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Place of Birth: Arequipa, Peru.
Citizenship: American.

I. EDUCATION

- **Ph.D. Civil Engineering** - Environmental and Water Resources Engineering (1996)
University of Texas at Austin, USA
- **M.S. Hydraulic Engineering** (1988)
International Institute for Hydraulic and Environmental Engineering (IHE), Delft, Netherlands
- **Civil Engineer** (1981) [Professional degree]
Catholic University of Peru, Lima

II. AREAS OF EXPERTISE

- Application of geographic information systems (GIS) to water resources and environmental engineering.
- Surface water hydrology and hydraulics.
- Spatial and temporal analysis of precipitation fields.
- Assessment of riverine and hurricane flood damage.
- Analysis and modeling of non-point source pollution.
- Modeling of flow systems at a global- and continental-scale.
- Development of spatial data models for water and natural resource assessment, planning and management.

III. POSITIONS HELD

- **Texas A&M University**
Zachry Department of Civil Engineering
 2008 – present: Division Head of Environmental and Water Resources and Associate Professor
 2007 – 2008: Associate Professor
 2001 – 2007: Assistant Professor

- **University of Texas at Austin**
Center for Research in Water Resources
 1999 - 2001: Research Scientist
 1996 - 1999: Research Scientist Associate
 1993 - 1996: Graduate Research Assistant
Department of Civil Engineering
 1996 - 2001: Lecturer
 1995 - 1996: Assistant Instructor
 1992 - 1993: Teaching Assistant

- **Catholic University of Peru**
Department of Engineering - Area of Hydraulics
 1991 - 1992: Professor
 1985 - 1991: Associate Professor
 1982 - 1985: Assistant Professor
 1981 - 1982: Lecturer

IV. RESEARCH

TEXAS A&M UNIVERSITY – ZACHRY DEPARTMENT OF CIVIL ENGINEERING

1. Quantification of hurricane surge damage in coastal bays as a function of dune and wetland characteristics with application to restoration and climate change. *Co-Principal Investigator.* Funded by the Coastal Coordination Council of the Texas General Land Office (GLO). Duration: 10/01/09 – 03/31/11.
2. Predicting the Influence of Climate Change on Hurricane Flooding. *Co-Principal Investigator.* Funded by the Bipartisan Policy Center. Duration: 7/1/07 – 8/31/08.
3. Simplified Method for Estimating Bridge Scour. *Co-Principal Investigator.* Funded by the Texas Department of Transportation (TxDOT). Duration: 9/1/07 – 8/31/08.
4. Control of Non-Point Source Loads in the Hickory Creek Sub-Basin of the Lake Lewisville Watershed as a Component of a Watershed-Based Water Quality Trading Program. *Principal Investigator.* Funded by the Texas Commission for Environmental Quality (TCEQ) through the City of Denton. Duration: 4/5/05 – 8/31/08.
5. Incentives for Action: Incorporating Trading Options Into Watershed Improvement Plans for Lake Lewisville – Phase II. *Principal Investigator.* Funded by the U.S. Environmental Protection Agency (EPA). Duration: 11/1/03 – 3/15/05.
6. GIS Static Storm Model Development. *Principal Investigator.* Funded by the Texas Department of Transportation (TxDOT). Duration: 9/1/03 – 8/31/05.
7. Non-Proprietary, Small-Footprint Stormwater Quality Structures for Use in Urban Areas. *Co-Principal Investigator.* Funded by the Texas Department of Transportation (TxDOT). Duration: 9/1/03 – 8/31/06.

8. San Antonio River Basin Regional Modeling – Phase II. *Principal Investigator*. Funded by the San Antonio River Authority (SARA) through PBS&J, Inc. Duration: 9/1/03 – 12/31/05.
9. Stormwater Quality Documentation of Roadside Shoulders Borrow Ditches. *Co-Principal Investigator*. Funded by the Texas Department of Transportation (TxDOT). Duration: 9/1/03 – 8/31/05.
10. San Antonio River Basin Regional Modeling – Phase I. *Principal Investigator*. Funded by the San Antonio River Authority (SARA) through PBS&J, Inc. Duration: 5/1/03 – 6/1/04.
11. Environmental Informatics in Coastal Margins. *Co-Principal Investigator*. Funded by the National Science Foundation (NSF). Duration: 3/1/03 – 2/28/07.
12. Documentation of the Source Publications Used in the Development of the Hydraulic Design Manual. *Principal Investigator*. Funded by the Texas Department of Transportation (TxDOT). Duration: 1/1/03 – 8/31/03.
13. Bridge Runoff Characterization. *Co-Principal Investigator*. Funded by the Texas Department of Transportation (TxDOT). Duration: 9/1/02 – 8/31/05.
14. Strengthening Water Resources Planning for Texas. *Co-Principal Investigator*. Funded by the U.S. Army Corps of Engineers. Duration: 9/1/01 – 9/30/03.
15. BASINS Training Courses. *Principal Investigator*. Funded by the U.S. Environmental Protection Agency (EPA) through the University of Texas at Austin. Duration: 8/1/01 – 8/31/02.
16. GIS Data of the Nueces, San Antonio and Guadalupe Basins. *Principal Investigator*. Funded by Texas State University. Duration: 6/10/05 – 12/31/06.
17. Update Maps of the Nueces River Basin. *Principal Investigator*. Funded by Texas State University. Duration: 11/15/05 – 12/31/06.
18. GIS Training. *Principal Investigator*. Funded by the Government of the Dominican Republic through the Texas Water Resources Institute. Duration: 2/1/03.
19. GIS Hydrologic Functions Based on Vector Spatial Data. *Principal Investigator*. Funded by the Department of Civil Engineering of Texas A&M University. Duration: 9/1/2002 – 8/31/2003.
20. Cell-to-Cell Flow Routing Models: Analysis from a GIS Perspective. *Principal Investigator*. Funded by the Department of Civil Engineering of Texas A&M University. Duration: 12/1/2001 – 11/30/2002.

COMPLUTENSE UNIVERSITY OF MADRID (SPAIN)

1. Improvements in the estimation of the frequency and magnitude of torrential floods using dendro-geomorphologic analysis - Dendro-Floods. *Researcher*. Funded by the Spanish Ministry of Science and Innovation. Duration: 04/2009 – 09/2010.
2. Study of the Processes, Erosion Rate and Sediment Transport in the Badlands North of the Sierra de Guadarrama. Effects on the Natural and Human Environment. *Researcher*. Funded by the Spanish Ministry of Science and Innovation. Duration: 10/2006 – 06/2010.

UNIVERSITY OF TEXAS AT AUSTIN – CENTER FOR RESEARCH IN WATER RESOURCES

1. BASINS Training Program. *Principal Investigator*. Funded by the U.S. Environmental Protection Agency (EPA). Duration: 1999 – 2001.

