

**ZULMA R. TORO-RAMOS, Dean**  
**College of Engineering**  
**Wichita State University**  
**1845 Fairmount, Wichita, KS 67260-0044**  
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**(316) 978-3400 or (316) 733-7152**

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## **Personal Profile**

Values: fairness, team work, accountability, honesty, openness, continuous improvement  
Experienced transformational leader with passion for excellence and diversity  
Committed to be a facilitator for faculty, student and staff success  
Knowledgeable in budget and human resource management  
Seasoned listener and effective communicator  
Adept at aligning budget allocation processes with objectives from strategic plans

## **Education**

Georgia Institute of Technology Industrial and Systems Engineering	Ph.D., 1988
Georgia Institute of Technology Computer Integrated Manufacturing Systems (CIMS) Graduate Certificate	G.C., 1988
University of Michigan Industrial and Operations Engineering	M.S., 1983
University of Puerto Rico Industrial Engineering	B.S., 1982

## **University Administrative Experience**

August 2005 – Present	Dean, College of Engineering Wichita State University, Wichita, KS
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Responsible for providing overall academic and administrative leadership for a college of 49 full-time faculty members; 931 undergraduate, 489 M.S., and 69 Ph.D. students. In fiscal year 2007, the College was awarded \$6.4M in grants and contracts, an increase of 57% from fiscal year 2004. Responsible for strategic planning, faculty and staff recruitment, retention, development, and advancement; oversight of undergraduate and graduate programs; program's accreditation; oversight of research and development activities; budget development and supervision; fostering relations with industry, government, and alumni; service on university wide committees; general management of the College are among the responsibilities of this position. Led the development and implementation of the Engineer 2020 program for the college based on an Experience-Based Engineering Education model aimed at becoming a leader in engineering education in the Midwest region.

July 2001 – July 2005                      Dean, School of Engineering and Applied Science  
University of New Haven, New Haven, CT

In charge of providing overall academic and administrative leadership for a school of 40 full-time and 30 part-time faculty members; 800 students in ten (10) undergraduate and seven (7) graduate academic programs. Responsibilities include strategic planning, faculty and staff recruitment, retention, development, and advancement; oversight of undergraduate and graduate programs; budget development and supervision; fostering relations with industry, government, and alumni; service on university wide committees; general management of the School. Led the development and implementation of the strategic plan for the school based on Multidisciplinary Engineering Education, aimed at becoming a leader in engineering education in the New England area. Established SEAS Engineering Support Center for Small and Emerging Businesses to assist local industry in becoming competitive.

Jun 1999 - 2001                              Chancellor  
University of Puerto Rico at Mayagüez

Chief executive officer of Puerto Rico's only land-grant and Hispanic Serving Institution (12,600 undergraduate enrollment; 800 graduate students). Responsible for presiding the Administrative Board, the Academic Senate, and faculty meetings. In charge of appointment of deans, departmental directors and university personnel; solving on appeal the decisions of the deans; identifying external funding sources; representing the campus at functions, ceremonies, and academic activities; preparing for submission to the President the campus annual report and budget petition; fostering and strengthening interactions with industry.

Apr 1998 - Jun 1999                        Acting Dean, College of Engineering  
University of Puerto Rico at Mayagüez

Responsible for providing overall academic and administrative leadership for a college of 168 full-time faculty members and 4,500 students; seven (7) undergraduate and seven (7) graduate academic programs. Responsibilities include strategic planning, faculty and staff recruitment, evaluation, retention, development, and advancement; oversight of undergraduate and graduate programs; budget development and supervision; fostering relations with industry, government, and alumni; service on university wide committees; general management of the College.

Mar 1998 - Apr 1998                        Director of Graduate Studies and Associate Dean for  
Academic Affairs  
University of Puerto Rico at Mayagüez

Responsible for supervising the admission, recruitment, academic standards, curriculum development, publications (brochures, catalogs, annual reports), program reviews, students records, thesis and dissertation approval, graduation, and student support at the graduate level.

Aug 1995 - Jan 1998                        Chairperson, Industrial Engineering Department  
University of Puerto Rico at Mayagüez

In charge of all administrative and academic affairs related to an ABET accredited department of seventeen full-time and six part-time professors, with an undergraduate enrollment of 800 students and a graduate enrollment of 45 students.

Feb 1995 - Aug 1995      Acting Chairperson, Industrial Engineering Department  
University of Puerto Rico at Mayagüez

Responsible for all administrative and academic affairs of the department as explained above.

Dec 1993 - Jan 1995      Associate Chairperson, Industrial Engineering Department  
University of Puerto Rico at Mayagüez

Responsible for the Industrial Engineering Department graduate program; graduate and undergraduate course scheduling.

Jan 1990 - Jun 1991      Associate Chairperson, Industrial Engineering Department  
University of Puerto Rico at Mayagüez

Responsible for the Industrial Engineering graduate program; graduate and undergraduate course scheduling.

## **Institutional Service**

Globalization Task Force, WSU

VPAAR Office Reorganization Task Force, WSU

Council of Deans and Academic Affairs Council, WSU

Chair, Search Committee for VP of Enrollment Management, UNH

Student Chapter of the National Society of Black Engineers, UNH, Faculty Advisor

Board of Governors' Facilities Committee, UNH

Board of Governors' Advancement and Development Committee, UNH

Global Initiatives Task Force, UNH

Management Committee, UNH

Exploratory Committee on Outcomes Assessment, UNH

Faculty Academic Affairs Committee, College of Engineering, UPRM

Faculty Research Committee, College of Engineering, UPRM

Industrial Engineering Department Course Committee and Graduate Committee, UPRM

Industrial Engineering Department Personnel Committee, UPRM

Campus Medical School Evaluator Committee, UPRM

Campus Committee to Internationalize the University of Puerto Rico, UPRM

Creation of a Manufacturing Engineering Academic Program, UPRM

## **Advancement and Development Activities**

2007	\$3,000,000 gift to pay for the Engineering Research Laboratory Building, WSU
2007	\$2,000,000 gift for a faculty endowed chair in Sustainable Materials and Energy Systems, WSU
2005-2007	\$2,000,000 gift for a faculty of distinction position and scholarships, WSU
2004	\$2,000,000 gift from alum for the advancement of the School of Engineering and Applied Science, UNH
2002	\$1,150,000 gift from alumni for the advancement of the School of Engineering and Applied Science, UNH

