

## José L. Zayas-Castro, Ph.D.

### PERSONAL:

Date of Birth: August 25, 1955      Citizenship: U.S.A.  
Place of Birth: Ponce, PR      Married, three grown children

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Languages: English, Spanish

### 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 statistical process control, productivity improvement, transportation and logistics, applied modeling, systems integration, information flow, business and R & D strategy, entrepreneurship, cost analysis, concurrent engineering, technology transfer, business process reengineering, organizational change, assessment, healthcare systems and healthcare delivery and engineering education. Recently my research has emphasized the re-design of processes, products and services, re-engineering the service sector, particularly healthcare, systems integration, and the integration of research and engineering education.

### ACADEMIC EXPERIENCE:

2002- Present	Professor (tenured) & Chair	Department of Industrial and Management Systems Engineering, U. South Florida
2008- Present	Member	H. Lee Moffitt Cancer Center at USF, Tampa, FL
2006- Present	Assistant Director of the Center For Entrepreneurship	U. of South Florida
	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
1995-98	Associate Dean for Academic & Research Affairs	College of Engineering University of Puerto Rico-Mayagüez
1994-97	Baxter Chair in Manufacturing Engineering (Co-Holder)	College of Engineering University of Puerto Rico-Mayagüez
1993-99	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
1987-92	Associate Professor (tenured)	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1987-90	Head	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1987-95	Small Business Institute Director (SBA/U.S.A.)	Department of Industrial Engineering University of Puerto Rico-Mayagüez
1983-87	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- 1999.

**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, Puerto Rico.

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.. 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, Puerto Rico  
Developed and conducted a seminar-workshop in "Productivity Improvement Through Office Automation", 1986.

**University of Puerto Rico at 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, PR 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, PR. 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, PR

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, PR

Taught seminar in "Statistical Process Control," to managers and engineers in the Puerto Rican manufacturing industry, 1985.

**Puerto Rico Lottery**, San Juan, PR

Designed and implemented new automated production facilities for lottery tickets, 1984.

**Caso Travel Agency**, Caparra Heights, PR

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, PR. 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:**

**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

**UPS (IIE) Minority Advancement Award**, May 2005

**SBIR/STTR – National Science Foundation, Service Recognition**, 2003

Listed in **Who's Who in Engineering Education (WWEE)**, 2002

January 2002, Member of **International WHO'S WHO** Historical Society, Mass.

August 2001, Technica Magazine and HENAAC, Recognition, Los Angeles, CA.

May 2001, **Fellow Award-Institute of Industrial Engineers (IIE)**, Dallas TX

2001/March 16, **2001 Non-Regular Academic Appointment Award**, College of Engineering, UM-Columbia

1998-99 **Distinguished Professor Award**, IE-Dept., UPRM (awarded Spring 2000)

1998-99 **Academic Productivity Bonus Award**, UPRM.

1998 Recognition for **Excellent Contribution as UPRM Engineering School Liaison with INTEL-PR.**

**First recommended** (of twenty candidates) by Chancellor's Search Committee of UPRM's, Fall 1997

**Teaching Recognition**, by students of the Capstone Design Course, Fall 1997.

1996 **Curriculum Innovation Award** (Learning Factory), ASME International.

Co-Holder (with Dr. Gursel Suer) of **Baxter Endowed Chair** in Manufacturing Engineering, 1994-1997.

Nominated for Dean of Engineering and Dean of Students Affairs at UPR- Mayagüez, 1994.

**Inmaculate Conception Academy**, Recognition for supporting elementary basketball team, 1994-95

Offered the **position of Dean of Engineering** at University of El Turabo, Ana G. Méndez System, Summer 1994.