2. System of GIS-Based Hydrologic and Hydraulic Applications for Highway Engineering – Implementation. *Principal Investigator*. Funded by the Texas Department of Transportation (TxDOT). Duration: 2000 – 2001.
3. System of GIS-Based Hydrologic and Hydraulic Applications for Highway Engineering – Implementation. *Principal Investigator*. Funded by the Texas Department of Transportation (TxDOT). Duration: 1999 – 2000.
4. Floodplain Mapping Using GIS. *Researcher*. Funded by the Lower Colorado River Authority (LCRA). Duration: 1999 – 2001.
5. System of GIS-Based Hydrologic and Hydraulic Applications for Highway Engineering. *Researcher*. Funded by the Texas Department of Transportation (TxDOT). Duration: 1996 – 1999.
This project was recognized with the TxDOT 1999 Top Ten Research Findings and Innovations Award.
6. Closing the Global Water Cycle in Fully-Coupled Climate System Models: Terrestrial Hydrology and River Transport. *Researcher*. Funded by the National Science Foundation (NSF). Duration: 1998 – 2000.
7. Water Quality Master Plan of the City of Austin. *Researcher*. Funded by the City of Austin. Duration: 1996 – 2000.
8. Water Balance of the Niger River Basin, West Africa. *Graduate Research Assistant*. Funded by the Food and Agriculture Organization (FAO) of United Nations. Duration: 1994 – 1996.

CATHOLIC UNIVERSITY (PERU) – DEPARTMENT OF ENGINEERING

- Study of Stone-Made Reservoirs for the Peasant Communities of Piura, Peru. *Principal Investigator*. Funded by the National Council for Science and Technology (*Consejo Nacional de Ciencia y Tecnología – CONCYTEC*) of the Peruvian Government.

TECHNICAL UNIVERSITY OF DELFT (NETHERLANDS) – LABORATORY OF FLUID MECHANICS

- Secondary Flow in a Flume with a Transversely Inclined Bottom Induced by Differences in Turbulence Intensity. *Graduate Research Assistant*. Funded by the Laboratory of Fluid Mechanics (*Laboratorium voor Vloeistofmechanica*) of the Delft Technical University (*Technische Universiteit Delft*).

V. PUBLICATIONS AND PRESENTATIONS

(*) refers to students working under my supervision (i.e., committee chair or member).

REFERRED JOURNAL ARTICLES

1. Larentis, D.G. (*), W. Collischonn, **F. Olivera**, C.E.M. Tucci, *GIS-Based Procedures for Hydropower Potential Spotting*, Energy, submitted in February 2010.
2. Irish, J.L., A.E. Frey (*), J.D. Rosati, **F. Olivera**, L.M. Dunkin, J.M. Kaihatu, C.M. Ferreira (*) and B.L. Edge, *Potential Implications of global warming and barrier island degradation on future hurricane inundation*, Ocean and Coastal Management, submitted in August 2009.
3. Frey, A.E. (*), **F. Olivera**, J.L. Irish, L.M. Dunkin, J.M. Kaihatu, C.M. Ferreira (*) and B.L. Edge, *The impact of climate change on hurricane flooding inundation, population affected and property damages*, Journal of the American Water resources Association, revisions requested in January 2010.

4. Kim, D. (*), **F. Olivera**, S. Socolofsky and H. Cho (*), *Regionalization of the Modified Bartlett-Lewis Rectangular Pulse stochastic rainfall model*, Water Resources Research, revisions requested in January 2010.
5. Cho, H. (*), **F. Olivera** and S. Guikema, *Enhanced Speciation in Particle Swarm Optimization for Multi-Modal Problems*, European Journal of Operational Research, revisions requested in October 2009.
6. Zaithik, B., M. Rodell and **F. Olivera**, *Evaluation of the Global Land Data Assimilation System using global river discharge data and a Source to Sink routing scheme*, accepted for publication in Water Resources Research in December 2009. Available at the publisher's web site at <http://www.agu.org/journals/pip/wr/2009WR007811-pip.pdf>.
7. Mousavi, M., J. Irish, A. Frey (*), **F. Olivera** and B. Edge, *Global warming and hurricanes: The potential impact of hurricane intensification and sea level rise on coastal flooding*, accepted for publication in Climate Change in December 2009. DOI 10.1007/s10584-009-9790-0. Available at the publisher's web site at <http://www.springerlink.com/content/1016250410j49032/fulltext.pdf>.
8. Choi, J. (*), **F. Olivera** and S. Socolofsky, *Storm Identification and Tracking Algorithm for Modeling of Rainfall Fields using 1-hour NEXRAD Rainfall Data in Texas*, Journal of Hydrologic Engineering 14 (7): 721 -730, 2009.
9. Cho, H. (*) and **F. Olivera**, *Effect of the spatial variability of land use, soil type and precipitation on streamflows in small watersheds*, Journal of the American Water Resources Association 45 (3): 673 – 686, 2009.
10. Cho, H. (*), **F. Olivera** and S. Guikema, *A Derivation of the Number of Minima of the Griewank Function*, Applied Mathematics and Computation 204 (2008): 694 - 701, 2008.
11. Merwade, V., **F. Olivera**, M. Arabi and S. Edleman, *Uncertainty in Flood Inundation Mapping – Current Issues and Future Directions*, Journal of Hydrologic Engineering 13 (7): 608 – 620, 2008.
12. Choi, J. (*), S. Socolofsky and **F. Olivera**, *Hourly Disaggregation of Daily Rainfall in Texas Using Measured Hourly Precipitation at Other Locations*, Journal of Hydrologic Engineering 13 (6): 476 – 487, 2008.
13. **Olivera, F.**, J. Choi (*), D. Kim (*) and M. Li, *Estimation of Average Rainfall Areal Reduction Factors in Texas Using NEXRAD Data*, Journal of Hydrologic Engineering 13 (6): 438 – 448, 2008.
14. Li, M-H., M. Barrett, P. Rammohan (*), **F. Olivera** and H. Landphair, *Documenting Stormwater Quality on Texas Highways and Adjacent Vegetated Roadsides*, Journal of Environmental Engineering 134 (1): 48 – 59, 2008.
15. **Olivera, F.** and B. DeFee (*), *Urbanization and Its Effect on Runoff in the Whiteoak Bayou Watershed, Texas*, Journal of the American Water Resources Association 43 (1): 170 - 182, 2007.
16. **Olivera, F.**, S. Koka (*) and J. Nelson, *WaterNet: A GIS Application for the Analysis of Hydrologic Networks Using Vector Spatial Data*, Transactions in GIS 10 (3): 355-375, 2006.
17. **Olivera, F.**, M. Valenzuela (*), R. Srinivasan, J. Choi (*), H. Cho (*), S. Koka (*) and A. Agrawal (*), *ArcGIS-SWAT: A Geodata Model and GIS Interface for SWAT*, Journal of the American Water Resources Association 42 (2): 295 - 309, 2006.
18. **Olivera, F.** and S. Koka (*), *Hydrodynamic Dispersive and Advective Processes in Watershed Responses*, Journal of Hydrologic Engineering 9 (6): 534-544, 2004.

