

JOSÉ L. ZAYAS-CASTRO

PERSONAL

Citizenship U.S.A
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EDUCATION

1983	Rensselaer Polytechnic Institute	Ph.D., Management
1981	Rensselaer Polytechnic Institute	M.B.A.
1979	Rensselaer Polytechnic Institute	M.S. Industrial and Mgt. Engineering
1978	University of Puerto Rico-Mayagüez	B.S. Industrial Engineering

Summary of interests

My interests relate to healthcare systems engineering, systems integration, systems modeling, engineering/business analysis, engineering entrepreneurship, cost/economic analysis, productivity improvement, R&D strategy, technology transfer, and engineering education and its integration with research and innovation. Recently my research has emphasized the re-design of processes, products and services, re-engineering the service sector, particularly healthcare, and the integration of research and engineering education.

ACADEMIC EXPERIENCE

08/2015-Present	Executive Associate Dean	College of Engineering, U. of South Florida
11/2013-Present	Courtesy Appointment, Professor	Department of Community & Family Health, College of Public Health
12/2011-08/2015	Associate Dean for Research	College of Engineering, U. of South Florida
2002-Present	Full Professor	Department of Industrial and Management Systems Engineering, U. South Florida
2002-12/2011	Professor (tenured) & Chair	Department of Industrial and Management Systems Engineering, U. South Florida
2009-Present	Research Associate	James A. Haley Tampa VA, Tampa, FL
2008-Present	Member	H. Lee Moffitt Cancer Center at USF, Tampa, FL
2006-Present	Assistant Director of the Center For Entrepreneurship & Coordinator for Engineering Entrepreneurship	College of Engineering, U. of South Florida
2004-Present	Associate Faculty	Center for Urban Transportation Research (CUTR), U of South Florida
2003-Present	Associate Faculty	Center for Entrepreneurship, U. South Florida
2001-2002	Professor (tenured) & Director of Graduate Studies	Department of Industrial and Manufacturing, Systems Engineering, UM-Columbia
1999 -2001	Visiting Professor	Department of Industrial and Manufacturing, Systems Engineering, UM-Columbia

1999-2002	Diversity in Engineering Program	College of Engineering, UM-Columbia
1995-1998	Associate Dean for Academic & Research Affairs	College of Engineering, University of Puerto Rico-Mayagüez
1994-1997	Baxter Chair in Manufacturing Engineering (Co-Holder)	College of Engineering, University of Puerto Rico-Mayagüez
1993-1999	Director	Institute for Innovation in Manufacturing Advancement of Interdisciplinary Education College of Engineering, UPR-Mayagüez
1992-2001	Professor	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1987-1992	Associate Professor (tenured)	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1987-1990	Head	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1987-1995	Small Business Institute Director (SBA/U.S.A.)	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1983-1987	Assistant Professor	Department of Industrial Engineering University of Puerto Rico-Mayagüez

GOVERNMENT, INDUSTRIAL AND CONSULTING EXPERIENCE

- **Vector Corporation**, Mayagüez, P.R., 1996- 2000. Founding Partner.
- **Productivity Management Associates**, Mayagüez, P.R. Consulting firm in industrial and business management: general management and business strategy; management information systems; production planning and inventory control; simulation; TQM/quality control; maintenance systems; project management and office and manufacturing automation. 1984-99.
- **Consultant for the Dean of Administration & the Chancellor**, UPRM, P.R. Worked on the analysis for improving quality and productivity using TQM in: purchasing office, warehouse and University Enterprises (Library, Hotel and Cafeteria) 1991-94. Worked in aspects related to assessment.1994-96.
- **Merck-Sharp and Dohme**, Caguas, P.R. Implementation of Statistical Process Control (SPC), 1991-92.
- **Johnson & Johnson Quality Institute**, New Brunswick, New Jersey.
- Training and implementation of the Statistically Based Continuous Improvement Program at J & J operating companies, 1990- 1996.
- **Lifescan, Inc.** (a Johnson & Johnson company), San Germán, P.R. Development and implementation of a "Micro-Computer based Planning System for Capacity Analysis," 1990-91.
- **Digital Equipment Corporation**, San Germán, P.R. Trainer/facilitator/consultant, 1990-91.
- **General Instruments**, Barceloneta, P.R. Workshops in cost reduction, Arecibo, P.R., August 1990.
- **Economic Development Administration**, Hato Rey, P.R. Conducted an Operational Diagnostic and Analysis of JPT Fashions and JPF Children Wear Inc. at Lajas, P.R., Spring 1990.
- **LMV & Assoc.**, Gainesville, Florida. "JIT Simulation Game," San Juan, P.R., January, September 1990, June 1991 at The Upjohn Mfg. Co.
- **AGC (American General Contractors Society) of Puerto Rico**. Developed and conducts workshops in supervision/project management/productivity improvement for foremen and supervisors in the construction industry, 1989-Present.
- **Puerto Rico Highway Authority**, Santurce, P.R. Office Automation, local area network and project management, 1989-1990.
- **Economic Development Administration**, Hato Rey, P.R. Workshops in techniques to assess businesses in Puerto Rico, 1989.
- **OLay Company**, Cayey, P.R. Conducted workshops in Statistical Process Control (SPC), 1989.
- **General Instrument**, Barceloneta, P.R.. Workshops in SPC, 1989.
- **Allergan, Hormigueros**, P.R./SKB, St. George's, Grenada. Conducted a production operations analysis to improved productivity by work analysis and measurement, line balancing, material handling analysis and development of operations layout, 1989.
- **Westinghouse**, Cataño, P.R.. Workshops in SPC to engineers and technicians, 1988.

- **Empresas Enrique Santiago**, Bayamón, P.R. Conducted an organizational and functional analysis of the corporation, 1988.
- **Baxter-NDM Corp.**, Sabana Grande, P.R. Improved the quality and productivity of electrodes painting process through statistical process analysis and value added engineering, 1987-88.
- **Metropolitan Bus Authority**, San Juan, P.R. Developed an implementation plan for the Preventive Maintenance Program, 1987-88.
- **Philips Industries**, Cayey, P.R. Developed operations standards for the Production Department using MTM, 1986.
- **The Upjohn Manufacturing Company**, Barceloneta, P.R. Developed and conducted a seminar-workshop in "Productivity Improvement Through Office Automation", 1986.
- **University of Puerto Rico-Mayagüez**, Telephone System Operations, Dean of Administration. Development and implementation of improved data base management and administrative systems for on campus telephonic operations, 1986-87.
- **Eli Lilly Industries**, Inc., Personnel Operations Department, Carolina, P.R. Studied and identified several opportunities for improvement in office productivity at the Personnel Department, 1986.
- **Product Management Group**, Institutional Banking, Citibank, Hato Rey, P.R. Developed and implemented a civil rights suits information system, 1986.
- **Metropolitan Bus Authority**, San Juan, P.R. Conducted life cycle cost analysis of the advanced bus versus the articulated bus system, 1986.
- **Manuel Porrata & Associates & Small Business Administration**, Hato Rey, P.R. Developed and conducted seminars-workshops in Marketing and Financial Management, and Quality Control Management to federal contractors - 8A firms, 1985-86.
- **Product Management Group**, Institutional Banking, Citibank, N. A., Hato Rey, P.R. Developed and implemented a market research to determine the feasibility of establishing a business in Information Management, 1985.
- **Zayas Master Auto Service**, Hato Rey, P.R. Developed a marketing and business strategy to improve business profitability, 1985.
- **Economic Development Administration of Puerto Rico**. Developed and taught industrial engineering and management seminars to industry managers and supervisors, 1985-97.
- **College of Engineers and Surveyors**, Hato Rey, P.R. Taught refreshment courses to engineers preparing to take the Professional License Examination, 1984-85.
- **Individual Banking Group**, Training and Development Center, Citibank, N. A., Hato Rey, PR. Developed and implemented a workshop-training course in Productivity Management and Improvement for Puerto Rico and Latin America- Argentina, Brazil, Chile, Colombia, Ecuador, México and Panamá. Improved productivity in several banking operations, 1983-1986.
- **Institutional Banking Group**, Citibank, N. A., Hato Rey, PR. Developed and implemented training workshops in office automation using micro-computer technology for productivity and service quality improvement. Supervised the development of a Productivity Tracking System, 1985.
- **Institute of Industrial Engineers** - Chapter 188, San Juan, P.R. Taught seminar in "Statistical Process Control," to managers and engineers in the Puerto Rican manufacturing industry, 1985.
- **Puerto Rico Lottery**, San Juan, P.R..Designed and implemented new automated production facilities for lottery tickets, 1984.
- **Caso Travel Agency**, Caparra Heights, P.R. Developed and implemented a computerized inventory and reporting system, 1984.
- **Rensselaer Ski Club**, Troy, N. Y. Developed an interactive computerized information system in COBOL, 1979.
- **Mr. Elias Segarra**, Rio Piedras, P.R. Developed an automated information system and designed working facilities, 1977.
- **Levi's**, Las Marias, PR. Designed work methods and developed standards for a packing operation, 1977.
- **Puerto Rico Iron Works**, Ponce, P.R.. Analyzed noise levels for a disassembly operation, 1976.
- **Assistant Industrial Engineer, McGaw Laboratories**, Sabana Grande, PR. Designed work areas, developed work standards, conducted time studies, work sampling and efficiency studies, 1977.
- **Research Assistant**, University of Puerto Rico at Mayagüez, research sponsored by UMTA. Identified, described and measured productivity of clerical work performed in the Metropolitan Bus Authority. Designed workshop facilities for the Metropolitan Bus Authority, 1977-78. (PI: Dr. Louis A. Martín-Vega)

AWARDS AND HONORS

- 2018** Certificate of Appreciation, Florida Educational Fund, 34th Annual McKnight Fellows Meeting & 22nd Annual Graduate School Conference
- 2018** USF INFORMS Student Chapter Award, Summa Cum Laude - Advisor
- 2018** Outstanding Service Award, Manufacturing & Design Division, IISE
- 2017** USF INFORMS Student Chapter Award, Summa Cum Laude - Advisor
- 2016** USF INFORMS Student Chapter Award, Cum Laude - Advisor
- 2015** USF INFORMS Student Chapter Award, Magna Cum Laude - Advisor
- 2014** USF INFORMS Student Chapter Award, Summa Cum Laude - Advisor
- 2013** USF INFORMS Student Chapter Award, Summa Cum Laude - Advisor
- 2012** USF INFORMS Student Chapter Award, Summa Cum Laude - Advisor
- 2011** USF INFORMS Student Chapter Award, Summa Cum Laude - Advisor
- 2010** USF INFORMS Student Chapter Award, Magna Cum Laude - Advisor
- 2009** INFORMS Moving Spirit Award, October 2009
- 2009** USF INFORMS Student Chapter Award, Magna Cum Laude - Advisor
- 2009** ASEE John L. Imhoff Global Excellence Award for Industrial Engineering Education, June 2009
- 2008** USF INFORMS Student Chapter Award, Cum Laude - Advisor
- 2006** USF Hispanic Pathways Award, USF Latin American Advisory Committee, October 5, 2006
- 2006** HENAAC Education Award – University, HENAAC Annual Conference, October 7, 2006
- 2006** Bernard M. Gordon Prize for Innovation in Engineering and Technology Education, National Academy of Engineering, Co-Recipient, February 2006
- 2005** UPS (IIE) Minority Advancement Award, May 2005
- 2003** SBIR/STTR – National Science Foundation, Service Recognition, 2003
- 2002** Listed in Who's Who in Engineering Education (WWEE), 2002
- 2002** Member of International WHO'S WHO Historical Society, Mass, January 2002.
- 2001** Technica Magazine and HENAAC, Recognition, Los Angeles, CA, August 2001.
- 2001** Fellow Award-Institute of Industrial Engineers (IIE), Dallas TX, May 2001,
- 2001** Non-Regular Academic Appointment Award, College of Engineering, UM-Columbia, March 16, 2001
- 1998-1999** Distinguished Professor Award, IE-Dept., UPRM (awarded Spring 2000)
- 1998-1999** Academic Productivity Bonus Award, UPRM.
- 1998** Recognition for Excellent Contribution as UPRM Engineering School Liaison with INTEL-PR.
- 1997** First recommended (of twenty candidates) by Chancellor's Search Committee of UPRM's, Fall 1997
- 1997** Teaching Recognition, by students of the Capstone Design Course, Fall 1997.
- 1996** Curriculum Innovation Award (Learning Factory), ASME International.
- 1994-1997** Co-Holder (with Dr. Gursel Suer) of Baxter Endowed Chair in Manufacturing Engineering, 1994-1997.
- 1994** Nominated for Dean of Engineering and Dean of Students Affairs at UPR- Mayagüez, 1994.
- 1994-1995** Immaculate Conception Academy, Recognition for supporting elementary basketball team, 1994-95
- 1994** Offered the position of Dean of Engineering at University of El Turabo, Ana G. Méndez System, Summer 1994.
- 1992** Recommended for Dean of Administration at UPRM, 1992.
- 1992** ASQC Quality Award, Puerto Rico Section 1500, 1992.
- 1989-1991** Certificates of Appreciation, NSF Young's Scholar Program, College of Business, UPRM, 1989-91.

