

RAMON E. VASQUEZ ESPINOSA
Dean, College of Engineering

EDUCATION:

Ph.D., Louisiana State University, 1984
MSEE, University of Puerto Rico, 1979
BSEE, University of Puerto Rico, 1974, (**Magna Cum Laude**)

UPRM SERVICE: 25 years, (College of Engineering)

Professor, July 1992 until present	Instructor, July 1975
Associate Professor, July 1987	Teaching Assistant, August 1974
Assistant Professor, July 1984	

EXPERIENCE:

February 2000

To Present Dean College of Engineering, University of Puerto Rico at Mayagüez,

July, 1992

To Present **Professor** Department of Electrical and Computer Engineering, University of Puerto Rico, Mayagüez Campus

**June, 1999 to
January 2000**

Director Center for Research and Development at the University of Puerto Rico at Mayagüez, June 1999 to present

**March 1990 to
June, 1998**

Associate Director, Department of Electrical and Computer Engineering, University of Puerto Rico, Mayagüez Campus

Director

Center for Computing Research and Development, Department of Electrical and Computer Engineering, (CECORD)
University of Puerto Rico, Mayagüez Campus, 1994 to June 1999

Director

Laboratory of Remote Sensing and Image Processing (LARSIP),
Department of Electrical and Computer Engineering,
University of Puerto Rico, Mayagüez Campus, 1989 to 1998

Associate Dean of Academic Affairs

Faculty of Engineering, University of Puerto Rico at Mayagüez,
June 1998 to June 1999

Associate Professor

Department of Electrical and Computer Engineering, University of Puerto Rico, Mayagüez Campus, July 1987

Assistant Professor

Department of Electrical and Computer Engineering, University of Puerto Rico,
Mayagüez Campus, July 1984

Research Assistant

Remote Sensing and Image Processing Center,
Department of Electrical and Computer Engineering,
Louisiana State University, Baton Rouge, La., July 1980 to June 1984

Instructor

Department of Electrical and Computer Engineering, University of Puerto Rico,
Mayagüez Campus, August 1975

Teaching Assistant

Department of Electrical and Computer Engineering, University of Puerto Rico,
Mayagüez Campus, August 1974

PROFESSIONAL SOCIETIES

IEEE - Institute of Electrical and Electronics Engineers

ASEE - American Society for Engineering Education

SPIE - International Society for Optical Engineering

ASPRS- American Society for Photogrammetry and Remote Sensing

PRS - Pattern Recognition Society

ACM - Association for Computing Machinery

HONORS AND DISTINCTIONS

Centennial Certificate, The American Society for Engineering Education

Best of Session Award for the Plenary Session on COASTAL MAPPING AND CHARTING entitled:
“An Integrated Mapping and Databank System for Coastal Changes”

Tau Beta Pi

Eta Kappa Nu

Who is Who Among Students in American Universities?

Sigma Xi

PUBLICATIONS AND PRESENTATIONS (Last Ten Years)

“Cellular design to minimize investment costs by using evolutionary programming”

Gursel Süer, Yolanda Peña, Ramón Vásquez, Considered for publication in International Journal of Engineering Valuation and Cost Analysis, February 2000

“Evolutionary Programming for Minimizing the Average Flow time in the presence of Non-zero ready times” G. Suer, R. Vasquez, and Joel Santos, submitted to the International Journal of Computers and Industrial Engineering for the Special Issue of New Orleans Conference, June 1999

“A Hybrid Approach of Genetic Algorithms and Local Optimizers in Cell Loading,” Gursel Süer, Ramón Vásquez and Miguel Cortés, 1999 Congress on Evolutionary Computation, Washington

“Wavelet Features for Color Image Classification,” V. Manian and R. Vásquez, submitted to IEEE Conference on Image Processing 2000

“Classifier Performance for SAR Image Classification,” V. Manian, R. Hernandez and R. Vásquez, submitted to IEEE Geosciences and Remote Sensing Conference (IGARSS) 2000

“A Texture Based Algorithm for Color Image Classification,” V. Manian, M. Castro and R. Vásquez, submitted to SPIE International Conference AeroSense 2000

“Texture Classifications of Scaled and Rotated Images Using Logical Operators,” V. Manian, R. and P. Katiyar, submitted to IEEE Transactions on Image Processing 2000

“Multiresolution Edge Detection Algorithm Applied to SAR Images,” V. Manian and R. Vásquez, IEEE Geoscience and Remote Sensing Conference IGARSS 99, Hamburg, Germany, June 1999

“The Use of a Robust Toolbox for Texture Classification and Segmentation,” V. Manian, Myra Ruiz and R. Vásquez, SPIE International Conference on AeroSense '99, Orlando, FL, April 1999

“On Remote Sensing Image Classification and Segmentation,” V. Manian and R. Vásquez, Fourth International Airborne Remote Sensing Conference and Exhibition,-ERIM, Ottawa, Canada June 1999

“Texture Techniques Applied to Remote Sensing Images,” V. Manian and R. Vásquez, ASPRS Annual Conference, Portland, Oregon, May 1999

“On classifications of scaled and rotated images using a class of basis functions,” by V. Manian and R. Vásquez, Pattern Recognition journal, Vol. 31, No. 12, Dec. 1998

“Cellular Design by Using Evolutionary Programming as a Tool,” Dr. Gursel Suer and Ramón Vásquez, The Second Japan-Australia Joint Workshop on Intelligent and Evolutionary Systems, Tokyo November 1998

