

# **CARLOS MIGUEL FERREGUT**

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**RESEARCH INTERESTS:** Structural Reliability, Structural Damage Assessment, Risk Analysis, Structural Health Monitoring

## **I. EDUCATIONAL BACKGROUND**

PhD	1986	Civil Engineering – Structures, University of Waterloo, Canada
MS.	1981	Structural Engineering, National Autonomous University of Mexico
BS	1979	Civil Engineering, National Polytechnic Institute, Mexico

## **II. EMPLOYMENT HISTORY**

- Director of Global Programs for the College of Engineering, UTEP, September 2011 to date
- Associate Dean of Engineering for Graduate Studies and Research, UTEP August 2008 to August 2011
- Associate Dean of Engineering for Undergraduate Studies, UTEP, September 2006 – July 2008
- Director of Civil, Industrial, Mechanical and Metallurgical and Materials Engineering Division, UTEP, November 2004 – August 2006
- Chair of Civil Engineering, University of Texas at El Paso, September 1998-November 2004
- Associate Director, FAST Center for Structural Integrity of Aerospace Systems, UTEP, Oct 1995-Sep. 1998.
- Professor of Civil Engineering, UTEP, September 1999-present
- Associate Professor of Civil Engineering, UTEP, September 1994-August 1999
- Assistant Professor of Civil Engineering, UTEP, January 1990- August 1994
- Senior Engineer, Fleet Technology Limited, Nepean, Ontario, January 1986-December 1989.
- Research Assistant, Department of Civil Engineering, University of Waterloo, September 1981- December 1985
- Technical Advisor, Ministry of Agriculture and Water Resources, Mexico City, January 1980- August 1981
- Research Assistant, Institute of Engineering, National Autonomous University of Mexico, September 1979-December 1980
- Structural Engineer, Sistemas y Procesos para Ingeniería S.A., Mexico City, November 1978- August 1979

### **III. OTHER APPOINTMENTS**

- Visiting Professor, Czech Technical University, February 2015 – August 2015
- Visiting Scientist, US Air Force Wright-Patterson Research Lab, June 1998-August 1998
- Director, Geometrica Inc., Houston, Texas, August 1992 – to date
- Visiting Professor, Autonomous University of Chihuahua, Jan 1992-Dec 1992

### **IV. PROFESSIONAL MEMBERSHIP**

American Society of Civil Engineers  
American Society of Engineering Education  
International Association for Civil Engineering Reliability and Risk Analysis  
Colegio de Ingenieros Civiles de México  
Structural Engineering Association of Texas (El Paso Chapter Director 2004-to date)

### **V. PUBLICATIONS**

#### **Journals, Conferences and Book Chapters**

Taboada, H., Espiritu, J., Chang, CM., 1, Cheu,R, Ferregut, C., Vargas-Hernandez, N., Vegas, S., Sanchez, E., Chang, G. Quevedo, V. and Marcelo, D.(20014), “Developing Global and Regional Sustainability Engineering Skills through a Successful Study Abroad Program,” To be published in the Proceedings of the Engineering Leaders Conference on Engineering Education, November 9-11, Doha, Qatar.

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Guirong Yan, Jianxin Yu, Ruoqiang Feng and Carlos Ferregut (2013), “Damage Location of Civil Large-scale Space Structures based on Average Axial-strain Mode Shapes”, 9th International Workshop on Structural Health Monitoring, September, 2013, Stanford, CA

Cheu, R.L., Ferregut, C., Bina, L., Novakova, H., Horak, T., Novak, A., Hudak, A. and Aguirre-Covarrubias, S., "Transatlantic Dual Master Degree Program in Transportation and Logistics Systems-First 2 Years of Implementation," Transportation Research Record: Journal of the Transportation Research Board, No.2328, 2013, Washington, D.C., pp.9-15.