## **Outreach Activities**

2007	Led the development and offering of two Summer Camps in partnership with the Office of Continuing Education to attract more students into Science, Technology and Engineering professions, WSU
2007	Established collaboration with the Kansas Medical School, Wichita Campus to work on bioengineering related projects, WSU
2006	Signed a memorandum of understanding with Wichita Area Technical College to expand and enhance the College of Engineering laboratory facilities, WSU
2006	Obtained the appointment of the College of Engineering at Wichita State University as the only affiliate center in the state of Kansas of the national organization Project Lead the Way, WSU
2002	Established a partnership with Platt Regional Vocational and Technical School to work in the robotics area, School of Engineering and Applied Science, UNH

- 2002 Worked with the Connecticut Department of Higher Education for the selection of the School of Engineering and Applied Science as one of the partners in the Connecticut Partnership for Science and Mathematics Education, UNH
- 2001 Obtained the appointment of the University of New Haven as the only affiliate center in the state of Connecticut of the national organization Project Lead the Way, School of Engineering and Applied Science, UNH
- 2001 Implemented the UNH-SEAS Annual Essay Contest 2002: "Dare to be an Engineer!" School of Engineering and Applied Science, UNH

### **Academic Experience**

2005 – Present Professor, Industrial and Manufacturing Engineering Department, Wichita State University

2001 - 2005 Professor, Industrial Engineering Department University of New Haven

Teaching of graduate and undergraduate courses. Responsible for coordinating the Executive Master of Science in Engineering Management (EMSEM) Program.

1997 - 2001 Professor, Industrial Engineering Department University of Puerto Rico at Mayagüez

Teaching of graduate and undergraduate courses: Facilities Design, Simulation, Design Capstone Course, COOP Course, Material Handling, Ergonomics, and Industrial Safety. Responsible for the operation of the Ergonomics Laboratory. Involved in research topics including the design of material handling systems and Ergonomics.

1992 - 1997 Associate Professor, Industrial Engineering Department University of Puerto Rico at Mayagüez

Teaching of graduate and undergraduate courses: Simulation, Probability Theory, Design Capstone Course, Material Handling, Facilities Design, Industrial Safety, Ergonomics, Production Planning and Control. Updated the Ergonomics Laboratory. Developed of a Computer Assisted Laboratory for the Facilities Design Course. Involved in research topics including the design of material handling systems from the ergonomic point of view.

1991 - 1992 Professor, Industrial Engineering Department

Monterrey Institute of Technology, Querétaro, Mexico

Teaching of graduate and undergraduate courses, such as, Operations Research, Operations implementation of an Industry University Collaboration Program.

1988 – 1991                      Assistant Professor, Industrial Engineering Department  
University of Puerto Rico at Mayagüez

Teaching of graduate and undergraduate courses, such as, Probability Theory, Simulation, Facilities Design, Material Handling, and Production Planning and Control. Involved in research topics including design of manufacturing systems and stochastic processes.

1985 - 1987                      Graduate Research Assistant, Material Handling  
Research Center, Georgia Institute of Technology

Involved in research topics such as: Just-In-Time Production System and design of centralized Work-in-Process (WIP) storage systems.

1984 –1985                      Instructor, Industrial Engineering Department  
University of Puerto Rico at Mayagüez

Teaching of graduate and undergraduate courses, such as, Probability Theory, Engineering Economy, and Operations Management.

### **Selected Funded Proposals**

2007 – 20012                      “South Central Kansas WIRED Initiative” US Department of  
Labor, PI for College of Engineering Role, \$5,000,000

2003 – 2008                      “Bayer-UNH Alliance for Advancing SEAS to the Next Level  
of Academic Excellence” Bayer HealthCare, LLC, April,  
2003: \$1,000,000

2000 – 2005                      “University of Puerto Rico at Mayaguez: Academic Axis for  
the Technological Corridor.” Puerto Rico Industrial  
Development Company, June 27, 2000, (with Waded  
Cruzado-Salas as Co-PI): \$28.8 M

1998 – 1999                      “Puerto Rico Experimental Program to Stimulate Competitive  
Technology.” U.S. Department of Commerce, August 1998,  
(with Brad R. Weiner as PI): \$850,000

1998                                      “Strengthening the Scientific Dissemination Activities in the

	College of Engineering.” President’s Office, University of Puerto Rico, July 1998: \$50,000
1998 – 2003	“Creation of an Institutional Minority Graduate Education Program at the University of Puerto Rico System.” NSF, (with Manuel Gómez): \$250,000
1998	“Ergonomics and Human Factors Engineering Projects-Phase II.” Intel-Puerto Rico, May 1998: \$90,000
1998	“Technological Advancements in the Third Millennium and their effects in the University of Puerto Rico System.” President’s Office, University of Puerto Rico: \$15,000
1997	“Sound and Luminance Study.” Intel Foundation: \$50,000
1996	“Statistics Aided Manufacturing-A Short Course.” Corange International Limited: \$25,000
1996	“Ergonomics and Human Factors Engineering Projects.” Intel-Puerto Rico: \$80,000
1995	“A Simulation Model for a Packing Line.” Lifescan-Puerto Rico Inc.: \$50,000
1995	“Robotics and Process Automation-A Short Course.” Avon Lomalinda: \$30,000
1988	“Network of Queues for Modeling and Design of Centralized Material Handling Systems.” NSF: \$50,000
1988	“A Decomposition Approach for Designing Manufacturing Systems.” NSF: \$90,000

## Selected Publications

Whitman, Lawrence, Toro-Ramos, Zulma, and Skinner, Steven, “Educating the Engineer of 2020: A Practical Implementation,” to appear in the *Proceedings of the 2007 Midwest Section Conference of the American Society for Engineering Education*, September 2007.