“Evolutionary Programming-Based Cell Loading,” Dr. Gursel Süer and Ramón Vásquez, The Second Japan-Australia Joint Workshop on Intelligent and Evolutionary Systems, Tokyo, November 1998

“Evolutionary Programming for Part Family Formation,” Dr. Gursel Süer and Ramón Vázquez, The Second Japan-Australia Joint Workshop on Intelligent and Evolutionary Systems, Tokyo, November 1998

“Evolutionary Programming for Minimizing the Average Flow Time in the Presence of Non-Zero Ready Times,” Dr. Gursel Suer and Ramón Vázquez, The Second Japan-Australia Joint Workshop on Intelligent and Evolutionary Systems, Tokyo, November 1998

“Evolutionary Programming Application in Lot Sizing Decisions,” Dr. Gursel Suer and Ramón Vázquez, The Second Japan-Australia Joint Workshop on Intelligent and Evolutionary Systems, Tokyo, November 1998

“A WWW-Base Expert System Advisor for the Diagnostic of Network Communications Problems,” Vázquez, R., A. Morales-Morell, A. Creus and J. Carvajal, ADMI98, Houston, TX, June 1998

“The ITaLiCS Environment and the Car Component,” Vázquez, R. and Ariel V. Mirles, ADMI98, Houston, TX, June 1998

“Fractal Transform as a Tool for Image Compression,” Vázquez, R. E. and M. Rosado, ADMI98, Houston, TX, June 1998

“Logical operators as a new tool for texture classification”, P. Katiyar and R. Vázquez, Aerosense’98, Orlando, FL, April 1998

“An Image Retrieval and Processing Expert System for the World Wide Web,” R. Vázquez and R. Rodríguez, URC-TC98, Alabama, February 1998

“Framework for SAR Image Classification: Comparison of Co-Occurrence Method and Gabor Based Method”, Vydia Manian and Ramón Vázquez, Proceeding of the IEEE IGARSS’97, Singapore, August 1997

“Denoising of LANDSAT Images Using Wavelet Transform,” Ramón Vázquez and Farouk Bonilla, 3rd International Airborne Remote Sensing Conference and Exhibition, Copenhagen, Denmark, July, 1997

“The Use of HRPT Imagery to Study Environmental and Climate Phenomena,” Nivia Colón, Félix Irizarry and Ramón E. Vázquez, “ADMI’97: Increasing Diversity in Research and Education”, Washington, DC, May 1997

“Speeding Image Transfer Through the Internet with the aid of the Java Programming Language”, Rolando Torres, William Vélez and Ramón E. Vázquez, “ADMI’97: Increasing Diversity in Research and Education,” Washington, DC, May 1997

“Expanding the Computer’s Number Horizon”, Karli López, Pieter L. Van der Meer and Ramón E. Vázquez, “ADMI’97: Increasing Diversity in Research and Education,” Washington, DC, May 1997

“Effects of Transportation, Urbanization and Industrialization on Agricultural Land use in Puerto Rico”, Bruce Ricart, Pieter L. Van der Meer and Ramón E. Vázquez, “ADMI’97: Increasing Diversity in Research and Education,” Washington, DC, May 1997

“An Academic Program in Computing and Information Sciences and Engineering”, Jaime Seguel, Dorothy Bollman, Pablo Tarazaga, Domingo Rodríguez, Néstor J. Rodríguez and Ramón Vázquez, “ADMI’97: Increasing Diversity in Research and Education,” Washington, DC, May 1997

“Comparison of Daubechies, Coiflet, and symlet wavelets for edge detection,” R. Vázquez, Reena Singh and Rajeev Singh, SPIE AeroSense’97, Orlando, April 1997

“A Spatial Data Retrieval and Image Processing System for the WWW,” Wendolin Bosques, Ricardo Rodríguez and Ramón Vázquez, Proceedings of the 21st International Conference on Computers & Industrial Engineering, San Juan, Puerto Rico, March, 1997

“Feature Analysis of Scaled and Rotated Texture Segmentation,” Vydia Manian and Ramón Vázquez, Proceeding of the 21st International Conference on Computers & Industrial Engineering, San Juan, Puerto Rico, March, 1997

“ML Parameter Estimation and Minimum Distance classifier for Texture Analysis Using Wavelet Transforms,” Reena Singh, Rajeev Singh and Ramón Vázquez, Proceeding of the 21st International Conference on Computers & Industrial Engineering, San Juan, Puerto Rico, March 1997

“Land Cover Classification Systems for SAR Images,” Khoros Symposium ’97, Albuquerque, NM, March, 1997

“Wavelet Transform and SGLDM: A Classification Performance Study Using ML Parameter Estimation, Minimum Distance, and K-nearest Neighbor Classifier,” Reena Singh, Rajeev Singh and Ramón Vázquez, SPIE AeroSense’97, Orlando, April, 1997

“On Scaled and Rotated Texture Segmentation Using a Class of Basis Functions”, V. Manian and R. Vázquez, SPIE AeroSense’97, Orlando, April 1997

“Wavelet Transform and SGLDM: A Classification Performance Study using ML Parameter Estimation, Minimum distance, and K-Nearest neighbor Classifiers,” Electronic Imaging’97, San Jose, Ca., February 1997

“A Comparison of Neural Network and Maximum-Likelihood Classifiers for Texture Classification,” Electronic Imaging’97, San Jose, Ca., February 1997

“Classification of Texture Using Fractal Techniques,” W. Navas and R. Vázquez, URC-TC’97, February 1997

“On the Implementation of a Land Cover Classification System for SAR Image Using Khoros,” E. Medina and R. Vázquez, URC-TC’97, February, 1997

