Business Journal* June 28, 2004, article on Masters Degrees at UB via the internet.
- Interviewed and featured in *The Connecticut Post* newspaper March 21, 2004, article on Confronting a Global Economy.
- Interviewed and featured in *The Connecticut Post* newspaper March 1, 2004, article on UB Masters Degrees through the Internet.
- Featured in *The Connecticut Post* newspaper in an article about the University of Bridgeport robotics programs (the UB Simulator and the robotic musicians), September ^{5th}, 2002.
- Interviewed by *Electronic Engineering Times*, for an article about the impact of the 9/11/2001 terror attacks on Engineering Education, Research and Development in the U.S., January 2002.
- Interviewed by *El-Gomhorria*, An Egyptian Newspaper for a biographical article and another article about the International Conference on Industrial Electronics, Automation and Technology, IETA 2001, December 2001.
- Interviewed by *Al-Ahram*, the Egyptian National Newspaper for an article about the International Conference on Industrial Electronics, Automation and Technology, IETA 2001, and about the RISC lab. research in Web-based Automation and Manufacturing, December 2001.
- Interviewed by *Nile-T.V.*, the Egyptian National Satellite T.V. Station for a feature about the International Conference on Industrial Electronics, Automation and Technology, IETA 2001, and about the RISC lab research in Web-based Automation and Manufacturing, December 2001.
- Featured in *Advanced Manufacturing Technology Alert*, a monthly industry newsletter, in an article about precision reverse engineering; describing the developed tolerancing techniques for reverse engineering applications, May 20th, 2001.
- Featured in *The Connecticut Post* newspaper in an article about the University of Bridgeport, School of Engineering recent dramatic growth, December 10th, 2000.
- Featured in *The Connecticut Post* newspaper in an article about the University of Bridgeport Y2K Project and the Stamford Weekend Program, August 2nd, 1998.
- Featured in *The Connecticut Post* newspaper in an article on the "Robotics, Intelligent Sensing and Control (RISC)" Laboratory Projects, including: the tire-changing robot, the internet-controlled robot (ROBI), the generic simulator/controller/monitor package, live software-based real-time video delivery over the internet, reverse engineering and tolerancing projects, June 6th, 1997.
- Profiled in *Academy Update*, the Newsletter of the *New York Academy of Science*, September 1996.

- Profiled in *The Bent*, the Quarterly Magazine of *Tau Beta Pi*, the Engineering Honor Society, Fall 1996.
- Profiled in the North America BEST Database of University Resources.
- Profiled in the Universities Faculty Researchers Database.
- Featured in the University of Utah Science Newsletter, March 1994 (URK Project).
- Featured in the *Deseret News* intermountain west newspaper in an article about URK and UPE, August 22nd, 1994.
- Interviewed by *Al-Ahram*, the Egyptian National Newspaper for a biographical article and story, 1994.
- Featured in Marquis *Who is Who in the East* 27th edition, 1998-1999, by invitation.
- Featured in Marquis *Who is Who in the West* 25th silver anniversary edition, 1995-1996, by invitation.
- Featured in Marquis Who is Who in the West 26th edition, 1996-1997, by invitation.
- Featured in *Who is Who in the World* 14th edition, 1997, by invitation.
- Featured in *Who is Who in the World* 15th edition, 1998, by invitation.
- Featured in *Who is Who in the World* 16th edition, 1999, by invitation.
- Featured in *Who is Who in the World* 17th edition, 2000, by invitation.
- Featured in Who is Who in the World Millennium edition, by invitation.
- Featured in *Who is Who in the World* 18th edition, 2001, by invitation.
- Featured in *Who is Who in the World* 19th edition, 2002, by invitation.
- Featured in *Who's Who in the World*, 24th edition, November 2006, by invitation
- Featured in *Who is Who in the Media and Communications* 1st edition, 1998, by invitation.
- Featured in *Who is Who in Science and Engineering* 4th edition, 1998, by invitation.
- Featured in *Who is Who in Science and Engineering* 5th edition, 1999, by invitation.
- Featured in *Who is Who in Science and Engineering* 6th edition, 2000, by invitation.
- Featured in *Who is Who in Science and Engineering* 7th edition, 2003-2004, by invitation.
- Featured in *Who's Who in Science and Engineering*, 9th edition, 2006 2007, by invitation
- Featured in *Who's Who in Science and Engineering*, 10th edition, 2007, by invitation
- Featured in *Who's Who in Science and Engineering*, 11th edition, 2008 2009, by invitation
- Featured in *Who is Who in America* 52nd edition, 1998, by invitation.
- Featured in *Who is Who in America* 53rd (100 years anniversary) edition, 1999, by invitation.
- Featured in *Who is Who in America* 54th edition (Millennium Edition), 2000, by invitation.

- Featured in *Who is Who in America* 55th edition, 2000, by invitation.
- Featured in *Who is Who in America* 56th edition, 2001, by invitation.
- Featured in *Who is Who in America* 57th edition, 2002, by invitation.
- Featured in *Who is Who in America* 58th edition, 2003, by invitation.
- Featured in Who's Who in America, 2005, by invitation
- Featured in *Who's Who in America*, Diamond Edition, 2006, by invitation
- Featured in *Who's Who in America*, 2007 edition, October 2006, by invitation
- Featured in *Who's Who in America*, 61st edition, 2007, by invitation
- Featured in *Who's Who in America*, 2008, by invitation
- Featured in *Who is Who in American Education* 6th edition, 2003, by invitation.
- Featured in *Who is Who in Finance and Industry 34*th edition, 2004, by invitation.
- Featured in Strathmore's Who is Who, 1998-1999 edition, by invitation.
- Featured in Lexington *Who is Who*, 1999-2000 (Millennium) edition, by invitation.
- Featured in *Who's Who Among America's Teachers* 7th edition, 2002, by invitation.
- Featured in *Who's Who Among America's Teachers*, 2004 2005, by invitation
- Featured in *America's Registry of Outstanding Professionals*, 2001-2002 edition, by invitation.
- Featured in *America's Registry of Outstanding Professionals*, 2002-2003 edition, by invitation.
- Featured in International Who is Who of Professionals, 1997 edition, by invitation.
- Featured in *International Who is Who of Information Technology*, 1998 edition, by invitation.
- Featured in *Who's Who in American Education*, 7th edition, 2005, by invitation
- Featured in *Who's Who in Engineering Academia*, 2005 2006, by invitation
- Featured in *Who's Who Among American Teachers*, 10th edition, 2005 2006, by invitation
- Featured in *Who's Who in American Education*, 2007 2008 edition, by invitation
- Featured in *Cambridge Who's Who Among Executives and Professionals*, Honors Edition, 2007 2008, by invitation.
- Featured in *Who's Who in Collegiate Faculty*, 2010-2011 edition, by invitation.
- Featured in *International Who's Who of Professionals*, 2009 edition, by invitation.