Magnusson, Marianne L., Toro-Ramos, Z.R., and Pope, Malcolm H., “Ergonomic Modification of the Workplace,” *Journal Seminars in Spine Surgery*, 1998.

Population,” *Journal of Computers and Industrial Engineering*, Vol. 33, No.1-2, 1997.

Toro-Ramos, Z. R., “A Decomposition Approach for Designing Manufacturing Systems with Limited Buffers,” NSF Final Report, September 1993.

Toro-Ramos, Z.R., Bartolomei, S., and Novoa, C. “Decomposition Approach for the Design of Manufacturing Systems with Centralized Work-In-Process Storage and Limited Buffers,” *Proceedings of NSF Design and Manufacturing Systems Conference*, Austin, Texas, January 9-11, 1991.

Toro-Ramos, Z.R., and McGinnis, L.F., “Performance Modeling for a Single Material Handling Device with Random Requests. Pure Blocking,” Progress in Material Handling and Logistics, Eds. John A. White and Ira W. Pence, Springer-Verlag, Volume 2, 1991.

Toro-Ramos, Z.R. and McGinnis, L.F., “Performance Modeling for a Single Material Handling Device with Random Requests - Blocking with Recourse.” Progress in Material Handling and Logistics, Eds. John A. White and Ira W. Pence, Springer-Verlag, Volume 2, 1991.

Toro-Ramos, Z.R., Bartolomei, S., and Santamaría, G., “A Decomposition Approach for Designing Manufacturing Systems with Limited Buffers.” *Proceedings of NSF Design and Manufacturing Systems Conference*, Tempe, Arizona, January 8-12, 1990.

McGinnis, L.F., Trevino, J., and Toro-Ramos, Z.R., “A Review of the Toyota Production System.” *Material Handling Research Center Report 85-01*, Georgia Institute of Technology, Atlanta, Georgia, 1985.

## **Talks and Presentations**

“Engineering and Its Relevance,” STEP into Science, Technology and Engineering Professions CAMP, Wichita, KS, June 11, 2007.

“Realizing the Greatest Potential of Females in Engineering: A National Imperative,” Wichita SWE 25<sup>th</sup> Anniversary Banquet, Wichita, KS, June 8, 2007.

“My Leadership Journey,” Wichita State University Leadershape Institute, Rock Springs, KS, May 22, 2007.

“From Puerto Rico to Wichita: A Career Path Founded on Perseverance,” Boeing Women in Leadership Association, Celebration of Women in History Month, Wichita, KS, March 21, 2007.

“Faculty Evaluation,” Wichita State University Department Chairs’ Meeting, Wichita, KS,

March 12, 2007.

“Engineering Versus Engineering Science: What Should We Teach?” National Science Foundation Design, Service and Manufacturing Grantees and Research Conference, St. Louis, MO, July 26, 2006.

“Thirty Years of Creating the Next Generation of Pioneers, 1976-2006,” Thirtieth Reunion of Wallace Scholars, Wichita State University, Wichita, KS, June 24, 2006.

“Challenges of Engineering Education in the 21<sup>st</sup> Century: Wichita State University College of Engineering Response,” SWE Banquet, Wichita State University, Wichita, KS, April 28, 2006.

“Why Engineering Education is Important to All of Us,” Council of University Women, Wichita State University, Wichita, KS, January 11, 2006.

“Global Learning: A Required Component of Engineering Education in the 21<sup>st</sup> Century,” Global Learning Conference, Wichita State University, Wichita, KS, November 11, 2005.

“The Role of a Department Chair,” Society of Women Engineers Dean’s Panel, California, November 5, 2005.

“The Role of International Education in Maintaining U.S. Competiveness,” KAFSA, Kansas Association of International Educators, Wichita State University, Wichita, KS, October 7, 2005.

“From Dean to Chancellor, From Chancellor to Dean: An Unusual Career Path,” Organization of Women in Higher Education (OWHE), Wichita State University, Wichita, KS, September 21, 2005.

“Women in Leadership,” West Haven Chamber of Commerce and Hamden Chamber of Commerce Educational Breakfast Series, West Haven, Connecticut, September 23, 2004.

“Dealing with Unexpected Standards: How to Become a Latino Leader,” Promoting Hispanic Graduate Education & Professional Development, Manchester, Connecticut, December 7, 2002.

“The Role of the Latino Community in the Selection of College and University Leaders,” Standardized Expectations or Unexpected Standards? Professional Development Advancement and the Dilemma for Latino Leaders in the Academy, Tempe, Arizona, September 26-28, 2002.

“Follow the Leader,” IIE Solutions, July, 2002.

“Women in Engineering,” UNH Lecture Series, West Haven, Connecticut, February 13, 2002.

“Spotlight on Excellence: New Leaders in Higher Education,” The Connecticut Association of Latin Americans in Higher Education Newsletter, Spring 2002.

“Dean Encourages Women to Explore Engineering,” Woman Magazine, Norwalk, Connecticut, December 2001.

“UNH Dean, Technology Chief Agree to Engineer Shortage Alliance,” The Independent Voice, Quarterly Newsletter, Volume 1, December 2001.

“A Critical Shortage of Engineers,” CT Business Magazine, December 2001.

UNH Dean, Council President Call for Response to Shortage of Engineers, New Haven Business Times, November 2001.

“Engineering Today: A Call for Action,” Connecticut Technology Council Breakfast, West Haven, Connecticut, October 30, 2001.

“On Becoming the First Woman Chancellor at University of Puerto Rico – Mayagüez,” Women’s Engineering Leadership Conference, Denver, Colorado, October 10-13, 2000.

“The University of Puerto Rico at Mayagüez: the Best Alternative for Higher Education in Science and Technology”, Hispanic Serving Institutions Summit, Washington, DC, September 12-14, 2000; and Chancellors’ Meeting, Dominican Republic, Sept. 4, 2000.

