

Journal Articles

- M A Yousuf and B A Asiyanbola, "Tactile Sensors in the Study of Tissue Properties," Journal of Engineering in Medicine, Part H of the Proceedings of the Institution of Mechanical Engineers, October 2013.
- M A Yousuf, K T Malinowski, S A Naqvi, W D D'Souza, "Guiding the selection of the patient-specific optimal gating duty cycle by predicting the impact of the tumor displacement distribution on the target dose," submitted to Physics in Biology and Medicine, October 2011.
- M A Yousuf, P C Rivera, M P Diaz and R M Chaveznava, "Lung Tumor Tracking and Couch Control - A Feasibility Study," IAENG International Journal of Applied Mathematics, 38:4, IJAM 38 4 11, Advance online publication, November 20, 2008.
- R M Chaveznava, V C Hernandez and M A Yousuf, "Learning Control Architectures by Robotics Application," WSEAS Transaction on Advances in Engineering Education, Issue 11, Volume 3, November 2006.
- A Bashir and M A Yousuf, "Relativistic and Binding Energy Corrections to Heavy Quark Fragmentation to Polarized Quarkonium," Phys. Lett. B424:375-380, 1998.
- M A Yousuf and A Bashir, "Relativistic and Binding Energy Corrections to Heavy Quark Fragmentation Functions," Phys. Rev. D56, 9:6014-6017, 1997.
- M A Yousuf and P Hoodbhoy, "Relativistic and Binding Energy Corrections to Direct Photon Production in Upsilon Decay," Phys. Rev. D54, 1:3345-3349, 1996.
- M A Yousuf, P Hoodbhoy, "On the Possible Measurement of Gluon Asymmetry in a Spinning Nucleus," J.Phys.G17:1637-1642, Nov. 1991.

Conference Papers and Extended Abstracts

- M A Yousuf, R Villastrigo and I Woiciechowski, "Developing the Postulates of Special Relativity in Group Discussions," accepted for NSTA Los Angeles, April 2017
- M A Yousuf and R Haugh, "The Poetry of Science and the Science of Poetry," NAGC Florida, Nov 3-6, 2016.
- M A Yousuf and I Woiciechowski, "Space-time diagrams and Einstein's Theory for Dummies," NAGC Florida, Nov 3-6, 2016.
- M A Yousuf and V Schneider, "Benefits and Challenges of Mixing Sports into a Physics Course," presented at the 62nd Annual NAGC Convention, Phoenix, Arizona, Nov 12-15, 2015.
- M A Yousuf and C Murray, "Science in a Global Perspective – Understanding the Science Policy Process," presented at the 62nd Annual NAGC Convention, Phoenix, Arizona, Nov 12-15, 2015.
- M A Yousuf, Using LEGO Robots to Create Smileys, Presented at the 61st Annual NAGC Convention (National Association for Gifted Children), Baltimore, Maryland, November 13-16, 2014.
- M A Yousuf, B Asiyanbola, Short Term Physiological Effects of a Hepatopancreaticobiliary Reservoir, the Americas Hepato-Pancreato-Biliary Association (AHPBA) Conference, Miami Beach, Eden Roc, February 2014.
- M A Yousuf, R Dumm, Y Kim and B A Asiyanbola, "A Model to Study the Effect on Gallbladder Stress Due to Contraction and Gallstones," presented at the 34th Annual International Conference of the Engineering in Medicine and Biology Society, Session on Bioinformatics and Computational Biology, Systems Biology, Modeling Methodologies, Hilton Bayfront Hotel in San Diego, California, USA. Aug 28 – Sept 1, 2012.
- M A Yousuf, K T Malinowski, T J McAvoy, H H Zhang, S A Naqvi, W D D'Souza, "Dosimetric Improvement via Real-Time Dynamic Couch-Based Intra-Fraction Motion Tracking For 3D Conformal and IMRT Plans," International Journal of Radiation Oncology* Biology* Physics, Volume 78, Issue 3, Supplement, 1 November 2010, S688, 2010.
- K T Malinowski, M A Yousuf, T J McAvoy, W D D'Souza, "Integration of optical tracking with dynamic treatment couch real-time tracking for intra-fraction motion compensation," International Journal of Radiation Oncology* Biology* Physics, Volume 78, Issue 3, Supplement, 1 November 2010, Pages S698, 2010.