- 1990 Teaching Recognition, Senior Capstone Design Course, Fall 1990, UPRM.
- 1988-1989 IIE Chapter 188, Special Contribution as member of Board of Directors, 1988-89.
- 1988 Best Department Head at UPRM's-College of Engineering (Dean: Dr. L. Rodríguez), 1988.
- 1985-1986 Distinguished Industrial Engineer of the Year 1985-86, IIE, Chapter 188, San Juan, PR
- 1986-1987 National Award of Excellence - IIE Student Chapter 891, UPRM, Mayagüez, PR, 1986-87
- 1985-1986 National Award of Excellence - IIE Student Chapter 891, UPRM, Mayagüez, PR, 1985-86
- 1985 Outstanding Young Men of America
- 1984-1985 National Award of Excellence - IIE Student Chapter 891, UPRM, Mayagüez, PR, 1984-85
- 1979-1983 Rensselaer Polytechnic Institute Scholarships, 1979-83
- 1980-1983 National Hispanic Fund Scholarships, 1980-83
- 1978-1979 Economic Development Administration of Puerto Rico Scholarship, 1978-79
- 1983 Resume Published in "1983 Outstanding Resumes of Business and Law Graduates", by The Graduate Group, West Hartford, Connecticut.

SOCIETIES AND ORGANIZATIONS

- **Health Systems Engineering Alliance (HSEA)**, 2012- Present (USF Representative and Board Member 2013-15. Chair 2013-14)
- **Institute for Operations Research and Management Science (INFORMS)**; Member Subdivisions Council, 2010-2012.
- **Institute of Industrial Engineers**: Senior VP at Large International (2005-07); Chair CIEADH (2004-05); Chair Elect of CIEADH (2003-04); Fellow (May 2001); Senior Member; Director of Chapter 188 (1985-88)
- **International Who's Who**, January 2002
- **Tau Beta Pi**
- **Alpha Pi Mu Honor Society**: secretary during 1977, UPRM
- **IEEE**
- **National Society of Professional Engineers**
- **American Society for Engineering Education**
- **Association for Computing Machinery**
- **Society Manufacturing Engineers**
- **Society of Hispanic Professional Engineers (SHPE)**, Judge, National Student Engineering Design Contest, 2000 -2002
- **National Society of Black Engineers (NSBE)**

SPONSORED PROGRAMS & OTHER RESEARCH ENDEAVORS

Funded Proposals

- 2016-2018 Florida-Georgia Louis Stokes Alliance for Minority Participation (FGLSAMP) Bridge to the Doctorate Activity; Role: Co-PI (FAMU is the lead) & USF Site Director; 08/01/18-7/31/19; \$1,075,000. Summary: Provides two-year funding, PhD recruitment, academic retention and professional development activities for 16 URM students within 7 STEM departments and 4 Colleges at USF.
- "Hillsborough County Tax Collector's Office," PI, \$25,772, July-Nov., 2018.
- "NSF I-Corps Site at USF," Co-PI, PI: Paul Sanberg, Co-PIs: Sudeep Sarkar , Jose Zayas-Castro, Valerie McDevitt, \$160,000, 10/1/2018 to 9/30/2020
- "PFI: AIR-TT Passive membrane photobioreactor for cultivation and harvesting of algal biomass and sustainable nutrient management," Co-PI, PI: D. Yeh, NSF, May 2016- October 2017, \$200,000 (Approved).
- "I-Corps Teams: Pathways to Market for ICARUS algae cultivation and harvesting technology," Co-PI, PI: D. Yeh , NSF (I-Corps), April 2015-Dec 2016, \$50,000 (Approved).

- “Smart Appliance Technology,” submitted to E-Team Program Grant, NCIIA, PI (w two undergraduate students), \$5k, June 2014 (Completed).
- “I-Corps: Mobile E-network Smart Health Care (MESH),” Co-PI, PI: H. Yang, submitted to NSF, June 2014, \$50,000; 7/20/2014-1/19/2015 (Completed)
- “University Center of Exemplary Mentoring,” PI, Co-PIs: Frank Muller-Karger, College of Marine Science submitted to the Alfred P. Sloan Foundation, \$630,000 Approved (Spring 2014-Spring 2017).
- “Product Review, Redesign, Testing and Manufacturability,” PI: J. L. Zayas-Castro, submitted to IRES Corp., \$147,026, Approved (April 2012-Dec 2012, Task 1).Completed.
- “Branch Operational Process Improvement at The Hillsborough County Tax Collector’s Office,” PI: J. L. Zayas-Castro, \$20,000, Approved (Oct 2011-March 2012). Completed.
- “Reducing Hospital Preventable Readmissions”, Collaborative Research of three sites (Purdue University, USF and Northeastern University), PI-USF: J. Zayas-Castro, Submitted to Regenstrief Foundation, Indiana, \$100,000. Approved, (May 2010-May 2011). Completed.
- “TACLAN/iGOV (DoD) –Research and Training”, PI: J. Zayas-Castro, Co-PIs: Alex Savachkin, R. Kasturi, M. Labrador, and J. Ligatti, Submitted to iGov-TACLAN Team, \$799,474 (\$399,888 for IMSE), September 2008. Approved (October 2008-May 2010). Completed.
- “TACLAN /iGOV (DoD)– Leap Ahead – Research and Training”, PI: J. Zayas-Castro, Co-PIs: R. Kasturi, M. Labrador, J. Ligatti, Paul Schnitzler, Alex Savachkin. Submitted to iGov-TACLAN Team, \$844,460, (\$442,000 for IMSE) August 2007. Approved (August 2007-September 2008). Completed
- “Virtual Medical Device Laboratory (Virtual MedLab) for manufacturing education with medical device concentration” PI: Susana Lai-Yuen, Co-PI: J. Zayas-Castro, N. Crane, R. Dubey, K. Reeves. Submitted to the Society for Manufacturing Engineers – Education Foundation - MEP, \$257,000, December 2006 – approved Spring 2007. Completed.
- “An Economic Sequential Probability Ratio Test (ESPRT) Approach to Enhance Surveillance Alert Utility of BioDefend™ .” Army’s Research, Development & Engineering Command (through USF Center for Bio-Defense) PI: T. Das, Co-PIs: Zayas-Castro, Reeves. Approved: \$176,000. Fall 2006. Completed.
- “Simulation, Analysis and Re-Design of Security Checkpoints at Major Commercial Airports”, Co-PI (PI: Ali Yalcin), University Consortium for Intermodal Safety and Security (UCITSS), August 2004-05, \$205,000. Completed.
- “Outcomes Based Assessment for Bridge to the Doctorate Program”, Principal Evaluator, University of South Florida, (PIs: Ashanti Pyrtle and Shekhar Bhansali), 2004- 2008. Completed.
- “VISS, ASC & CAMS Research”, renewal, Co-PI, (PI: Rangachar Kasturi), STS International (ARMY), August 2004-05, \$591,548 (IMSE: \$248,684). Completed.
- “Outcomes Based Assessment for IGERT-SKINS Program”, Principal Evaluator, University of South Florida (PI: Shekhar Bhansali), 2003- 2007. Completed.
- “VISS, ASC & CAMS Research”, Co-PI (PI: Rangachar Kasturi), STS International (ARMY), August 2003-04, \$433,269 (IMSE: \$174,549). Completed.
- “Interdisciplinary Manufacturing Innovation: Adapting and Implementing MEEP’s Learning Factory”, PI, National Science Foundation-DUE/CCLI, April 2001, \$106,687. Completed.
- “Establishing an Inter-College Honors Program in Innovation and Entrepreneurship”, Co-PI (PI: Crowe), University of Missouri-Columbia, Mission Enhancement-Connections, \$375,000 (for four faculty in IMSE & Management) March 2000. Completed.
- “Computer Science, Engineering, and Mathematics Scholarships (CSEMS)”, Co-PI (PI: M. Lee), National Science Foundation, \$200,000 (2 years), August 1999. Completed.
- “Outcomes Based Engineering Education: The Learning Factory and ABET 2000”, Co-PI with L. Morell (PI) and others, Raytheon Corporation, \$31,500, June 1998. Completed.
- “The Learning Factory: Implementing ABET 2000 A Hands-On Workshop” Co-PI with Morell (PI) and Jorge I. Velez-Arocho at UPRM, NSF 98-27 (Systemic...), VA, \$179,965, March 1998. Completed.
- “Design of an Activity Based Costing System at Hanes Menswear, Inc.,” Hanesmenswear, Ponce, PR, \$21,790, Nov. 1997. Completed.
- “Distance Learning Education Through Video Conferencing Technology,” PI (with Rafael Fernández) AT&T Foundation, \$50,000, 1996. Completed.
- “Development of an SMT Lab in the Learning Factory at UPRM,”PI (with A. Rullán and M. Vélez) Motorola, \$200,000, 1996. Completed.
- “Advising Small Businesses in PR,” Small Business Administration, USA, \$40,000, 1987-95. Completed.