“Reflections Regarding the College of Agricultural Sciences: Challenges of the New Millennium,” General Ordinary Assembly, College of Agronomists of Puerto Rico, San Juan, Puerto Rico, August 19, 2000.

“The University of Puerto Rico at Mayaguez and the Implementation of a Technological Corridor”, Puerto Rico’s Secretary of Economic Development and Commerce Meeting, March 13, 2000.

Encounter on General Education, University College of Cayey, Puerto Rico, February 18, 2000.

“Successful Preparation of Minority MSE Doctoral Degree Recipients,” Quality Education for Minorities Network, Ninth Annual National Conference, Washington, DC, February 11-13, 2000.

“Technology and Teaching: New Learning Tools.” First Congress on Education for the Eastern Area, Puerto Rico Interamerican University, Fajardo, Puerto Rico, February 4, 2000.

“The Contribution of the University Puerto Rico at Mayagüez,” Initiatives to Foster Entrepreneurship in Puerto Rico’s Universities, Puerto Rico Interamerican University, Bayamón, Puerto Rico, January 28, 2000.

“University of Puerto Rico at Mayagüez: its Critical Role for the Implementation of a

Technological Corridor,” Senate of Puerto Rico, San Juan, Puerto Rico, December 21, 1999.

“Rethinking Undergraduate Education,” San Juan, Puerto Rico, November 30, 1999.

“Challenges for Women in the New Millennium,” Ponce, Puerto Rico, October 13, 1999.

“Education: A Permanent Value in a Changing World,” Advisory Council, College Entrance Examination Board, San Juan, Puerto Rico, October 6-7, 1999.

“Business Strategies for the Western Part of Puerto Rico,” Southwestern Industrial Association Annual Conference, Dorado, Puerto Rico, August 28, 1999.

“Why Are They Still Here? Findings from a Preliminary Study of Hispanic Undergraduate Women in Engineering,” ASEE Conference, Charlotte, NC, June 23, 1999; and WEAPAN Annual National Conference, San Antonio, Texas, June 5-8, 1999 (With Elsa Villa and Lueny Morell).

“Making the 7<sup>th</sup> Largest School of Engineering in the Nation Competitive in Research: Integrating Research and the Learning Experience,” National Research Council Site Visit, San Juan, Puerto Rico, October, 1998.

Ergonomics: a Tool for Increasing Productivity,” Universidad de los Andes, Colombia, August 1998.

“Storage Policies and Design,” II National Congress on Competitive Logistics, University of Lima, Peru, November, 1997.

“Selection of Material Handling Equipment,” II National Congress on Competitive Logistics, University of Lima, Peru, November 6, 1997.

“Ergonomics for Quality of Life,” HP-IJBU, Aguadilla, Puerto Rico, September 1997.

“What is Ergonomics?” Echlin-Ponce, Inc., Ponce, Puerto Rico, September, 1997.

“A Proposal to Strengthen Competitiveness,” I Forum on Competitiveness, Río Grande, Puerto Rico, August 15, 1997.

“An Analytic Approach for Teaching Facilities Design,” University of Lima, Peru, May 23, 1997.

“Governor’s Award to Quality in Public Service,” University of Puerto Rico Central Administration, April 4, 1997.

“Anthropometric Table for the Industrial Puerto Rican Population,” 21<sup>st</sup> International

Conference on Computers and Industrial Engineering, San Juan, Puerto Rico, March 9-12, 1997.

“Women in Engineering,” Colloquium Woman and Work: Challenges in the New Millennium, Caribe Hilton, San Juan, Puerto Rico, March 7, 1997.

“New Paths: Women in Manufacturing,” University of Puerto Rico-Aguadilla, May 2, 1996.

“Ethics in Industrial Engineering,” ASQC Student Chapter, University of Puerto Rico at Mayaguez, May 4, 1995.

“Reengineering: A First Glance,” Third Symposium on Production Management, Sheraton Hotel, Santo Domingo, Dominican Republic, October 2, 1994.

“Important Steps to Implementing an Effective Quality System,” Third Symposium on Production Management, Sheraton Hotel, Santo Domingo, Dominican Republic, October 2, 1994.

“Quality Management and Human Factors,” Warner Lambert, Puerto Rico, October 1, 1994.

“Statistical Process Control,” Telular, Inc., Caguas, Puerto Rico, September 1994.

“Quality and Productivity Simultaneous Improvement: First Step for World Class Manufacturing,” ASQC Puerto Rico Chapter, Mayaguez, Puerto Rico, August 1990.

“Queuing Network Model for an Assembly Line Manufacturing System,” Material Handling Research Center Spring Monitors Meeting, Atlanta, Georgia, May 1990.

“Queuing Network Analysis of Material Handling Systems,” Material Handling Research Center, Monitors Meeting, Atlanta, Georgia, November 1989.

“Simulation: A Tool for the Design and Control of Manufacturing Processes,” Baxter Fenwall Division, Mayaguez, Puerto Rico, May 1989.

“SPC and JIT or JIT and SPC,” College of Engineers and Surveyors of Puerto Rico Mayaguez Chapter, Mayaguez, Puerto Rico, February 1989.

“A Decomposition Approach for Designing Microload AS/R Systems,” Material Handling Research Center, Monitors Meeting, Atlanta, Georgia, November 1987.

“Product Form Solutions for Queuing Network Models for Material Handling Systems,” ORSA/TIMS Meeting, St. Louis, Missouri, Fall 1987.

“A Network of Queues Model for a Manufacturing System,” Material Handling Research Center Spring Monitors Meeting, Atlanta, Georgia, May 1987.

“Buffer Sizing for Centralized WIP Storage Systems,” Material Handling Research Center

Fall Monitors Meeting, Atlanta, Georgia, November 1986.