- M A Yousuf, K T Malinowski, T J McAvoy, W D D'Souza, "A Novel Treatment Couch for Real-Time Tracking of Respiration Induced Target Motion: Evaluating its Geometric Accuracy," *Medical Physics* 37, 3185, 2010.
- M A Yousuf, K T Malinowski, S A Naqvi, W D D'Souza, "Determining the optimal gating window size by considering the effect of tumor displacement on dose distributions," *Medical Physics* 37, 3184, 2010.
- E Ataer-Cansizoglu, E Bas, M A Yousuf, S You, W D D'Souza, D Erdogmus, "Towards Respiration Management in Radiation Treatment of Lung Tumors: Transferring Regions of Interest from Planning CT to Kilovoltage X-ray Images". 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society "Merging Medical Humanism and Technology", Buenos Aires, Argentina, August 31 - September 4, 2010.
- K T Malinowski, M A Yousuf, T J McAvoy, W D D'Souza, "Couch Motion Compensation," Real-Time Motion Adaptive Radiation Therapy Workshop, Lubeck, September 2009.
- M A Yousuf, T J McAvoy, W D D'Souza, "Performance Characteristics of an Experimental Couch for Real-Time Tumor Motion Tracking," *Medical Physics* 36, 2676, 2009.
- M A Yousuf, P C Rivera, M P Diaz and R M Chaveznava, "Lung Tumor Tracking and Couch Control - A Feasibility Study," International Conference on Electrical Engineering and Applications (ICEEA 2008), San Francisco, USA, 22-24 October, 2008
- R M Chaveznava, M A Yousuf, V C Hernandez and I Caldelas, "Internet en la Enseñanza de Conceptos en Ingeniería," IADIS Conferencia Ibero-Americana WWW/Internet (CIAWI 2008).
- S F Rosales, R E G Vara, G Olivera, K Harris, L C Albiztegui, J C Pérez, V C Hernandez, R M Chaveznava and M A Yousuf, "Educational Robots for Economically Challenged Communities," International Conference on Engineering Education, Pécs-Budapest, Hungary, 27-31 July 2008.
- M A Yousuf, "Solving Physics Problems Using Variable Flow Diagrams," International Conference on Engineering Education, Pécs-Budapest, Hungary, 27-31 July 2008.
- R M Chaveznava, M A Yousuf, I Caldelas, "Project Proposals to Improve Engineering Learning," International Conference on Engineering Education, Pécs-Budapest, Hungary, 27-31 July 2008.
- R M Chaveznava, M A Yousuf, I Caldelas, "Strategies to Motivate Engineering Learning," poster presentation at the International Conference on Engineering Education, Pécs-Budapest, Hungary, 27-31 July 2008.
- M A Yousuf, A S Sanders, A I S Ochoa and R M F Somoza, "Real-time Tumor Tracking – Modeling and Simulating the Process," 7th WSEAS International Conference on Application of Electrical Engineering (AEE'08), Trondheim, Norway, July 2-4, 2008.
- R Montufar-Chaveznava, V de la Cueva Hernandez and M A Yousuf, "Web Technology for Engineering and Computer Science Learning," 38° Congreso de Investigación y Desarrollo del Tecnológico de Monterrey, 23 – 25 January 2008, Campus Monterrey, Tecnológico de Monterrey. ISBN 968-891-124-0.
- F A Lelo de Larrea de la Peña, S V P Vértiz, D J E Berrios, J A P Huelsz, E M Servín and M A Yousuf, "Automation at a Stamping Industry," 7th WSEAS International Conference on Robotics, Control and Manufacturing Technology (ROCOM '07), Hangzhou, China, April 15-17, 2007. ISBN: 978-960-8457-67-6
- R M Chaveznava, V C Hernandez and M A Yousuf, "Web Technology for Engineering and Computer Science Learning," Conference on Information Technology, Organisations and Teams, Lisbon, Portugal, May, 19-20, 2007.
- M A Yousuf, V C Hernández and R M Chaveznava, "Learning Two-Dimensional Physics and Mathematics through their Applications in Robotic Manipulators," International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering, (CIS2E 06), December 4 - 14, 2006, IEEE – University of Bridgeport.
- R M Chaveznava, V C Hernandez and M A Yousuf, "Learning Control Architectures by Robotics Application," 5th WSEAS International Conference on Education and Educational Technology, Tenerife, Canary Islands, Spain, Dec 16-18, 2006.
- M A Yousuf, R M Chaveznava, and V C Hernández, "Robotic Projects to Enhance Student Participation, Motivation and Learning," IV International Conference on Multimedia and Information & Communication Technologies in Education (m-ICTE2006), 22-25 November 2006, Sevilla, Spain. ISBN Vol. III (13): 978-84-690-2474-4.