- "Outreach for Interdisciplinary Education in Manufacturing," Upjohn Foundation, \$75,000, October 1995. Completed.
- "Desktop Video Conferencing," ATT Foundation, \$15,000, Spring 1995, (with A. Rullán and M. Torres).
- "Planning Project Proposal to the National Institute of Standards and Technology Manufacturing extension Partnership Program, Co-PI," (Economic Development Administration-Leading Institution), NIST, \$120,000, April 1994.
- "The Manufacturing Engineering Education Partnership," (UPRM Co-PI with PSU:Drs. Soyster & Lamancusa, UW: Dr. Jorgensen), ARPA/NSF, \$2,750,000, 1994.
- "Design and Implementation of a Cost Database System at Baxter Diagnostics," Baxter-Diagnostics, Aguada, PR, \$17,720, 1992.
- "Design of an Activity Based Cost System at Baxter Diagnostics," Baxter-Diagnostics, Aguada, PR, \$14,360, 1993.
- "Global Manufacturing Education in Puerto Rico," PI(with Profs. R. Fernández, A. Rullán, L. Rosario, I. Baigés, Jorge I. Vélez) AT&T Foundation-Phase III, New Jersey, \$200,000, 1991.
- "By Design: Manufacturing Engineers," (with Profs. R. Fernández, L. Morell, L. Rosario, D. Serrano, A. Rullán, F. Toledo) National Science Foundation, Washington D. C., Fall 1991, \$75,000.
- "Design, Review and Implementation of Activity Based Costing," Hewlett-Packard, Aguadilla, Puerto Rico, July 1991, \$15000.
- "A Systematic Analysis of the Solder Joint Reliability and Verification for Multiple Pitch SMT," (with Dr. Noel Artilles) Digital Equipment Corporation, San Germán, PR, Fall 1989, \$73,427
- "A Systematic Analysis of A Process Development Project: The Case of Equipment Calibration For Surface Mount," Digital Equipment Corp., San Germán, PR, Spring 1989, \$60,316.
- "Simulation of the Needs at the Service Areas: Entrance and Exit, at the Luis Muñoz Marín International Airport," (with Dr. F. Luyanda) Puerto Rico Ports Authority, San Juan, P.R., Spring 1989, \$50,680.
- "Development of Manufacturing Engineering Education at the School of Engineering of the University of Puerto Rico at Mayagüez," (with Profs. B. Llorens and L. Rosario) AT&T Foundation Manufacturing Technology Grants Program, Princeton, N.J., Spring 1989, \$25,000 (planning grant).
- "Reduced Scale Automated Work Station," (with J. C. Villa and Luis Rodríguez) College of Engineering, University of Puerto Rico-Mayagüez, October 1986, \$9,910.
- "Experimental Statistical Design of Experiments for Yield Optimization in Dental Floss Manufacturing at Johnson & Johnson-Gurabo," (with Dr. M. González) University/Industry Research Program, CEER, University of Puerto Rico, January 1987, \$4000.

PUBLICATIONS

Under Review (or to be submitted)

- "Ambulance allocation optimization model for the overcrowding problem in US emergency departments: A case study in Florida" Acuna-Melo, J.A., **Zayas-Castro, J.L.**, Charkhgard, H., to be submitted to Socio Economic Planning Sciences (Dec 2018).
- "Prediction of Chronic Disease Related Inpatient Prolonged Length of Stay Using Machine Learning Algorithms," Symum, H., **Zayas-Castro, J. L.**, to be submitted to Journal of Healthcare Informatics Research (Dec 2018).
- "Office-based and home-care for older adults in primary care: a comparative analysis using the Nash bargaining solution," Jennifer Mendoza-Alonzo, **José Zayas-Castro**, Hadi Charkhgard, submitted to Socio-Economic Planning Sciences, Sept 2018.
- "A Decision Support System for Hospitals in the Implementation of Disease-Specific Interventions to Reduce Preventable Hospital Readmissions." Andrés García-Arce and **José Zayas-Castro**, To be re-submitted

Refereed Journal articles

- "Osteonecrosis in individuals with systemic lupus erythematosus: A predictive model; Osteonecrosis en individuos con lupus eritematoso sistémico: un modelo predictivo." Jennifer Mendoza-Alonzo, **José Zayas-Castro**, Karina Soto-Sandoval <https://doi.org/10.1016/j.reuma.2018.05.002>
- "A strategic gaming model for health information exchange markets". Martinez, D. A., Feijoo, F., **Zayas-Castro J.**, J. L., Levin, S., & Das, T. K. (2018). *Health care management science*, 21(1), 119-130.
- "Comparison of Machine Learning Algorithms for the Prediction of Preventable Hospital Readmissions". Garcia-Arce, Andres, Florentino Rico, and **José L. Zayas-Castro**. *Journal for healthcare quality*, May/June 2018, Vol 40, Issue 3 pp. 129-138, doi: 10.1097/JHQ.0000000000000080.
- "A literature review of preventable hospital readmissions: Preceding the Readmissions Reduction Act". Wan, H., Zhang, L., Witz, S., Musselman, K.J., Yi, F., Mullen, C.J., Benneyan, J.C., **Zayas-Castro, J.L.**, Rico, F., Cure, L.N. and Martinez, D.A., 2016. *IIE Transactions on Healthcare Systems Engineering*, 6(4), pp.193-211, <https://doi.org/10.1080/19488300.2016.1226210>
- "Activating clinical trials: a process improvement approach". Martinez, D.A., Tsalatsanis, A., Yalcin, A., **Zayas-Castro, J.L.** and Djulbegovic, B., 2016. *Trials*, 17(1), p.106.
- "Preventable readmission risk factors for patients with chronic conditions". Rico, F., Liu, Y., Martinez, D.A., Huang, S., **Zayas-Castro, J.L.** and Fabri, P.J., 2016. *Journal for Healthcare Quality*, 38(3), pp.127-142.
- "Technological Innovation, R&D Activities and Innovation System Between Organizations," Jonas Pedro Fabris, Maria Emilia Camargo, Suzana Leitão Russo, **Jose Zayas-Castro**. *Journal on Systemics, Cybernetics and Informatics: JSCI*, Volume 13 - Number 5 - Year 2015, pp. 87-90, ISSN: 1690-4524 (Online), <http://www.iiisci.org/journal/sci/issue.asp?is=ISS1505>
- "A user needs assessment to inform health information exchange design and implementation". Strauss, A.T., Martinez, D.A., Garcia-Arce, A., Taylor, S., Mateja, C., Fabri, P.J. and **Zayas-Castro, J.L.**, 2015. *BMC medical informatics and decision-making*, 15(1), p.81.
- "Uncovering hospitalists' information needs from outside healthcare facilities in the context of health information exchange using association rule learning". Martinez, D.A., Mora, E., Gemmani, M. and **Zayas-Castro, J.**, 2015. *Applied clinical informatics*, 6(4), pp.684-697.
- "Interventions as an alternative to penalties in preventable readmissions". Garcia-Arce, A. and **Zayas-Castro, J.L.**, 2015. *Journal of Hospital Administration*, 4(3), p.p70.
- "Statistical and prognostic analysis of dynamic changes of platelet count in ICU patients". Puertas, M., **Zayas-Castro, J.L.** and Fabri, P.J., 2015. *Physiological measurement*, 36(5), p.939.
- "Learning high-dimensional networks with nonlinear interactions by a novel tree-embedded graphical model". Liu, Y., **Zayas-Castro, J.L.**, Fabri, P. and Huang, S., 2014. *Pattern Recognition Letters*, 49, pp.207-213.
- "Bounceback branchpoints: Using conditional inference trees to analyze readmissions". Hartney, M., Liu, Y., Velanovich, V., Fabri, P., Marcet, J., Grieco, M., Huang, S. and **Zayas-Castro, J.**, 2014. *Surgery*, 156(4), pp.842-848.
- "Challenges and opportunities in the analysis of risk in healthcare". Cure, L., **Zayas-Castro, J.** and Fabri, P., 2014. Challenges and opportunities in the analysis of risk in healthcare. *IIE Transactions on Healthcare Systems Engineering*, 4(2), pp.88-104.
- "Clustering-based methodology for analyzing near-miss reports and identifying risks in healthcare delivery". Cure, L., **Zayas-Castro, J.** and Fabri, P., 2011. *Journal of biomedical informatics*, 44(5), pp.738-748.
- "Evaluating the Impact of Patient Arrival Patterns in the Performance of Appointment Scheduling Rules". Santander-Mercado, A., **Zayas-Castro, J.**, Cure, L. and Yalcin, A., 2011. *International Journal of Applied Management Science*
- "Selecting the Best Performing Weibull Estimation Method for Randomly Right Censored Data". J. Bates, **José L. Zayas-Castro**, 2010. *International Journal of Reliability, Quality and Safety Engineering*, 17(02), pp.105-118.
- "Evaluation of an error-reduction training program for surgical residents". Brannick, M.T., Fabri, P.J., **Zayas-Castro, J.** and Bryant, R.H., 2009. *Academic Medicine*, 84(12), pp.1809-1814.
- "Human error, not communication and systems, underlies surgical complications" Fabri, P.J. and **Zayas-Castro, J.L.**, 2008. *Surgery*, 144(4), pp.557-565.

- "The Learning Factory: Industry Partnered Active Learning," John S. Lamancusa, **José L. Zayas-Castro**, Allen L. Soyster, Lueny Morell, Jens Jorgensen, *Journal of Engineering Education*, January 2008, Vol. 97, No. 1.
- "Simulating less-than-truckload terminal operations". Deshpande, P.J., Yalcin, A., **Zayas-Castro, J.** and Herrera, L.E., 2007. *Benchmarking: An international journal*, 14(1), pp.92-101.
- "Assessing Organizational Readiness for Enterprise Resource Planning," Crowe, Thomas J., **José L. Zayas-Castro**, and Sompop Vanichsenee, *Information Technology & People*, 2003
- "Quantitative Risk Level Estimation of Business Process Reengineering Efforts," Crowe, Thomas J., Pekying Meghan Fong, Todd A. Bauman, and **José Zayas-Castro**, *Business Process Management Journal*, v. 8 n. 5, 2002, pp. 490-511.
- "Making a Partnership Work: Outcomes Assessment of a Multi-Task, Multi-Institutional Project," by Morell, Lamancusa, **Zayas-Castro**, Jorgensen, *Journal of Engineering Education*, Vol 87(5) 1998, pp. 519-528.
- "The Learning Factory – A New Approach to Integrating Design and Manufacturing into Engineering Curricula," by Lamancusa, Jorgensen, **Zayas-Castro**, ASEE, *Journal of Engineering Education*, Vol. 86, No. 2, pp. 103-112, April 1997.

Refereed or Invited Proceedings or Presentations

- "Osteonecrosis in Chilean patients with Systemic Lupus Erythematosus". Mendoza-Alonzo J., **Zayas-Castro J.**, Soto-Sandoval K., ". 2017 INFORMS Annual Meeting. Invited by Dr. Shuai Huang. Oct 22-25, Houston, Texas, United States.
- "Interventions as an alternative to penalties in preventable readmissions," A. Garcia, **JL Zayas-Castro**, Health Systems Optimization Workshop, Northwestern University (sponsored by NSF), September 2014.
- "Health Information Exchange: The Potential for Impact on Clinical care," A. Strauss, Diego Martinez, Andres Garcia-Arce, Candice Mateja MD, Stephanie Taylor MD, Peter Fabri, MD, **Jose Zayas-Castro**, ISERC, Montreal, Canada, May 2014
- "New approach to looking at complex physiologic data," Monica Puertas, **Jose Zayas-Castro**, Peter J. Fabri; ISERC, Montreal, Canada, May 2014.
- "Modeling and Decision Making For Healthcare Management," J Mendoza, M Puertas, **J Zayas-Castro**, Peter Fabri, INFORMS 2013, Minneapolis, MN
- "Data Mining Approach using Hemodynamic parameters," M. Puertas, J Zayas-Castro, Peter Fabri, INFORMS 2013, Minneapolis, MN
- "Interventions as an alternative to penalties in the fight against preventable readmissions," Andres Garcia, Jose Zayas-Castro, INFORMS 2013, Minneapolis, MN
- "Identifying Readmission-Related Clinical Associations by a High-Dimensional Tree-Embedded Graphical Model," Y. Liu, S. Huang, J Zayas-Castro, Peter Fabri, INFORMS 2013, Minneapolis, MN
- "Incorporating Health Systems Engineering (HSE) in Medical Education," Peter J Fabri, Alicia D. H. Moore, Jose L. Zayas-Castro, 87th Meeting of The Halsted Society, U of Minnesota, Sept 11-14, 2013, Minneapolis, MN
- "Identifying Factors to Reduce Preventable Readmissions among Congestive Heart Failure Patients," F. Rico, Y Liu, D Martinez, J. Zayas-Castro, ISERC, San Juan, PR 2013
- "Data Mining Approach Using Hemodynamic Parameters" M. Puertas, J Zayas-Castro, P. Fabri, ISERC, San Juan, PR 2013
- "Patient Care and Resource Management Optimization," M. Puertas, P. Fabri, J. Zayas-Castro, B. Zeng, INFORMS, Phoenix, AR, 2012
- "Identifying Patient and Hospital Factors to Reduce Preventable Readmissions," F. Rico, D. Martinez, Y. Liu, J Zayas-Castro, P. Fabri, ISERC 2012. Orlando, FL
- "Outcome-Based Resource Utilization Assessment," J. Mendoza-Alonso, J. Zayas-Castro, P. Fabri, ISERC 2012, Orlando, FL
- "Determining Patient Flow and Resource Utilization," M. Puertas, C. Feliciani, S. Gunpinar, J. Zayas-Castro, B. Zeng, P. Fabri, ISERC 2012, Orlando, FL
- "Using Markov Models to Support the Identification of Risk in Healthcare Systems," L. Cure, J. Zayas-Castro, INFORMS, Charlotte, NC 2011