### **M.S. Students Supervised and Assisted**

- 2004 Thesis Advisor, Azucena Mudén, “Strategies for Keeping the Manufacturing Industry in Connecticut.”
- 2004 Thesis Advisor, Hermitt Vega, “What Type of Product Diversification Will Keep the Manufacturing Industry in Connecticut?”
- 2003 Research Project Advisor, Bonnie Garrett, “Project Management Process Model Applied to the Navy F100-PW-220 Fleet Management Program.”
- 2002 Research Project Advisor, Judith LeBlanc, “Constraints A Company Faces When a Change in the Corporate Culture is Required.”
- 2000 Thesis Advisor, Lourdes del Valle, “A Regression Model to Predict Ergonomic Risk in the Office Environment.”
- 2000 Thesis Advisor, Dany Villafuertes, “A Framework to Implement a Personnel’s Rotation Program in Computer Cards Assembly Lines.”
- 1997 Thesis Advisor, C. Galdos, “Ergonomic Analysis of Material Handling in the Production Floor.”
- 1997 Thesis Advisor, M. Vargas, “A Simulation Model for the Design of a Packaging Line.”
- 1997 Thesis Committee Member, H. Celiz, “Implementation of a TQM Program in the Department of Chemistry.”
- 1996 Thesis Advisor, M. Henrich, “Ergonomic Analysis of Material Handling in Warehouses.”
- 1996 Thesis Committee Member, Z. Luciano, “Design of a Methodology for Programming a Flexible Automated Manufacturing Line.”
- 1994 Thesis Committee Member, H. Ortiz, “Analysis of the Importance of Production Sequences in Series Processing Systems.”
- 1991 Thesis Advisor, G. Santamaría, “A Decomposition Approach for Designing Manufacturing Systems with Limited Input and Output Buffers.”

- 1991 Thesis Advisor, H. Veras, “A Simulation for Manufacturing Systems with Centralized Work-In-Process Storage.”

- 1991 Thesis Advisor, C. Novoa, “Decomposition Approach for the Evaluation of Manufacturing Systems with Centralized Work-In-Process Storage.”
- 1990 Thesis Advisor, M. del R. Hernández, “An Analytical Model for Designing Material Handling Systems to Support Assembly Lines.”
- 1990 Thesis Committee Member, A. Cedeño, “Simulation of Arrival and Departure Car Traffic Lanes Needs of the Luis Muñoz Marín International Airport.”
- 1990 Thesis Committee Member, J.V. Rodríguez, “An Implementation of the Karmarkar Algorithm for Linear Programming.”
- 1990 Thesis Committee Graduate Studies Representative, M. Farah, “SITRANS: Integrated Systems to Support Traffic Engineering.”

**Industrial Experience**

- 1998 Consultant, Ergonomic evaluation of manufacturing and packaging areas, IPR Pharmaceuticals, Inc., Carolina, Puerto Rico.
- 1997 – 1998 Consultant. Design and implementation of an ergonomics program for production area, Storagetek de Puerto Rico, Inc., Ponce, Puerto Rico.
- 1997 Consultant. Design and implementation of an ergonomics program for the administrative area, IPR Pharmaceuticals, Inc., Carolina and Guayama, Puerto Rico.
- 1996 Consultant. Development of a plant layout for a new building, Sanz Convair Jumbo, Inc. Cabo Rojo, Puerto Rico.
- 1996 Consultant. Design and implementation of productivity improvement and cost reduction programs, Star Tours, Inc., San Juan, Puerto Rico.
- 1996 Consultant. Design and development of a simulation tool for plant capacity, Lifescan P.R., Inc. Cabo Rojo, Puerto Rico.
- 1992 Consultant. Redesign of raw material warehouse, Condumex, S.A., Querétaro. Mexico.

- 1989 Consultant. Implementation of productivity improvement programs for Production Planning and Control, Facilities Planning and Design, and Material Handling related activities, Digital Equipment, Puerto Rico.

- 1984            Consultant. Design, development and direction of the Total Quality Program, Hewlett Packard, Puerto Rico.
- 1984            Consultant. Implementation of productivity improvement and cost reduction programs for credit cards and loan processing activities, Citibank, N.A., Puerto Rico and Mexico.
- 1982 – 1983    Systems Engineer, Economic Analysis and Quality Control Support of Switching Control Center Systems, Bell Laboratories, West Long Branch, New Jersey.
- 1982            Executive Trainee of Corporate Services Management Productivity Group. Leading of the productivity and cost reduction program in different corporate branches, Citibank, N.A., Corporate Group, Puerto Rico.
- 1981            Assistant Industrial Engineer. Design and implementation of a new layout for the plant; Development of a training program for new employees; Design of work centers, work methods, developed work standards and productivity measures, Health-Tex, Cabo Rojo, Puerto Rico.

**Honors and Awards**

- 2005            Pfizer-New Alliance Bank Academic Innovation and Leadership Award, Connecticut Technology Council, Cromwell, Connecticut
- 2003            Mentor Program Scholarship Breakfast Honoree, ACE Mentor Program of Connecticut, Inc., New Haven, Connecticut
- 2000            Pioneer Award, Hispanic Engineer National Achievement Awards Conference, El Paso, Texas
- 2000            Quality Award, The American Society for Quality Control, Puerto Rico Section
- 2000            Dedication of the First Agricultural Millennium Fair, Cayey, Puerto Rico
- 2000            Honored by Club Caborrojeño, Guaynabo, Puerto Rico
- 2000            Leadership Award, Elizabeth Arden Corporation, San Juan, Puerto Rico
- 1999-2000    Honorary Member, Golden Key National Honor Society

- 1999            Honored by Cabo Rojo’s City Hall, Cabo Rojo, Puerto Rico
- 1999            Outstanding Industrial Engineer, Institute of Industrial Engineers, Puerto Rico