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Richardson, A., N. Bassim, C. Ferregut, D. Miramontes, R. Romero, G. Miramontes, J.P. Burak, C. Zhang, G. Aguilera, "Educating Engineers for a Global 21<sup>st</sup> Century: Mentoring in a Consortium of Six North American Universities," Proceedings of 8<sup>th</sup> ASEE Global Colloquium on Engineering Education, Budapest, Hungary, October 2009.

Richardson, A., N. Bassim, C. Ferregut, C. Zhang, G. Miramontes, R. Romero, G. Aguilera, "An Innovative and Unique North American Project in Global Engineering Education and Practice," Proceedings of the 7<sup>th</sup> ASEE Global Colloquium Engineering Education, Cape Town, South Africa, October 2008.

Kreinovich, V., Beck, Jan., Ferregut, C., Sanchez, A., Keller, R.G., Averill, M., and Starks, S.A., "Monte-Carlo-Type Techniques for Processing Interval Uncertainty, and Their Potential Engineering Applications", *Reliable Computing* 13:25-69, 2007.

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Cesar J. Carrasco, Carlos M. Ferregut, Robert Warke and Ben H. Thacker, "A Monte Carlo Approach to Sampling-Frequency Optimization and its Application to Pipeline Inspection" Proceedings of the 9th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, July 2004, Albuquerque, New Mexico

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Ferregut, C., Nazarian, S. Abdallah, I.N. and Melchor-Lucero, O., "Estimating Remaining Life of Flexible Pavement Systems Using Artificial Neural Networks," Proceedings of the 2<sup>nd</sup> International Workshop on Artificial Intelligence and Mathematical Methods in Pavement and Geomechanical Systems, N.O. Attoh-Okine Ed., Newmark, Delaware, August 11-12, 2000, pp. 121-132.

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Melchor-Lucero, O. and Ferregut, C., "Sistema Experto para La Evaluación de Elementos Estructurales de Concreto Dañados por Sismo," Revista de Ingeniería, Vol. LXVIII, No.2, Abril/Junio, UNAM, 1997, pp.87-106.

Perez, L.E., Ferregut, C., Carrasco, C., Paez, T.L., Barney, P. and Hunter, N.F., "Statistical Validation of a Plate Finite-Element Model for Damage Detection," in Smart Structures and Materials: Smart Systems for Bridges, Structures and Highways, 1997.

Carrasco, C.J., Osegueda, R.A., Ferregut, C.M., and Gryger, M. "Localization and Quantification of Damage in a Space Truss Model Using Modal Strain Energy," in Smart Structures and Materials: Smart Systems for Bridges, Structures and Highways, 1997.

Carrasco, J.C., Osegueda, R.A., Ferregut, C. and Grygier, M., "Damage Localization in a Space Truss Model Using Modal Strain Energy," Proceedings of the 15<sup>th</sup> International Modal Analysis Conference, IMAC97, V.2, Society for Experimental Mechanics, Inc., Bethel, Connecticut, pp. 1786-1792, 1997.

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Ferregut, C., "Classification of Highway Bridges for Safety Differentiation," Proceedings of the Second International Conference on Short and Medium Span Bridges, August 17-21, 1986 Ottawa, pp.361-372.

Ferregut, C. and Lind, N. C., "Safety Level Differentiation in Highway Bridges," Summary Paper, Proceedings of the 10th Canadian Congress of Applied Mechanics, London, Ontario, June 2-7, 1985, pp. E99-E100.

Rosenblueth, E. and Ferregut, C., "Processing of Doubtful Information, Part 2: Gaussian Distributions," Risk, Structural Technology and Human Error, M. Grigoriu, (Ed.), University of Waterloo Press, 1984, pp.57-88.

Ferregut, C., "Reliability of Elastoplastic Systems," in Reliability Theory and its Applications in Structural Engineering and Soil Mechanics, P. Thoft-Christensen, (Ed.), Martinus Nijhoff Pub., The Hague, 1983, pp.445-451.