19. **Olivera, F.** and R. Raina (*), *Development of Large-Scale Gridded River Networks from Vector Stream Data*, Journal of the American Water Resources Association 39 (5): 1235-1248, 2003.
20. **Olivera, F.**, M. Lear, J. Famiglietti and K. Asante (*), *Extracting Low-Resolution River Networks from High-Resolution Digital Elevation Models*, Water Resources Research 38 (11): 13.1–13.8, 2002.
21. Tate, E. (*), D. Maidment, **F. Olivera** and D. Anderson (*), *Creating a Terrain Model for Floodplain Mapping*, Journal of Hydrologic Engineering 7 (2): 100-108, 2002.
22. **Olivera, F.**, *Extracting Hydrologic Information from Spatial Data for HMS Modeling*, Journal of Hydrologic Engineering 6 (6): 524-530, 2001.
23. **Olivera, F.**, J. Famiglietti and K. Asante (*), *Global-Scale Flow Routing Using a Source-to-Sink Algorithm*, Water Resources Research 36 (8): 2197-2207, 2000.
24. **Olivera F.** and D. Maidment, *GIS-Based Spatially Distributed Model for Runoff Routing*, Water Resources Research 35 (4): 1155-1164, 1999.
25. **Olivera, F.** and D. Maidment, *GIS for Hydrologic Data Development for Design of Highway Drainage Facilities*, Transportation Research Record 1625: 131-138, 1998.
26. Maidment, D., **F. Olivera**, A. Calver, A. Eatherall and W. Fraczek, *A Unit Hydrograph Derived From a Spatially Distributed Velocity Field*, Special Issue of Hydrological Processes 10 (6): 831-844, 1996.

BOOKS AND BOOK CHAPTERS

1. **Olivera, F.**, D. Maidment and D. Honeycutt, *Hydro Networks*, Chapter 3 in Arc Hydro – GIS for Water Resources, ed. D. Maidment, pp. 33–54, ESRI Press, Redlands, 2002.
2. **Olivera, F.**, J. Furnans (*), D. Maidment, D. Djokic and Z. Ye, *Drainage Systems* Chapter 4 in Arc Hydro – GIS for Water Resources, ed. D. Maidment, pp. 55–86, ESRI Press, Redlands, 2002.
3. **Olivera, F.** and D. Maidment, *GIS tools for HMS Modeling Support*, Chapter 5 in Hydrologic and Hydraulic Modeling Support, ed. D. Maidment, pp. 85-112, ESRI Press, Redlands, 2000.
4. DeBarry, P., J. Garbrecht, L. Garcia, L. Johnson, J. Jorgeson, V. Krysanova, G. Leavesley, D. Maidment, J. Nelson, F. Ogden, **F. Olivera**, R. Quimpo, T. Seybert, W. Sloan, D. Burrows, and E. Engman, *GIS Modules and Distributed Models of the Watershed*, ASCE – Water Resources Division – Surface Water Hydrology Committee, 120 pp., 1999.

INVITED SEMINARS AND CONFERENCE PAPERS/PRESENTATIONS

1. **Olivera, F.**, *Development of a Geo-Hydrologic Data Model*, Department of Sanitary and Environmental Engineering of the Federal University of Santa Catarina, Florianopolis, Brazil, November 2008.
2. **Olivera, F.** and V. Merwade, *Uncertainty in floodplain mapping – Current issues and future directions*, Severe Storm Prediction and Global Climate Impact on the Gulf Coast Conference, Rice University, Houston, Texas, October 2008.
3. **Olivera, F.**, *Use of GIS for Hydrologic and Hydraulic Modeling*, Hydraulic Research Institute (IPH) of the Federal University of Rio Grande do Sul, Porto Alegre, Brazil, November 2007.
4. **Olivera, F.**, *Cartographic Tools and their Connection to Hydrologic and Hydraulic Models*, XVI National (Peruvian) Congress of Civil Engineering, Peruvian College of Engineers, Arequipa, Peru, October 2007. (In Spanish)

5. **Olivera, F.**, *Land Use Change in the Whiteoak Bayou Watershed from 1950 to 2000 and its Effect on Runoff and Peak Flows*, Severe Storm Prediction, Education and Evacuation from Disasters, Rice University, Houston, Texas, May 2007
6. **Olivera, F.**, *Extracting Hydrologic Information from Spatial data for HMS Modeling*, HEC-HMS User's Conference – Current Trends and Applications, ASCE, Austin, Texas, April 2007
7. **Olivera, F.**, *Cartographic Tools and their Connection to Hydrologic and Hydraulic Models for the Study of River Floods*, College of Geological Sciences of the Complutense University of Madrid, Madrid, Spain, February 2007. (In Spanish)
8. **Olivera, F.** and J. Bodoque (*), *Cartographic Tools and their Connection to Hydrologic and Hydraulic Models*, Proceedings of the Technical Symposium on the Cartography of Flood Risk (INUNMAP), Spanish Geological Survey, Madrid, Spain, May 2006. (In Spanish)
9. **Olivera, F.**, *Rainfall Spatial Distribution in Texas*, Severe Storms Impact and Disaster Response in the Gulf Coast Conference, Rice University, Houston Texas, March 2006.
10. **Olivera, F.**, *Storm Analysis and Flow Routing Using Geographic Information Systems (GIS)*, “Flooding and Emergency Response” Conference on Climate Change, Extreme Events and Coastal Cities: Houston & London, Rice University, the University College London and the British Consulate-General at Houston, Houston, Texas, February, 2005.
11. **Olivera, F.**, *Large-Scale Flow Routing Algorithm Using Geographic Information Systems*, Iowa Institute of Hydraulic Research (IIHR) of the University of Iowa, Iowa City, Iowa, September 2004.
12. **Olivera, F.**, *Use of GIS for Hydrologic Modeling: An Overview*, Tropical Storm Allison – Two Years Later Symposium, Rice University, Houston, Texas, May 2003.
13. **Olivera, F.**, *Applications of GIS to Water Resources Engineering*, Department of Civil and Environmental Engineering of Rice University, Houston, Texas, April 2002.
14. **Olivera, F.**, *Applications of GIS to Water Resources Engineering*, Department of Civil and Environmental Engineering of the University of Maryland at College Park, College Park, Maryland, March 2002.
15. **Olivera, F.**, *Geographic Information Systems*, 1999 Annual Meeting of the American Meteorological Society, Dallas, Texas, January 1999.
16. **Olivera, F.**, *Runoff Modeling Using GIS*, Ninth Annual Conference of the Southwestern Association of ALERT Systems (SAAS), Baton Rouge, Louisiana, 1996.