“A Framework for the Recognition of Scaled, Translated Objects Using the Short Time Fourier Transform,” V. Manian and R. Vázquez, 1996 IEEE International Conference on Systems, Man and Cybernetics, Beijing, China, October, 1996

“On the Implementation of Wavelet Transforms in Multicomputer Networks,” International Conference on Signal Processing Applications and Technology, Boston, MA, October, 1996

“A Framework for Object Recognition in Images Using the Short Time Fourier Transform,” V. Manian and R. Vásquez, SPIE’s Optical Science, Engineering and Instrumentation, Denver, CO, August, 1996

“Comparative Study of Spatial Gray Level Dependence Method and Gabor Transform Method for Texture Analysis,” N. Colón and R. Vásquez, ADMI Conference, Mayagüez, P.R., July 1996

“Crisp and Fuzzy C-Means Algorithms,” O. Mislá, H. Parsiani, and R. Vásquez, ADMI Conference, Mayagüez, P.R., July 1996

“Wavelets, Gabor Transform and Co-occurrence Matrix: A Comparative Study for Texture Analysis,” Reena Singh, Rajeev Singh and R. Vásquez SPIE 10TH Annual International Aerosense Symposium, April 1996

“Efficient Algorithms for Discrete Gabor Transforms using Multicomputer Networks,” V. Manian and R. Vásquez, SPIE 10th Annual International Aerosense Symposium, April 1996

“A Computational Framework for Analysing Textured Image Classification,” IEEE International Conference on System, Man and Cybernetics, R. Vásquez, V. Manian, October 1995

“An Analysis of Transputer Processor Networks for Image Processing,” R. Vásquez, V. Manian, Aerosense ’95 (SPIE’s International Symposium on Aerosense/Defense Sensing and Dual-Use Photonics ’95), April 1995

“A Methodology for an Automatic Image Updating Systems: Extracting Raster Templates from Vector Data Sets for Template Matching”, R. Vásquez, C. Rodríguez, ACSM/ASPRS ’95, March 1995

“An Approach to Develop an Intelligent Interface to Control an Applications Software,” R. Vásquez, F. Nevárez, ACSM/ASPRS ’95, March 1995

“On Teaching AI and Expert Systems Courses,” O. N. García, R. A. Pérez, L. H. Brady, R. Vásquez, et al IEEE Transactions on Education, Vol. 36. No 1. February 1993, pages 193-197

“A Simulation Model for a Centralized Multihop Packet Radio Network,” Manuel Jiménez Cedeño and Ramón E. Vásquez, 36th Midwest Symposium on Circuits and Systems, Detroit, August 1993

“Application of a Weather Information System in the Implementation of Flash Flood Models”, Héctor Luciano, Ramón E. Vásquez, Rafael Fernández Seín, 28th ACS JUNIOR TECHNICAL MEETING, March 6, 1993

“Centralized Packet Radio Network: A Communication Approach Suited for Data Collection in a Real-Time Flash Flood Prediction System,” Manuel Jiménez and Ramón E. Vásquez, Proceedings of the 1993 Symposium on Applied Computing, Indianapolis, Indiana, February 1993

“A Coastal Classification System for Tropical Islands” Maritza Barreto, Jack Morelock and Ramón Vásquez, Ocean ’92 Newport, Rhode Island, October 1992

“Estimation of Motion and Position of a Rigid Object Using a Sequence of Images: Tridimensional Kalman Filter Approach,” Ramón Vázquez and Justo Mayora, 19th Annual Computer Science Conference, March 5-7, 1991

“Use of Simulated Neural Networks for Aerial Image Classification,” Frances Medina and Ramón Vázquez, on Proceeding 1991 ACSM-ASPRS, Annual Convention, Baltimore

“Kalman Filter Application to Three Dimensional Rigid Body Motion Parameter Estimation from a Sequence of Images,” Ramón Vázquez and Justo Mayora, 5th International Conference on CAD/CAM Robotics and Factories of the Future, December 1990

“Flash Flood Forecasting Based on Real Time Data Acquisition,” Ismael Pagán, Rafael Fernández and Ramón Vázquez, International Symposium on Tropical-Hydrologic an 4th Caribbean Islands Water Resource Congress, July, 1990

“Development of a Triangulated Irregular Network (TIN) from Topographic and Hydrologic Models,” Eduardo Blanco, Rafael Fernández and Ramón Vázquez, International Symposium on Tropical-Hydrologic and 4th Caribbean Islands Water Resource Congress, July, 1990

“Introducción a los Sistemas de Información Geográfica,” December 1997, Santo Domingo, República Dominicana

“Primera Feria Ecoturística y de Producción,” presentation: “El Uso de Sistemas de Información Geográfica como Herramientas de Apoyo al Ecoturismo,” Santo Domingo, RD, June 1997

“A Comparison of Traditional and Wavelet Methods for Invariant Texture Classification,” Vidya Manian and Ramón E. Vázquez, April 1997

“The Multifeature Extraction Approach for SAR Image Classification,” Edwin J. Medina and Ramón E. Vázquez, CRC’97, April 1997, Mayagüez, PR

“Comparison of Statistical Features for Invariant Texture Segmentation,” Vidya Manian and Ramón E. Vázquez, CRC’97, April 1997, Mayagüez, PR

“On Simulating NOAA-A VHRR Images,” Farouk Bonilla and Ramón E. Vázquez, CRC’97, April 1997, Mayagüez, PR