### **Abstracts**

Ferregut, C., Nazarian, S., Vennalaganti, K., Chang, C. and Kreinovich, V., "Fast Interval Error Estimates for the Results on Non-Linear Least Squares Method: Application to Pavement Engineering," Abstracts for a Workshop on Interval Methods in International Conference on Interval Computations, Lafayette, LA, February 25-March 1, 1993, p.14.

Barraza, E. and Ferregut, C., "Reliability of Gas Pipelines Under Vehicular Crossings," Forum on Undergraduate Research Experience of Minority Students, October, 1992, p.8

Barraza, E., Ferregut, C. and Oey, H.S., "Uncertainty and Reliability Considerations in the Design of Gas Pipelines Under Vehicular Crossings," Texas Civil Engineer, August-September 1992.

Ferregut, C. and Picornell, M., "Bosquejo de un Modelo de Confiabilidad para Desplazamientos y Tensiones de Pilotes en Suelos Expansivos," Memoria del 1er Encuentro de Investigadores de la Zona Norte, Autonomous University of Chihuahua, June, 1991.

Ferregut, C., "Risk of Brittle Fracture Initiation in Heat Affected Zones of Welded Joints," Texas Civil Engineer, August-September 1991, p.17.

Rodriguez, J., Ferregut, C. and Nazarian, S., "Impact of Variability in Thickness of Pavement Layers on Backcalculated Moduli from Nondestructive testing," Texas Civil Engineer, August-September 1991, p.16.

Ferregut, C., and Picornell, M., "Uncertainty Modeling of Displacements and Tensile Stresses in Piers on Expansive Soils," Texas Civil Engineer, August-September, 1990.

### **Technical Reports**

Optimizing Construction quality Management of Pavement Using Mechanistic Performance Analysis," (with Nazarian, Hao and Abdallah), Research Report 4046-1, Center for Highway Materials Research, UTEP, November 2002 (Submitted to TxDOT)

Abdallah, E., Melchor, O., Ferregut, C. and Nazarian, S., "Artificial Neural Network Models for Assessing Remaining Life of flexible Pavements," Report No. TX-99 1711-2, Submitted to Texas Department of Transportation, January 2000.

Ferregut, C. and Carrasco, C. "Modal Analysis of the Border Steel Plant Fan Foundation," prepared for Robert Navarro & Associates Inc., November 1999.

Ferregut, C. and Carrasco, C. "Statistical Study of the Effect of Fissures in Geometrica Aluminum Alloy 6061-T6 Tubes," prepared for Geometrica Inc, October 1999.

Ferregut, C., Abdallah, I., Melchor-Lucero, O. and Nazarian, S. "Artificial Neural Networks-Based Methodologies for Rational Assessment of Remaining Life of Existing Pavements, Report TX-99 1711-1, Submitted to Texas Department of Transportation April 1999.

Ferregut, C., Carrasco, C., "Strength Characterization of Geometrica Connector Type 6ZD-00," Report Submitted to Geometrica, Inc., December 1998.

Carrasco, C.J and Ferregut, C. "Nonlinear Finite Element Analysis of Geometrica Connector Series 6-6090, Report Submitted to Geometrica, Inc., February 1998.

Warke, R. and Ferregut, C. "Reliability-Base Fitness-for-Service Assessment of Pipeline Girth Welds," Final Report, EWI Project No. J7281, December 1997.

Carrasco C.J., Osegueda R.A., Ferregut, C.M. "Modal Tests of a Space Truss Model and Damage Localization Using Modal Strain Energy" Report FAST 96-1, FAST Center for Structural Integrity of Aerospace Systems, UTEP, July 1996.

Warke, R. and Ferregut, C. "Reliability-Based Fitness-for-Service Assessment of Pipeline Girth Welds, Phase 1: Plastic Collapse" EWI Project No.J7281, March 1996.