- "Post-surgical Complication Patterns Based on Laboratory Test Results and Electrical Heart Signals," D. Martinez, M. Puertas, C. Kan, J. Zayas-Castro, H. Yang, P. Fabri, INFORMS, Charlotte, NC 2011
- "Determining Patient Flow and Resource Utilization," C. Feliciani, M. Puertas, S. Gunpinar, J. Zayas-Castro, B. Zeng, P. Fabri, INFORMS, Charlotte, NC 2011
- "Determining Patient Flow and Resource Utilization," C. Feliciani, M. Puertas, S. Gunpinar, J.L. Zayas-Castro, B. Zeng, P.J. Fabri, Margaret Veneman, IERC 2011, Reno, NV.
- "Analysis of Temporal Variations of Laboratory Test Results of Patients in Intensive Care Units," J.L. Zayas-Castro, A. Santander, P. J. Fabri, INFORMS, Austin, TX, 2010
- "A Methodology to Guide Risk Analysis in Health Care Delivery Systems," L. Cure, J. Zayas-Castro, P. J. Fabri, INFORMS, Austin, TX, 2010
- "Time-Series Analysis for Forecasting Patient Arrivals in Emergency Departments," Alcides Santander, Jose Zayas-Castro, Ramzi Sinokrot, Peter Fabri, IERC 2010, Cancún, MX, June 2010
- "Clustering Near-Miss Reports to Identify Risk in Healthcare Delivery," L. Cure, J. Zayas-Castro, P. Fabri, IERC 2010, Cancún, MX, June 2010.
- "Identification of Patient Recovery Patterns after Cardiac Surgery based on Laboratory Tests Results," A. Santander, J. Zayas-Castro, Ramzi Sinokrot, P. Fabri, P. Foulis, INFORMS, San Diego, CA, October 2009
- "Developing Models for the Monitoring and Evaluation of Patient Safety Interventions," L. Cure, J. Zayas-Castro, INFORMS, San Diego, CA, October 2009
- "VirtualMD Lab - Integrating Medical Device Design and Manufacturing into Undergraduate Engineering Education," Lai-Yuen, S. K., Gooding, D., and Zayas-Castro, J. L., Manufacturing Education Transformation Summit, Austin, TX, June 18-19, 2009.
- "Time Series Clustering of Patients Who Underwent Heart Bypass Surgery Based on Laboratory Test Results," A. Santander, J. Zayas-Castro, P. Fabri, IERC, Miami, FL, June 2009
- "Development of a Framework to Identify Patient Pathways in a Segment of the Health Care Cycle," M. Bounds, A. Bhattacharya, J. Zayas-Castro, P. Fabri, IERC, Miami, FL, June 2009
- "An Economic Sequential Probability Ratio Test (ESPRT) Model to Detect Epidemic Outbreaks," Dayna Martinez, Tapas Das, J. Zayas-Castro, INFORMS, Washington, DC, October 2008
- "Modeling Flow for Patients Undergoing Lung Resection at a Tertiary Care Teaching Hospital," Abhik Bhattacharya, J. Zayas-Castro, P. Fabri, INFORMS, Washington, DC, October 2008
- "Risk Identification, Assessment, and Monitoring in the Delivery of Health-care Services," Laila Cure, J. Zayas-Castro, P. Fabri, INFORMS, Washington, DC, October 2008
- "Time Series Analysis of Laboratory Test Results to Prevent Adverse Patient Outcomes," Alcides Santander, J. Zayas-Castro, P. Fabri, INFORMS, Washington, DC, October 2008
- "A modular synthesis approach to modeling hospital-based clinical pathways," Abhik Bhattacharya, J. Zayas-Castro, P. Fabri, IERC 2008, Vancouver, CN, May 2008
- "Near miss analysis to reduce errors in outpatient health care settings," Laila Cure, J. Zayas-Castro, P. Fabri, IERC 2008, Vancouver, CN, May 2008
- "Developing patients' comprehensive profiles to enhance timely disease diagnostic," Alcides Santander, J. Zayas-Castro, P. Fabri, IERC 2008, Vancouver, CN, May 2008
- "Interpreting Laboratory Test Results as a Dynamic Model," Alcides Santander, J. Zayas-Castro, P. Fabri, Seattle, WA, October 2007.
- "Error Minimization in Health Care Settings Through the Dynamic Analysis of Near-Misses," L. Cure, J. Zayas-Castro, P. Fabri, Inform, Seattle, WA, October 2007
- "Improving Operational Quality of Care in Health Care Inpatient Processes," A. Bhattacharya, J. Zayas-Castro, P. Fabri, Inform, Seattle, WA, October 2007.
- "Evaluating the Impact of Walk-ins and Late Patients in the Average idle Time for medical resources and patients in an Outpatient Clinic," Alcides Santander, J. Zayas-Castro. IERC Annual research conference, Nashville, TN, May 2007.
- "Managing Patient Flow in Inpatient Services," Abhik Bhattacharya, J. Zayas-Castro. IERC Annual Research Conference, Nashville, TN, May 2007.
- "Multi-criteria Decision Making in Outpatient Scheduling," Jana Iezzi, J. Zayas-Castro, Alcides Santander-Mercado, Michael Weng. Invited, IERC Annual research conference, Nashville, TN, May 2007.

- “Improving Patient Flow and Resource Allocation Through Healthcare Decision-Making,” J. Zayas-Castro, Abhik Bhattacharya, Jana Iezzi, Alcides Santander, Michael Weng. Invited. INFORMS 2006, Pittsburgh, PA
- “Modeling and analysis of the security screening process at commercial airports,” G. Centeno, Ali Yalcin, José Zayas-Castro, Daniel Yankov, Abhik Bhattacharya, Arka Bhattacharya. IERC 2006 – Orlando, FL
- “Improving Service in Healthcare Inpatient Processes,” Abhik Bhattacharya, José Zayas-Castro, Michael Weng, Grisselle Centeno. Invited, IERC 2006 – Orlando, FL
- “Healthcare Decision Making in Outpatient Processes,” Jana Iezzi, José Zayas-Castro, Michael Weng. Invited, IERC 2006 – Orlando, FL
- “Statistical Process Analysis used to Improve Healthcare Decision Making,” José Zayas-Castro, Abhik Bhattacharya, Jana Iezzi, Michael Weng. Invited to Quality and Statistical Decision Making in Healthcare Applications, INFORMS 2005, San Francisco, CA.
- “A Decision Tool for Effective Classification and Diagnosis of Prostate Cancer,” Das, Gopalappa, Nanduri, Zayas-Castro, Torres-Garcia. Presented on Sunday Nov 13, 08:00 - 09:30, Joint Session: Computational Biomedicine Chair: Ariela Sofer, Professor and Chair, George Mason University, INFORMS 2005, San Francisco, CA.
- “Engineering Service at H. Lee Moffitt Cancer Center Hospital,” J. Iezzi, José Zayas-Castro, Michael Weng, Grisselle Centeno, Kiara Pérez, Angela Hatton, Cristina Pérez, IERC 2005 Conference Proceedings, Atlanta, May 14-18.
- “Progressing Towards an Optimal Maintenance/Inventory Policy,” J. J. Bates and José Zayas-Castro, IERC 2005 Conference Proceedings, Atlanta, May 14-18.
- “Modelando Cambio Organizacional,” Humberto R. Alvarez, Thomas J. Crowe, and José Zayas-Castro, Revista de I + D Tecnológico, Universidad Tecnológica de Panamá, Vol. 3, No. 1, 2004
- “Formulating and Modeling the Dynamics of Enterprise Change,” José L. Zayas-Castro, Thomas J. Crowe, and Humberto R. Alvarez (2003), IERC 2002 Conference Proceedings, Portland, May 19-21.
- Marrs, M.B., Crowe, T., Burns, C., Zayas-Castro, J., Moesel, D., Occena, L., Wu, B., & Schwartz, S. (2003, February). “I get by with a little help from my friends: Business and engineering students working collaboratively on entrepreneurship projects,” Proceedings of the 2003 annual meeting of the American Society of Business and Behavioral Sciences, Las Vegas, NV.
- Bin Wu, Douglas D. Moesel, Thomas J. Crowe, Luis G. Occeña, José L. Zayas-Castro, Mary E. Marrs, Sally S. Schwartz. “Bridging Engineering and Business Education: A Case Study,” Hawaii International Conference on Business June 18-21, 2003, Honolulu Hawaii, USA.
- “EMILE: A concerted tech-based entrepreneurship effort between Engineering and Business,” by José L. Zayas-Castro, Cathleen S. Burns, Thomas J. Crowe, Mary E. Marrs, Douglas D. Moesel, Luis G. Occeña, Sally S. Schwartz, and Bin Wu (2002) Proceedings of 2002 American Society for Engineering Education Annual Conference & Exposition, Montreal, Canada, June 16-20 (refereed).
- “Organizational Change: A Case for More Systematic and Dynamic Modeling,” José L. Zayas-Castro, Thomas J. Crowe, and Humberto R. Alvarez (2002), IERC 2002 Conference Proceedings, Orlando, FL.
- “Readiness Assessment for Enterprise Resource Planning,” by Crowe, Thomas J., José Zayas-Castro and Sompop Vanichsenee, Conference Proceedings IAMOT 2002 Conference, Miami, FL
- “The Learning Factory - Integrating Design, Manufacturing And Business Realities Into Engineering Curricula - A Sixth Year Report Card,” John S. Lamancusa, Jens E. Jorgensen, José L. Zayas-Castro, Lueny Morell de Ramirez, International Conference in Engineering Education (ICEE) 2001, August 6-10, 2001, Oslo-Norway.
- “Distance Learning between Two Countries: A Rationale for Distance Education Methodology,” by Stevenson, Johnissia, Eric Epperson, Rose Marra, José Zayas-Castro, Tom Noack, Harry Tyrer, ASEE 2001, Albuquerque, NM.
- “The Learning Factory and ABET 2000,” by Morell, Jorgensen, Vélez, Torres, Zayas, Lamancusa, ASEE 2000, St. Louis, MO.
- “Curricular Innovations Outcomes Assessment,” by Morell, Zayas-Castro, Velez-Arocho, Torres, ICEE 1998, Brazil.
- “A Decade of Partnership: A Success Story of the University of Puerto Rico at Mayagüez and Raytheon Corporation,” by Johnson, Morell, Vasquez-Espinosa, Fernandez-Sein, Velez, Zayas-Castro, Bujosa, Rodriguez, ICEE 1998, Brazil