**Recommended for Dean of Administration** at UPRM, 1992.

**ASQC Quality Award**, Puerto Rico Section 1500, 1992.

**Certificates of Appreciation**, **NSF Young's Scholar Program**, College of Business, UPRM, 1989-91.

**Teaching Recognition**, Senior Capstone Design Course, Fall 1990, UPRM.

**IIE Chapter 188**, Special Contribution as member of Board of Directors, 1988-89.

**Best Department Head** at UPRM's-College of Engineering (Dean: Dr. Leandro Rodríguez), 1988.

**Distinguished Industrial Engineer of the Year** 1985-86, IIE, Chapter 188, San Juan, PR

**National Award of Excellence** - IIE Student Chapter 891, UPR- Mayagüez, Mayagüez, PR, 1986-87

**National Award of Excellence** - IIE Student Chapter 891, UPRM, Mayagüez, PR, 1985-86

**1985 Outstanding Young Men of America**

**National Award of Excellence** - IIE Student Chapter 891, UPR- Mayagüez, Mayagüez, PR, 1984-85

**Rensselaer Polytechnic Institute Scholarships**, 1979-83

**National Hispanic Fund Scholarships**, 1980-83

**Economic Development Administration** of Puerto Rico Scholarship, 1978-79

Resume Published in: **1983 Outstanding Resumes of Business and Law Graduates**, by The Graduate Group, West Hartford, Connecticut.

## **SOCIETIES and ORGANIZATIONS:**

Institute for Operations Research and Management Science (INFORMS)

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

Alpha Pi Mu Honor Society: secretary during 1977, UPRM

American Production and Inventory Control Society

American Society for Quality Control

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:**

### **Recently Submitted/In Preparation Proposals:**

**Co-PI, From Biology to You: Engineering a Science-Based Health Care Delivery System by Modeling Integrated Care Cycles – to be submitted to NSF – STC.** University partners are NC State (lead), Purdue, UNC-Chapell Hill, and USF. USF participants are Industrial Engineering, College of Medicine, and H. Lee Moffitt Cancer Center & Research Institute (pre-proposal to be submitted in October 2008).

**Co-PI, Healthcare Engineering Research Center to National Science Foundation - ERC.** University partners are Purdue (leader), Arkansas, NCSU, and NC A&T. USF participants are Industrial Engineering, College of Medicine, College of Public Health, and H. Lee Moffitt Cancer Center & Research Institute. Total amount for the first five years is \$18.5 million, full proposal submitted on December 2007. (Not invited for a site visit)

“EFRI-CBE Preliminary Proposal: Harnessing True Potential of Genomics for Disease Diagnosis and Treatment Planning through Noise Reduction and Pattern Identification of Gene Expressions from Microarray” (T. Das (PI), co-PIs: J. Zayas-Castro, Ph.D; A. Savachkin, Ph.D., S. Enkemann, Ph.D., S. Eschrich, Ph.D., J. Pow-Sang, M.D., L. Kang, M.D.). A collaborative proposal submitted to **NSF ERFI program** on Nov. 17, 2006, requested Funding amount: \$2.0 million. (2007-2010) (*Not invited for final submission*)

### Funded Proposals:

“TACLAN – 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, August 2007. Approved (fall 2007-fall 2008).

“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.

“An Economic Sequential Probability Ratio Test (ESPRT) Approach to Enhance Surveillance Alert Utility of BioDefend™ .” PI: T. Das, Co-PIs: Zayas-Castro, Reeves. Approved: \$124,954. Fall 2006.

“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.

“Outcomes Based Assessment for Bridge to the Doctorate Program”, Principal Evaluator, University of South Florida, (PIs: Ashanti Pyrtle and Shekhar Bhansali), 2004- Present.

“VISS, ASC & CAMS Research”, renewal, Co-PI, (PI: Rangachar Kasturi), STS International, August 2004-05, \$591,548.

“Outcomes Based Assessment for IGERT-SKINS Program”, Principal Evaluator, University of South Florida (PI: Shekhar Bhansali), 2003- 2007.

“VISS, ASC & CAMS Research”, Co-PI (PI: Rangachar Kasturi), STS International, August 2003-04, \$433,269.

“Interdisciplinary Manufacturing Innovation: Adapting and Implementing MEEP’s Learning Factory”, PI, National Science Foundation-DUE/CCLI, April 2001, \$106,687.

“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.

“Computer Science, Engineering, and Mathematics Scholarships (CSEMS)”, Co-PI (PI: M. Lee), National Science Foundation, \$200,000 (2 years), August 1999.

“Outcomes Based Engineering Education: The Learning Factory and ABET 2000”, Co-PI with L. Morell (PI) and others, Raytheon Corporation, \$31,500, June 1998.

“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.

“Design of an Activity Based Costing System at Hanes Menswear, Inc.,” Hanesmenswear, Ponce, PR, \$21,790, Nov. 1997.

“Distance Learning Education Through Video Conferencing Technology,” PI (with Rafael Fernández) AT&T Foundation, \$50,000, 1996.