## Chapter

- 1995 Outstanding Professor 1995, Alpha Delta Kappa, Mayagüez, Puerto Rico
- 1990 Guest Speaker, Colloquium on Material Handling Research, Kentucky, Ohio
- 1989-90 Distinguished Industrial Engineer Award, IIE Chapter No. 236
- 1989-91 Baxter Endowed Chair in Manufacturing Engineering Recipient
- 1988 Ph.D. Dissertation Wunsch Award Recipient, Georgia Institute of Technology
- 1985-87 University of Puerto Rico President Scholarship Recipient
- 1984-85 Computer Integrated Manufacturing Systems Fellowship
- 1982-83 Bell Laboratories Scholarship Recipient
- 1982 Magna Cum Laude, Class of 1982, University of Puerto Rico at Mayagüez

## Professional and Community Activities

- 2007-Present Member, Board of Directors, Exploration Place, Wichita, KS
- 2006 Member, ADVANCE Site Visiting Team, University of Texas-El Paso
- 2006-Present Member, Rotary Club of Wichita
- 2004 Member, Connecticut Academy of Science and Engineering – CT Medal of Technology Selection Committee
- 2003-2007 Member, Technology Transfer/Commercialization Advisory Board to CT Governor's Council on Economic Competitiveness and Technology
- 2003 Reviewer, CAREER Panel in Manufacturing Enterprise, Engineering Directorate, National Science Foundation (NSF)
- 2003 Panelist, Planning Grants for the Department-Level Reform, Engineering Directorates for Engineering and Education and Human Resources, NSF
- 2003 Member, Mentoring and Advisory Panel, EPA National Council for Science and the Environment/ Office of Research and Development, Washington, DC

- 2003-Present Member, Gender Equity Advisory Board to Northeastern University, Boston, MA

- 2002 Member, Committee of Visitors for NSF Office of International Science and Engineering
- 2001-2007 Member, Georgia Institute of Technology President Advisory Board
- 2000 Member, Commission on the Rural/Regional Agenda, American Association of State Colleges and Universities
- 2000 Member, Board of Directors, Communications and Information Technology Alliance, Puerto Rico Industrial Development Company
- Aug 2000 Panelist, ADVANCE 2000 Workshop, NSF
- 1999 – 2001 Member, Board of Directors, Perea Hospital, Inc., Mayaguez, Puerto Rico
- 1998 - 2000 Evaluator, Governor's Award for Excellence in Schools in Puerto Rico Public Education System
- Summer 1997 Visiting Professor, Monterrey Institute of Technology, Queretaro, Mexico
- May 1997 Visiting Professor, Universidad de Lima, Lima, Perú
- 1996 – 1997 Advisor, Development and Implementation of a Master's Degree Program in Industrial Engineering at the University of Lima, Perú
- 1996 – 1998 Proposal's Reviewer for the Production Systems Program, NSF
- 1996 – 2000 Evaluation Panel Member, Physical Sciences, Math & Engineering, Ford Foundation Postdoctoral Fellowship for Minorities Program
- 1996 Instructor, Professional Engineering License Review Courses, San Juan, Puerto Rico
- 1995 – 2000 Evaluator, Governor's Quality Award, San Juan, Puerto Rico
- 1993 - 2000 Evaluator, Industrial Excellence Award Puerto Rico 2000
- 1989 - 1991 Proposal Reviewer, Design Theory and Methodology, Operations Research/Production Systems, and Computer Engineering Program, NSF
- 1989 – 1990 Instructor, Professional Engineering License Review Courses, Mayagüez, Puerto Rico
- 1990 Academic Coordinator, ASQC Quality Engineering, Ponce, Puerto Rico
- 1990 Steering Committee Member, Unattended Processes in Pharmaceutical Manufacturing, INDUNIV Research Center, Dorado, Puerto Rico

1990 – 1991 Chairperson, Education Committee, ASQC Puerto Rico Chapter

## **Participation in Administration, Teaching, and Research Improvement Programs**

*“Riding the Wave to Excellence in Engineering Education,”* ASEE Annual Conference, Honolulu, Hawaii, June 24-27, 2007

*“Diversity in Engineering,”* ASEE, Engineering Deans Conference, San Juan, Puerto Rico, April 15-18, 2007

*“Engineering Colleges: Critical for America’s Future,”* ASEE, Engineering Deans Council Public Policy Colloquium, Washington, DC, February 14-15, 2007

*“First Consortium on Science, Math and in Engineering,”* Federal Aviation Administration, Washington, DC, January 29, 2007

*“First Hispanic Deans Meeting,”* National Science Foundation, Dallas, TX, January 19, 2007

*“Making Our Mark, Making a Difference,”* The Third Summit for Women of Color Administrators in Higher Education, Long Beach, California, November 6-8, 2006

*“Advancing Scholarship in Engineering Education,”* ASEE Annual Conference, Chicago, IL, June 18-21, 2006

*“Engineering Leadership in American Society,”* ASEE 2006 Engineering Deans Institute, San Francisco, CA, March 26-28, 2006

*“Building Community Leadership,”* Wichita Metro Chamber of Commerce 2006 Wichita Insight, Wichita, KS, February 16- April 25, 2006

*“Engineering Colleges in Service to America,”* 2006 Engineering Deans Council Public Policy Colloquium (PPC), Washington, D.C., February 14-15, 2006

*“Women Engineers Leading Global Diversity,”* Society of Women Engineers National Conference, Anaheim, CA, November 3-4, 2005

*Women in Engineering Leadership Institute’s Advancement Leadership Conference,* Syracuse, New York, (NSF supported), October 7-10, 2004

*“Recruiting and Retaining Engineers for the 21<sup>st</sup> Century,”* 40<sup>th</sup> ASEE Midwest Section Annual Conference, University of Arkansas, Fayetteville, AR, September 14-16, 2005

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*SWE Leadership Advancement Conference,* Phoenix, Arizona, August 5, 2004

*New England Deans’ Meeting,* New Castle, New Hampshire, July 21-22, 2003

*11<sup>th</sup> Annual Symposium on Corporate Responsibility*, Hispanic Association on Corporate Responsibility, Chicago, Illinois, June 30 & July 1, 2003