- "Developing and Assessing Teamwork Skills in a Multi-disciplinary Course," by Morell, Zayas-Castro, Velez-Arocho, Torres, FIE 1998, Tempe, Arizona
- "Confidence Intervals for Cpk when the Underlying Distribution is Weibull," by Artilles-Leon, Zayas-Castro, Ramirez, IEMS-98, Coco Beach, FL, March 1998.
- "Some Assessment Tools for Evaluating Curriculum Innovations Outcomes," Morell, Zayas-Castro, Velez-Arocho, ASEE 1998, Seattle, WA.
- "Outcomes Assessment Results of a Multi-Institutional Curriculum Project," by Morell, Zayas-Castro, Lamancusa, Jorgensen. Frontiers in Education, Pittsburgh, PA, Nov. 1997.
- "An Educational Program in Products and Processes Realization," Frontiers in Education, by Jorgensen, Lamancusa, Zayas-Castro Pittsburgh, PA, Nov. 1997.
- "Making a Partnership Work: Outcomes Assessment of a Multi-Task, Multi-Institutional Project," by Morell, Zayas-Castro, Lamancusa, and Jorgensen, Proc. 1997 ICEE International Conference on Engineering Education, August 1997, Chicago, Ill (refereed).
- "Making a Partnership Work: Outcomes Assessment of a Multi-Task, Multi-Institutional Project," by Morell, Zayas-Castro, Lamancusa, and Jorgensen, ASEE World Conference, Milwaukee, June 1997.
- "A Summative Assessment Strategy for a Multi-Institutional, Multi-Task Project: the Case of the Manufacturing Engineering Education Partnership," by Morell, Zayas-Castro, Lamancusa, Jorgensen and others, Frontiers in Education 1996, Utah (refereed).
- "Outcomes Assessment of a Multi-Institutional, Multi-task Project: the Case of the Manufacturing Engineering Education Partnership," by Morell, L., Zayas, J.L., Lamancusa, J. Jorgensen, J., Frontiers in Education Conference, Utah, November, 1996.
- "Concurrent Engineering: A Partnership Approach," by Smith, Barton, Novatek, Zayas-Castro, ASEE, Wash. D.C., 1996.
- "The Learning Factory: A new Approach to Integrating Design and Manufacturing Into Engineering Curricula," by Lamancusa, Jorgensen, Zayas-Castro and Ratner, Proceedings, ASEE 1995, Anaheim, CA.
- "The Design of a Skill-based Course Focused on Student Outcomes: A Partnership Template," by Morell, Zayas-Castro, Vélez-Arocho, ASEE 1995, Anaheim, CA.
- "The Learning Factory: A new Approach to Integrating Design and Manufacturing Into Engineering Curricula," by Lamancusa, Jorgensen, Zayas-Castro and Ratner, Proceedings, ASEE 1995.
- "The Design of a Skill-based Course Focused on Student Outcomes: A Partnership Template," by Morell, Zayas-Castro, Vélez-Arocho, ASEE 1995.
- "The Design of an Interdisciplinary Manufacturing Course: Focusing on Student Outcomes," by Morell, Zayas-Castro and Vélez-Arocho, Engineering Education Congress XXIII UPADI, Acapulco, Mexico, Spring 1994.
- "Yield Improvement Through SPC and DOE," by González, M., J. L. Zayas-Castro ASQC - Transactions, 46th Annual Quality Congress, 1992.

Doctoral Dissertation

- "Research and Development, Strategic Factors and Profitability," Ph. D. Dissertation, 1983, Lally School of Management, Rensselaer Polytechnic Institute.

Technical Reports

- Description and Analysis of the TACLAN Training System - Final Report – Year 1: Improvement of the Training System, (with A. Savachkin, P. Schnitzler, A.Yalcin, A. Bhattacharya, A. Santana-Reynoso, A. Santander, M. Bounds), September 2008
- Description and Analysis of the TACLAN Training System - Phase III: Improvement of the Training System, (with A. Savachkin, P. Schnitzler, A.Yalcin, A. Bhattacharya, A. Santana-Reynoso, A. Santander, M. Bounds), September 2008
- An Economic Sequential Probability Ration Test (ESPRT) Approach to Enhance Surveillance Alert Utility of Biodefend™ (Das (PI), J Zayas-Castro, K. Reeves, Dayna Martinez), July 2008
- Description and Analysis of the TACLAN Training System - Phase II: Improvement of the Training System, (with A. Savachkin, P. Schnitzler, A.Yalcin, A. Bhattacharya, A. Santana-Reynoso, A. Santander, M. Bounds), April 2008

- Description and Analysis of the TACLAN Training System - Phase I: Preliminary Results, (with A. Savachkin, P. Schnitzler, A. Yalcin, A. Bhattacharya, A. Santana-Reynoso, A. Santander, M. Bounds), December 2007.
- Simulation, Analysis and Re-Design of Security Checkpoints at Major Commercial Airports, Final Report (with A. Yalcin (PI), G. Centeno and others), January 2006.
- Engineering Service at H. Lee Moffitt Hospital, Tampa, FL, Progress Report, (with Jana Iezzi, M. Weng, Grisselle Centeno, Kiara Pérez and others), April 2005.
- Simulation, Analysis and Re-design of Security Checkpoints at Major Commercial Airports, Progress Report (with A. Yalcin (PI). G. Centeno and others.), March 2005, UCITSS.
- Vehicle Passenger Access System (VPAS) Simulation Model and Analysis, Progress Reports Jan-March 2005, (with Michael Weng and Ali Yalcin and others)
- IGERT-Bio Skins – Assessment Progress Report, (with Tara McCoy), Fall 2004, USF.
- VISS System Performance Modeling and Simulation (with Ali Yalcin and Michael Weng), May 2004, STS International.
- EMILE – Progress Report, NSF (with Thomas J. Crowe and others), 2002, University of Missouri-Columbia.
- Business Process Re-Engineering in the office for Academic and Research Affairs at the College of Engineering-UPRM (with Nicolás Salazar 1998).
- Design of an Activity Based Costing System for Hanes-Menswear Manufacturing (with J. Romero, Vilmari García and L. Padilla 1998).
- Computerized Information System and ABC at Baxter Dade (with Luis Mañan, 1995).
- Design of an Activity Based Cost System and Its Impact on Total Quality (with Carlos Oliveras) 1995.
- Improvement of Operations Management at Magna Medical Through the Use of World Class Techniques (with Juan Martínez) 1993-94.
- Design of an Activity Based Cost System at Baxter Dade. (with Alejandro Abreu/Carlos Oliveras) 1992-93.
- Interdisciplinary Manufacturing Engineering Education (Various reports- 1990-93 with A. Rullán, R. Fernandez-Seín, I. Baigés, L. Rosario, Jorge Velez-Arocho)
- The Basics of Engineering Design, 1993 (with F. Toledo, L. Morell, B. Calcagno)
- Re-Design of Activity Based Costing at Hewlett Packard, 1992 (with A. Abreu)
- Systematic Analysis of Process Development-Surface Mount Technology, 1991 (with N. Artilles, V Cesaní, R. Sánchez)
- Simulation Requirements at the Service Entrances at the Luis Munoz-Marín Airport, 1990 (with F. Luyanda, A. Cedeño)
- Improving the Low Profiles Valves Manufacturing Through SPC and DOE, 1990 (with V. Mundo)
- Micro-Computer Based System MMA-IBM Fishkill, 1989 (with Jack Allison, W. Padín, E. Baez)
- R & D Strategic Determinants at Digital-Puerto Rico, 1989 (with J. Rodríguez, A. Dykyj, M. Oliveras)
- Interdependency Information System-BellCore, 1989 (with Max Figueroa)
- Reduced Scale Work Station, 1987 (with J. Villa, L. Rodríguez)
- Yield Optimization Through Design of Experiments, 1987 (with M. González)

ACADEMIC AND PROFESSIONAL PRESENTATIONS & TALKS (NON-REFEREED)

- **Panelist**, Deans' Roundtable, 34th Annual McKnight Fellows' Meeting & 22nd Annual Graduate School Conference, November 2018, Tampa, FL
- **Panelist**, "Calidad de la Investigación Universitaria," ("Quality of University Research"), Cátedra Global, Universidad del Norte, Barranquilla, Colombia, August 2018
- **Judge**, Research Fair, Cátedra Global, Universidad del Norte, Barranquilla, Colombia, August 2018
- **Judge**, Research Fair, Cátedra Global, Universidad del Norte, Barranquilla, Colombia, August 2017
-
- **Key Note- Speaker** ("Lider Académico"), "Re-thinking Healthcare Through Industrial & Systems Engineering," Instituto Tecnológico de Monterrey, Campus Guadalajara, Guadalajara, Mexico, September 2012
- **Panelist**, "Developing an Industrial Engineering and Health Care Research Agenda, Final Report by: R. Valdez, P. Brennan, T. Zayas-Cabán, C. Klein, P. Jonathan White," IERC, Cancún, MX, June 2010

- **Panelist**, “How HSE programs can better organize and work together – the case of HEA (Healthcare Engineering Alliance,” Healthcare Systems Engineering Research and Education Leadership Workshop University of Arkansas, Fayetteville, Arkansas, May 20-21, 2010
- **Presenter**, “Vision on Systems Analysis, Change & Implementation Theories,” AHRQ/NSF, Industrial & Systems Engineering and Health Care: Critical Areas of Research Workshop, Washington DC, September 2009
- **Speaker**, “Developing Comprehensive Patients’ Profiles to Enhance Timely Disease Diagnostic,” Alcides Santander-Mercado, J. Zayas-Castro, Peter J. Fabri; IERC – Vancouver, CN, May 2008
- **Speaker**, “A Synthesis Approach to Modeling Hospital-Based Clinical Pathways,” Abhik Bhattacharya, J. Zayas-Castro, Peter Fabri; IERC – Vancouver, CN, May 2008
- **Poster**, “Near-Miss Analysis to Reduce Errors in Outpatient Health Care Settings,” Laila Cure, J. Zayas-Castro, and Peter J. Fabri; IERC – Vancouver, CN, May 2008
- **Speaker**, “Disease Management Through Modeling,” HEA Symposium, Raleigh, NC, April 7, 2008
- **Speaker**, “Diversity & Engineering Education in the 21st Century,” Raytheon, St. Pete, FL, Sept 20, 2007
- **Speaker**, Congreso Internacional de Ingeniería Industrial, Universidad de Las Americas, Puebla, Mexico, March 2007
- **Speaker**, “The Learning Factory,” CalPoly, San Luis Obispo, November 2006
- **Speaker**, “Toma de Decisiones Usando Herramientas Estadísticas,” Congreso Internacional de Ingeniería Industrial, Instituto Tecnológico de San Luis Potosí, San Luis Potosí, Mexico, October 2006
- **Speaker**, “The Learning Factory,” Universidad del Norte, College of Engineering, Barranquilla, Colombia, September 22, 2006
- **Speaker/Panelist**, “Challenges in Education the Engineer for 2020,” ACOFI Conference, Colombian Association of Colleges of Engineering, Cartagena, Colombia, September 21, 2006
- **Speaker**, “The Learning Factory,” ACOFI Conference, Colombian Association of Colleges of Engineering, Cartagena, Colombia, September 20, 2006
- **Speaker**, “Innovación Tecnológica, Economía del Conocimiento y Desarrollo Sostenible,” (Technological Innovation, Knowledge Based Economy and Sustainable Development), 2do. Congreso Nacional de Ciencias y Tecnología, U. Tecnológica de Panamá, Panamá, August 9-12, 2006
- **Speaker**, “The Life of the Professor,” 2006 SUS/USF Summer Program, Marshall Center, June 30, 2006
- **Speaker**, “Process Redesign in Hospital Environment,” Healthcare Systems Engineering Workshop, NSF, June 16, 2006
- **Speaker (Keynote)**, “The Strategic Work & Direction of IIE,” IEM Conference 2006, University of West Indies, Trinidad, June 2006
- **Speaker**, “Research in Healthcare,” Universidad del Mayab, Merida, Mexico, October 2005
- **Speaker/Panelist**, “The Industrial Engineer of Yesterday, Today and Tomorrow,” 50th Anniversary, Department of Industrial Engineering, UPR-Mayagüez, Mayagüez, PR, August 19-21, 2004.
- **Speaker**, “Research Opportunities in IMSE,” UPR-Mayagüez, January 2004.
- **Speaker**, “Relevance and Experiences of Interdisciplinary/Multidisciplinary Collaborations and Experiences: A Perspective,” University of Puerto Rico-Río Piedras, San Juan, PR November 2003.
- **Speaker**, “EMILE: A concerted tech-based entrepreneurship effort between Engineering and Business,” ASEE 2002, Montreal, Canada.
- **Workshop** “Implementing ABET 2000: The Learning Factory – A Model,” at the University of El Paso, Texas, October 1998; Southern University, Feb. 1999, North Carolina A&T, May 1999; ASEE 1999-Arizona; ASEE 2000-St. Louis, MO.
- **Speaker**, “Holistic Engineering Education,” Spring 1998, UPRM.
- **Speaker**, “Decision Making Models Using Activity Based Costing in Puerto Rican Dairies,” Annual Scientific Meeting of the Puerto Rican Society of Agricultural Sciences, November 1997.
- **Speaker**, “Interdisciplinary Education in Science and Engineering,” Plenary session - 1st Confraternization for Engineering students in Puerto Rico, Univ. of El Turabo, Fall 1995.
- **Speaker**, “Panel of: The Impact of Globalization on the Industrial Chemical Processes,” Global Awareness Program-UPRM, April 1994.
- **Speaker**, “Benefits and Barriers to Interdisciplinary Education,” College of Engineering, UPRM, Spring 1994.
- **Speaker**, “Concurrent Engineering,” Global Awareness Day, UPRM, Fall 1994.