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Ferregut, C. "Probabilistic Based Ship Design Procedures - A Demonstration," UTEP-URI Final Project Report, October, 1991.

Murray, A., and Ferregut, C. "Reliability Methods for Ship Structures," DREA Report No. CR/90/441, Halifax, Nova Scotia, 1990.

Murray, A., Ferregut, C., and Ritch, R., "Analysis of Sub scour Stresses and Probability of the Scour Induced Damage for Buried Submarine Pipelines," PERD, Canadian Oil and Gas Land Administration, March, 1990, 0825-25-6-4.

Ferregut, C., Jutla, C. and Graville, B., "Probabilistic Modeling for Local Brittle Zones in the Heat Affected Zones of Welded Structures," Fleet Technology Report FTL E73330, 1990.

Comfort, G., Gilbert, G. and Ferregut, C., "Data Base for Analysis of Probability of Damage Due to Ice Scour for Two Pipeline Routes," Volumes I and II, Fleet Technology Report FTL 3235-1, March, 1989.

Ferregut, C. and Daley, C., "Towards an Understanding of Stiffener Tripping Under External Lateral Loading," Transport Canada Report 9712E, January, 1989.

Ferregut, C. and Daley, C., "ASPEN Structural Modeling Using Limit States," Fleet Technology Report FTL 3061, August, 1988.

Comfort, G., Abdelnour, R., Ferregut, C. and Murray, A., "Preliminary Review of Bercha (1988) Ice Jamming Model And Assessment of Proposed Designs for PEI Crossing," Fleet Technology Report FTL 3134c, July, 1988.

Daley, C., and Ferregut, C., "Strength and Stability of Framing for Ice Strengthening," Transport Canada Report TP9157E, March, 1988.

Daley, C.G., Perchanok, M., Ferregut, C., and Brown, R. "Arctic Shipping Probability Evaluation Network - Model Update to March 1987," Vols. I and II, Transport Canada Report No. TP8554E, March, 1987.

Daley, C. and Ferregut C., "Structural Requirements for Submarines in Brash Ice," Arctec Canada Report 1959D, November, 1986.

Perchanok, M. and Ferregut, C., "Feasibility of Under Ice Operations for a Conventional Submarine", Arctec Canada Report 1959B, October, 1986.

Esteva L., Ferregut C., Chavez M. and Tellez F., "Structural Design Criteria for Offshore Structures," Institute of Engineering, National Autonomous University of Mexico, 1981.

## **Editorships**

Proceedings of the Workshop on Intelligent NDE Sciences for Aging and Futuristic Aircraft, C. Ferregut, R. Osegueda and A. Nunez (Eds.), El Paso, Texas, Sep 30-Oct 2, 1997.

## **VI. CONTRACTS AND GRANTS**

“Engineering Together Sustainable Communities: A US-Mexico Study Abroad Program,” Partners for the Americas Organization, 10/1/2014 – 8/30/2015, \$25,000, Co-PI with H. Taboada and J. Espiritu.

“USA/Peru Study Abroad Program: Global and Regional Sustainability Engineering,” US Department of State, 9/18/2012 – 7/31/2015, \$225,000, PI with H. Taboada, J. Espiritu, N. Vargas-Hernandez, K. Cheu, C. Chang and N. Minion.

“UTEP’s Graduate Bridge Program for Highly Achieving Engineering and Computer Science Students”, NSF, 9/15/2011 – 8/30/2016, \$600,000, PI with B. Flores, S. Aguirre-Covarrubias and R. Sassenfeld.

“Structural Integrity – Study of Probabilistic Approach for ISS Structural Life Assessment,” Phase III, The Boeing Company, 6/1/2011 – 12/31/2011, \$82,313 PI with O. Melchor.

“Transatlantic Dual Degree Program in Transportation and Logistics,” Atlantis Program, FIPSE, Department of Education, 9/1/2010 – 8/31/2015, \$416,000, Co-PI with K. Cheu, C. Chang, S. Hernandez.