CONFERENCE PAPERS/PRESENTATIONS

1. Irish J.L., I. Udoh, C. Ferreira (*), **F. Olivera**, Y.K. Song, and K.A. Chang, *Rapid Probabilistic Hurricane Surge and Damage Forecasting Using Hydrodynamics-Based Surge Response Functions*, accepted for presentation at the 32nd International Conference in Coastal Engineering (ICCE 2010), ASCE, Shanghai, China, June– July 2010.
2. Kim, D. (*) and **F. Olivera**, “Improving Stochastic Rainfall Generators”, accepted for publication in the Proceedings of the World Environmental & Water Resources Congress 2010, ASCE-EWRI, Providence, Rhode Island, May, 2010.
3. Ferreira, C. (*), **F. Olivera** and D. Djokic, *Development of Large Topographic Datasets for Hydrologic Analysis*, accepted for presentation in the World Environmental & Water Resources Congress 2010, ASCE-EWRI, Providence, Rhode Island, May, 2010.

4. Ferreira, C. (*), **F. Olivera** and D. Djokic, *Evaluation of Terrain Datasets for Water Resources Modeling*, accepted for presentation at the 2010 AWRA Spring Specialty Conference – GIS & Water Resources VI, American Water Resources Association, Orlando, Florida, March 2010.
5. Kim, D. (*) and **F. Olivera**, *Development of Parameter Maps of the Modified Bartlett-Lewis Rectangular Pulse Stochastic Rainfall Generator*, accepted for presentation at the 2010 AWRA Spring Specialty Conference – GIS & Water Resources VI, American Water Resources Association, Orlando, Florida, March, 2010.
6. Bodoque, J.M. (*), A. Díez-Herrero, F. Olivera, V. Ruíz-Villanueva, *Hydrologic response estimation of the arroyo Cabrera (Spanish Central System) flash flood 1997 event*, accepted for presentation at the 2010 AWRA Spring Specialty Conference – GIS & Water Resources VI, American Water Resources Association, Orlando, Florida, March 2010.
7. Fernández-Bethencourt, J.D., P. Delgado-Melián, J. López-García, M. Rodríguez-Pallarés and **F. Olivera**, *Estimation of Flood Flows in the Island of Tenerife, Spain*, accepted for presentation at the 2010 AWRA Spring Specialty Conference – GIS & Water Resources VI, American Water Resources Association, Orlando, Florida, March 2010.
8. Bodoque, J.M. (*), V. Ruiz, A. Díez-Herrero, **F. Olivera**, *Sediment Load Estimation of the Arroyo Cabrera, Spanish Central System, Hyperconcentrated Flow of 1997*, 7th International Conference on Geomorphology, Australian and New Zealand Geomorphology Group, Melbourne, Australia, July 2009.
9. Bodoque, J.M. (*), M.A. Eguibar, I. Gutierrez, I., A. Díez-Herrero, **F. Olivera**, V. Ruiz, *Peak Discharge Estimation of the December 17, 1997 Hyperconcentrated Flow Event at Arroyo Cabrera Watershed, Spanish Central System*, 7th International Conference on Geomorphology, Australian and New Zealand Geomorphology Group, Melbourne, Australia, July 2009.
10. Frey, A. (*), **F. Olivera**, J. Irish, M.E. Mousavi, Y.K. Song and B. Edge, *The Impact of Climate Change on Hurricane Flooding Inundation and Economic Damages*, Gulf Coast Hurricane Preparedness, Response, Recovery and Rebuilding Conference, Mobile, Alabama, November 2008.
11. Frey, A. (*), **F. Olivera**, J. Irish, M.E. Mousavi, J. Kaihatu, Y.K. Song and B. Edge, *Assessment of the Economic Damages of Hurricane Coastal Flooding under Global Warming Conditions*, Severe Storm Prediction and Global Climate Impact in the Gulf Coast Conference, Rice University, Houston, Texas, October 2008.
12. Irish, J., B. Edge and **F. Olivera**, *Predicting the Influence of Climate Change on Hurricane Flooding*, International Conference on Coastal Engineering, Hamburg, Germany, August-September 2008.
13. Mousavi, M., J. Irish, A. Frey (*), B. Edge and **F. Olivera**, “Prediction of the Impact of Climate Change on Hurricane Flooding”, 2008 Energy and Climate Change: Innovative Approaches to Solving Today’s Problems, PACON, Honolulu HI, June 2008.
14. **Olivera, F.**, M. Rodriguez and J. Murillo, *Floodplain Delineation of the Ranillas Meander in Zaragoza Using GUAD-2D*, World Environmental & Water Resources Congress 2008, ASCE-EWRI, Honolulu HI, May 2008.
15. Irish, J., M. Mousavi, B. Edge, **F. Olivera** and A. Frey (*), *Quantification of climate change impacts on hurricane flooding*, Effects of Climate Change on the World’s Oceans, Gijon, Spain, May 2008.
16. Irish, J., M. Mousavi, A. Frey (*), B. Edge and **F. Olivera**, *Quantification of climate change impacts on hurricane flooding*, Spring 2008 Meeting, ASCE Texas Section, Corpus Christi, Texas, April 2008.