*Reforming Engineering Education: A Workshop*, UNH School of Engineering and Applied Science, Madison, Connecticut, March 10, 2003

*Engineering's Role in the National Agenda*, American Society for Engineering Education Deans Council Public Policy Colloquium, Washington, D.C., February 11-12, 2003

*The Science and Technology Policy of the Bush Administration*, American Society for Engineering Education Deans Council Public Policy Colloquium, Washington, DC., February 12-13, 2002

*New Presidents' Academy*, American Association of State Colleges and Universities, Boulder, Colorado, August 2000

*6<sup>th</sup> Academic Planning Workshop*, University of Puerto Rico, Ponce, Puerto Rico, August 2000

*Annual Summer Meeting*, National Association of State Universities and Land-Grant Colleges, Commission on International Affairs, Oregon, July 26-30, 2000

*Entrepreneurial Leadership Development Institute for Academic Deans, Directors & Administrators at the University of Puerto Rico Mayagüez Campus*, Mayagüez, Puerto Rico, June 29-30, 2000

*EPSCoR Annual Meeting*, Fajardo, Puerto Rico, May 26-28, 2000

*IT in the 21<sup>st</sup> Century-A Growth Engine for the Maritime Industry*, International IT Conferences, Singapore, May 16-17, 2000

*13<sup>th</sup> Annual Conference Championing Hispanic Success in Higher Education*, Florida, October 29- November 2, 1999

*5<sup>th</sup> Academic Planning Workshop*, University of Puerto Rico, Mayagüez, Puerto Rico, August 1999

*Moving Beyond Individual Programs to Systemic Change*, Women in Engineering Programs & Advocates Network Conference, San Antonio, Texas June 5-8, 1999

*EPSCoR Annual Meeting*, Ponce, Puerto Rico, May 1, 1999

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*Best Assessment Symposium in Engineering Education II*, Rose-Hulman Institute of Technology, Terre Haute, Indiana, October 14-18, 1998

*Financial Ideas Exchange Day*, Andersen Consulting, New York City, New York, September 17-18, 1998

*1998 Summer Meeting of the Engineering Accreditation Commission-Dean's Day Information*, Baltimore, Maryland, July 15-17, 1998

*Technology Implementation Workshop*, Wake Forest University, NC, June 9-10, 1998

*U.S.-Mexico Joint Workshop on Research and Educational Opportunities in Manufacturing*, El Paso, Texas, October 17-18, 1997

*21<sup>st</sup> International Conference on Computers and Industrial Engineering*, March 9-12, 1997, San Juan, Puerto Rico, March, 9-12, 1997

*47<sup>th</sup> International Industrial Engineering Conference & 5<sup>th</sup> Industrial Engineering Research Conference*, Minneapolis, Minnesota, May 18-22, 1996

*Teaching Effectiveness Workshop*," Dr. Richard M. Felder, Mayagüez Hilton, Mayagüez, Puerto Rico, January 3-4, 1996

*Second Seminar/Workshop on Total Quality*, Drs. Merbil González, Jorge González Monclova y José R. Deliz, Mayagüez Hilton, Mayagüez, Puerto Rico, November 1, 1995

*Seminar/Workshop on Strategic Planning*, Dr. Ramón Claudio, University of Puerto Rico, Mayagüez, December 18, 1995

*Seminar/Workshop on Communication and Effective Meetings*, Dr. Ramón Claudio, University of Puerto Rico, Mayagüez, December 4, 1995

*Team Work Workshop*, Dr. Ramón Claudio, University of Puerto Rico, Mayagüez, November 20, 1995

*Assessment of Institutional Effectiveness and Student Learning Outcomes*, Dr. Jeffrey A. Seybert, University of Puerto Rico, Mayagüez, October 19, 1995

*Leadership and Academic Administration Training for Department Directors*, Dr. Ramón Claudio, University of Puerto Rico, Mayagüez, July 28 & 29, 1995

*46<sup>th</sup> International Industrial Engineering Conference & 4<sup>th</sup> Industrial Engineering Research Conference*, Nashville, Tennessee, May 21-25, 1995

*Factory Programs Training*, Ames, Iowa, January 25-26, 1995

*Re-engineering the Organization*, Mayagüez, March 3, 1994

*National Science Foundation Design and Manufacturing Systems Grantees Conference*, Austin, Texas, January 9-11, 1991

*National Science Foundation Design and Manufacturing Systems Grantees Conference, Tempe, Arizona, January 8-12, 1990*

*Unattended Processes in Pharmaceutical Manufacturing Symposium, Dorado, Puerto Rico, October 18-19, 1990*

*Society for Integrated Manufacturing Conference, Atlanta, Georgia, November 12-15, 1989*

*Seminar on Automated Material Handling, lectured by Dr. Leon F. McGinnis, University of Puerto Rico, Mayagüez, August 22-24, 1989*

*ORSA/TIMS Joint National Meeting, St. Louis, Missouri, October 25-28, 1987*

*Production Measurement and Improvement Strategies and Techniques, lectured by Dr. D. Scott Sink, San Juan, Puerto Rico, June 1994*

## **Special Projects**

Jan – May 1996	Ergonomic Design of Medical Instrumentation, Mayagüez, PR
Dec 1995 – Jan 1996	An Ergonomic Evaluation of Production Operations, Erie Scientific, Aguadilla, PR
Nov 1995 – Jan 1995	An Ergonomic Evaluation of Production Operations, Frederick Lee, Mayagüez, PR
Sep 1995 – Dec 1996	An Ergonomic Evaluation of Warehousing, Packaging Operations, SKB, Cidra, PR
1988	Capacity Requirement Analysis for an Automated Material Handling System, Baxter Bentley of Puerto Rico, Añasco, PR
1984	Procedure to Analyze Microload AS/R Systems, Georgia Institute of Technology, Atlanta, GA
1985	Design and Implementation of an Advisory Interactive System to Aid in the Process of User Interface Development, Georgia Institute of Technology, Atlanta, GA
1983	An Analytical Model for a Construction Project using Operations Management Techniques, University of Michigan, Ann Arbor, MI
1983	Research Training Techniques and the Effect of the Industrial Environment in the Learning Process, University of Michigan, Ann Arbor, MI
1981	Design of the Breaker Manufacturing Plant Facility Layout, GTE