HONORARY AWARDS, AWARDS, SCHOLARSHIPS AND MERITS

- Member, Connecticut Academy of Science and Engineering (CASE), February 2011.
- Distinguished Professor of Engineering and Computer Science. Unanimously named by the University of Bridgeport Board of Trustees, February 2010.

- Fellow, African Academy of Sciences, elected in December 2009
- Member, The Connecticut Academy of Science and Engineering, elected in February 2011.
- American Society for Engineering Education (ASEE) 2008 Professional Regional Award.
- Named Director, Connecticut Center for Advanced Technologies (CCAT) Center for Robotic Simulation (2008)
- First Place, American Society for American Education (ASEE) Zone 1 meeting, Student Research Poster supervision, West Point, NY, March 2008.
- \$2.4 million in scholarships University of Bridgeport and the Connecticut Pre-Engineering Program (CPEP), December 2007.
- ASEE Award, Campus Representative, (2007).
- ASEE Section Winner for Professional Recruitment (2007).
- Honorary membership Arab Healthy Water Association (AHWA) (2007).
- Nominated for the Connecticut Medal of Science (2007).
- Nominated for Membership in the World Academy of Sciences (TWAS) (2007).
- Member, Phi Kappa Phi, National Honor Society, since March 2006
- "A Tool for Data Structure Visualization and User-defined Algorithm Animation", by Chen, Tibrewal and Sobh, in the Journal of STEM Education, was noted as the number one referenced article in the history of the Journal.
- "Online Automation and Control: An Experiment in Distance Engineering Education", Sarosh Patel and Tarek Sobh, presented at the American Society for Engineering Education (ASEE) New England Section Conference, March 2006, Worcester Polytechnic Institute, was voted as the "Best Paper in Session".
- University of Bridgeport Service Award, 2006
- Nominated for the Connecticut Medal of Science (2005).
- Honorary Membership, Delta Mu Delta (The National Honor Society for Business Administration, Connecticut Theta Delta Chapter), for exceptional performance and achievements in leading and managing the School of Engineering as a business unit at the University of Bridgeport from 1999-2002.
- AMSE Honorary Life Membership awarded October 1999.
- World Automation Congress (WAC 98) Best Paper Award, for the paper entitled: "Automated Tolerance Specification Across Sensing, Design and Manufacturing," Alaska, May 1998.
- Chosen by Schlumberger Oil Company for an international summer internship in 1987 (one of two selected from among 1500 junior engineering students in Alexandria University.)
- International Student Exchange Fellowship for Computer Research in Denmark, 1991.
- University of Pennsylvania Research Fellowship, 1989-1991.
- University of Pennsylvania Teaching Fellowship 1988.
- Alexandria University Scholarship, for academic achievements, 5 times, 1983-1988
- Degree of Honor, Alexandria University, 1988.
- Member, Tau Beta Pi (The National Engineering Honor Society.)

- Member, Phi Beta Delta (The International Honor Society, Alpha Omicron Chapter.)
- Member, Sigma Xi (The National Scientific Research Society.)
- Member, Upsilon Pi Epsilon (The National Honor Society for the Computing Sciences, Connecticut Delta Chapter.)
- Certificates of Merit and Victoria College Cups from Victoria College, for academic and extracurricular achievements 1979-1983.

SAMPLE OF SOME SUPERVISED STUDENTS HONORARY AWARDS, SCHOLARSHIPS & MERITS

Supervised over 35 award winning undergraduate and graduate students in various competitions, fellowships and scholarship venues. Some of the supervised student merits include:

- National Phi Kappa Phi Award
- National Upsilon Pi Epsilon Award
- Sigma Xi Research Award
- Charles Reed Award
- University of Bridgeport Dean's Award
- University of Bridgeport Computer Science Academic Achievement Award
- Top University of Utah Research Fellowship
- American Society of Engineering (ASEE) Annual Northeast Conference student paper contest
- American Society of Engineering Education (ASEE) Annual Northeast Conference Student Poster Contest
- Connecticut Innovations Award
- University of Bridgeport Academic Achievement Award in Computer Engineering
- University of Bridgeport Academic Achievement Award in Electrical Engineering

SAMPLE OF PAST INVITED TALKS, SEMINARS, PANELS, COLLOQUIA, LECTURES & COURSES

- University of Utah, December 1991.
- Institute of National Economy, Ternopil, Ukraine, September 1991
- Columbia University, New York, January 1992.
- California State University at Fresno, California, March 1992.

- CAD/CAM group, University of Utah, November 1992.
- Computer Science Department Colloquium, University of Utah, November 1993.
- College of Engineering, Alexandria University, December 1994.
- Optimum Plus International, January 1995.
- Universal Trade Promoters, Ltd., Swiss Precision Manufacturing Company, and the International Traders Group, Ltd. (joint presentation), January 1995
- Monmouth University, April 1995.
- University of Texas at San Antonio, April 1995.
- University of Bridgeport May 1995.
- Duke University, May 1995.
- Panel on "Innovative Tools and Techniques for Intelligent Control." 10th IEEE International Symposium on Intelligent Control (ISIC 95), Monterey, California, August 1995.
- Polytechnic University, New York, February 1996.
- Future Engineering Systems, Utah, July 1996.
- Invited Panel member on Collaborative Power Engineering for the 1997 IEEE PICA Conference, Columbus, Ohio.
- University of Connecticut, January 1997.
- California State University Fresno, April 1997.
- San Jose State University, June 1997.
- The Instituto Tecnolico y de Estudios Superiores de Monterrey, Campus Estado de Mexico (ITESM CEM) (Technological Institute and Superior Studies of Monterrey), Ixtapa, Mexico, October 1997.
- Texas A&M University, College of Engineering, May 2001.
- Merit International Institute of Technology, Ooty, India, September 2000 and July 2001.
- Scuola Speriore G. Reiss Romoli (SSGRR) 2002 Winter and Summer International Conference on Infrastructure for e-Business, e-Education, e-Science and e-Medicine on the Internet. L'Aquila, Italy, January 2002 and July 2002.
- City University of New York, October 2003.
- Pennsylvania State University, October 2003.
- Virginia State University, 2003.
- North Carolina Central University, 2003.
- Wichita State University, 2003.
- Rensselaer Polytechnic Institute, Hartford Graduate Center, November 2003.
- Henry Cogswell College, December 2003.
- Bradley University, 2003.
- Point Park University, 2003.
- Western Michigan University, 2003.
- Texas A&M University, Commerce, TX, 2003.
- American University in Sharjah, UAE, 2003.