17. Bodoque, J.(*) and **F. Olivera**, *Urbanization and its Effect on Runoff Generation in the Ripoll River Watershed, Spain*, General Assembly 2008, European Geosciences Union, Vienna, Austria, April 2008.
18. Govindasamy, A.V.(*), J.L. Briaud, H.C. Chen, J. Delphia, K. Elsbury, P. Gardoni, G. Herrman, D. Kim (*), C.C. Mathewson, M. McClelland, **F. Olivera**, *Simplified Method for Estimating Scour at Bridges*, GeoCongress 2008, ASCE, New Orleans, Louisiana, March 2008.
19. Hudgens, B., H. Harris, K. Banks and **F. Olivera**, *Implementing Integrated Stormwater Management in Denton, Texas*, Texas Water 2008, Water Environment Association of Texas (WEAT) and Texas Section of the American Water Works Association (AWWA), San Antonio, TX, March 2008.
20. **Olivera, F.** and K. Logsdon, *GeoTerrain Part 1: Leveraging Terrains in ArcGIS 9.2*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources V, American Water Resources Association (AWRA), San Mateo, CA, March 2008.
21. Paz, A., M. Bravo, D. Larentis (*), W. Collischonn, C. Tucci and **F. Olivera**, *Hydraulic Model of the Paraguay River and Pantanal Wetland in South America*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources V, American Water Resources Association (AWRA), San Mateo, CA, March 2008.
22. **Olivera, F.**, M. Rodríguez and J. Murillo, *Guad2D: A Two-Dimensional Flow Model for Floodplain Mapping Over Time*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources V, American Water Resources Association (AWRA), San Mateo, CA, March 2008.
23. Merwade V., **F. Olivera** and S. Edleman, *Uncertainty in Flood Inundation Mapping*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources V, American Water Resources Association (AWRA), San Mateo, CA, March 2008.
24. **Olivera, F.** and H. Cho (*), *Importance of Spatial Distribution in Small Watershed Models*, 4th International Soil and Water Assessment Tool (SWAT) Conference, UNESCO-IHE, Delft, The Netherlands, July 2007.
25. **Olivera, F.**, J. Choi (*) and S. Socolofsky, *Use of NEXRAD Precipitation Data for Storm Identification and Tracking in Texas*, World Environmental & Water Resources Congress 2007, ASCE-EWRI, Tampa FL, May 2007.
26. Bodoque, J. (*), A. Díez-Herrero and **F. Olivera**, *Hydro-Geomechanical and Hydraulic Methods for the Análisis of the 1997 Cabrera River Debris Flood in the Spanish Central System*, General Assembly 2007, European Geosciences Union, Vienna, Austria, April 2007.
27. Bodoque, J. (*), A. Díez, J. De Pedraza, J. Martín and **F. Olivera**, *Assessment of the Solid Load of Debris Floods Using Geomechanic, Hydrologic and Hydraulic Models: The Case of Venero Claro in Avila (Spain)* in *Geomorfología y Territorio – Actas de la IX Reunión Nacional de Geomorfología*, eds. A. Pérez and J. López, pp. 483 – 495, Universidad de Santiago de Compostela, Santiago de Compostela, September 2006.
28. Logsdon, K., **F. Olivera** and M. Valenzuela (*), *Production of FEMA's Digital Flood Insurance Rate Maps Using GIS/SDE*, ASFPM 30th Annual Conference, Association of State Flood Plain Managers, Albuquerque, NM, June 2006.
29. Bastian, M., K. Banks, R. Adams, **F. Olivera**, L. Bacon, T. La Point and R. Autenrieth, *Control of Nonpoint Source Pollution in the Hickory Creek Watershed of Denton, Texas*, 2006 Annual Conference and Exposition of the American Water Works Association (AWWA), San Antonio, TX, June 2006.

30. Choi, J. (*), D. Kim (*) and **F. Olivera**, *Determination of the Spatial Distribution of Rainfall in Texas Using NEXRAD Data and Geographic Information Systems*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources IV, American Water Resources Association (AWRA), Houston TX, May 2006.
31. **Olivera, F.** and B. DeFee (*), *Effect of Urbanization on Runoff in the Whiteoak Bayou Watershed in Texas*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources IV, American Water Resources Association (AWRA), Houston TX, May 2006.
32. **Olivera, F.**, K. Logsdon and M. Valenzuela (*), *GIS/SDE Lessons Learned: Collaborative Engineering and FEMA Mapping Teams*, Spring Specialty Conference on Geographic Information Systems (GIS) and Water Resources IV, American Water Resources Association (AWRA), Houston TX, May 2006.
33. Wang, L. (*), **F. Olivera** and H. Liu, *Incorporating High-Resolution LIDAR DEM into a GIS-Based Distributed Hydrologic Model with variable Spatial Scales*, 2006 Meeting, American Association of Geographers (AAG), Chicago IL, March 2006.
34. **Olivera, F.** and B. DeFee (*), *Quantifying the Spatial Configuration of Impervious Cover and its Effect on Runoff Generation in the Whiteoak Bayou Watershed in Texas*, 2005 Fall Meeting, American Geophysical Union, San Francisco CA, December 2005.
35. Choi, J. (*), D. Kim (*) and **F. Olivera**, *Estimation of Average Rainfall Areal Reduction Factors in Texas Using NEXRAD Data*, 2005 Fall Meeting, American Geophysical Union, San Francisco CA, December 2005.
36. **Olivera, F.** and H. Cho (*), *Two Step Method for SWAT Calibration*, 3rd International Soil and Water Assessment Tool (SWAT) Conference, Swiss Federal Institute for Environmental Science and Technology (EAWAG), Zurich, Switzerland, July 2005.
37. **Olivera, F.** and H. Cho (*), *The Two-Step Calibration Method of Distributed Models*, VII IAHS Scientific Assembly, International Association of Hydrologic Sciences (IAHS), Foz do Iguacu, Brazil, April 2005.
38. Bonner, J., A. Cahill, K. Callicott, R. Caso, N. Chang, J. Froyd, K. John, T. Kramer, **F. Olivera**, C. Page, V. Uddameri, *Combining Research with Curriculum Development for Environmental Informatics*, Proceedings of the 9th Conference on Chemistry and the Environment (Behavior of Chemicals in the Environment), Federation of European Chemical Societies (FECS), Bordeaux, France, August -September 2004.
39. **Olivera, F.**, M. Valenzuela (*) and R. Srinivasan, *ArcGIS-SWAT: A GIS interface for the Soil and Water Assessment Tool (SWAT)*, Proceedings of the World Water and Environmental Resources Congress 2004, ASCE-EWRI, Salt Lake City UT, June – July 2004.
40. **Olivera, F.** and M. Valenzuela (*), *Analysis of Uncertainty of the Soil Water Assessment Tool (SWAT) Simulation Results with ArcGIS-SWAT*, Spring Specialty Conference – Geographic Information Systems (GIS) and Water Resources III, American Water Resources Association (AWRA), Nashville TN, May 2004.
41. Bonner, J., C. Page, A. Cahill, K. Callicott, R. Caso, J. Froyd, T. Kramer, **F. Olivera**, N. Chang, K. John and V. Uddameri, *Environmental Informatics of the Coastal Margin Combining Research with Curriculum Development*, 2004 Ocean Research Conference, American Society of Limnology and Oceanography (ASLO), Honolulu HI, February 2004.
42. Autenrieth, R., R. Adams, M. Bastian, E. Bacon and **F. Olivera**, *Incorporating Trading Options into Watershed Improvement Plans: The lake Lewisville Pilot Project*, 76th Annual Technical Exhibition and Conference (WEFTEC03), Water Environment Federation, Los Angeles CA, October 2003.