- Sylvania, Canóvanas, PR
- 1981 Applied Data Analysis for the College of Engineers and Surveyors of Puerto Rico, Industrial Engineering Department, University of Puerto Rico, Mayagüez, PR
- 1980 Design of Work Stations and Work Methods, Health-Tex, Cabo Rojo, PR
- 1980 Noise Level Analysis, Sanz Convair Jumbo, Inc., Cabo Rojo, PR

### **Scientific and Professional Societies**

Tau Beta Pi, Member

Alpha Pi Mu, Member

American Society for Engineering Education (ASEE), Member

American Society of Quality Control (ASQC), 1994 Board of Directors

Golden Key National Honor Society, Honorary Member

Institute of Industrial Engineers (IIE), 1995-1997 Board of Directors, Chapter No. 236

Society for Advancement of Chicanos and Native Americans in Science (SACNAS), Member

Society of Hispanic Professional Engineers (SHPE), Member

Society of Women Engineers (SWE), Member

### **References**

**Dr. Lawrence J. DeNardis**, President Emeritus

University of New Haven

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[ljdns@newhaven.edu](mailto:ljdns@newhaven.edu)

Dr. DeNardis hired me as Dean of the School of Engineering and Applied Science at UNH.

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**Professor Rafael Pietri-Oms**, Former Chancellor

University of Puerto Rico at Mayaguez

(787) 834-9167

Professor Pietri-Oms, an Emeritus Dean and Professor of UPRM College of Agriculture, served as my Senior Executive Advisor during my tenure as Chancellor of UPRM.

**Dr. Waded Cruzado-Salas**, Executive Vice-President and Provost  
New Mexico State University  
P.O. Box 30001  
Las Cruces, NM 88003-8001  
(505) 646-2127  
[wcruzado@nmsu.edu](mailto:wcruzado@nmsu.edu)

Dr. Cruzado-Salas was appointed Dean of the College of Arts and Sciences at the UPRM during my tenure as Chancellor of that institution.

**Dr. Donna Hawley**, Professor, Assistant Vice President for Academic Affairs and Director of Institutional Research (Past Faculty Senate Chair)  
Wichita State University  
1845 Fairmount  
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(316) 978-3015  
[donna.hawley@wichita.edu](mailto:donna.hawley@wichita.edu)

Dr. Hawley is in charge of academic program reviews and the performance agreements WSU has with the Kansas Board of Regents.

**Mrs. Connie Dietz**, Director  
Cooperative Education & Work-Based Learning  
Wichita State University  
1845 Fairmount  
Wichita, KS 67260-0143  
(316) 978-6988  
[connie.dietz@wichita.edu](mailto:connie.dietz@wichita.edu)

During my tenure as Dean of the College of Engineering at WSU I have collaborated extensively with Mrs. Dietz including her participation in the multidisciplinary task force who developed the Engineer 2020 program.

**Dr. Peter A. Cohen**, Dean  
College of Health Professions  
Wichita State University

1845 Fairmount  
Wichita, KS 67260-0043  
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[peter.cohen@wichita.edu](mailto:peter.cohen@wichita.edu)

As Dean of the College of Engineering at WSU I have collaborated with Dean Cohen in multiple initiatives including the development of the new undergraduate program in Bioengineering.

**Dr. Susan Kovar**, Dean  
Graduate School  
Wichita State University  
1845 Fairmount  
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The offering and administration of the graduate programs in the College of Engineering at WSU requires a collaborative effort between the Dean of the College and the Dean of the Graduate School.

**Mrs. Virginia Zawoy**, Trustee  
Connecticut Community Colleges  
and Director of Development  
University of New Haven  
300 Orange Avenue  
West Haven, CT 06516  
(203) 932-7263

[vzawoy@newhaven.edu](mailto:vzawoy@newhaven.edu)

Mrs. Zawoy was the Director of Development assigned to the School of Engineering and Applied Science during my tenure as Dean at UNH.

**Ms. Laura Cotté**, Former Director  
Office of External Resources UPRM  
1500 Massachusetts Avenue # 349, NW  
Washington, D.C. 20005  
(703) 505-6445 or (202) 296-1723

[l\\_cotte@hotmail.com](mailto:l_cotte@hotmail.com)

Ms. Cotté was appointed Director of the Office of External Resources at UPRM during my tenure as Chancellor of that institution.

**Dr. Steven Skinner**, Professor and Chair  
Department of Electrical and Computer Engineering  
College of Engineering  
Wichita State University

1845 Fairmount  
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(316) 978-6197

[steven.skinner@wichita.edu](mailto:steven.skinner@wichita.edu)

Dr. Skinner leads the largest department in the College of Engineering at WSU in terms of student-credit hours.

**Dr. Michael Collura**, Professor of Chemical Engineering

Tagliatela College of Engineering

University of New Haven

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[mcollura@newhaven.edu](mailto:mcollura@newhaven.edu)

Dr. Collura is the faculty leader in the development and implementation of the UNH multidisciplinary engineering education model.

**Dr. Janet Twomey**, Associate Professor of Industrial & Manufacturing Engineering

College of Engineering

Wichita State University

1845 Fairmount

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(316) 978-5908

[janet.twomey@wichita.edu](mailto:janet.twomey@wichita.edu)

Dr. Twomey is a recipient of a NSF Career Award and a former NSF Director of the Manufacturing Enterprise Systems in Design Manufacture and Industrial Innovation Program.

**Mrs. Karen Ralph**, Former Assistant to the Dean

University of New Haven

[kralph@newhaven.edu](mailto:kralph@newhaven.edu)

Mrs. Ralph served as Assistant to the Dean during my tenure as Dean of the School of Engineering and Applied Science at UNH.

## **Mailing Address**

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