“Development of an SMT Lab in the Learning Factory at UPRM,”PI (with A. Rullán and M. Vélez) Motorola, \$200,000, 1996.

“Advising Small Businesses in PR,” Small Business Administration, USA, \$40,000, 1987-95.

“Outreach for Interdisciplinary Education in Manufacturing,” Upjohn Foundation, \$75,000, October 1995.

“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 Artilés) 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: (Papers, Proceedings, Invited Presentations and Technical Reports)**

### **Under Review:**

"Evaluating the Impact of Walk-Ins and Late Patients in the Performance of Appointment Scheduling Rules through a Simulation-Optimization Based Approach," Alcides Santander, Laila Cure, and José Zayas-Castro.

"Selecting the Best Performing Weibull Estimation Method for Randomly Right Censored Data," Jonathan J. Bates, José L. Zayas-Castro.

"Stocking policies for multiple operating components," Jonathan J. Bates, José L. Zayas-Castro,.

### **Work in Process:**

"A Methodology for Validating Outcome Studies in Medical Error," Peter J. Fabri, and José Zayas-Castro.

"Designing a Hybrid Simulation Process in Surgical Error," Peter J. Fabri, and José Zayas-Castro.

"Improving health care operational outcomes: Perspectives on patient safety" Laila Cure and José Zayas-Castro

"Understanding the impact of priority rules on patient waiting time in outpatient clinics," Alcides Santander and José Zayas-Castro.

“Dynamic Analysis and interpretation of laboratory test results,” Alcides Santander, Peter Fabri, and José Zayas-Castro.

“Improving patient flow in hospitals by using clinical care pathways,” Abhik Bhattacharya, and José Zayas-Castro.

**Refereed Journal articles:**

“Human Error, not Communication and Systems, Underlies Surgical Complications,” P.J. Fabri, J Zayas-Castro, accepted for publication, J. of Surgery, October 2008

“The Learning Factory: Industry Partnered Active Learning,” John S. Lamancusa, José L. Zayas, Allen L. Soyster, Lueny Morell, Jens Jorgensen, Journal of Engineering Education, January 2008, Vol. 97, No. 1.

“Simulating less-than-truckload operations,” Pranav J. Deshpande, Ali Yalcin, José Zayas-Castro and Luis E. Herrera, Special Issue on Benchmarking the Management of Operations and Information Systems in Benchmarking: An International Journal, Vol 14, No. 1, 2007

Crowe, Thomas J., José L. Zayas-Castro, and Sompop Vanichsenee, “Assessing Organizational Readiness for Enterprise Resource Planning,” Information Technology & People.

Crowe, Thomas J., Pekying Meghan Fong, Todd A. Bauman, and José Zayas-Castro (2002), "Quantitative Risk Level Estimation of Business Process Reengineering Efforts," *Business Process Management Journal*, v. 8 n. 5, 2002, pp. 490-511.

**Refereed or Invited Proceedings or Presentations:**

“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.

“Re-Engineering Graduate Medical Education: An Analysis Of The Contribution Of Residents To Teaching Hospitals Utilizing A Model Of An Internal Medicine Residency Program,” Ian Elius, Peter J. Fabri, José L. Zayas-Castro. Submitted to the Journal of Academic Medicine, November 2005.

“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 (refereed).

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, May 19-21 (refereed).

“Readiness Assessment for Enterprise Resource Planning,” by Crowe, Thomas J., José Zayas-Castro and Sompop Vanichsene, Conference Proceedings IAMOT 2002 Conference, Miami, Fla (refereed).

“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 (refereed).

“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 (refereed).

“The Learning Factory and ABET 2000,” by Morell, Jorgensen, Vélez, Torres, Zayas, Lamancusa, ASEE 2000, St. Louis, MO (refereed).

“Curricular Innovations Outcomes Assessment,” by Morell, Zayas-Castro, Velez-Arocho, Torres, ICEE 1998, Brazil (refereed).

“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 (refereed).

“Developing and Assessing Teamwork Skills in a Multi-disciplinary Course,” by Morell, Zayas-Castro, Velez-Arocho, Torres, FIE 1998, Tempe, Arizona (refereed).

“Confidence Intervals for Cpk when the Underlying Distribution is Weibull,” by Artiles-Leon, Zayas-Castro, Ramirez, IEMS-98, Coco Beach, FL March 1998 (refereed).