SAMPLE OF INVITED KEYNOTE SPEECHES AND ACADEMIC CONFERENCE & WORKSHOP PRESENTATIONS

- Invited Presentation, KCG College of Technology, India, September 2010.
- Invited Presentation, Dhaanish Ahmed College of Engineering, India, September 2010.
- Invited Presentation, DMI College of Engineering, India, September 2010.
- Invited Presentation, New L J College of Commerce, India, September 2010.
- Invited Presentation, Sabar Institute of Management, India, September 2010.
- Invited Presentation, Indus Institute of Technology & Engineering, India, September 2010.
- Invited Presentation, G H patel College of Engineering and Technology, India, September 2010.
- Invited Presentation, ARIBAS College, India, September 2010.
- Invited Presentation, SEMCOM- Management College, India, September 2010.
- Invited Presentation, Birla Vishvakarma Mahavidhyala (BVM) College, India, September 2010.
- Invited Presentation, Annamacharya Institute of Technology and Science, India, September 2010.
- Invited Presentation, Nalla Malla Reddy Engineering College, India, September 2010.
- Invited Presentation, Krishna Murthy Institute of Technolgy and Engineering, India, September 2010.
- Invited Presentation, Osmania University, India, September 2010.
- Invited Keynote Speaker, Ministry of Science and Technology, Brazil, VI-GESITI Congress (Management of Systems and Information Technology in Organizations), Campinas City, Brazil, June 2010.
- Keynote Speaker, the 2009 International Conference on Industrial Electronics, Technology & Automation (IETA 2009), "Research and Education Directions in Robotics, Intelligent Sensing and Mechantronics", December 2009.
- Invited Colloquium Speaker, "Robotics, Intelligent Sensing and Control: New Directions in Research and Education", University of Denver, October 2009.
- Plenary session speaker, Sixth International Conference on Remote Engineering and Virtual Instrumentation, (REV2009), University of Bridgeport, CT, June, 2009.
- Invited Keynote Speech, IEEE Symposium, University of Bridgeport, CT, April 2009.
- Plenary Session Speaker, *American Society for Engineering Education*, (ASEE 2009), Northeast Section Conference, University of Bridgeport, CT, April 2009.
- Invited Keynote Speaker, Fourth International Conference on Intelligent Computing and Information Systems (ICICIS 2009), Ain Shams University, Cairo, Egypt, March 2009.

- Invited Keynote Speech, 6th International Conference on E-Learning Applications, The American University in Cairo, Egypt, January 2009.
- Invited Keynote Speech International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2008), December 2008.
- Workshop Presentation "Online Engineering and Remote Learning", *Conference on Remote Engineering and Virtual Instrumentation* REV 2008, Dusseldorf, Germany, 2008.
- Invited Keynote Speech International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2007), December 2007.
- Invited Keynote Speech International Conference on Computers, Controls and Communication, National University of Science and Technology, Pakistan, November 2007
- Invited Keynote Speech, IEEE Symposium, University of Bridgeport, CT, April 2007.
- Panel member participant on "Engineering, Education and STEM Initiatives", IEEE Symposium, University of Bridgeport, CT, 2007.
- Invited Talk Tenth JCIS Joint Conference on Information Sciences, Salt Lake City, Utah, September 2007.
- Invited Panel Speaker, National Action Council for Minorities in Engineering (NACME), "Best Practices in Recruitment, Retention and Graduation of Underrepresented Minorities in Engineering", University of Colorado, July 2007.
- Invited Keynote Speaker, *Workshops on Information Technologies and Systems: Challenges and Solutions*, (WITSCS) Colloquium, Cairo University, Egypt, July 2007.
- Invited Talk International Conference Remote Engineering and Virtual Instrumentation (REV), University of Porto, Portugal, June 2007
- Invited Keynote Speech Interactive Computer Aided Blended Learning (ICBL), Florianopolis, Brazil, May 2007
- Invited Keynote Speech Second International Conference on Interactive Mobile and Computer Aided Learning (IMCL), Amman, Jordan (IMCL), April 2007.
- Invited Keynote Speech International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2006), December 2006.
- Invited Keynote Speech, "The World is Virtually Flat: New Directions in On-Line Collaborative Engineering, Research and Education", Remote Engineering and Virtual Instrumentation (2006 REV) International Symposium, Slovenia, June 2006.
- Invited Keynote Speaker, NATO ARW Workshop, Lviv, Ukraine, September 2003.
- Invited Keynote Speaker, the International Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS 2001), Foros, Crimea, Ukraine, July 2001.
- Invited Plenary talk, *Merit International Institute of Technology, Engineering School Opening Ceremony*, Ooty, India, September 2000.

- "New Trends in Prototyping Design and Automation," invited Symposium plenary talk, IEEE International Conference on Robotics and Automation, San Francisco, California, April 2000.
- "Robotics in the Next Millennium", "6th. Simposio Internacional de Sistemas Computacionales" (6th International Computer Systems Symposium). Invited by the Asociacin de Estudiantes de Sistemas Computacionales (AESC) (Computer Systems Students Organization), The Instituto Tecnolico y de Estudios Superiores de Monterrey, Campus Estado de Mexico (ITESM CEM) (Technological Institute and Superior Studies of Monterrey), Ixtapa, Mexico, October 1997.
- "Introducing Laboratory-Based Classes in Distance Learning Programs," Center for Teaching Excellence, California State University, April 1997.
- "Discrete Event and Hybrid Systems in Robotics and Automation," invited workshop plenary talk, IEEE International Conference on Robotics and Automation, Albuquerque, New Mexico, April 1997.
- "Recovering Structure Uncertainties from Noisy Sense Data," 1997 Measurement Science Conference, Pasadena, California, January 1997.
- "Prototyping Activities in Robotics, Control, and Manufacturing," invited presentation, Department of Defense Software Technology
- Support Center (DoD STSC) Annual Symposium, Salt Lake City, April 1994.
- "Utah Robot Kit (URK) and the Utah Prototyping Environment (UPE)." Included in the IEEE International Conference on Robotics and Automation, Workshop on Advanced Manufacturing, San Diego, May 1994.
- "Prototyping Hybrid Distributed Control Schemes for Sonar-Based Mobile Robots," 10th IEEE International Symposium on Intelligent Control (ISIC 95), Monterey, California, August 1995.
- "Prototyping Activities at the University of Utah," invited demonstration at the University of Chicago during the NSF CISE Infrastructure annual meeting, June 1993.
- "Intelligent Inspection," NATO Advanced Research Workshop on Intelligent Systems, Izmir, Turkey, August 1992.
- "Discrete Event Observers," Hybrid System Workshop, Mathematical Sciences Institute, Cornell University, March 1991.