“A Comparison of Traditional and Wavelet Methods for Invariant Texture Classification,” Vidya Manian and Ramón E. Vázquez, CRC’97, April 1997, Mayagüez, PR

“Implementation of the Multimedia Technology in the Industrial Archeology of Puerto Rico,” Leonardo Rodríguez, Irving Hernández and Ramón E. Vázquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“Performance Evaluation of Logical Transforms,” Praveen Katiyar and Ramón E. Vázquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“An Expert System for a Spatial Data Retrieval and Image Processing,” Angélica Rondón and Ramón E. Vázquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“The Use of HRPT Imagery to Study Environmental and Climate Phenomena,” Félix Irizarry, Nivia Colón and Ramón E. Vásquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“Texture Features Set for SAR Images Classification: the Gray Level Cooccurrence Matrix Approach,” Edwin J. Medina and Ramón E. Vásquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“A Framework for Interactive Diagramming on the Web,” Ricardo J. Rodríguez and Ramón E. Vásquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“Image Compression Using Neural Networks and Vector Quantization,” Farouk Bonilla, Fabian González and Ramón E. Vásquez, ACS Junior Technical Meeting, March 1997, Carolina, PR

“On the Implementation of Wavelet Transforms in Multicomputer Networks,” Vidya Manian and Ramón E. Vásquez Espinosa, October 1996

“Using a Geographic Information System for Architectural Structures,”
31st ACS Junior Technical Meeting, Eydie V. González and Ramón E. Vásquez, March 9, 1996

“Using Geographical Information System for Architectural Structures and Digitalization of Maps,” 31st ACS Junior Technical Meeting, Silma Vega and Ramón E. Vásquez, March 9, 1996

“Experimental Development of Digital Systems using VHDL Technology,” Edward David, Pepin Torres, Yamil Chaar, Sonya Nieves and Ramón E. Vásquez, 31st ACS Junior Technical Meeting, March 9, 1996

“Implementation of Spatial Gray Level Dependence Method for Texture Analysis,” Nivia Colón and Ramón E. Vásquez, 31st ACS Junior Technical Meeting, March 9, 1996

“Bayesian Networks of Markov Random Fields for Image Segmentation,” Sandra Soto Cabán and Ramón E. Vásquez, 31st ACS Junior Technical Meeting, UPR-Arecibo, March 9, 1996

“Fuzzy Logic in Image Compression,” Oscar Mislá Villalba, Hamed Parsiani and Ramón E. Vásquez, 31st ACS Junior Technical Meeting, UPR- Arecibo, March 9, 1996

“Edge Detection and Wavelets,” Rajeev Singh and Ramón E. Vásquez, 31st ACS Junior Technical Meeting, UPR-Arecibo March 9, 1996

“Texture Analysis using Wavelet Transform,” Reena Singh and Ramón E. Vásquez, 31st ACS Junior Technical Meeting, UPR-Arecibo, March 9, 1996.

“Khoros Classification Algorithms Applied to SAR Images” 31st ACS Junior Technical Meeting, UPR-Arecibo, March 9, 1996

“Ground Truth for Remote Sensing of Carbonate Environments,” Jack Morelock, Waleska Cruz, Ramón E. Vásquez and Richard L. Miller, Remote Sensing and Environmental Monitoring for the Sustainable Development of the Americas, San Juan, P.R. March 21-22, 1995

“An integration of remote sensing, mapping and survey data to describe bottom sediment types in the marine nearshore” Barreto, M., Morelock, J., Miller, R.L., Vásquez, R., Remote Sensing

and Environmental Monitoring for the Sustainable Development of the Americas, San Juan, P.R., March 21-22, 1995

“Descripción de la Distribución de tipos de sedimentos de fondo en la zona litoral de Puerto Rico: a través de la integración de Percepción Remota, Mapas y Trabajo de Campo,” M. Barreto, J. Morelock, R.L. Miller, R. Vázquez, VII Simposio Latinoamericano de Percepción Remota, Puerto Vallarta, México, November 1995

“An Integration of Remote Sensing, Mapping and Survey Data to Describe Bottom Sediment Types in the Marine Nearshore at Puerto Rico Island,” Ramón E. Vázquez, VII Simposio Latinoamericano de Percepción Remota, November 5-10, 1995

“Application of Fuzzy Logic Methods to Computer Vision,” Rogelio Palomera-Arias, Ramón E. Vázquez, 30th ACS Junior Technical Meeting, March 4, 1995.

“A Catalog for Neural Networks Implementation,” David A. Gaud Esteves, Ramón E. Vázquez, 30th ACS Junior Technical Meeting, March 4, 1995

“Using a Geographic Information System (GIS) for Architectural Structures,” Eydie V. González Rivera, Ramón E. Vázquez, 30th ACS Junior Technical Meeting, March 4, 1995

“Biography of a Puerto Rican Eminence Using the Multimedia Technology,” José Portalatín Rosario, Ramón E. Vázquez, 30th Junior Technical Meeting, March 4, 1995

“Study of Noise Sensitivity on Edge Detection Algorithms,” Nivia Colón Díaz, Ramón E. Vázquez, 30th Junior Technical Meeting, March 4, 1995

“Comparison of NETS NNS and MATLAB NNS,” Marcelino Santos Alejandro, Ramón E. Vázquez, 30th Junior Technical Meeting, March 4, 1995

“Western Area Terrestrial Database and Its User Interface,” William M. Vélez Pérez, Sandra Padilla, Francisco Colón, Ramón E. Vázquez, 30th Junior Technical Meeting, March 4, 1995.