“Some Assessment Tools for Evaluating Curriculum Innovations Outcomes,” Morell, Zayas-Castro, Velez-Arocho, ASEE 1998, Seattle, WA (refereed).

“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 (refereed).

“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).

“Outcomes Assessment Results of a Multi-Institutional Curriculum Project,” by Morell, Zayas-Castro, Lamancusa, Jorgensen. Frontiers in Education, Pittsburgh, PA, Nov. 1997 (refereed).

“An Educational Program in Products and Processes Realization,” Frontiers in Education, by Jorgensen, Lamancusa, Zayas-Castro Pittsburgh, PA, Nov. 1997 (refereed).

“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 (refereed).

“Concurrent Engineering: A Partnership Approach,” by Smith, Barton, Novatek, Zayas-Castro, ASEE, Wash. D.C., 1996 (refereed).

“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 (refereed).

“The Design of a Skill-based Course Focused on Student Outcomes: A Partnership Template,” by Morell, Zayas-Castro, Velez-Arocho, ASEE 1995, Anaheim, CA (refereed).

“The Learning Factory: A new Approach to Integrating Design and Manufacturing Into Engineering Curricula,” by Lamancusa, Jorgensen, Zayas-Castro and Ratner, Proceedings, ASEE 1995 (refereed).

"The Design of a Skill-based Course Focused on Student Outcomes: A Partnership Template," by Morell, Zayas-Castro, Vélez-Arocho, ASEE 1995 (refereed).

"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:**

1. An Economic Sequential Probability Ratio Test (ESPR) Approach to Enhance Surveillance Alert Utility of Biodefend<sup>TM</sup> ( Das (PI), J Zayas-Castro, K. Reeves, Dayna Martinez), July 2008
2. 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
3. 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.
4. Simulation, Analysis and Re-Design of Security Checkpoints at Major Commercial Airports, Final Report (with A. Yalcin (PI), G. Centeno and others), January 2006.
5. Engineering Service at H. Lee Moffitt Hospital, Tampa, FL, Progress Report, (with Jana Iezzi, M. Weng, Grisselle Centeno, Kiara Pérez and others), April 2005.
6. 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.
7. Vehicle Passenger Access System (VPAS) Simulation Model and Analysis, Progress Reports Jan-March 2005, (with Michael Weng and Ali Yalcin and others)
8. IGERT-Bio Skins – Assessment Progress Report, (with Tara McCoy), Fall 2004, USF.
9. VISS System Performance Modeling and Simulation (with Ali Yalcin and Michael Weng), May 2004, STS International.
10. EMILE – Progress Report, NSF (with Thomas J. Crowe and others), 2002, University of Missouri-Columbia.
11. Business Process Re-Engineering in the office for Academic and Research Affairs at the College of Engineering-UPRM (with Nicolás Salazar 1998).
12. Design of an Activity Based Costing System for Hanes-Menswear Manufacturing (with J. Romero, Vilmari García and L. Padilla 1998).
13. Computerized Information System and ABC at Baxter Dade (with Luis Mañan, 1995).

14. Design of an Activity Based Cost System and Its Impact on Total Quality (with Carlos Oliveras) 1995.
15. Improvement of Operations Management at Magna Medical Through the Use of World Class Techniques (with Juan Martínez) 1993-94.
16. Design of an Activity Based Cost System at Baxter Dade. (with Alejandro Abreu/Carlos Oliveras) 1992-93.
17. Interdisciplinary Manufacturing Engineering Education (Various reports- 1990-93 with A. Rullán, R. Fernandez-Seín, I. Baigés, L. Rosario, Jorge Velez-Arocho)
18. The Basics of Engineering Design, 1993 (with F. Toledo, L. Morell, B. Calcagno)
19. Re-Design of Activity Based Costing at Hewlett Packard, 1992 (with A. Abreu)
20. Systematic Analysis of Process Development-Surface Mount Technology, 1991 (with N. Artiles, V Cesaní, R. Sánchez)
21. Simulation Requirements at the Service Entrances at the Luis Munoz-Marín Airport, 1990 (with F. Luyanda, A. Cedeño)
22. Improving the Low Profiles Valves Manufacturing Through SPC and DOE, 1990 (with V. Mundo)
23. Micro-Computer Based System MMA-IBM Fishkill, 1989 (with Jack Allison, W. Padín, E. Baez)
24. R & D Strategic Determinants at Digital-Puerto Rico, 1989 (with J. Rodríguez, A. Dykyj, M. Oliveras)
25. Interdependency Information System-BellCore, 1989 (with Max Figueroa)
26. Reduced Scale Work Station, 1987 (with J. Villa, L. Rodríguez)
27. Yield Optimization Through Design of Experiments, 1987 (with M. González)