SAMPLE OF PAST ACADEMIC CONFERENCE & WORKSHOP RESEARCH PRESENTATIONS

- "Are We Accepting the Right Students to Graduate Engineering Programs: Measuring the Success of Accepted Students Via Data Envelopment Analysis", *American Society for Engineering Education* (ASEE) *Conference*, Pittsburgh PA, June 2008.
- "Prototyping, Modeling, Simulation and Analysis in Robotics", *American Society for Engineering Education* (ASEE) Regional Conference, Rhode Island, 2007.

- "Online Automation and Control: An Experiment in Distance Engineering Education", the *International Remote Engineering*, *Virtual Instrumentation Symposium* (REV 06), Maribor, Slovenia, June, 2006.
- "An Electronic Web-Based Assessment System", *The Annual New England Association of Schools and Colleges (NEASC) Fall Forum*, Bentley College, Waltham, Massachusetts, November, 2004.
- "Simulation of Memory Management Using Paging Mechanisms in Operating System," the *American Society of Engineering Education* (ASEE) New England Section Spring Conference, Orono, Maine, May 2003.
- "Case Studies in Web-Controlled Devices and Remote Manipulation: Laboratory-Based Distance Learning", the 8th International Symposium on Manufacturing with Applications (ISOMA '02), Florida, May 2002.
- "Effective Simulation and Control Techniques for Alleviating Problems in Accessing High-Cost Manipulators Wireless Control Perspectives", the 8th *International Symposium on Manufacturing with Applications (ISOMA '02)*, Orlando, Florida, May 2002.
- "Fully Autonomous Web Based Virtual Robot Prototyping and Manufacturing", the 8th International Symposium on Manufacturing with Applications (ISOMA '02), Orlando, Florida, May 2002.
- "Web Based Virtual Robot Prototyping and Manufacturing." International Conference on Industrial Electronics, Technology and Automation (IETA 2001), Cairo, Egypt, December 2001.
- "E-Learning: Case Studies in Web-Controlled Devices and Remote Manipulation." *International Conference on Industrial Electronics, Technology and Automation (IETA 2001)*, Cairo, Egypt, December 2001.
- "Ergonomic and Efficient Software Alternatives for High Cost Manipulators -Direct Wireless and Networked Control Techniques." *International Conference on Industrial Electronics, Technology and Automation (IETA 2001)*, Cairo, Egypt, December 2001.
- "SKED: A Course Scheduling and Advising Software." 2001 American Society of Engineering Education (ASEE) Annual Conference, Albuquerque, New Mexico, June 2001.
- "Distance Learning: Case Studies in Web-based Robotics, Automation and Prototyping," *AMSE Conference on Science, Technology and Entrepreneurship*, Washington, D.C., October 2000.
- "A Tool for Manipulator Design, Optimization, Simulation and Control," 8th International Symposium on Robotics and Applications (ISORA 2000), Hawaii, May 2000.
- "Robotic Optimization for the Formula One Tire Changing Robot (F1-T.C.R.)," 8th International Symposium on Robotics and Applications (ISORA 2000), Hawaii, May 2000.
- "A Case Study in Manipulator Optimization: The F-1-T.C.R." *AMSE Conference* on Science, Technology and Entrepreneurship, Washington, D.C., October 1999.
- "Remote Learning: A World-Wide-Web Operated Robot Arm." *IEEE* 2nd *International Conference on Recent Advances in Mechatronics*, Istanbul, Turkey, May 1999.

- "A Generic Simulator/Controller for Robot Manipulators." *IEEE 2nd International Conference on Recent Advances in Mechatronics*, Istanbul, Turkey, May 1999.
- "The Formula One Tire Changing Robot (F1-T.C.R.)." *IEEE International Conference on Robotics and Automation (IEEE ICRA 99)*, May 1999, Detroit, Michigan.
- "A PC-Based Simulator/Controller/Monitor Software for Manipulators and Electromechanical Systems." *Seventh International Symposium on Robotics with Applications (ISORA '98)*, Alaska, May 1998.
- "Automated Tolerance Specification Across Sensing, Design and Manufacturing." Sixth International Symposium on Manufacturing with Applications (ISOMA '98), Alaska, May 1998.
- "Discrete Event and Hybrid Systems Applications," *IEEE International Conference on Robotics and Automation*, Albuquerque, New Mexico, April 1997.
- "Recovering Structure Uncertainties from Noisy Sense Data," 1997 Measurement Science Conference, Pasadena, California, January 1997.
- "Commanding Sensors and Controlling Indoor Autonomous Mobile Robots," Presented in the *IEEE International Conference on Control Applications*, Dearborn, Michigan, September 1996.
- "Sensing Under Uncertainty for Mobile Robots," Presented in the Second World Automation Congress, *First International Symposium on Intelligent Automation and Control (ISIAC 96)*, Montpellier, France, May 1996.
- "Prototyping a Three-link Robot Manipulator," Presented in the Second World Automation Congress, *Sixth International Symposium on Robotics and Manufacturing (ISRAM 96)*, Montpellier, France, May 1996.
- "Modeling and Recovering Uncertainties in Sense Date." Sixth International Symposium on Measurement and Control in Robotics (ISMCR 96), Brussels, Belgium, May 1996.
- "A Unifying Framework for Tolerance Analysis in Sensing, Design, and Manufacturing." *IEEE International Conference on Robotics and Automation*, Nagoya, Japan, May 1995.
- "Discrete Event Control for Inspection and Reverse Engineering." *IEEE International Conference on Robotics and Automation*, San Diego, May 1994.
- "Prototyping Activities in Robotics, Control, and Manufacturing," *Department of Defense Software Technology Support Center (DoD STSC) Annual Symposium*, Salt Lake City, April 1994.
- "Industrial Inspection and Reverse Engineering." 1994 2nd CAD-Based Vision Workshop, Pittsburgh, February 1994.
- "A Discrete Event Framework for Intelligent Inspection," *IEEE International Conference on Robotics and Automation*, Atlanta, Georgia, May 1993.
- "Autonomous Observation Under Uncertainty," *IEEE International Conference* on *Robotics and Automation*, Nice, France, May 1992.
- "A Model for Visual Observation Under Uncertainty," IEEE Symposium on Computer Aided Control System Design (CACSD '92), March 1992.
- "A Model for Shape and Motion Perception," SPIE Conference on Mobile Robots, November 91.