- E M Servín and M A Yousuf, "TRIZ Motivated Design of a Two-Armed Manipulator for the Stamping Industry," 1st Iberian & Latin American Conference on Technological Innovation, Puebla, Mexico, 4-7 September 2006. Published in "TRIZ – Un Nuevo enfoque para la innovación sistemática," ed. E. C. López ISBN: 968 863 923 0.
- M P Díaz and M A Yousuf, "Learning Differential Equations using Simple Laboratory Experiments," Active Learning in Engineering (ALE) Conference, Monterrey, 7-9 June 2006. Published in the proceedings.
- M A Yousuf, "Problem Solving Strategies in Physics and the Variable Flow Diagrams," Congreso de experiencia profesional, Tec de Monterrey – Campus Santa Fe, December 2005.
- M A Yousuf, A Bashir, M E L Flores, R F Cortés, G G Arreguín, "Kinematics and Workspace Analysis of a Novel 3-DOF Parallel Manipulator," XI Annual Conference of SOMIM, 2003.
- M E L Flores, A Bashir, M A Yousuf, B V Neri, C V Hugo, Z Mario, C C Eduardo, "Análisis de Posición, Geometría y Cinemática del Manipulador Paralelo DELTA 580," Conference in Reynosa, Mexico, 2003.
- M A Yousuf, "Neural Networks and Some of Their Applications," IEEE Conference on Millennium Technologies, December 1999, Karachi, Pakistan, (published in the proceedings.)

Other Miscellaneous Publications

- H de las Heras and M A Yousuf, "2010 US Science and Engineering Festival Report," Newsletter of the American Association Of Physicists in Medicine, Volume 35, No. 6, November/December 2010.
- L A M Cabrera, J R J Tapia, L C A Coello, F E Barrios, M G O Mejía, V M G Medina and M A Yousuf, "Design of an Adaptive Liquid Vending Machine," the TRIZ Journal, July 2008.
- M T T Cohen, L M G Zamudio and M A Yousuf, "TRIZ Motivated Design of an Amphibian Bicycle," The TRIZ Journal, October 2006.
- E M Servín and M A Yousuf, "A Novel Manipulator Design Using TRIZ Methodology," Published in The TRIZ Journal, Dec 2006.
- M A Yousuf, "Pomegranate Seed Extractor," NASA Tech Briefs Create the Future Design Contest, 2007. <http://www.createthefuturecontest.com/>
- L A M Cabrera, J R J Tapia, L C A Coello, F E Barrios, M G O Mejía, V M G Medina and M A Yousuf, "Design of an Adaptive Liquid Vending Machine," NASA Tech Briefs Create the Future Design Contest, 2007. <http://www.createthefuturecontest.com/>
- M A Yousuf, "A Gentle Introduction to Genetic Algorithms," Workshop on Artificial Intelligence, NED University of Engineering and Technology, 22-25 April 2000, Karachi, Pakistan.

Books and book chapters

- M A Yousuf, "Robots in Education," chapter published in the "Encyclopedia of Artificial Intelligence", (Eds.) J R Rabuñal, J Dorado and A Pazos, Information Science Reference, USA, 2008. ISBN: 978-1-59904-849-9.
- M A Yousuf, V C Hernandez and R M Chaveznava, "Learning Two-Dimensional Physics and Mathematics through their Applications in Robotic Manipulators," in "Innovations in E-learning, Instruction Technology, Assessment and Engineering Education," ed. M Iskander. Springer 2007. ISBN: 978-1-4020-6261-2.
- M A Yousuf, "Elementary Techniques of Integration," 1985.
- M A Yousuf, "To Prove" (a collection of proofs of most commonly used formulas in undergraduate mathematics), 1984.

Invited Talks and Presentations

- M A Yousuf, "Medical Robots and Other Devices," Lecture delivered at the meeting of NED Alumni Association of DC, April 29, 2012.
- M A Yousuf, "An Inclusive Education," Invited talk at "Artificial Intelligence and Educational Robotics in the Technology in the Classroom Mini-conference", Decision Sciences (DSI) Meeting, Baltimore, Maryland, November 22-25, 2008.

- M A Yousuf, A series of five (weekly) talks on the Frontiers of Physics at the Colegio Hebreo Tarbut, Mexico City, Mexico, 2007
- M A Yousuf, "Achieving the Competitive Edge through Strategic Management of Science and Technology", Convention of Young Scientists, Technologists and Engineers, October 1998, Islamabad, Pakistan.
- M A Yousuf, "The Emerging Trends in Private Education," HRCP Workshop on Private Education, April 2000, Karachi, Pakistan.
- M A Yousuf, "Online Office – Prospects for Pakistani Women," at the University of Karachi, Karachi, Pakistan, 1999.