#### **ACADEMIC AND PROFESSIONAL PRESENTATIONS & TALKS: (non-refereed)**

1. **Speaker**, “Developing Comprehensive Patients’ Profiles to Enhance Timely Disease Diagnostic,” Alcides Santander-Mercado, J. Zayas-Castro, Peter J. Fabri; IERC – Vancouver, CN, May 2008
2. **Speaker**, “A Synthesis Approach to Modeling Hospital-Based Clinical Pathways,” Abhik Bhattacharya, J. Zayas-Castro, Peter Fabri; IERC – Vancouver, CN, May 2008
3. **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
4. **Speaker**, “Disease Management Through Modeling,” HEA Symposium, Raleigh, NC, April 7, 2008
5. **Speaker**, “Diversity & Engineering Education in the 21<sup>st</sup> Century,” Raytheon, St. Pete, FL, Sept 20, 2007
6. **Speaker**, Congreso Internacional de Ingeniería Industrial, Universidad de Las Americas, Puebla, Mexico, March 2007
7. **Speaker**, “The Learning Factory,” CalPoly, San Luis Obispo, November 2006
8. **Speaker**, “Toma de Decisiones Usando Herramientas Estadísticas,” Congreso Internacional de Ingeniería Industrial, Instituto Tecnológico de San Luis Potosí, San Luis Potosí, Mexico, October 2006
9. **Speaker**, “The Learning Factory,” Universidad del Norte, College of Engineering, Barranquilla, Colombia, September 22, 2006
10. **Speaker/Panelist**, “Challenges in Education the Engineer for 2020,” ACOFI Conference, Colombian Association of Colleges of Engineering, Cartagena, Colombia, September 21, 2006
11. **Speaker**, “The Learning Factory,” ACOFI Conference, Colombian Association of Colleges of Engineering, Cartagena, Colombia, September 20, 2006

12. **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
13. **Speaker**, "The Life of the Professor," 2006 SUS/USF Summer Program, Marshall Center, June 30, 2006
14. **Speaker**, "Process Redesign in Hospital Environment," Healthcare Systems Engineering Workshop, NSF, June 16, 2006
15. **Speaker (Keynote)**, "The Strategic Work & Direction of IIE," IEM Conference 2006, University of West Indies, Trinidad, June 2006
16. **Speaker**, "Research in Healthcare," Universidad del Mayab, Merida, Mexico, October 2005
17. **Speaker/Panelist**, "The Industrial Engineer of Yesterday, Today and Tomorrow," 50<sup>th</sup> Anniversary, Department of Industrial Engineering, UPR-Mayagüez, Mayagüez, PR, August 19-21, 2004.
18. **Speaker**, "Research Opportunities in IMSE," UPR-Mayagüez, January 2004.
19. **Speaker**, "Relevance and Experiences of Interdisciplinary/Multidisciplinary Collaborations and Experiences: A Perspective," University of Puerto Rico-Río Piedras, San Juan, PR November 2003.
20. **Speaker**, "EMILE: A concerted tech-based entrepreneurship effort between Engineering and Business," ASEE 2002, Montreal, Canada.
21. **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.
22. **Speaker**, "Holistic Engineering Education," Spring 1998, UPRM.
23. **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.
24. **Speaker**, "Interdisciplinary Education in Science and Engineering," Plenary session - 1st Confraternization for Engineering students in Puerto Rico, Univ. of El Turabo, Fall 1995.
25. **Speaker**, "Panel of: The Impact of Globalization on the Industrial Chemical Processes," Global Awareness Program-UPRM, April 1994.
26. **Speaker**, "Benefits and Barriers to Interdisciplinary Education," College of Engineering, UPRM, Spring 1994.
27. **Speaker**, "Concurrent Engineering," Global Awareness Day, UPRM, Fall 1994.
28. **Evaluator/Committee Member**, Puerto Rico 2000, San Juan, PR, 1992- Present
29. **Speaker**, "TQM in Education," Puerto Rican Association for Higher Education, Fall 1993, San Juan.
30. **Speaker**, "Activity Based Costing," Week of the Accountant, Joint Meeting for Baxter-Eduards and Baxter-Bentley, El Mesón, Mayaguez, April 1993.
31. **Speaker**, "Motivation as a Resource for Better Project Construction Management," 19th AGC Conference, Dorado, PR, August 1992
32. **Speaker**, "Yield Improvement Through SPC & DOE," 46th. Quality Congress, Nashville, Tennessee, May 1992
33. **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
34. **Speaker**, "Important Factors for Puerto Rico Competitive Position in the XXI Century," CAPOTECO, WPAB Radio Station, Ponce, P.R., September 1991
35. **Speaker**, "Yield Improvement Through SPC and DOE," First Puerto Rican Annual Quality Congress, San Juan, P.R., September 1991
36. **Research Advisor**, "Activity Based Costing," by Mr. Alejandro Abreu, 26th Junior Technical Meeting 11th Interdisciplinary Scientific Meeting, Cayey, PR, March 1991
37. **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
38. **Research Advisor**, "Modeling a Flexible JIT Manufacturing Systems," by Ms. Sandra González, 26th Junior Technical Meeting 11th Interdisciplinary Scientific Meeting, Cayey, PR, March 1991
39. **Alpha Pi Mu** (I.E. Honor Society), **Speaker**, "Graduate Studies in Manufacturing Engineering at the College of Engineering-UPRM," February 1991.
40. **Facilitator**, "Quality Control Techniques in Road Construction," Transportation Technology Transfer Center, Civil Engineering Department, UPRM, April 1990.
41. **Speaker**, "Statistical Process Control," World Class Manufacturing Excellence Conference, Sponsored by IIE-Chapter 188, Sands Hotel, San Juan, P.R., March 1990.