- "Visual Observation of A Moving Agent," *The European Robotics and Intelligent Systems Conference (EURISCON '91)*, Corfu, Greece, June 1991.
- "A Hybrid System for Computing Reachable Workspaces for Redundant Manipulators," *SPIE Conference on Machine Vision Systems Integration*, November 1990.
- "Operator/System Communications: An Optimizing Decision Tool," SPIE Conference on Mobile Robots, November 1990.
- "Structure and Motion of Entire Polyhedra," SPIE Conference on Intelligent Robots and Computer Vision, November 1990.
- "An Efficient System for 3-D Object Recognition." SPIE Conference on Three Dimensional Perception and Recognition, November 1990.
- Structure and Motion in the "Moving Blocks World." *IASTED International Conference on Adaptive Control and Signal Processing*, October 1990.
- "A System for Recovering 3-D Motion and Structure." ACM 3rd International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, July 1990.
- "Recovery of 3-D Motion and Structure by Temporal Fusion." SPIE conference on Sensor Fusion, November 1989.
- "Pyramid Computation of the Image Flow for Fast Tracking," *SPIE conference on Sensor Fusion*, November 1989.

FUNDED, CURRENT AND PENDING RESEARCH CONTRACTS; FUND-RAISING AND DEVELOPMENT ACTIVITIES

- "Computer Aided Reverse Engineering," University of Utah Research Committee, November 1992, through October 1993; \$4,924; Funded.
- "CISE Research Instrumentation," NSF, January 1, 1993, through December 31, 1993; \$57,606 plus \$28,803 in University of Utah matching funds, Funded.
- "Real-Time Control Systems," University of Utah Research Equipment Support Funds, July 1, 1993, through June 30, 1994; \$14,225; Funded.
- "Sensing for Inspection and Reverse Engineering," Augmentation Awards for Science and Engineering Research Training, Defense Advanced Research Projects Agency (DARPA) / Office of Naval Research (ONR), July 1, 1993, through June 30, 1996; \$244,470; Funded.
- "Reverse Engineering of Mechanical Parts," The α_1 Graphics Group, Department of Computer Science, University of Utah, June 15, 1993, through September, 15 1993; Student Research Fellowship; Funded.
- "Sensing Strategies for Advanced Manufacturing," Advanced Research Projects Agency (ARPA), September 1, 1993, through August 31, 1996; \$886,718; Funded.
- "CISE Research Instrumentation," NSF, January 1, 1994, through December 31, 1994; \$37,310 plus \$18,656 in University of Utah matching funds, Funded.
- "Utilizing URK (Utah Robot Kit) through Multi-Media Technology," Office of Naval Research, July 1, 1994, through March 31, 1995; \$40,000; Funded.

- "Utah Center for Human Genome Research," NIH, September 1994, through August 1999; \$37,603,924; Funded. (Senior Investigator)
- "Establishing the Robotics, Intelligent Sensing and Control (RISC) Laboratory at the University of Bridgeport," Future Engineering Systems, January 1996, through May 1997; \$16,500, Funded.
- "Tolerance Analysis for Sensing, Design, and Manufacturing," Future Engineering Systems, May 1996, through September 1999; \$76,234, Funded.
- "Budget and Equipment to build the Robotics, Intelligent Sensing and Control (RISC) Laboratory" Internal Proposal for matching funds, University of Bridgeport, \$16,500, 1997, Funded.
- Data Solutions, Inc., \$124,000 grant to work on software compliance and certification in hospital environments, 2000, Funded.
- Visiting Deans Program, Texas A&M University, College Station, Texas, May 2001, Funded.
- "NSF Engineering Assessment Workshop," NSF, held on UB's campus in September 2001, \$4,500, Funded.
- "Rapid Prototyping in Support of Manufacturing and Automation," United Nations Development Program (UNDP), Transfer of Knowledge through Expatriate Nationals (TOTKEN) Fund, \$3,500, December 2001, Funded.
- Kiran Gopu Scholarship, Kiran Gopu family, Scholarship Endowment seed for the School of Engineering, \$20,000, 2002, Funded.
- "Exploring Academic and Industrial Training and Exchange Possibilities in Germany," Deutscher Akademischer Austausch Dienst (DAAD) Fund, \$7,500, March 2002, Funded.
- "NSF Engineering Design Workshop," NSF, held on UB's campus in April 2002, Funded.
- "Development of a high reliability, multi-algorithm facial recognition system based on web services," IQ Inc., June 2002, through December 2003, \$80,000 plus 750,000 shares, Funded.
- "Low Bandwidth, Animated, Streaming Audio Based Distance Learning," Connecticut Distance Learning Consortium (CTDLC), March 1, 2003, through February 29, 2004; \$11,200, Funded.
- School of Engineering Academic Scholarships, GE Development Fund Grant, \$15,000, 2003-2006, Funded.
- NASA CT Space Consortium Grant, "Five Year EPSCoR and CT Space Grant", National Space Grant College and Fellowship Program consortium, (Univ. of Bridgeport, Univ. of Hartford and consortium of four other universities), NASA, Current, \$2,369,085.
- NSF workshop, "Mathematical Models in Engineering Education", Purdue University, February 2005, \$5,000, Funded.
- Pitney Bowes Literacy and Education Scholarship Fund, scholarship for the School of Engineering, \$8,000, Funded, 2005 2007.
- GE Foundation, \$8,000, Educational Funds, 2005, Funded.
- Robotic Musicians Display, cost re-imbursement, Discovery Museum, 2005 2006, Funded.