“Automatic Parameters Gathering System to Obtain the Geographical Instantaneous Unit Hydrogram (GIUH),” Rafael A. Tejera García, Ramón E. Vázquez, 30th Junior Technical Meeting, March 4, 1995

“A Methodology for an Automatic Image Updating System,” Carlos M. Rodríguez, Ramón E. Vázquez, 30th Junior Technical Meeting, March 4, 1995

“A Proposal for an Automatic Image Updating System,” Carlos M. Rodríguez Ramos, Ramón E. Vázquez, 29th ACS Junior Technical Meeting, March 5, 1994

“Biography of an Eminence Using the Multimedia Technology,” José I. Portalatín, Leonardo Rodríguez, Ramón E. Vázquez, 29th ACS Junior Technical Meeting, March 5, 1994.

“Information System for Architectural Structures,” Wendolin Bosques, Lillian Cotto, Ramón E. Vázquez, 29th ACS Junior Technical Meeting, March 5, 1994

“Enhancement of the Laboratory for Applied Remote Sensing and Image Processing,” Aramis J. Alvarez Gómez, Ramón E. Vázquez, 29th ACS Junior Technical Meeting, March 5, 1994

“Microprocessor Design Using VHDL,” Miguel Pimentel, Wilmarí Salvá, Armando García, Ramón E. Vásquez, 29th ACS Junior Technical Meeting, March 5, 1994

“A Proposal For An Automatic Image Updating System,” Carlos Manuel Rodríguez Ramos, Ramón E. Vásquez, Fourth Undergraduate Research Seminar, March 1, 1994

“Remote Data Acquisition Unit: A Real-Time Acquisition Unit Suited For Data Collection In a Flash Flood Prediction System,” Ricardo E. Del Rosario-Charbonnier, Eric R. Flores-Acosta, Prof. Manuel Jiménez-Cedeño, Ramón E. Vásquez, Fourth Undergraduate Research Seminar, March 1, 1994

“Development of the Biography of a Puerto Rican Eminence Using The Multimedia Technology,” José I. Portalatín, Leonardo Rodríguez, Ramón E. Vásquez, Fourth Undergraduate Research Seminar, March 1, 1994.

“Implementation of a New Statistical Approach for Texture Analysis in the Khoros Environment,” Hugo A. Badillo, Ramón E. Vásquez, 28th ACS Junior Technical Meeting, March 6, 1993

“Effect of the Longitudinal Slope on the Saltation Length of Eroded Particles,” José G. Pérez Aponte, Ramón E. Vásquez, Raúl Zapata, 28th ACS Junior Technical Meeting, March 6, 1993

“GIS, Activities in Puerto Rico,” Pieter Van der Meer, Ramón E. Vásquez, 28th ACS Junior Technical Meeting, March 6, 1993

“An Integrated Mapping and Databank System for Coastal Changes Part A. West Coast, Puerto Rico,” Second Thematic Conference on Remote Sensing for Marine and Coastal Environments, New Orleans, February 1994

“Artificial Intelligence as a Tool in the Design of A Coastal Classification Model,” Maritza Barreto Orta, Ramón E. Vásquez Espinosa, 27th ACS Junior Technical Meeting, March 7, 1992

“An Automatic Image Analysis and Classification System,” Octavio R. Gómez Alba, Ramón E. Vásquez, 27th ACS Junior Technical Meeting, March 7, 1992

“An Algorithm for the Extraction of Very Important Points (VIPs) from Vector Digital Elevation MAPS” (DEM), Braulio Rivera González, Ramón E. Vásquez, 27th ACS Junior Technical Meeting, March 7, 1992

“The Use of Tiger/Line Files and Digitized Images as a Database for Analyzing Transportation Issues in Urban Areas,” Pieter L. Van der Meer, Ramón E. Vásquez, 27th ACS Junior Technical Meeting, March 7, 1992

“Rapid Access Database to Geographical Information,” Camille Santiago Rivera, Ramón E. Vásquez, 27th ACS Junior Technical Meeting, March 7, 1992

“Design of a Remote Data Acquisition Unit for A Flash-Flood Prediction System,” Ismael E. González Valentín, Carlos Canals Moreno, Ramón E. Vásquez, Manuel Jiménez Cedeño, 27th ACS Junior Technical Meeting, March 7, 1992

“Implementing Image Segmentation Algorithms Using Parallel Processors,” Carlos Vélez, Ramón E. Vásquez, Nayda Santiago, Second Undergraduate Research Seminar, March 12, 1992

“Implementation of Texture Segmentation Algorithms Using Neural Networks and Object-Oriented Programming,” Obed Torres, Ramón E. Vásquez, Second Undergraduate Research Seminar, March 12, 1992

“Vision Algorithm,” María H. Cotto, Ramón E. Vásquez, Second Undergraduate Research Seminar, March 12, 1992

“Design of a High Resolution Image Display Graphics Board for The AT&T 3B2-500 Computer,” Hugo A. Badillo, Ramón E. Vásquez, Second Undergraduate Research Seminar, March 12, 1992

“Application of a Weather Information System in The Implementation of Flash Flood Models,” Héctor Luciano, Ramón E. Vásquez, Second Undergraduate Research Seminar, March 12, 1992

“Automatic Recognition of Musical Instruments,” Rogelio Palomera-Arias, Ramón E. Vásquez, Second Undergraduate Research Seminar, March 12, 1992

“Design of a Remote Data Acquisition Unit for A Flash-Flood Prediction System,” Ismael E. González, Carlos Canals, Ramón E. Vásquez, Manuel Jiménez, Second Undergraduate Research Seminar, March 12, 1992