42. **Speaker**, "Tools and Techniques for World Class Excellence," WEUC- Catholic Radio Station, CAPOTECO-Sponsor: College of Engineers and Land Surveyors, Ponce Chapter, Ponce, P.R., March 1990.
43. **Panelist**, "The Situation at the UPRM Campus," Moderator: Mr. Totti Figueroa in "Comunicando," Channel 22, Mayagüez, P.R., January 1990.
44. **Speaker**, "Statistical Process Control," IIE - Chapter 188 Conference, Cerromar-Hyatt Hotel, Dorado, PR, June 1989.
45. **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
46. **Speaker**, National Quality Forum: Statistical Process Management, UPRM, October 1988, Mayagüez, P.R.
47. **Referee**, V Pan American Congress of Traffic and Transportation Engineering, UPRM, PR
48. **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
49. **Speaker**, Impact of Quality Control on the Economic Development of Puerto Rico, WKAQ Radio, Hato Rey, P.R., October 1987
50. **Speaker**, Impact of Total Quality in Improving the Standard of Living in Puerto Rico, WKAQ Radio, Hato Rey, P.R. April 1987
51. **Chairman and Member**, Evaluating Committee of Candidates for Graduate Scholarships in Industrial and Management Engineering, Economic Development Administration, Hato Rey, PR, 1987- 1998.
52. **Co-Chairman/Evaluator** Engineering group 1987 International Science and Engineering Fair, Roberto Clemente Coliseum, PR, May 1987
53. **Speaker**, The Industrial Engineer in the Validation of Pharmaceutical Processes, IIE-Oeste Chapter 236, P.R., Nov. 1986
54. **Speaker**, The Office of the Future, APICS-Oeste Chapter 241, PR, July 1986
55. **Speaker**, New Trends in Engineering Science and Technology, Digital Equipment Corporation, PR, - Week of the Engineer -, Club Deportivo, Cabo Rojo, May 1986
56. **Speaker**, Back to Basics in Quality and Productivity Improvement, APICS-Oeste Chapter 241, P.R., April 1986
57. **Evaluator - Group Leader**, 7th. Puerto Rican Science and Engineering Fair, Interamerican University at San German, PR, April 1986
58. **Speaker**, Effective Economic Justification, Institute of Industrial Engineers-College of Engineers and Surveyors, San Juan, PR, January 1986
59. **Speaker**, Office Automation: Productivity Systems, Institute of Industrial Engineers 188, Convention Center, Condado, P.R., May 1985
60. **Coordinator and Moderator**, Entrepreneurial Opportunities for the Industrial Engineer, Department of Industrial Engineering, UPRM, Mayagüez, P.R., April 1985
61. **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
62. **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
63. **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 Committees:**