- **Evaluator/Committee Member**, Puerto Rico 2000, San Juan, PR, 1992- Present
- **Speaker**, "TQM in Education," Puerto Rican Asociation for Higher Education, Fall 1993, San Juan.
- **Speaker**, "Activity Based Costing," Week of the Accountant, Joint Meeting for Baxter-Eduards and Baxter-Bentley, El Mesón, Mayaguez, April 1993.
- **Speaker**, "Motivation as a Resource for Better Project Construction Management," 19th AGC Conference, Dorado, PR, August 1992
- **Speaker**, "Yield Improvement Through SPC & DOE," 46th. Quality Congress, Nashville, Tennessee, May 1992
- **Co-Speaker** (with Dr. Noel Artilles), "Process Quality Improvement Through Design of Experiments at an Electronic Manufacturing Firm," ORSA/TIMS Joint National Meeting, Anaheim, CA, November 1991
- **Speaker**, "Important Factors for Puerto Rico Competitive Position in the XXI Century," CAPOTECO, WPAB Radio Station, Ponce, P.R., September 1991
- **Speaker**, "Yield Improvement Through SPC and DOE," First Puerto Rican Annual Quality Congress, San Juan, P.R., September 1991
- **Research Advisor**, "Activity Based Costing," by Mr. Alejandro Abreu, 26th Junior Technical Meeting 11th Interdisciplinary Scientific Meeting, Cayey, PR, March 1991
- **Research Advisor**, "A Decision Tool for Modeling Manufacturing Systems," by Ms. Zaida Ramírez, 26th Junior Technical Meeting 11th Interdisciplinary Scientific Meeting, Cayey, PR, March 1991
- **Research Advisor**, "Modeling a Flexible JIT Manufacturing Systems," by Ms. Sandra González, 26th Junior Technical Meeting 11th Interdisciplinary Scientific Meeting, Cayey, PR, March 1991
- **Alpha Pi Mu** (I.E. Honor Society), Speaker, "Graduate Studies in Manufacturing Engineering at the College of Engineering-UPRM," February 1991.
- **Facilitator**, "Quality Control Techniques in Road Construction," Transportation Technology Transfer Center, Civil Engineering Department, UPRM, April 1990.
- **Speaker**, "Statistical Process Control," World Class Manufacturing Excellence Conference, Sponsored by IIE-Chapter 188, Sands Hotel, San Juan, P.R., March 1990.
- **Speaker**, "Tools and Techniques for World Class Excelence," WEUC- Catholic Radio Station, CAPOTECO-Sponsor: College of Engineers and Land Surveyors, Ponce Chapter, Ponce, P.R., March 1990.
- **Panelist**, "The Situation at the UPRM Campus," Moderator: Mr. Totti Figueroa in "Comunicando," Channel 22, Mayagüez, P.R., January 1990.
- **Speaker**, "Statistical Process Control," IIE - Chapter 188 Conference, Cerromar-Hyatt Hotel, Dorado, PR, June 1989.
- **Speaker**, "The Industrial Engineering Career," WEUC-Catholic Radio Station, CAPOTECO- Sponsored by the College of Engineers and Land Surveyors, Ponce Chapter, Ponce, P.R., March 1989
- **Speaker**, National Quality Forum: Statistical Process Management, UPRM, October 1988, Mayagüez, P.R.
- **Referee**, V Pan American Congress of Traffic and Transportation Engineering, UPRM, PR
- **Speaker**, Perspectives of Development at the Department of Industrial Engineering and the School of Engineering, Primer Reencuentro Industrial, Recinto Universitario de Mayagüez, P.R., March 1988
- **Speaker**, Impact of Quality Control on the Economic Development of Puerto Rico, WKAQ Radio, Hato Rey, P.R., October 1987
- **Speaker**, Impact of Total Quality in Improving the Standard of Living in Puerto Rico, WKAQ Radio, Hato Rey, P.R. April 1987
- **Chairman and Member**, Evaluating Committee of Candidates for Graduate Scholarships in Industrial and Management Engineering, Economic Development Administration, Hato Rey, PR, 1987- 1998.
- **Co-Chairman/Evaluator** Engineering group 1987 International Science and Engineering Fair, Roberto Clemente Coliseum, PR, May 1987
- **Speaker**, The Industrial Engineer in the Validation of Pharmaceutical Processes, IIE-Oeste Chapter 236, P.R., Nov. 1986
- **Speaker**, The Office of the Future, APICS-Oeste Chapter 241, PR, July 1986
- **Speaker**, New Trends in Engineering Science and Technology, Digital Equipment Corporation, PR, - Week of the Engineer -, Club Deportivo, Cabo Rojo, May 1986
- **Speaker**, Back to Basics in Quality and Productivity Improvement, APICS-Oeste Chapter 241, P.R., April 1986

- **Evaluator - Group Leader**, 7th. Puerto Rican Science and Engineering Fair, Interamerican University at San German, PR, April 1986
- **Speaker**, Effective Economic Justification, Institute of Industrial Engineers-College of Engineers and Surveyors, San Juan, PR, January 1986
- **Speaker**, Office Automation: Productivity Systems, Institute of Industrial Engineers 188, Convention Center, Condado, P.R., May 1985
- **Coordinator and Moderator**, Entrepreneurial Opportunities for the Industrial Engineer, Department of Industrial Engineering, UPRM, Mayagüez, P.R., April 1985
- **Research Advisor**, Automatización en la Oficina: Un Laboratorio Clínico (Office Automation: A Clinical Laboratory) by Ms. Carol Hutchison, 20th Junior Technical Meeting 5th Interdisciplinary Scientific Meeting, Humacao, PR, March 1985
- **Research Advisor**, Productividad: Medición y Control (Productivity: Measurement & Control) by Ms Damaris Colón, 20th Junior Technical Meeting 5th Interdisciplinary Scientific Meeting, Humacao, P.R., March 1985
- **Graduate Staff Member**, 1982 Interface: XIV Symposium on the Interface of Computer Science and Statistics, Rensselaer Polytechnic Institute, Troy, N. Y.

PROFESSIONAL AND SERVICE ACTIVITIES

National/International Committees

- **Member**, International External Review Committee, CORFO Innova Chile, Spring 2014- Present
- **Member**, Advisory Board, Department of Industrial & Systems Engineering, Rensselaer Polytechnic Institute, Troy, NY, 2012- 2015
- **Member**, IIE 2018 Annual Conference – Host/Planning Committee, Orlando, FL
- **Member**, IIE 2013 Annual Conference – Host/Planning Committee, San Juan, PR
- **Member**, Organizing Committee, & Track Co-Chair, World Engineering Education Forum (WEEF) 2012, Buenos Aires, Argentina
- **Member**, IIE 2012 Annual Conference – Host/Planning Committee, Orlando, FL
- **Member**, Committee of Visitors (COV) to IIP Division, National Science Foundation, 2009-10
- **INFORMS session Chair** (various)//Advisor USF Student Chapter, 2005- Present
- **IERC Session Chair & Forum Coordinator** (several times)
- **Co-Chair, Committee of Visitors (COV) and Advisory Committee**: Division of Design and Manufacturing Innovation (DMI), National Science Foundation, 2006.
- **Sr. VP – International**, Board of Trustees, IIE, 2005-2007
- **IIE**, translation/Reviews – English to Spanish and vice-versa, several times (most recent Sept 2010)
- **Chair**, Council of Industrial Engineering Academic Department Heads, CIEADH, 2005-2006
- **Chair Elect**, Council of Industrial Engineering Academic Department Heads, CIEADH, 2004-05
- **Member**, Committee of Visitors (COV) to SBIR/STTR, National Science Foundation, 2003-04
- **Member**, Council of Industrial Engineering Academic Department Heads, CIEADH, 1987-90, 2002-Present.
- **Member**, Committee of Visitors (COV) and Advisory Committee: Division of Design, Manufacture and Industrial Innovation, National Science Foundation, 2000-2003.
- **Member**, Advisory Committee: SBIR/STTR, National Science Foundation, 2000-2003.

Reviewer

- NSF various programs and divisions since 1990
- "Strategic Outsourcing, An International Journal (SOIJ)," 2007- present.
- "Computers and IE" – 2004 – Present
- "Benchmarking International Journal," 2001- present.
- "Division of Engineering Entrepreneurship – ASEE," 2000-present.
- "International Journal of Operations and Quantitative Management," 1998-present.
- "Pre-Doctoral Dissertations and Post-Doctoral Fellowships in Science and Engineering-Ford Foundation,"
- National Research Academy, Washington D.C., Spring 1994/Spring 1995/Spring 1996/Spring 2005.