- ConnCAP Summer 2006 Grant, Department of Education, \$5,000, Funded.
- Bodine Inc, \$10,000, CAD Workshop, 2006, Funded.
- Sikorsky Aircraft UTC, grant, \$5,000, Funded, 2006.
- Co-established student-staffed IT Support Services, at the University of Bridgeport, Annual funded cost \$36,000 \$40,000, February 2006 December 2007, Funded.
- Carstenson Hall (UB) renovation, Private Donor, September 2006, \$20,000, Funded.
- Initiated fund-raising campaigns in the Schools of Engineering and Business at the University of Bridgeport, 2006 2007.
- \$2.4 million in Scholarships for Connecticut Pre-Engineering Program, November 2007, Funded.
- NACME Scholars Grant, \$4000 \$10,000 per NACME scholar, 2005 2009, Current.
- Establishing the Paul T. Bauer Scholarship Fund, Current.
- Connecticut Center for Advanced Technology Grant for project entitled: "Center for Simulation, Modeling and Analysis for Robotic Applications", 1/1/08-12/31/08, \$40,000, Funded.
- "Hybrid Projectile Design," U.S. Army Armament, Research, Development & Engineering Center (ARDEC), \$57,688, Funded. [8/1/2008 5/31/2009]
- Development of a travel grant, U.S. Army Armanent, Research, Development & Engineering Center (ARDEC), \$5,000, Funded. [1/2010]
- Hybrid Projectile Vision System, Imperial Machine and Tool Company, \$30,000; April 2010 - July 2010 - Current.
- "Advanced Technology in Support of Hybrid Projectiles", FY 2010 Defense Appropriation Request, \$2.4 million, Current. [1/1/2010 1/7/2011]
- "Graduate Visiting Scholar Research Program Online Robotics", U.S.A. Austria Marshall Plan program, Graduate Scholar Support for 1 year, \$25,000, Current, [3/1/2010 - 2/28/2011].
- Department of Energy (DOE), "Connecticut Energy Workforce Development", 2010, \$275,000, Pending.
- Qatar Foundation, "Multilingual Parsing and Sematic Analysis", 2010, \$53,500, Pending.

CONSULTING, ADJUNCT POSITIONS, INDUSTRIAL COLLABORATIONS AND BOARD MEMBERSHIPS

Micro Images, Inc. [9/92 – 5/93]

Design and Implementation of a Microfilm Labeling Computer System.

Central Michigan University. [8/94 – 7/97]

Associate Graduate Faculty (Adjunct Professor), Classes in Computer Science and Software Engineering classes in the Extended Degree Program (EDP) for graduate students.

Future Engineering Systems. [9/94 – 7/95]

Working on implementing and designing tolerance measures for inspection and assembly of machine parts.

Optimum Plus International. [12/94 – 12/95]

Manufacturing and Reverse Engineering of machine parts and sculpted models (Lausanne, Switzerland).

Universal Trade Promoters, Ltd. [1/95 – 6/96]

Specifying a center for the design, remote manufacture, and precise inspection of mechanical parts.

Fairfield University. [10/95 – 1/96]

Adjunct Professor, Computer Science Department, teaching Computer Science classes.

Digital Communications, Inc. [1/96 -- 12/96]

Developing an Internet service provider site, to support general Internet browsing, in addition to making special software packages, multilingual publications and search engines, and multilingual printed character recognition, audio and video, and other services available to subscribers.

Advanced Design, Inc. [4/96 – 6/97]

Designing and implementing the controller, simulator, and monitor package for the new ROBIX robotics toolkit and manipulator.

MultiDisciplinary Research, Inc. [9/96 – 9/97]

Work on Multi-agent intelligent hybrid software components, for multimedia and automation applications.

The World Bank and Purdue University. [6/97 – 6/98]

Setting up infrastructure to support Robotics and Automation programs in Malaysia (funded by The World Bank).

Data Solutions, Inc. [6/98 – 9/98]

Team leader (Led a team of 40 programmers), Y2K compliance project, 20+ New York Hospitals, approximately 20,000 compute platforms (in networked environments) were checked, prepared, and certified for Y2k compliance.

Merit International Institute of Technology. [9/2000 – 8/2002]

Developing accreditation and program requirements for eight engineering programs (India).

Arnold and Porter, Attorneys at Law. [9/2000 – 1/2001] Expert Consultant.

Gerson Lehrman Group. [11/2000 – present] Member, Council of Advisors.

Technical Advisory Service for Attorneys (TASA). [11/2000 – present] Expert Consultant.

Tennessee Board of Regents. [1/2001] External Reviewer, Master of Science in Computer Science program, Tennessee Technological University, Cookeville, Tennessee.

Merit International Institute of Technology. [10/2001 – 9/2002] Chair, Institute Advisory Board (India).

Caesar, Rivise, Bernstein, Cohen Pokotilow, Ltd., Law Offices. [6/2002 – 8/2002] Expert Consultant.

IQ Inc. [6/2002 – present] Developing EX Match and Faces Identification software tools.

Real-Time Modeling (RTM) Technologies. [2004 – present] President

Connecticut Pre-Engineering Program (CPEP). [2004 – present] Board Member

The Northeast Center for Computers and Information Systems Security (NECCISS). [2004 – present] Board Member

Automated Exchange Networks, Inc. [2005 – present] Founding President and CEO

Nitron Advisors, LLC. [2006 – present] Board Member, Circle of Experts

Standard and Poor's Society of Industry Leaders. [2006 – present] Board Member Scientific Advisory Board, the International Association of Online Engineering.

[2006 – present] Board Member and Founding Co-Chair

Discovery Museum [2007 – 2009] Bridgeport, CT Board Member

International e-Learning Association (IELA). [2007 - present] Founding Member

Stratford, CT Public Schools [2007 – present] Partnership Team Advisory Board Member

New England Association of Schools & Colleges, Inc. (NEASC) [2009] Team Member for Evaluation of Bryant University, 2010.