“An Algorithm for the Extraction of Very Important Points (VIPs) from Vector Digital Elevation MAPS” (DEM), Braulio Rivera González, Ramón E. Vásquez, MRCE Advisory Board Visit (Poster Session), April 6, 1992

“Design of a Remote Data Acquisition Unit for A Flash-Flood Prediction System,” Ismael E. González, Carlos Canals, Ramón E. Vásquez, Manuel Jiménez, MRCE Advisory Board Visit (Poster Session), April 6, 1992

“Porting of BRASS Software,” Ricardo Acosta Torres, Auristela Mueces, Pagán Trinidad, Ramón E. Vásquez, 26th ACS Junior Technical Meeting, March 16, 1991

Using Geographic Information Systems (GIS) for the Mayagüez Parking Study, Pieter Van der Meer, Ramón E. Vásquez, 26th ACS Junior Technical Meeting, March 16, 1991

Centralized Packet Radio Network: A Communication Approach Suited for Data Collection in a Real-Time Flash Flood Prediction System, Manuel Jiménez Cedeño, Ramón E. Vásquez, 26th ACS Junior Technical Meeting, March 16, 1991

Serial Communication for the Data Acquisition Project, Juan A. Padilla Ortiz, Justo Mayora, Ramón E. Vásquez, 26th ACS Junior Technical Meeting, March 16, 1991

Utilización de la Función de Activación Cúbica (FAC) en el Proceso de Entrenamiento de Redes Neuronales Utilizando la Regla Delta, José Navarro, Ramón E. Vásquez, 26th ACS Junior Technical Meeting, March 16, 1991

Design of a High Resolution Display Board for the AT&T 3B2/500 Computer, José Luis Cruz-Rivera, Manuel Jiménez Cedeño, Ramón E. Vázquez, 26th ACS Junior Technical Meeting, March 16, 1991

Use of Simulated Neural Networks in Image Analysis, Frances I. Medina, Ramón E. Vázquez, 26th ACS Junior Technical Meeting, March 16, 1991

Grass Applied Land use Studies, Carlos E. Sandoval Lemus, Ramón E. Vázquez, 26th ACS Junior Technical Meeting, March 16, 1991

Use and Applications of the Geographic Resources Analysis Support System, Juan Carlos Ortíz Falcon, Ramón E. Vázquez, 26th ACS Junior Technical Meeting, March 16, 1991

An Expert System Implementation for Texture Analysis, Octavio Gómez, Ramón E. Vázquez, 26th ACS Junior Technical Meeting, March 16, 1991

Application of Neural Networks Image Analysis, Frances Medina, Ramón E. Vázquez, 25th ACS Junior Technical Meeting, March 17, 1990

Utilización del Procesamiento Distribuido en Paralelo para Determinar la Identidad y Orientación de Patrones Bidimensionales, José Navarro Figueroa, Ramón E. Vázquez, 25th ACS Junior Technical Meeting, March 17, 1990

Aplicación del Filtro Kalman para la Estimación de los Parámetros Tridimensionales del Movimiento de un Objeto Rígido Utilizando una Secuencia de Imágenes, Justo Mayora, Ramón E. Vázquez, 25th ACS Junior Technical Meeting, March 17, 1990

High Resolution Image Display in Remote Sensing Laboratory: Problem, and Solutions, Manuel Jiménez Cedeño, Braulio Rivera, Ramón E. Vázquez, 25th ACS Junior Technical Meeting, March 17, 1990

TECHNICAL REPORTS

An intelligent Front end and Graphical User Interface for INFFORM, CARSIP TR 6.0592.01, Braulio Rivera, Rafael Fernández Seín and Ramón E. Vázquez Espinosa

Software Utilities and Related Programs for the IVAS Graphics System and the Earth Resources Laboratory Applications Software, CARSIP TR 6.0592.02, Anibal Morales Morell and Ramón E. Vázquez

Interleaf Technical Publishing Software User's Guide, CARSIP TR 4.1291.01, Paula Moctezuma Fernández, Ramón E. Vázquez Espinosa

Packed Radio Network Techniques for Real-Time Flash Flood Prediction, CARSIP TR. 1.1291.03, Manuel Jiménez Cedeño, Ramón E. Vázquez Espinosa

Utilización de Redes Neurales para Determinar la Identidad y Orientación de Patrones Bidimensionales, CARSIP TR 1.591.01, José Navarro y Ramón Vázquez

Application of Neural Network in Image Analysis, CARSIP TR 1.591.02, Frances I. Medina and Ramón Vázquez

Design of a High Resolution Image Display Graphics Board for the AT&T 3B2500 Computer, CARSIP TR 6.591.02, José Luis Cruz and Ramón Vázquez

"Geographical Database, CARSIP TR 6.790.01, Antonio Crespo, Ramón Vázquez

Aplicación Del Filtro Kalman para la Estimación de los Parámetros Tridimensionales del Movimiento de un Objeto Rígido Utilizando una secuencia de Imágenes, CARSIP TR 1.590.01, Justo Mayora, Ramón E. Vázquez

High Resolution Image Display in Remote Sensing Laboratory Problem and Solutions, CARSIP TR 6.590.02, Manuel Jiménez and Ramón Vázquez

Color Image Isolated-Noise Detection and Reduction, Sigfredo Peña, CARSIP Technical Report, May 1990, Ramón Vázquez

ELAS User Guide, Awilda Meléndez, CARSIP Technical Report, December 1989, Ramón Vázquez