University Related

- **Member**, USF Advisory Board, Office of Corporate Partnerships, 2018- Present
- **Member**, Search Committee, Associate Dean for Research, College of Nursing – USF, 2017-18.
- **Member**, USF Search Committee for the Purchasing Director, 2016-2017.
- **Member**, USF-RCM Advisory Committee, 2016- Present.
- **Chair**, Search Committee for the Executive Director of Center for Urban Transportation Research (CUTR), USF- College of Engineering, 2015-2016
- **Member**, USF Research Strategic Planning Committee, 2015-2016
- **Member**, USF – RCM – Transition Workgroup in ORI, Fall 2015- Present
- **Member**, USF – RCM Central Support Services Advisory Workgroup, Fall 2015- Present
- **Co-Chair**, Biomedical Engineering Initiative Task Force (Engineering & Medicine), 2015-2017 (led to the establishment of the Department of Medical Engineering between the Colleges of Engineering and Medicine).
- **Chair**, Search Committee for Faculty in Cybersecurity, USF- College of Engineering, Fall 2014- Present
- **Member**, USF – Distinguished University Professor, Discipline Committee, spring 2013, spring 2018
- **Member**, Search Committee for the Associate Dean for research & Graduate Programs, College of Business, USF, 2012-13.
- **Chair**, Search for three staff hires (Administrative Specialist, Academic Service Administrator, Health & Safety Manager), Dean’s Office, College of Engineering, USF, 2012-13.
- **Member**, Search Committee for Director of Government Relations, College of Engineering, USF Summer 2011
- **Member**, Search Committee for the University’s Chief Operating Officer, USF, Fall 2010- Spring 2011
- **Chair**, Search Committee for the Chairperson of Mechanical Engineering, USF, Fall 2010- Spring 2011
- **Chair**, Search Committee for the Academic Services Administrator, IMSE, USF, Fall 2010-Spring 2011
- **Member**, Search Committee for the Director of Student Services, College of Engineering, Fall 2010- Spring 2011
- **Participant**, EDUCATION ROUND TABLE, Locational Assessment and Strategic Plan for Economic Growth, Tampa Hillsborough Economic Development Corporation, Thursday, April 15, 2010
- **Member**, College of Business Search Committee for a Faculty in Entrepreneurship, USF, 2009- 2010
- **Member**, Mechanical Engineering Search Committee for a Chairperson, USF, Fall 2009- 2010
- **Member**, Computer Science & Engineering Search Committee for a Faculty in Bioinformatics, USF, 2008- 2009
- **Dean’s Advisory Group** in Biomedical Engineering, College of Engineering, USF, Fall 2008
- **Member** (CoE Representative), Advisory Chairs Group to USF Provost, USF, 2008- 2010
- **Budgetary Advisory Taskforce**, Provost’s office, Chair for the Natural & Physical Sciences Sub-Committee, USF, January 2008- 2009
- **Reviewer**, Diverse Student Success Fellowships (DSS), USF, 2007- 2012
- **FAIR System Advisory Committee**, USF, 2007- Present
- **Distinguished University Professor (DUP) Selection Committee**, 2007-2009, University of South Florida
- **Sloan Foundation Departmental Coordinator**, IMSE – USF, 2005- 2011
- **Member**, Search Committee for the Dean of the College of Business Administration at USF, 2005-06.
- **Advisor**, USF INFORMS Student Chapter, 2005- Present
- **Coordinator**, SBIR/STTR (NSF-NIH) Participation in FMMC Symposium and presentations at USF, April 26-28, 2005.
- **Member**, Industrial Advisory Committee, FL-ATE, 2005-Present.
- **Member**, Search Committee for the Dean of the College of Business, USF 2005.
- **Coordinator**, Foundations of Engineering, College of Engineering, USF, 2004-2011.
- **Coordinator**, SBIR/STTR NSF Visit to USF, August 2004.
- **Member**, Advisory Chairs Group to USF Provost, USF, 2003-2011.

- **Member**, Search Committee for Technical Director, College of Visual & Performing Arts, USF 2003-04.
- **Member**, Search Committee for the Vice-President of Academic Affairs & Provost of USF, 2003-04.
- **Member**, Advisory Chairs Group to USF President & Provost, USF, 2002- 03.
- **Member**, Campus Advisory Committee, HAMP – Phase II (Heartland Alliance for Minority Participation), UM-Columbia, 2001-02.
- **Member**, Ad-Hoc Committee, “Defining the Role of the Director of Graduate Studies,” Graduate School, UM-Columbia, Fall 2001.
- **Member**, Faculty Search Committee, Department of Management, College of Business, UM-Columbia, “Mission Enhancement Faculty Positions,” August 2001-P Present.
- **Member**, Faculty Search Committee, IMSE-UM-Columbia, “Mission Enhancement Faculty Positions,” October 2000- 2001.
- **EIT Review** – Engineering Economics, College of Engineering, University of Missouri-Columbia, 2000-2002.
- **Advisor/mentor DEP/CEMS Scholars**, Diversity for Engineering Program, College of Engineering, UM-Columbia, 2000- 2002.
- **Academic Advisor**, NSBE (National Society of Black Engineers), UM-Columbia Chapter, 2000- 2001.
- **Co-Advisor**, SHPE (Society of Hispanic Professional Engineers), UM-Columbia Chapter, 1999- 2002; UPRM-Chapter 1995-99.
- **UM-Columbia** Faculty Diversity Advisory Council, College of Engineering Representative, UM-Columbia, MO, 1999-2002.
- **Hispanic/Latin American Faculty and Staff Association (HLAFSA)**, UM-Columbia, MO, 1999-2002.
- **Organizing Committee**, Computers and IE Conference, San Juan, March 1997.
- **Organizing Committee**, First World Congress on Intelligent Manufacturing, UPRM, 1994-1995.
- **Member of the Advisory Board**, Global Awareness Program at the College of Business Administration, 1992- 1995.
- **Advisor to the SAC team** (Student Aid Center) to evaluate the feasibility of implementing the student ran enterprise. This enterprise became the first student owned venture at UPRM.
- **Co-Coordinator**, Hewlett-Packard Sponsored Technical Conferences in Emerging Trends in Manufacturing Engineering, College of Engineering, PR 1987- 1989.
- **Academic Advisor**, Graduate Students Association, I.E. Dept., 1991- 1994.
- **Academic Advisor**, Institute of Industrial Engineers- Student Chapter 891, UPRM, PR, 1984 – 1998.
- **Personnel Committee** (P&T), Department of Industrial Engineering, UPRM, Mayagüez, PR, 1987-1990; 1991-1995; 1998-99.
- **Committee for Academic Excellence at the College of Engineering**, UPRM, Mayagüez, PR, 1988-1991.
- **Committee for Manufacturing Engineering**, Coordinator, College of Engineering, UPRM, Mayagüez, PR 1987-1989.
- **Computing Committee**, College of Engineering, UPRM, PR, 1992- 1995.
- **Committee for Planning and Development**, Chairman, College of Engineering, College of Engineering, UPRM, Mayagüez, PR, 1986-1990; Member 1991-1992.
- **Committee for developing a Food Management Systems Program**, UPRM, Mayagüez, PR, 1985
- **Graduate Studies Committee**, Department of Industrial Engineering, UPRM, Mayagüez, PR, 1983-1990; 1997- 1998.
- **Project Design** (Capstone Course in I. E.), Coordinator, Industrial Engineering, UPRM, Mayaguez, P.R., 1986- 1999.
- **Statistics Courses Committee**, Coordinator, Department of Industrial Engineering, UPRM, Mayagüez, P.R., 1985-86.
- **Engineering Economics and Accounting Courses Committees**, Department of Industrial Engineering, UPRM, Mayagüez, PR, 1984-1999.

PROFESSIONAL DEVELOPMENT

- INFORMS, Phoenix, 2108
- Cátedra Global, Barranquilla, Colombia 2018

- IISE/ISERC, Orlando, 2018
- INFORMS, Houston, 2017
- Cátedra Global, Barranquilla, Colombia 2017
- IISE/ISERC, 2016
- INFORMS, Nashville, 2016
- Cátedra Estados Unidos, Barranquilla, Colombia 2016
- ASEE, New Orleans, 2016
- Cátedra Europa, Barranquilla, Colombia 2016
- Cátedra Estados Unidos, Barranquilla, Colombia 2015
- Cátedra Europa, Barranquilla, Colombia 2015
- IIE/IERC, Nashville, 2015
- INFORMS, San Francisco, CA, 2014
- IIE/IERC, Montreal, Canada, 2014
- INFORMS, Minneapolis, MN, 2013
- INFORMS Healthcare, Chicago, Ill, June 2013
- ASEE-NAE Workshop on "Identifying and Surmounting Impediments to Implementing Diversification Efforts in Engineering Education," NAE, Washington, DC, September 2013
- "Systems Approaches for Improving Health Innovation Collaborative, A joint project of the IOM Roundtable on Value & Science-Driven Health Care, and the National Academy of Engineering," IOM/NAE, Washington, DC, September 2013.
- IIE/ISERC - San Juan, PR, May 2013
- 19th Annual Institute on Teaching & Mentoring, Tampa, FL, October 2012
- WEEF 2012, Buenos Aires, Argentina, October 2012
- IIE/ISERC – Orlando, FL, May 2012
- INFORMS, Charlotte, NC, November 2011
- IIE/IERC – Reno, NV, May 2011
- INFORMS, Austin, TX, November 2010
- IIE/IERC – Cancún, MX, June 2010
- INFORMS, San Diego, CA, October 2009
- AHRQ/NSF, Industrial & Systems Engineering and Health Care: Critical Areas of Research Workshop, September 21-22, 2009, Washington, DC
- IERC/IIE Conference, Miami, FL, June 2009
- IERC/IIE Conference, Vancouver, CN, May 2008
- IOM Roundtable on Evidence-Based Medicine workshop. Engineering a Learning Healthcare System: A Look at the Future, April 29-30, 2008, Washington, DC.
- INFORMS, November 2007, Seattle, WA
- INFORMS International, July 2007, Rio Grande, PR
- IERC/IIE, May 2007, Nashville, TN
- INFORMS, November 2006, Pittsburgh, PA
- Healthcare Systems Engineering Workshop, NSF, June 15-16, 2006
- IERC/IIE Conference, May 2006, Orlando, FL
- INFORMS, November 2005, San Francisco, CA
- IERC/IIE Conference, May 2005, Atlanta, GA
- 2005, FMMC Symposium, Tampa, FL, April 26-27, 2005.
- 2005 NSF Design, Service and Manufacturing Grantees and Research Conference, Jan 2005, Phoenix, AZ
- INFORMS, October 2004, Denver, CO
- IERC/IIE Conference, May 2004, Houston, TX
- 2004 NSF Design, Service and Manufacturing Grantees and Research Conference, Jan 2004, Dallas, TX
- INFORMS, October 2003, Atlanta, Georgia
- IIE Conference, May 2003, Portland, OR
- 2003 NSF Design, Service and Manufacturing Grantees and Research Conference, Jan 2003, Birmingham, AL
- ASEE World Conference, June 2002, Montreal, Canada
- IIE Conference, May 2002, Orlando, FL