U.S. Department of Energy [2010] Technical Merit Reviewer for Workforce Training for the Electric Power Sector

Egyptian National Authority for Quality Assurance and Accreditation in Education, Ministry of Higher Education and Scientific Research [March 2010] Cairo, Egypt, Invited Workshop Presenter: University and Disciplinary Accreditation for Egyptian Universities

Jordanian Ministry of Higher Education and Scientific Research [June 2010] Amman, Jordan, Invited Workshop Presenter: National Conference for the Development of Study Plans, Teaching, Learning and Scientific Research.

Advisory Board, the CTech IncUBator, Fairfield County High-Tech Business Incubator at UB [2010 – present] Board Member and Founder.

SAMPLE OF CURRENT AND PAST RESEARCH PROJECTS

Current Research Projects

- On-Line Virtual Real-Time E-Collaboration
- Data Envelopment Analysis Approach for Efficient Engineering Enrollment Management
- A New Algorithm for Measuring and Optimizing the Manipulability Index
- Mobile Manipulation Platforms

- A Framework for Extreme Modular Design: A Plug and Play Approach to Sensory Modules, Actuation Platforms, and Task Descriptions and Implementations for Robotics and Automation
- The robotic musicians band project (Partially Artificial Musicians (PAM)) with the School of Arts and Sciences.
- The chiropractic force sensor project (The Glove) and business plan with the School of Chiropractic and the School of Business.
- The electronic educational assessment web-based system with the School of Education.
- 3-D Reverse Engineering applications in dentistry, entertainment, plastic surgery and movie making (with the Health Sciences Division, the School of Arts and Sciences, and the School of Business).
- Ergonomically-correct task-based design of cockpit interiors based on manipulability measures (Dept. of Industrial design, Dept. of Mathematics, Dept. of Mechanical Engineering and the Dept. of Computer Science and Engineering).
- The Virtual Chemistry Laboratory: An experiment in internet-based education using remotely controlled robot manipulators (Dept. of Computer Science and Engineering and the Department of Chemistry).
- A reverse engineering and inspection system (has been implemented in an auto assembling plant).
- The robot prototyping environment (currently being packaged as software for controlling, simulating, and monitoring generic manipulators).
- An automated stock trading system that is currently in use.
- A prototype has been developed for a cell-based car mapping system.
- An academic class scheduler and advisor software (SKED), which is currently used by several academic departments.
- A face recognition / object identification software, is currently being developed for commercial deployment via an incubator established through angel investments and VC seed funds (joint work with other Universities and industry partners).
- An electronic raffle web site is being readied to go live with the help of VC funding.

Past Research Projects

- Real-time control, monitoring, and simulation of electro-mechanical systems.
- Parallel architectures for the realization of uncertainty from sensed data.
- Inspection and reverse engineering of mechanical parts.
- Modeling and Verification of Distributed Control Schemes for Mobile Robots.
- Mobile manipulation.
- Algorithms for manipulator workspace generation and visualization in the presence of obstacles.
- Parallel architectures for robust motion and structure recovery from uncertainty in sensed data.
- Advanced sensing for manufacturing.

- Uncertainty visualization in CAD systems from sensed data.
- Kinematics and dynamic hardware for multi-degree of freedom manipulators.
- Hardware realizations for discrete-event-based hybrid systems.
- A framework for timed hybrid systems representation, synthesis, and analysis.
- Internet-based tele-control of robotic manipulators.
- Graphical user interfaces for event-based monitoring and control of hybrid systems.
- Coordinate measuring machine operating system realizations using hybrid systems.
- Concurrent optimal engineering design of manipulator prototypes.
- Uncertainty visualization for tolerance analysis in manufacturing.
- Catalogue-based optimization of manipulator parameters.
- Parallel realizations for computing 3-D workspaces of redundant manipulators
- Object-oriented prototyping environments for electro-mechanical systems and robotic manipulators.
- Robotic Manipulation for Genetics Research.
- Feature-based reverse engineering and inspection of machine parts.
- Recovering manufacturing tolerancing from uncertainty in sensed data.
- Discrete event modeling and control of autonomous agents under uncertainty.
- Discrete-event-based synchronization of multi-media.
- The dynamic recursive context of finite state machines.
- Reverse engineering applications in dentistry.
- Service robotics and tire-changing robots for car racing applications.
- Sensor-based control of mobile robots.
- Calibration and singularity determination for robotic manipulators.
- Optimality for compressed communication modes.
- Error detection and correction for intelligent observers.

PATENTS AND INVENTIONS

- T. Sobh, A. Mahmood, "Multi Dimensional, Multi-Transform (MDMT) Adaptive Face Recognition System", Patent Pending.
- T. Sobh, R. Mihali and A. Rosca, "Raffle-Based Collaborative Product Selling and Buying System", Patent Pending.
- T. Sobh, R. Mihali, A. Rosca and T. Alameldin, "Normalized Distributed Exchange System", Patent Pending.
- T. Sobh, "Multilingual Speech Synthesis." Invention Disclosure, June 1994.
- G. Gopalakrishnan and T. Sobh, "Monitoring Spaces within a Parking Lot," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, June 1993.

- T. Sobh, "An autonomous sprinkler," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.
- T. Sobh and G. Gopalakrishnan, "Sprinkler system with rain, wind, and sun detector," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.
- G. Gopalakrishnan and T. Sobh, "Child crib computer," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.
- G. Gopalakrishnan and T. Sobh, "Device to fix images obtained while copying fat bound volumes," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.
- G. Gopalakrishnan and T. Sobh, "Gas-tank level indicator based on resonant acoustic tube," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.
- G. Gopalakrishnan and T. Sobh, "Range detector to help avoid collisions between automobiles and while parking," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.
- T. Sobh and G. Gopalakrishnan, "Child crib computer with video monitoring unit," Invention Disclosure submitted to the University of Utah Campus Office for Inventions and Patents, November 1993.

STUDENT SUPERVISION

B. S. Project Supervision:

Supervised over 75 Bachelor's projects from 1992 to present.

M.S. Projects/Thesis Supervision:

Supervised over 250 students from 1992 to present.