43. Bonner, J., C. Page, A. Cahill, R. Caso, J. Froyd, T. Kramer, **F. Olivera**, N-B. Chang, K. John, V. Uddameri, *Combining Research with Curriculum Development: New Technologies Associated with Assessment Methods for the Environment*, Frontiers in Assessment Methods for the Environment (FAME) Conference, Association of Environmental Engineers and Science Professors (AEESP), Minneapolis MN, August 2003.
44. **Olivera, F.**, M. Valenzuela (*) and R. Srinivasan, *Linkage of the Arc Hydro Data Model with SWAT*, 2nd International Soil and Water Assessment Tool (SWAT) Conference, Water Research Institute (Istituto di Ricerca sulle Acque) and National [Italian] Research Council (Consiglio Nazionale delle Ricerche), Bari, Italy, July 2003.
45. **Olivera, F.**, R. Dodson and D. Djokic, *Use of Arc Hydro for Integration of Hydrologic Applications*, Proceedings of the World Water and Environmental Resources Congress 2003, ASCE-EWRI, Philadelphia, Pennsylvania, June 2003.
46. **Olivera, F.** and D. Stolpa, *Effect of the Storm Hyetograph Duration and Shape on the Watershed Response*, Proceeding of the 82nd Annual Meeting, Transportation Research Board (TRB), Washington DC, January 2003.
47. **Olivera, F.** and R. Raina (*), *Cell-Based Flow Routing Model*, 2002 Fall Meeting, American Geophysical Union, San Francisco CA, December 2002.
48. Koka, S. (*) and **F. Olivera**, *Topology and Parameters of Watersheds and River Networks*, 2002 Fall Meeting, American Geophysical Union, San Francisco CA, December 2002.
49. Raina, R. (*) and **F. Olivera**, *River Networks for Global Flow Routing Modeling*, 2002 Fall Meeting, American Geophysical Union, San Francisco CA, December 2002.
50. Whiteaker, T. (*), D. Maidment, **F. Olivera**, and M. Valenzuela (*), *Texas Integrated Water Simulation System (TIWSS)*, Proceedings of the Fall 2002 Meeting, ASCE Texas Section, Waco TX, October 2002.
51. **Olivera, F.** and S. Koka (*), *Hydrologic Topology*, Mississippi Climate and Hydrology Conference, Global Energy and Water Cycle Experiment's (GEWEX) Continental Scale International Project (GCIP) and GEWEX Americas Prediction Project (GAPP), New Orleans LA, May 2002.
52. **Olivera, F.**, *Effect of the Watershed Size on the Shape of its Hydrologic Response*, 2001 Fall Meeting, American Geophysical Union, San Francisco CA, 2001.
53. **Olivera F.**, *ArcHydro Data Model – Hydro Network*, GIS Hydro 2001 Pre-Conference Seminar, 21st International Users Conference, ESRI, San Diego CA, 2001.
54. Furnans, J. (*) and **F. Olivera**, *Watershed Topology: The Pfafstetter System*, Proceedings of the 21st International Users Conference, ESRI, San Diego CA, 2001.
55. Famiglietti, J., **F. Olivera**, J. Walker, P. Houser and M. Rodell, *A Catchment-Based Global River Routing Scheme for Climate Models and Assimilation of Streamflow and Altimetry Data*, 26th General Assembly, European Geophysical Society, Nice, France, 2001.
56. **Olivera, F.** and J. Famiglietti, *Global-Scale Water Transport Modeling Using Digital Spatial Databases*, 1999 Fall Meeting, American Geophysical Union, San Francisco CA, 1999.
57. Lear, M., **F. Olivera**, J. Famiglietti, K. Asante (*) and D. Maidment, *Upscaling River Network Extraction from Global Digital Elevation Models*, 1999 Fall Meeting, American Geophysical Union, San Francisco CA, 1999.

58. Asante, K. (*), **F. Olivera**, J. Famiglietti and D. Maidment, *GIS-Based Analysis of Global Digital Elevation Models for Derivation of Surface Water Transport Parameters*, 1999 Fall Meeting, American Geophysical Union, San Francisco CA, 1999.
59. **Olivera, F.** and K. Asante (*), *Global Hydrology*, GIS Hydro '99 Pre-Conference Seminar, 19th International Users Conference, ESRI, San Diego CA, 1999.
60. **Olivera, F.**, J. Famiglietti and M. Branstetter, *Resolution Dependence of Cell-to-Cell Runoff Routing Models*, 1999 Spring Meeting, American Geophysical Union, Boston MA, 1999.
61. **Olivera, F.**, J. Famiglietti, K. Asante (*) and D. Maidment, *DTM-Based Model for Global Scale Runoff Routing*, 1998 Fall Meeting, American Geophysical Union, San Francisco CA, 1998.
62. **Olivera, F.** and D. Maidment, *HEC-PrePro v. 2.0: An ArcView Pre-Processor for HEC's Hydrologic Modeling System*, Proceedings of the 18th International Users Conference, ESRI, San Diego CA, 1998.
63. **Olivera, F.**, J. Famiglietti and D. Maidment, *GIS-Based Continental Scale Flow Routing Algorithm for Climate System Models*, 1998 Spring Meeting, American Geophysical Union, Boston MA, 1998.
64. Maidment, D., **F. Olivera**, Z. Ye, S. Reed, S. Akmansoy and D. McKinney, *Water Balance of the Niger River Basin in West Africa*, GIS Hydro 97 Pre-Conference Seminar, 17th International Users Conference, ESRI, San Diego CA, 1997.
65. **Olivera, F.** and D. Maidment, *Spatially Distributed Modeling of Storm Runoff Using Geographic Information Systems (GIS)*, 1997 Spring Meeting, American Geophysical Union, Baltimore MD, 1997.
66. Maidment, D., **F. Olivera**, Z. Ye, S. Reed and D. McKinney, *Water Balance of the Niger Basin*, Proceedings of the North American Water and Environment Congress '96, ASCE-EWRI, Anaheim CA, 1996.
67. **Olivera, F.** and D. Maidment, *Runoff Computation Using Spatially Distributed Terrain Parameters*, Proceedings of the North American Water and Environment Congress '96, ASCE-EWRI, Anaheim CA, 1996.
68. **Olivera, F.**, D. Maidment, Z. Ye, S. Reed and D. McKinney, *Water Balance of the Niger Basin, West Africa*, 1995 Fall Meeting, American Geophysical Union, San Francisco CA, 1995.
69. **Olivera, F.**, D. McKinney, Z. Ye, D. Maidment and S. Reed, *Predicting the Water Balance of Surface and Ground Water Resources Over Large Areas*, Proceedings of the Symposium on Runoff Computations for Water Projects, UNESCO, St. Petersburg, Russia, October – November, 1995.
70. **Olivera, F.**, D. Maidment and R. Charbeneau, *Non-Point Source Pollution Analysis With GIS*, Proceedings of the 1995 Texas-Section Spring Meeting, ASCE, Waco TX, 1995.
71. **Olivera, F.**, *Effects of the Construction of a Breakwater in the Coast Line* (in Spanish), Proceedings of the 1st Iberian-American Congress of Computational Methods in Engineering (1^{er} Congreso Iberoamericano de Metodos Computacionales en Ingenieria), Center for Studies and Experimentation of Public Works (*Centro de Estudios y Experimentacion de Obras Publicas – CEDEX*), Madrid, Spain, 1985.
72. **Olivera, F.**, *FORTTRAN Program for the Analysis of the Coast Line Changes* (in Spanish), Proceedings of the IV National (Peruvian) Congress of Civil Engineering (IV Congreso Nacional de Ingenieria Civil), Peruvian College of Engineers (*Colegio de Ingenieros del Peru*), Chiclayo, Peru, 1982.