“Structural Integrity – Study of Probabilistic Approach for ISS Structural Life Assessment,” Phase II, The Boeing Company, 12/2010 – 4/2011, \$65,000 PI with C. Carrasco.

“WSC-Category 1 - Sustainability on the Border: Water, Climate, and Social Change in a Fragile Landscape”, NSF, 9/15/2010 – 8/30/2012, \$150,000, Co-PI with W. Hargrove, D. Borok, J. Heyman, C. Tweedie.

“Structural Integrity – Study of Probabilistic Approach for ISS Structural Life Assessment”, Phase I, The Boeing Company, 10/09-6/10, \$111,920, PI with C. Carrasco.

“ENG: ECNP - Nitrogen/Oxygen Recharge System (NORS)” - Phase 2, 10/15/2009 to 4/14/2010, The Boeing Company, \$72,159, Co-PI with C. Carrasco and Octavio Melchor.

“Building Partnerships and Pathways to Address Engineering Grand Challenges,” NSF, 9/09 - 8/10, \$174, 953, PI with A. Gates, S. Nazarian, R. Gutierrez, H. Nazeran and B. Benedict.

“Develop a Theoretically Sound Approach to Reliability Analysis of Components,” The Boeing Company, 1/2009 – 5/2009, \$38,261, Co-PI with F. Modave.

“North American Engineering Innovation and Training Project: Enhancing the future of engineering through collaboration,” U.S. Department of Education (Subcontractor to CSU-Chico), 9/07-8/11, \$87,500, PI with H. Nazeran.

“Integration of Non-destructive Testing Data Analysis Techniques,” TXDOT, 9/03–8/05, \$260,000, Co-PI with S. Nazarian and Imad Abdallah.

“Development of a Construction Management Course,” 3D/I Inc., 8/03 – 12/03, \$35, 000, PI with Vivek Tandon,

“LAMB Wave Scanning and Intelligent NDE for Wide Area Aircraft Inspections,” US AFOSR, 9/00 – 8/03, \$300,000 Co-PI with R. Osegueda and S. Nazarian.

“ Impact of Construction Quality on Life-Cycle Performance of Pavements Using Mechanistic Analysis,” TXDOT, 9/00 – 8/03, \$212,000, Co-PI with S. Nazarian and I. Abdallah.

“Data Fusion Methodologies for Damage Monitoring of Aerospace Structures,” NASA Johnson Space Center, 5/99 – 4/2003, \$162,000, PI. with R. Osegueda.

“Data Fusion Methodologies for Intelligent Nondestructive Evaluation,” US Air Force Research Laboratories, 6/99 – 5/02, \$192,000, PI. with R. Osegueda and S. Nazarian.

“Workshop on Intelligent Nondestructive Evaluation Sciences for Aging and Futuristic Aircraft,” AFOSR 5/97 – 9/97, \$29,904, PI. with R. Osegueda.

"Development of a Comprehensive Rational Method for Determination of Remaining Life of an Existing Pavement, TXDOT, 9/96 8/99, \$219,000, PI with S. Nazarian and I. Abdallah.

"Development of Analytical Tools to Process Modal Analysis Data for Damage Monitoring of Structures," NASA Johnson Space Center, 9/96 – 8/99, \$163, 746, PI with R. Osegueda.

"FAST Center for Structural Integrity of Aerospace Systems," AFOSR, 10/95 – 9/01, \$3,325,000, Co-PI with R. Osegueda, S. Nazarian, L. Murr and J. Pierluisi.

"Reliability-Based Fitness-For-Service Assessment of Pipeline Girth Welds, American Gas Association, (Subcontractor to Edison Welding Institute), 3/94 – 3/97, \$50,000, PI.

"Development of a Damage Assessment Methodology for Space Structures Using Neural Networks," NASA, 9/93 – 8/95, \$44,000, PI.