Supervised Thesis and Project Work - Undergraduate:

- B Hura, "Treatment of Lung Tumors Using Cyberknife Robotic System," Karakoram International University, Pakistan, July 2012.
- M H Zaidi, "Tracking of Tumors in Cyberknife Radiotherapy," Karakoram International University, Pakistan, July 2012.
- N Muhammad, "A Study of the Radiation Dose Coverage in Robotic Radiotherapy," Karakoram International University, Pakistan, July 2012.
- N Ahmad, "Radiosurgery of Spinal Cancer using Cyberknife," Karakoram International University, Pakistan, July 2012.
- M Nisar, "Radiative Treatment and Localization of Thoracic Tumors," Karakoram International University, Pakistan, July 2012.
- Noorida, "MRI Guided Tumor Tracking in Cancer Radiotherapy," Karakoram International University, Pakistan, July 2012.
- S Ahsan, "Magnetic Resonance Imaging for Lung Cancer Detection," Karakoram International University, Pakistan, July 2012.
- T Fida, "MRI in the Imaging of Nasopharyngeal Cancer," Karakoram International University, Pakistan, July 2012.
- Z Akbar, "Segmentation of Bones in MRI and CT Images," Karakoram International University, Pakistan, July 2012.
- F Jabeen, MRI and its clinical applications, Karakoram International University, Pakistan, July 2012.
- A J S Lopez, "A Study of MEMS – Micro Electro Mechanical Systems", Tec de Monterrey, Santa Fe Campus, Mexico, 2007.
- J C Pérez and M R Esquivel, "Mechanical Construction of a Cartesian Robot with One degree of Freedom", Tec de Monterrey, Santa Fe Campus, Mexico, 2007.
- G O Mejia, "Boe-Bots and Table Football", Tec de Monterrey, Santa Fe Campus, Mexico, 2007
- N Turkia, "Developing the Electrical Control System for the Ford Mustang - Alison", Tec de Monterrey, Santa Fe Campus, Mexico, 2007.
- A R Vargas, "Automatic Car Loading and Unloading System", Tec de Monterrey, Santa Fe Campus, Mexico, 2007.
- J P M Esponda, "Design and Construction of a Rope Climbing Robot," accepted for publication in the 10th International Conference on Climbing and Walking Robots, 16-18 July 07, Singapore
- M O Andrade "Predicting Blood Pressure Using Neural Nets," Tec de Morelia, Mexico, 2002.
- C L F Prado, "A report on the applications of genetic algorithms," Tec de Morelia, Mexico, 2002.
- A Calderon, "A comparative study of freeware/shareware neural network tools available on DOS / Windows platform, with some representative applications," Tec de Morelia, Morelia, Mexico, 2002.
- J Aguirre, "A study of recent trends in Artificial Life / Digital Biology," Tec de Morelia, Morelia, Mexico, 2002.
- A C Fernandez, "A report on the financial applications of neural networks with explanations of techniques used," Tec de Morelia, Morelia, Mexico, 2002.
- H Balam, "Financial forecasting (S & P 500 index) using neural nets," Tec de Morelia, Morelia, Mexico, 2002.

- M E S Orozoco, "Neural network based prediction of diabetes," Tec de Morelia, Morelia, Mexico, 2002.
- D Corona, "Use of Neural networks and genetic algorithms in weather forecasting," Tec de Morelia, Morelia, Mexico, 2002.
- N A Zeeshan and S Momin, "To understand and predict musical preferences of human listeners using neural nets," Hamdard Institute of Information Technology and KASBIT, 2000.
- S Abbasi, "Neural nets based face recognition system," Hamdard Institute of Information Technology, 1999.
- N Zai, "Diabetes Prediction in Prima Indians," Hamdard Inst of Information Technology, 1999.
- M Nazim, "Loan Approval," Asian Institute of Management, 1999.
- S Ahmer, "Prototype neural network based semiconductor curing furnace controller," Asian Institute of Management, 1999.
- F Rizvi, "A study in the possible use of neural nets in the 'Hypothesis testing' process," Asian Institute of Management, 1999.
- J. Farooqi, "Neural Nets in Semiconductor Etch Process – a case study," Asian Institute of Management, 1999.
- K Khalid, "Economic forecasting (World Bank – basic indicators) using neural nets," Hamdard Inst. of Inf. Tech., 1999.
- N A Zeeshan, "Financial forecasting (S & P 500 index) using neural nets," Hamdard Inst. of Inf. Tech., 1999.
- R Ahmed, "Signature verification using neural nets," Hamdard Inst. of Inf. Tech., 1999.
- S S Hussain, "Bankruptcy prediction using neural nets," Hamdard Inst. of Inf. Tech, 1999.

Co-Supervised Thesis and Project Work - Graduate:

- V N B Torres, "Modelo Modificado del Manipulador de la Universidad de Maryland," Tec de Morelia, Morelia, Mexico, 2003.
- G G Arreguín, "Análisis de Trayectorias Libres de Colisiones para un Manipulador Paralelo de 3 GDL", Tec de Morelia, Morelia, Mexico, 2002.
- F C Ricardo, "Comparación de los Espacios de Trabajo de los Manipuladores Serie y Paralelo con los Mismos Grados de Libertad", Tec de Morelia, Morelia, Mexico, 2002.