- 2002 NSF Design, Service and Manufacturing Grantees and research Conference, Jan 2001, San Juan, PR.
- ABET 2000 Evaluator Training Session, May 21, 2001, IIE, Dallas, TX (Trainers: M. Leonard, S. Schall, L. David)
- ASEE World Conference, June 2001, Albuquerque, NM
- IIE Conference, May 2001, Dallas, TX
- 2001 NSF Design, Service and Manufacturing Grantees and research Conference, Jan 2001, Tampa, Florida.
- NSF CRCD/AAECIP Annual Grantees Meeting, October 2000, Washington D.C..
- ASEE World Conference, June 2000, St. Louis, MO.
- IIE Conference, May 2000, Cleveland, OH.
- FIE, November 1998, Tempe, AZ.
- ASEE World Conference, June 1998, Seattle, WA.
- FIE, November 1997, Pittsburgh, PA.
- ASEE World Conference, June 1997, Milwaukee, WI.
- Annual Conference of SHPE, Philadelphia, PA, Jan 1997
- 1996 Frontiers in Education, Salt Lake City, Utah, Nov. 1996.
- ASEE World Conference, June 1996, Anaheim, CA.
- Ford Global Dean's Conference, May 1996, Detroit, MI.
- World Conference on Engineering Education, Fall 1995, St. Paul, Minnesota
- TRP/MEP Conference by NSF, San Diego, CA, Summer 1995.
- ASEE Annual Conference, Anaheim, CA, Summer 1995.
- "Developing a Data Base for Institutional Assessment," by Dr. T. Sanford, UPR-R P, October 21, 1994.
- Pre-Conference: "Renewable Energy for Latin America and the Caribbean: Opportunities and Empowerment for Experts and Consultants, June 17, 1994, San Juan, PR
- ASHE: "Assessment & Quality", Washington DC, June 11-15, 1994
- AMP: "Assessment and Evaluation of Curricular Innovations," by Dr. Brian Coppola, University of Michigan, April 1994
- Florida Association of College Stores, West Palm Beach, Florida, March 1992.
- IEE/ASEE/NSF: Frontiers in Education Conference, Nashville, Tennessee, November 1992.
- AGC Annual Conference-PR Chapter, Dorado, PR, September 1992
- ASEE Annual Conference, Toledo, Ohio, June 1992
- ASQC 46th. Annual Congress, Nashville, Tennessee, May 1992
- IIE International Conference, Detroit, Michigan, May 1991
- Teaching Statistical Process Control, Johnson & Johnson, New Jersey, March 1990.
- IIE-Chapter 188 Conference, San Juan, Puerto Rico, September 1990
- IIE International Conference, San Francisco, California, May 1990
- IIE Chapter 188 Conference, Dorado, Puerto Rico, September 1989
- IIE International Conference, Toronto, Canada, May 1989
- Conference on the Humanities and Social Component in Undergraduate Engineering Education, Sponsored by the Accreditation Board for Engineering and Technology and the American of American Colleges, Baltimore, Maryland, June 1988.
- IIE International Conference, Orlando, Florida, May 1988
- IIE National Convention & World Productivity Forum, Washington, D. C., May 1987
- Expert Systems in Manufacturing, San Juan, PR, May 1987, by Dr. A. A. Arroyo and Dr. L. Martin-Vega
- AIIE Chapter 188 Annual Convention, Caribe Hilton, San Juan, PR, May 1986
- Proposals Development for the Agency for International Development (AID), State Department of the Commonwealth of Puerto Rico, Convention Center, Condado, July 1985
- Small Businesses Opportunities in Puerto Rico, Chamber of Commerce, San Juan, PR, April 1985
- Productivity Measurements and Improvement Strategies and Techniques, by Dr. Scott Sink, June 1984, Caribe Hilton, San Juan
- Introduction to the C language, Mr. Jerry Marengo, Bell Communications Research, UPRM, December 1984
- Introduction to the UNIX operating System, Ms. Patricia Felder, Bell Communications Research, University of Puerto Rico -Mayagüez, May 1984

- Using Dbase II and Lotus 123, Mr. Adam B. Green, Software Bank Seminars, Washington D. C., January 1984
- AIIE Spring Conference, Toronto, Canada, May 1978

GRADUATE COMMITTEES

Ph.D. Committees

Major Professor (or Co-Major Prof.)

Mr. Hasan Symum	in progress	USF
Mr. Jorge Acuña-Melo	in progress	USF
Ms. Jennifer Mendoza-Alonzo	in progress	USF
Mr. Andrés García	graduated 2017	USF
Ms. Yazhuo Liu	graduated 2105	USF
Mr. Diego Martínez-Cea	graduated 2015	USF
Ms. Mónica Puertas	graduated 2014	USF
Ms. Laila Cure	graduated 2011	USF
Mr. Alcides Santander	graduated 2011	USF
Mr. Peter J. Fabri, MD	graduated 2007	USF
Mr. Jonathan J. Bates	graduated 2007	USF
Mr. Humberto Alvarez (Co-Major)	graduated 2002	UM-Columbia
Mr. Sangwook Kim (Co-Major)	graduated 2002	UM-Columbia

Master's Thesis/Project

Chairperson (or Co-Chairperson)

Ms. Alesandra Strauss (also MD)	graduated 2013	USF
Ms. Jennifer Mendoza-Alonzo	graduated 2013	USF
Ms. Courtney Feliciani	graduated 2011	USF
Ms. Meredith Bounds	graduated 2010	USF
Mr. Ramzi Sinokrot	graduated 2009	USF
Mr. Abhik Bhattacharya	graduated 2009	USF
Ms. Jana Iezzi	graduated 2006	USF
Ms. Vuslat Nazilli	graduated 2005	USF
Mr. Ian Elius	graduated 2005	USF
Mr. Sompop Vanichsenee (Co-Chair)	graduated 2002	UM-Columbia
Ms. María Baez	graduated 1998	UPRM
Mr. Johny Romero	graduated 1998	UPRM
Mr. Nicolás Salazar	graduated 1998	UPRM
Mr. Socrates Dotel	graduated 1997	UPRM
Ms. Isabel Ramírez	graduated 1997	UPRM
Mr. Luis Mañan	graduated 1996	UPRM
Mr. Carlos Oliveras	graduated 1995	UPRM
Mr. Juan Martínez	graduated 1994	UPRM
Mr. José Velazco	graduated 1994	UPRM
Mr. Armando Fajardo	graduated 1994	UPRM
Ms. Blanca Tallaj	graduated 1994	UPRM
Ms. Yuderki Tejada	graduated 1993	UPRM
Mr. Alejandro Abreu	graduated 1993	UPRM
Ms. Zaida Ramírez	graduated 1992	UPRM
Ms. Sandra González	graduated 1992	UPRM

Mr. Benjamín Lizardo	graduated 1991	UPRM
Mr. Víctor Mundo	graduated 1991	UPRM
Mr. Ricardo Albino	graduated 1991	UPRM
Ms. Angela Cedeño	graduated 1990	UPRM
Mr. Roque Sánchez	graduated 1990	UPRM
Mr. Héctor Ortiz	graduated 1989	UPRM

Committee Member: (PhD at University of South Florida)

Ms. Mona Haghioghi	Mr. Patricio Rocha
Mr. Seyed Javad Sajjadi	Mr. Ozan Ozcan
Mr. Gang Liu	Mr. Vishnuteja Nanduri
Mr. Florentino Rico	Mr. Xi Zhang
Mr. Long Zhao	Mr. Cihan Babayigit
Mr. Oguz Cimenler	Mr. Hui Wang
Mr. Alfredo Santana	Mr. Luis Otero
Mr. Andrés Uribe	Mr. Rajesh Ganesan

Committee Member: (Masters at University of South Florida)

Mr. Gang Liu	Ms. Paula López
Mr. Arka Bhattacharya	Mr. Alok Buch
Mr. Vijay Veerachandran	Mr. Sandeep Iyer
Mr. Hani Kababji	Ms. Radhika Poolla
Mr. Balaji Rajan	Mr. Pranav Deshpande
Mr. Bharath Natarajan	Ms. Santosh Kothamasu
Mr. Chaitanya Damle	Mr. Sanket Gupte
Mr. Steve Christian	

Committee Member: (Masters at UPRM)

Mr. Harry Ramírez	Mr. Ricardo Pérez
Mr. Joseph Nair	Ms. Nilda Ríos
Mr. Jaime Montes	Ms. Celia A. González
Mr. Omar Rosado	Ms. Indhira Caraballo
Ms. Carolina Domenech	Ms. Gloria García
Mr. José Mejías	Mr. José Castro
Ms. Gloria Godoy	Mr. Néstor Porcell
Mr. Gabriel Ferrer	Ms. Rosa Milagros Espino
Ms. María Medina	Mr. Jorge Pagán
Ms. Rosa María Espino	Mr. Rolando Quesada
Mr. Luis Nieves de Jesús	

External Committee Member: (PhD at other institutions)

Ms. Martha T. Ramirez-Valdivia, Catholic University, Chile, S.A. - July 2010

COURSES TAUGHT

Healthcare Systems Engineering	U. of South Florida (USF) – Honors College
Human Error & Patient Safety	USF Health – Interdisciplinary/team taught (several times)
Technology & Finance	USF (several times)

Statistical Optimization Models	USF
Research for Undergraduates	USF (several times)
Graduate Research Seminar	USF (several times)
Capstone Design (prev. Facilities Design II)	USF (several times)
Statistical Process Control	USF
Enterprise Conception	UM-Columbia (team-taught- engineering and business)
Supply Chain Management	UM-Columbia (team-taught)
Research Seminar	UM-Columbia
Probability and Statistics	UPRM & UM-Columbia
Engineering Economy	UPRM & UM-Columbia (several times)
Production and Operations Mgt.	UPRM (several times)
Information Systems	UPRM (several times)
Statistical Design of Experiments	UPRM (several times)
Capstone Design	UPRM (several times)
Technology Based Entrepreneurship	UPRM (team-taught – engineering and business)
Concurrent Engineering	UPRM (several times)
Accounting for Engineers	UPRM (several times)
Cost Accounting for Engineers	UPRM (several times)
Research for Undergraduates	UPRM (several times)

NON-ACADEMIC ACTIVITIES

- **Member, Most Sacred Heart of Jesus**, Gulfport, FL 2014- present
- **Member, MOSI National Hispanic Scientist Committee**, Tampa, FL, 2012- present
- **Member, Holy Cross Parish**, Palmeto, FL, 2003- 2013
- **Member, USF Catholic Center**, Tampa, FL 2002-2005
- **Member, Parish Council**, Newman Center, UM-Columbia, Columbia, MO, 2001-2002.
- **Member, Board of Directors, “Adelante,”** (Hispanic Bilingual Newspaper), Columbia, MO, 2000- Jan 2001.
- **Contributing Writer and Translator, “Adelante”**, Columbia, MO, 2000-2002.
- **Eucharistic Minister**, Newman Center-UM-Columbia, Columbia, MO 1999-2002.
- **Member**, Parish Council, El Buen Pastor Parish, Mayagüez, PR 1999.
- **Eucharistic Minister**, El Buen Pastor Parish, Mayagüez, PR 1998-2000.
- **President**, Parents & Teachers Association, Immaculate Conception Academy-High School, 1997-98; 1998-99.
- **Vice-President** (1998-99), Director & Acting Secretary (1997-98), Vice-President(1996-97), Treasurer(1994-95), Secretary(1993-94), Member (since 1992), Board of "Liga de Baloncesto Infantil Jaime Frontera," (Infant/Youth Basketball League), Mayagüez, PR
- **Assistant Coach** ICA-Elementary, Spring 95, Mayagüez PR
- **Assistant Coach**, "Equipo Pre-Futuras de Mayagüez - Campeón de Puerto Rico 1992-93."(Infant Basketball Team)/Pre-Biddy-LBIJF 1992-93 (Participated in the National Tournament, New Orleans, March 1993).
- **Member**, Parish Council, "El Buen Pastor," Mayagüez, PR 1991-93.
- **Chairman**, Academic Affairs Committee; and Member, Sports Committee, Immaculate Conception Academy (PTA), Mayagüez, PR, 1990- 1991.
- **Advisor**, José Gautier Benítez School, Mayagüez, P.R. Advise in security and physical layout improvement, Mayagüez, Puerto Rico, Spring 1990.
- **Member**, Recreational Association, first section, Alturas de Mayagüez, Mayagüez, Puerto Rico, 1988-1991.
- **Assistant Treasurer**, Parents and Teachers Association, Immaculate Conception Academy, Mayagüez, Puerto Rico, 1988-89.

- **Vice-President**, Parents and Teachers Association, Immaculate Conception Academy, Mayagüez, Puerto Rico, 1987-88.
- **Representative**, Parents and Teachers Association, Immaculate Conception Academy, Mayagüez, Puerto Rico, 1986-87.