INFORMS session Chair (various)

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  
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:**

“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.  
“NSF-DUE,” S-STEMS, Summer 2006; CCLI Program, Summer 2001.  
“NSF-DMI: OR/Production Programs/MES,” since 1990.  
“NSF-SBIR,” Division of Design, Manufacture and Industrial Innovation (DMII), since September 1999.  
"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.  
"Undergraduate Course and Curriculum Development Program," National Science Foundation, Directorate  
for Education and Human Resources-Undergraduate Education, Washington, D. C., August 1992.  
"Summer Internships," National Science Foundation, Engineering Directorate, Washington, D.C., April  
1992.  
"Research Thrusts on Engineering & Technology Management," National Science Foundation, Engineering  
Directorate, Washington, D.C., April 1990.  
Production Systems Program, National Science Foundation, Washington, D. C., May 1990.

**University Related:**

Member (CoE Representative), Advisory Chairs Group to USF Provost, USF, 2008- present  
Budgetary Advisory Taskforce, Provost's office, Chair for the Natural & Physical Sciences Sub-  
Committee, USF, January 2008- Present  
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- Present  
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-Present.  
Coordinator, SBIR/STTR NSF Visit to USF, August 2004.  
Member, Advisory Chairs Group to USF Provost, USF, 2003- Present.  
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- present.

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-Present.

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; 1991-1998.

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: (Conferences, Workshops, and Courses)**

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

IIE Conference, May 2006, Orlando, FL

INFORMS, November 2005, San Francisco, CA

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

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  
 AIEE Spring Conference, Toronto, Canada, May 1978

## **GRADUATE COMMITTEES:**

### Ph.D. Committees

#### Chairperson (or Co-Chairperson)

Ms. Courtney Feliciani	in progress	USF
Ms. Laila Cure	in progress	USF
Mr. Alcides Santander	in progress	USF
Mr. Peter J. Fabri, MD	graduated 2007	USF
Mr. Jonathan J. Bates	graduated 2007	USF
Mr. Humberto Alvarez (Co-Chair)	graduated 2002	UM-Columbia
Mr. Sangwook Kim (Co-Chair)	graduated 2002	UM-Columbia

### Master's Thesis/Project

#### Chairperson (or Co-Chairperson):

Mr. Ramzi Sinokrot	in progress	USF
Ms. Meredith Bounds	in progress	USF
Mr. Abhik Bhattacharya	in progress	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. Johnny 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

Committee Member: (PhD at University of South Florida)

Mr. Vishnuteja Nanduri  
Mr. Cihan Babayigit  
Mr. Hui Wang

Mr. Luis Otero  
Mr. Rajesh Ganesan

Committee Member: (Masters at University of South Florida)

Mr. Arka Bhattacharya  
Mr. Vijay Veerachandran  
Mr. Hani Kababji  
Mr. Balaji Rajan  
Mr. Bharath Natarajan  
Mr. Chaitanya Damle  
Mr. Steve Christian  
Ms. Paula López

Mr. Alok Buch  
Mr. Sandeep Iyer  
Ms. Radhika Poolla  
Mr. Pranav Deshpande  
Ms. Santosh Kothamasu  
Mr. Sanket Gupte

Committee Member: (Masters at UPRM)

Mr. Harry Ramírez  
Mr. Joseph Nair  
Mr. Jaime Montes  
Mr. Omar Rosado  
Ms. Carolina Domenech  
Mr. José Mejías  
Ms. Gloria Godoy  
Mr. Gabriel Ferrer  
Ms. María Medina  
Ms. Rosa María Espino  
Mr. Luis Nieves de Jesús

Mr. Ricardo Pérez  
Ms. Nilda Ríos  
Ms. Celia A. González  
Ms. Indhira Caraballo  
Ms. Gloria García  
Mr. José Castro  
Mr. Néstor Porcell  
Ms. Rosa Milagros Espino  
Mr. Jorge Pagán  
Mr. Rolando Quesada

**COURSES TAUGHT:**

Technology & Finance	U of South Florida (USF) (several times)
Statistical Optimization Models	USF
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

**NON-ACADEMIC ACTIVITIES: Community Service**

**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.