Centralized Packet Radio Network: A Communication Approach Suited for Data Collection in a Real-Time Flash Flood Prediction System, Manuel Jiménez Cedeño, Ramón Vázquez Espinosa, Rafael Fernández Seín

GRANTS:

"Partnership for Spatial Computational Research" (PaSCoR), NASA (PAIR), \$2,301,289, June 1998 to May 2003 – PI

"Advanced Automated Image Analysis Project in the grant Tropical Center for Earth and Space Studies" with Prof. Rafael Fernández Seín (Project director), NASA University Research Centers Program, \$5,500,000, July 1995 to June 2000, Co-PI

"A Program for Research in Computing and Information Sciences and Engineering" (PRECISE), NSF, \$409,850, August 1999 to July 2000, Co-PI

"ADMI 97: Increasing Diversity in Research and Education," NSF, Washington, DC, \$33,920, May 1997

"The Caribbean Climate Dynamics Initiative," January 1997 to January 1999, \$710,468

"Fingerprint Verification System: A Vectorial Approach," January, 1997 to July, 1998, \$228,989.87

"Supplemental Funding for Development of a Computer Engineering Research Environment at the University of Puerto Rico at Mayaguez," October 31, 1996 NSF CISE II-MI, \$30,000

"System Software Component for Hyperspectral Data Analysis," February, 1997 to February, 1999

“Center for Computing Research and Development,” NSF, \$1,506,891, October 1994-September 1999, PI

“ADMI’96: Building for the Future - The Symposium on Computing at Minority Institutions”, NSF, Washington, DC, \$49,892, July 1996, PI

“Establishment of a Laboratory for Applied Remote Sensing and Image Processing,” NSF, \$250,000 Washington, DC, October 1993 through September 1998. - PI

“INCADEL”, Intel, \$65,000, February 1996, PI

“MDL”, Intel, \$172,250, February 1996, PI

"Automated Feature Extraction for Scene Interpretation (AFEASI)", NASA, \$22,000 June 1994 thru July 1995 - PI

"Identification of Reef Areas from Satellite Images" NASA, \$44,000 June 1993 thru July 1994 - PI

"An Expert System for the Usage of ELAS" NASA, \$44,000 July 1992 thru June 1994 - PI

"Enhancement of the Computer Engineering Academic and Research Program at UPRM", NSF, Washington, DC, \$1,300,000 September, 1989 thru September 1994 - PI

"A Proposal to Offer the First Technological Symposium in Western Puerto Rico-SISCAP", \$13,000, AT&T Foundation, 1993-94 - Co PI

Motorola of Puerto Rico, \$10,000, 1993-94 - Co PI

Bellcore Corporation, \$5,000, 1993-94 - Co PI

Avon, \$2,000, 1993-94 - Co PI

Raytheon, \$5,000, 1993-94 - Co PI

"Real Time State Acquisition and Alarming for Tropical Flash Flood Mitigation", National Science Foundation, Washington, DC, \$360,918, October 1988 thru September 1993 - PI

"EMPE: Elas Modules Programming Environment" NASA, \$58,000, July, 91 thru June 93- PI

"Establishment of a Center for Applied Remote Sensing and Image Processing", NSF, Washington, DC, \$240,435, October 1988 thru September 1993 - PI

"The Development of a Computer Aided Design Laboratory", AT&T Foundation, \$250,000, 1991 - PI

"The Development of an Advance Software Engineering Laboratory", IBM, \$400,000, 1990- PI

“Development of a Five Year Plan for the Enhancement of the Computer Engineering program at UPRM,”NSF Washington, DC, \$46,468, August 1988 thru May 1990 - PI

“Microprocessor-Based Water Resources Requirement Simulation Analysis,” WRI, \$20,000 for fiscal year 1988-89 - PI

“Paralell Data Stream Relation Processor for Acoustic Signature Recognition,” Naval Surface Weapons Center, Dahlgren, Virginia, Contract No. N-60921-85-A357, \$98,418.02, October 1985 thru September 1987 - Co PI

“Automated Feature Extraction for Scene Interpretation,” (AFEASI) - (Sandra Soto) - \$66,000 in 1994-95 (NASA)

AT&T Development - \$35,000 - PI

“Development of a Computer Engineering Research Environment at the University of Puerto Rico-Mayaguez,” \$840,101, 1995 to 1999

“Laboratory Networking and Distributed Systems,” \$35,000, October 1994 to September 1995

SERVICE

Chair and Co-Chair of numerous conferences such as IEEE, ADMI, FIE and other

President for Information, Association of Department of Computer Science and Engineer for Minority Institutions (ADMI), Washington, D.C., 1998-present

Vice-President IEEE Western Section, 1998-present

Vice-President of IEEE-CS Chapter, 1998-present

Peer Reviewer for various programs at NSF 1990-present

Editor on Proceedings for ADMI Conferences on 1996, 1997, 1998 and 1999

President of IEEE Western Section, 1997-98

Vice-president for Information, Association of Department of Computer Science and Engineer for Minority Institutions (ADMI), Washington, D.C., 1992- 1998

CONSULTING:

Consulting Board for the Accreditation of Polytechnic University-President, Council of Higher Education, 1992-1994

President of the Review Committee for the MU-SPIN Program at Goddard Space Center NASA, 1992

Consulting Board for the Accreditation of Interamerican University, Guayama Campus, President, Council of Higher Education, 1993-1995

Consulting Board for the Accreditation of EDP College, President, Council of Higher Education, 1995-present