"U.T. El Paso Transportation Technology Transfer Subcenter - Continuation Agreement," Texas Engineering Extension Service, The Texas A&M University System, 9/92 – 8/93, \$53,400, Co – PI with R. Osegueda.

“Determination of Unknown Subsurface Bridge Foundations,” National Cooperative Highway Research Program, NCHRP Project 21-5, (Subcontractor to Olson Engineering, Inc.), 9/92 –

12/93, \$10,500. Co-PI with S. Nazarian and M. Baker.

“Development of an Expert System for the Design of Drilled Shafts in Expansive Soils,” Texas Higher Education Coordinating Board, 1/91 – 8/94, \$120, 000, PI with M. Picornell.

"Reliability of Damaged Space Structures from Vibration Measurements," NASA Johnson Space Center, 9/90 – 12/95, \$238,575, PI with R. Osegueda.

"Evaluation of Bridge Stresses Under Unusual Vehicle Widths and Axle Configuration," Texas Department of Transport, 9/90 – 8/92, \$40,000, Co-PI with R. Osegueda.

"Development of an Expert System for Fatigue and Fracture Evaluation of Steel Structures," UTEP-URI, 9/90 – 8/92, \$5,500.

## **VII. COURSES TAUGHT**

### **At UTEP**

UNIV 1301 Seminar/ Critical Inquiry  
CE 3215 Engineering Mechanics  
CE 3234 Mechanics of Materials  
CE 3343 Structural Analysis  
CE 3373 Probability and Statistics for Civil Engineers  
CE 3435 Structural Design I  
CE 3461 Structural Design II  
CE 1595 Graduate Seminar  
CE 3590 Reliability of Engineering Systems  
CE 3590 Advanced Steel Structural Design  
CE 3590 Advanced Concrete Design  
CE 3590 Structural Load Models  
CE 3525 Design of Structures for Dynamic Loads

### **At Universidad Autónoma de Ciudad Juárez, Mexico**

Structural Analysis

### **At Universidad de Piura, Peru**

Reliability of Transportation Systems

## **VIII. GRADUATE THESES DIRECTED**

Mustafa Aldalinsi, “Method to Reduce Plastic Shrinkage Cracking of Concrete Using the Re-vibration Technique,” Ph.D. Dissertation, December 2013.

Jose Garcia, “Study of Probabilistic Approach for Structural Health Assessment of Aerospace  
Carlos M. Ferregut

Structures,” Master of Science in Civil Engineering, December 2011.

Mustafa Aldalinsi, “Probabilistic Fracture Modeling for Reinforced Concrete Structures,” Master of Science in Civil Engineering, May 2010

Jose Adrian Vela, “Probability of Failure and Determination of Safety Factors in Dome Structures”, Master of Science in Civil Engineering, May 2010.

Gabriela Garcia, “Mid-rise Building Framing Systems Comparison”, Master of Science in Civil Engineering, May 2007.

Edgar Munoz, Master of Science in Civil Engineering, “Feasibility of Using Artificial Neural Networks and Analytical Data for Prediction of Damage Detectability on Aluminum Beams”, Master of Science in Civil Engineering, December 2004

Lizeth Carrasco, “A Bayesian Method for Processing Modal Information for Damage Detection”, Master of Science in Civil Engineering, May 2004.

Benjamin Lopez, “Quantification of Pitting Corrosion Using Fractal Theory,” Master of Science in Civil Engineering, December 2001.

Hugo Pardo, “A Reliability-Based Method for Corrosion Quantification,” Master of Science in Civil Engineering, December 2001.

Walter Alvarez, “Artificial Neural Network Models for Damage Detection Using Lamb Waves,” Master of Science in Civil Engineering, December 1999.

Angel Urbina, “Probabilistic Analysis of Rechargeable Batteries in a Renewable Power Supply System,” Master of Science in Civil Engineering, May 1999.