TECHNICAL REPORTS

1. Briaud, J.L., A.V. Govindasamy (*), D. Kim (*), P. Gardoni, *F. Olivera*, H.C. Chen, C. Mathewson and K. Elsbury, *Simplified Method for Estimating Scour at Bridges*, submitted to the Texas Department of Transportation (TxDOT), Texas Transportation Institute (TTI), Texas A&M University, 2009.
2. Irish, J., A. Frey (*), M. Mousavi, **F. Olivera**, B. Edge, J. Kaihatu, Y. Song, L. McNeill and S. Finn, *Predicting the Influence of Climate Change on Hurricane Flooding*, submitted to the Bipartisan Policy Center, Texas A&M University, 2008.
3. **Olivera, F.**, D. Kim (*), J. Choi (*) and M. Li, *Calculation of Areal Reduction Factors Using NEXRAD Precipitation Estimates*, Research Report FHWA/TX-05/0-4642-3, submitted to the Texas Department of Transportation (TxDOT), Texas Transportation Institute (TTI), Texas A&M University, 2005.
4. Barrett, M., P. Kearfott, J. Malina, H. Landphair, M. Li, **F. Olivera** and P. RamMohan (*), *Pollutant Removal on Vegetated Highway Shoulders*, Research Report FHWA/TX-05/0-4605-1, submitted to the Texas Department of Transportation (TxDOT), Center for Transportation Research (CTR), University of Texas at Austin, and Texas Transportation Institute (TTI), Texas A&M University, 2005.
5. **Olivera, F.**, R. Autenrieth, M. Bastian, R. Adams and L. Bacon, *Trading Options for Watershed Improvement: The Lake Lewisville Pilot Project – Year 2*, submitted to the Environmental Protection Agency (EPA) Region VI, Texas A&M University, 2005.
6. **Olivera, F.** and T. Gill (*), *GIS Static Storm Model Development: Literature Review and Progress Report*, Research Report FHWA/TX-05/0-4642-1, submitted to the Texas Department of Transportation (TxDOT), Texas Transportation Institute (TTI), Texas A&M University, 2004.
7. Autenrieth, R., **F. Olivera**, M. Bastian, R. Adams and L. Bacon, *Trading Options for Watershed Improvement: The Lake Lewisville Pilot Project – Final Report*, submitted to the Environmental Protection Agency (EPA) Region VI, Texas A&M University, 2003.
8. **Olivera, F.** and J. Choi (*), *Documentation of the Source Publications Used in the Development of the Hydraulic Design Manual* (in CD-ROM format only) submitted to the Texas Department of Transportation (TxDOT), Texas Transportation Institute, Texas A&M University, 2003.
9. PBS&J et al., *Regional Watershed Modeling Master Plan for the San Antonio River Basin*, submitted to the San Antonio River Authority, the City of San Antonio and Bexar County, Texas A&M University, 2003.
10. Jones, A., R. Wurbs, **F. Olivera**, R. Srinivasan and D. Maidment, *Strengthening Water Resources Planning for Texas*, submitted to the U.S. Army Corps of Engineers – Fort Worth District, Texas Water Resources Institute, Texas A&M University, 2003.
11. **Olivera, F.**, *BASINS Training Program*, submitted to the U.S. Environmental Protection Agency, Texas A&M University, 2002.
12. **Olivera, F.** and D. Maidment, *GIS-Based Hydrologic and Hydraulic Applications for Highway Engineering*, Research Report 1738-6, submitted to the Texas Department of Transportation (TxDOT), Center for Transportation Research (CTR), University of Texas at Austin, 1999.
13. Maidment, D., E. Tate and **F. Olivera**, *GIS Floodplain Mapping in Design of Highway Drainage Facilities*, Research Report 1738-4, submitted to the Texas Department of Transportation (TxDOT), Center for Transportation Research (CTR), University of Texas at Austin, 1998.

14. **Olivera, F.**, J. Bao and D. Maidment, *Geographic Information System for Hydrologic Data Development for Design of Highway Drainage Facilities*, Research Report 1738-3, submitted to the Texas Department of Transportation (TxDOT), Center for Transportation Research (CTR), University of Texas at Austin, 1997.
15. **Olivera, F.** and D. Maidment, *Digital Spatial Data of Texas: An Internet and Literature Review*, Research Report 1738-2, submitted to the Texas Department of Transportation (TxDOT), Center for Transportation Research (CTR), University of Texas at Austin, 1997.
16. **Olivera, F.** and D. Maidment, *GIS-Based Hydrologic and Hydraulic Applications for Highway Engineering: Literature Review*, Research Report 1738-1, submitted to the Texas Department of Transportation (TxDOT), Center for Transportation Research (CTR), University of Texas at Austin, 1997.

OTHER PUBLICATIONS

1. **Olivera, F.** and B. DeFee (*), *Urbanization and Runoff in the Whiteoak Bayou Watershed*, Watershed Update 3 (4), Hydrology and Watershed Management Committee of the American Water Resources Association (AWRA), 2005.
2. **Olivera, F.**, *Forces Acting on Gravity Dams* (in Spanish), Department of Engineering (*Departamento de Ingenieria*), Catholic University of Peru (*Universidad Catolica del Peru*), 1991.
3. **Olivera, F.**, *Gravity Dams – Classic Theory – Historical Approach* (in Spanish), Department of Engineering (*Departamento de Ingenieria*), Catholic University of Peru (*Universidad Catolica del Peru*), 1990.

DISSERTATION AND THESIS

1. **Olivera, F.**, *Spatially Distributed Modeling of Storm Runoff and Non-Point Source Pollution Using Geographic Information Systems*, Doctoral Dissertation, Department of Civil Engineering, University of Texas at Austin, Austin, Texas, 1996.
2. **Olivera, F.**, *Secondary Flow in a Flume with a Transversely Inclined Bottom Induced by Differences in Turbulence Intensity*, Masters in Hydraulic Engineering Thesis, International Institute for Hydraulic and Environmental Engineering (IHE), Delft, Netherlands, 1988.
3. **Olivera, F.**, *Computer Program for Estimating the Coast Line Changes Due to the Construction of a Breakwater*, Professional degree of Civil Engineer Thesis, Department of Engineering (*Departamento de Ingenieria*), Catholic University of Peru (*Universidad Catolica del Peru*), Lima, Peru, 1981.

VI. TEACHING

TEXAS A&M UNIVERSITY – DEPARTMENT OF CIVIL ENGINEERING (SINCE 2001)

Teaching of Graduate and Undergraduate Classes

- CVEN 658/689 Civil Engineering Applications of Geographic Information Systems (GIS). Graduate class.
- CVEN 458 Hydraulic Engineering. Senior technical-elective class.
- CVEN 455 Urban Stormwater Management. Senior technical-elective class.
- CVEN 423 Geomatics for Civil Engineering. Senior technical-elective class.