COURSES AND PROGRAM DEVELOPMENT

- Development of many graduate and undergraduate courses such as Artificial Intelligent Recycle, Remote Sensing, GIS, Image processing and others
- Development of the actual Computer Engineering Curriculum audited by ABET
- Development of the Master and PhD programs in Computer Information Science and Engineering
- Development of a program on Software Engineering (in progress)

OTHER DUTIES

Several Department, Faculty, Campus and Institutional Committees

PROFESSIONAL DEVELOPMENT ACTIVITIES

(More to be added when actualized)

ADMI'97, Washington, DC, May 1997

ADMI'96, Mayagüez, PR, July 1996

SUPERCOMPUTING '95, San Diego, CA, December 1995

1995 IEEE International Conference on Systems, Man and Cybernetics, Vancouver, Canada, October 1995

1995 ADMI Annual Workshop, New Orleans, LA, August 1995

Integrated Imaging Technologies for Geographic Information System (GIS) Data Development, June 1995

1995 International Conference on Acoustics, Speech and Signal Processing, Detroit Michigan, May 1995

SPIE'S International Symposium on Aerospace/Defense Sensing and Dual-Use Photonics, Orlando, April 1995

ACSM/ASPRS 1995 Annual Conference & Exposition, Charlotte, Carolina del Norte, February - March 1995

IFIP Congress "Computer and Communications Evolutions the Driving Forces", Hamburg, August 1994

'94 ADMI Workshop, Atlanta, July 1994.

NSF Institutional Infrastructure Workshop, Utah, July 1994

ACM SIGPLAN '94 Conference, Orlando, Florida, June 1994

SPIE's International Symposium on Optical Engineering in Aerospace Sensing, Orlando, Florida, April 1994

Annual ACM Computer Science Conference Advance Program, Phoenix, Arizona, March 1994

Co-Chairman Technical Program Symposium on Intelligent Systems, Communications and Power, Mayagüez, P.R. February 1994

GIS/LIS '93 Annual Conference & Exposition, Minneapolis, Minnesota, October 1993

Mini Symposium "Forging Collaborations in Science" University of Virgin Islands, present The Status of the Establishment of the Laboratory for Applied Remote Sensing and Image Processing, Virgin Islands, October 1993

Third Annual Users Working Group Conference, "Minority University-Space Interdisciplinary Network (MU-SPIN), Washington, September 1993

36th Midwest Symposium on Circuits and Systems, Detroit, present A Simulation Model for a Centralized Multihop Packet Radio Network, August 1993

4th ADAMI Workshop, Virginia, Workshop Teaching on CS1 and CS2 Courses, and present the Enhancement of the Computer Engineering Academic and Research Program at UPR-M, July 1993

Microelectronics Workshop, Boston, July 1993

Workshop on the Use of GEO/SQL, Colorado, July 1993

NECC, National Education Computer Conference, Orlando, Florida, July 1993

SPIE's International Symposium on Optical Engineering and Photonics in Aerospace and Remote Sensing, Orlando, Florida, April 1993

21st Annual ACM Computer Science Conference '93, Indiana, February 1993

GIS/LIS '92, Building the GIS Land Base, San José, California, November 1992

OCEAN '92, Newport, Rhode Island, October 1992

Minority University-Space Interdisciplinary Network Second Annual Conference, Maryland, September 1992

ADAMI Workshop '92, Washington, August 1992

"Introduction to X Window System Programming", 1992 ADAMI Workshop, New Orleans, Louisiana, June 1992

"Object Oriented Programming," 1992 ADMI Workshop, New Orleans, Louisiana June 1992

"Using the X Window System for Undergraduate Graphics Instruction," 1992 ADMI Workshop, New Orleans, Louisiana, June 1992

"NSF Institutional Infrastructure Workshop, Michigan State University, May 26-28 1992

"Machine Learning, 1992 GIGSE Technical Symposium", Kansas City, March 5-6, 1992

"Teaching Ideas and Resources for Software Engineering and Computer Science", 1992 SIGSE Workshop March 7, 1992

"Parallel Computing", 1992 Symposium on Applied Computing, Kansas City, March 1, 1992

"Parallel Computing and System Architectures", 1992 Computer Science Conference, Kansas City, March 2, 1992

GIS/LIS'91 Conference Annual, "GIS & Transportation" and "GIS Management & Operation, Atlanta, Georgia

Annual Conference of Association of Department of Computer Section"

"GIS Applications", Saint Thomas, May 14-15, 1991

"Building GIS Databases" Workshop on GIS/LIS'90, Orlando, Florida

"Object-Oriented Design and Programming" Dr. Nancy Martin, Department of Computer Science, Stanford University, July 17-21 1989

"Expert System Technology", Dr. Nancy Martin, Department of Computer Science, Stanford University, Palo Alto, California, July 10-14, 1989

"Using GRASS", Dr. W. Frederick Limp, Institute for Technology Development, Stennis Space Center Miss., July 31-August 4, 1989

"System 600 Programmer's", Thomas B. Williams, IIS, Milpita, California, 1989

MASTER STUDENTS

Bermúdez, Frances

Brunelli, Raúl

Cortés, Miguel

Crespo, Antonio

Díaz, Javier

Enriquez, Enrique E.

Jiménez, Carlos

Katiyar, Praveen

Manian, Vidya B.

Méndez, Manuel A.

Nevárez, Félix

Ortíz, Miguel

Peña, Yolanda

R. Sandra

Roa, Benjamín

Rondón, Angélica

Rodríguez, Ricardo J.

Santos, Joel

Sepúlveda, Miriam

Singh, Rajeev

Singh, Reena

Soto, Sandra

Valentín, Wilson