Thalia Yiasemis, “A Matlab Tool for Probabilistic Safety Factors Calibration,” Master of Science in Civil Engineering, September 1997.

Javier Navarro, “Stanton Street Toll Plaza,” (Graduate Project), Master of Science in Civil Engineering, August 1997.

David C. Doran, “Toward The Strength Characterization of Connections Employed in Reticulated Structures,” Master of Science in Civil Engineering, August 1997.

Luis E. Perez, “Statistical Validation of a Plate Finite Element Model for Damage Detection,” Master of Science in Civil Engineering, May 1997.

Javier Ernesto Avila, “A Geographic Information System for Expansive Soils,” Master of Science in Civil Engineering, May 1996.

Jaime Ortiz, "Neural Networks in Damage Assessment Using Vibrational Measurements", Master of science in Civil Engineering, May 1996.

Jacobo Behar "Experimental and Analytical Behavior of Model Concrete Piers in Expansive Soils," Master of Science in Civil Engineering, July 1995

Susan Jutta Rosas, "Reliability-Based Calibration of Safety Factors for Fitness-for-Service Assessment of Pipeline Girth Welds", Master of Science in Civil Engineering, Master of Science in Civil Engineering, December 1995.

Hareesh Gowdappa, "Development of an Expert System for the Reliability Design of Piers in Expansive Soils," Master of Science in Civil Engineering, August 1994.

Octavio Melchor Lucero, "Development of a Prototype Expert System for Damage Assessment of Structural Concrete Elements," Master of Science in Civil Engineering, December 1993.

Thomas Stephenson, "Probabilistic Evaluation of a Vibrational NDE Damage Detection and Reliability Assessment Method," Master of Science in Civil Engineering, August 1993.

Vennalaganti Krishna Mohan. "Uncertainty Analysis of Remaining Life of Flexible Pavements," Master of Science in Civil Engineering, May 1993.

Jose Angel Pendones, "Analysis of Uncertainties Related to the Response of Piers in Expansive Soils," Master of Science in Civil Engineering, January 1992.

## **IX. UNIVERSITY SERVICE**

Member of Mexican Engagement Task Force (Sep 2014 to date)

Member of Global Engagement Task Force (Oct 2014 to date)

Ad-Hoc Member of Student Welfare Committee (Sep 2013-May 2014)

Faculty Fellow, NSF-ADVANCE Program (2005-2009)

Admissions and Academic Standards Committee (2003-2008)

UTEP's representative to the Texas Higher Coordinating Board, Engineering Field of Study Committee (2000-2002)

Faculty Athletic Council (1999- 2004)

Faculty Senate Executive Council (1999 – 2001)

CARPE Committee (1998 – 2000, 2002 -2003)

Advisory Committee to the Entering Students Program (1998-2000)

Statistics and Probability for Engineers (MIE) Committee (1997- 2000)

Student Organizations and Activities Committee (1995-1998)

Faculty Senator (Sep 1994 – Aug 1996)

Institutional Effectiveness Advisory Committee (SACS) (1994-1996)

Member of Faculty Welfare Committee (1993 - 1996)

Student Organization and Activities Committee (1994 – 1998)

Center for Inter-American and Border Studies Advisory Committee (1993-1996)

Member of Student Publication Committee (1992-1994)

Member of Admissions and Academic Standards Committee (1992-1994)

## **X. RECOGNITIONS**

Prof. F.J. Gerstner Medal on merit to the Faculty Development awarded by the Faculty of Transportation Sciences, Czech Technical University, Prague, 2013

Best Paper of Conference Award, SPIE Smart Structures and Materials Conference, March 2000.

Professor of the Semester Award from ASCE Student Chapter, Fall 2001

Professor of the Semester Award from ASCE Student Chapter, Spring 2000.

Outstanding Civil Engineering Graduate Award from the Mexican Society of Civil Engineers, 1980.