Ph.D. Student Supervision:

V. Sai Srikanth [2009]

Ph.D. thesis – External Committee Member – "Modelling and Analysis of Material Handling by Single AGVS with Onboard Robot in Straight Line Flow Paths" College of Engineering, Andhra University, India

P. Venkatakrishna [2008]

Ph.D. thesis – External Committee Member - "A Study of QOS Metrics for Wireless Systems" - School of Computing Sciences, VIT University, India

Ayssam ElKady [9/2007 – present]

Ph.D. research – ongoing – "Extreme Modular Design: A Plug and Play Approach to Sensory Modules, Actuation Platforms, and Task Descriptions and Implementations for Robotics and Automation"

Abuzneid, Abdelshakour [1/2006 – present] Ph.D. Research – ongoing – "Sensing Communications in Prototyping and Automation"

Sarosh Patel [9/2006 – present] Ph.D. Research – ongoing – "Sensory Fusion Algorithms for Intelligent/Mobile Agent Design"

Cristian Craciun [9/2006 – present] Ph.D. Research – ongoing – "Robotics & Automation"

Mihali, Raul [9/2005 – present] Ph.D. Research – ongoing- "Rapid-Prototyping and Self-Manufacturing Devices"

Hodge, Lovell [8/2001]

Ph.D. thesis – External Committee Member – "An Adaptive Framework for Sensor Planning in a Coordinated Multi-agent Environment" - University of Waterloo, Department of Systems Design Engineering.

El-Sayed, Mohamed [1/94 – 9/98]

Ph.D. thesis - "Control Strategies for Sensing (Modeling and Verification of Distributed Control Schemes for Mobile Robots" - Awardee, Top University of Utah Research Fellowship, 1995-1996.

Tewari, Sandeep [1/94 – 9/95]

Ph.D. thesis – External Committee Member – "Visualization of Uncertainty in Manufacturing Features" - Texas A&M University, Department of Computer Science.

RECENT COURSES INITIATED & DEVELOPED AT UB

Taught and developed the following semester-long classes at the Department of Computer Science and Engineering, University of Bridgeport:

- "Introduction to Computing II: Data Structures and Algorithms," Computer Science 102, Fall 1995, Spring 1996, Fall 1997, Spring 1998, Fall 1998 (Stamford Pre - M.S. Program), Winter 1998 (Stamford Pre - M.S. Program), Spring 1999 (Stamford Winter 1999 (Stamford Pre - M.S. Program), Summer 1999.
- "Operating Systems," Computer Engineering 408, Fall 1995, Fall 1996, Fall 1997, Fall 1998, Fall 1999, Fall 2000, Fall 2001, Spring 2003, Fall 2003, Fall 2004.
- "Introduction to Robotics," Computer Engineering 360 and 460, and Computer Science 360 and 460, Spring 1996, Fall 1996, Spring 1998, Fall 1998, Fall 1999, Fall 2000, Fall 2001, Fall 2002, Fall 2003, Fall 2004, Fall 2005, Fall 2006, Fall 2007, Fall 2008.
- "Advanced Robotics," Computer Engineering 570, and Computer Science 570, Fall 1996, Spring 1997, Spring 1999, Spring 2002, Fall 2003 (Seminar), Spring 2005, Spring 2006, Spring 2007, Spring 2009.
- "Machine Perception," Computer Engineering 484, and Computer Science 484, Spring 1997, Spring 2003 (Seminar), Spring 2005.
- "Advanced Operating Systems," Computer Science 503, Spring 1997, Winter 1997 (Stamford Weekend M.S. Program), and Summer 1997 (Stamford Weekend M.S. Program), Spring 1998, Spring 1998 (Stamford Weekend M.S. Program), Summer 1998 (Stamford Weekend M.S. Program), Fall 1998 (Stamford Weekend M.S. Program), Spring 1999, Summer 1999 (Stamford Weekend M.S. Program), Fall 1999 (Stamford Weekend M.S. Program), Winter 2000 (Stamford Weekend M.S. Program), Spring 2000 (Stamford Weekend M.S. Program), Spring 2000, Summer 2000 (Stamford Weekend M.S. Program), Fall 2000 (Stamford Weekend M.S. Program), Fall 2000 (Stamford Weekend M.S. Program), Spring 2000, Summer 2000 (Stamford Weekend M.S. Program), Fall 2000 (Stamford Weekend M.S. Program), Fall 2000 (Stamford Weekend M.S. Program), Spring 2001 (Stamford Weekend M.S. Program), Spring 2001 (Stamford Weekend M.S. Program), Spring 2001, Spring 2004, Spring 2005.
- "Economics and Management of Engineering Projects," Engineering 300, Spring 1999, Spring 2000, Spring 2001, Spring 2002, Spring 2003, Spring 2004, Spring 2005, Spring 2006, Spring 2007.

 "Advanced Problem in Computer Science," Computer Science 597, Fall 1997, Spring 1998, Summer 1998, Fall 1998, and Winter 1998 (Stamford Weekend M.S. Program), Spring 1999 (Stamford Weekend M.S. Program), Summer 1999 (Stamford Weekend M.S. Program), Fall 1999 (Stamford Weekend M.S. Program), Winter 2000 (Stamford Weekend M.S. Program), Spring 2000 (Stamford Weekend M.S. Program), Spring 2000, Summer 2000 (Stamford Weekend M.S. Program), Fall 2000 (Stamford Weekend M.S. Program), Winter 2001 (Stamford Weekend M.S. Program), Spring 2001 (Stamford Weekend M.S. Program), Summer 2001 (Stamford Weekend M.S. Program), Fall 2001 (Stamford Weekend M.S. Program), Spring 2001 (Stamford Weekend M.S. Program), Summer 2001 (Stamford Weekend M.S. Program), Fall 2001 (Stamford Weekend M.S. Program).

Developed the following continuing education classes at the University of Bridgeport:

- "Electronic Printing and Postscript," Summer 1997.
- "Networks Basics," Summer 1997.
- "Factory Automation and Robotics in Industrial Applications," Summer 1997.

In addition to various independent studies, senior projects, master's thesis and projects, and Ph.D. dissertation supervision.

MISCELLANEOUS

- Languages: English, Arabic, French.
- Citizen of the United States and Egypt.
- Judge, Bridgeport Public Schools Science Exposition.
- Life Fellow of the Old Victorian Association, ex-member of the board of directors and former treasurer.
- Photography Courses, London, England, 1985.
- Diploma in Business Communications, with Distinction, Business Training Limited, Manchester, England, June 1982.
- Centre Culturel Francais, Premier Degree, 1981-1982,
- Faculty advisor, the Himalayan Club, University of Bridgeport.
- Faculty advisor, the Robotics Club, University of Bridgeport.
- Scuba Diving License, 2-star ranking, International Scuba Diving Association.
- Squash, Soccer, and Table Tennis Player.