- CVEN 339 Water Resources Engineering. Junior technical-elective class.

Study Abroad

Participated in the Summer 2008 and Summer 2009 Study Abroad program in Spain of the College of Engineering and listed to participate in the Summer 2010 program.

Advising of Graduate Students (Committee Chair)

- Celso Ferreira – Doctor of Philosophy – May 2012 (expected)
- Dongkyun Kim – Doctor of Philosophy – December 2009
Doctoral Dissertation: Study on Poisson Cluster Stochastic Rainfall Generators.
- Huidae Cho – Doctor of Philosophy – August 2008
Doctoral Dissertation: On the Predictive Uncertainty of a Distributed Hydrologic Model.
- Janghwoan Choi – Doctor of Philosophy – December 2006
Doctoral Dissertation: Study of the Spatio-Temporal Distribution of Rainfall in Texas.
- Dante Larentis (Co-Chair) – Doctor of Philosophy – December 2009
Student of the Federal University of Rio Grande do Sul in Brazil.
Doctoral Dissertation: Methodology for the Assessment of Hydropower Resources (in Portuguese)
- Pavitra RamMohan – Master of Science – May 2006
M.S. Thesis: Performance of vegetated roadsides in removing stormwater pollutants.
- Ashish Agrawal – Master of Science – August 2005
M.S. Thesis: PrePro2004: A data Model with Pre- and Post-Processor for the Hydrologic Engineering Center's (HEC) Hydrologic Modeling System (HMS).
- Tarun Gill – Master of Science – May 2005
M.S. Thesis: Transformation of Point Rainfall to Areal Rainfall by Estimating Areal Reduction Factors Using Radar Data for Texas.
- Rajeev Raina – Master of Science – May 2004
M.S. Thesis: Development of a Cell-Based Streamflow Routing Model.
- Srikanth Koka – Master of Science – May 2004
M.S. Thesis: Integration of Stream and Watershed Spatial Data for Hydrologic Modeling.
- Milver Valenzuela – Master of Science – December 2003
M.S. Thesis: Development of an ArcGIS Interface and Design of a Geodatabase for the Soil and Water Assessment Tool (SWAT).
- Zubin Sukheswalla – Master of Science – December 2003
M.S. Thesis: A Statistical Model for Estimating Mean Annual and Mean Monthly Flows at Ungauged Locations.

Visiting Scholars

- Dr. Kwon HyungJoong, Research Fellow at the Nation Institute of Environmental Research in Korea. 12/08 – 12/09.

- Mr. Dante Larentis, doctoral student of Civil Engineering at the Federal University of Rio Grande do Sul in Brazil. I am also Co-Chair of his doctoral committee. 02/07 – 12/07.
- Dr. Jose Bodoque, Professor of Environmental Sciences at the University of Castilla – La Mancha in Toledo, Spain. 10/04 – 12/04, 11/06 – 12/06 and 10/07 – 12/07.

UNIVERSITY OF TEXAS AT AUSTIN – DEPARTMENT OF CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING (1995 TO 2001)

Teaching of Undergraduate Classes

- CE356 Elements of Hydraulic Engineering. Junior required class.
- CE 365 Hydraulic Engineering Design. Senior technical-elective class.

CATHOLIC UNIVERSITY OF PERU – DEPARTMENT OF ENGINEERING – AREA OF HYDRAULICS (1981 – 1992)

Teaching of Undergraduate Classes (5.5-year undergraduate program)

- Hydraulic Structures. Fifth/sixth-year undergraduate technical-elective class.
- River Engineering. Fifth/sixth-year undergraduate technical-elective class.
- Topics of Hydraulic Engineering. Fourth-year undergraduate required class.
- Fluid Mechanics. Third-year undergraduate required class.
- Statics. Second-year undergraduate required class.

TEACHING IMPROVEMENT

- Peer-Reviewed Teaching Project, Texas A&M University – Center for Teaching Excellence, College Station, September 2003 – April 2004.
- Excellence in Civil Engineering Education (ExCEED) Teaching Workshop, American Society of Civil Engineers (ASCE), U.S. Military Academy at West Point, July 27 – August 1, 2003.

VII. TEACHING OF CONTINUING EDUCATION COURSES AND TRAINING SESSIONS

TEXAS A&M UNIVERSITY – TEXAS WATER RESOURCES INSTITUTE

- Floodplain Delineation Using GIS (December 2008, April 2009 and scheduled for August 2010). Three-day course. College Station, Texas.

COMPLUTENSE UNIVERSITY OF MADRID – COMPLUTENSE SUMMER SCHOOL (SPAIN)

- Methods for the Sustainable Management of Water Resources: The Use of Geographic Information Systems (GIS) (July 2005, July 2006, July 2007 July 2008 and July 2009, and scheduled for July 2010). Two-week course. Madrid, Spain.

CENTER FOR STUDIES AND EXPERIMENTATION OF PUBLIC WORKS – CENTER FOR HYDROGRAPHIC STUDIES (SPAIN)

- Spatially-Distributed Hydrologic Modeling (April 2006, February 2007, March 2008 and February 2009 and scheduled for April 2010). Two-day course. Master in General and Applied Hydrology. Madrid, Spain.

FEDERAL UNIVERSITY OF RIO GRANDE DO SUL – INSTITUTE FOR HYDRAULIC RESEARCH (BRAZIL)

- Applications of Geographic Information Systems (GIS) to Water Resources Engineering and Integration of GIS and Hydrologic Modeling (November 2007). Five-day course. Porto Alegre, Brazil.

NATIONAL UNIVERSITY OF THE LITORAL – COLLEGE OF ENGINEERING AND WATER SCIENCES (ARGENTINA)

- International Course on GIS Applied to Hydrology (October 2008, November 2009 and scheduled for November 2010). Two-day course. Santa Fe, Argentina.

UNIVERSITY OF PIURA – DEPARTMENT OF CIVIL ENGINEERING (PERU)

- Use of Geographic Information Systems (GIS) in Water Resources Engineering (October 2007). Nine-hour course. Master in Civil Engineering with emphasis in Water Resources. Piura, Peru.

UNIVERSITY OF TEXAS AT AUSTIN – CENTER FOR RESEARCH IN WATER RESOURCES

- Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) (Eight courses in the period 1999 – 2002). One-week course. Funded by the U.S. Environmental Protection Agency. Austin, Texas.

HELSINKI UNIVERSITY OF TECHNOLOGY – WATER RESOURCES LABORATORY (FINLAND)

- Geographic Information Systems (GIS) in Water Resources (October 2000). Three-day course. Helsinki, Finland.

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

- Use of BASINS and Geographic Information Systems (GIS) for Water Quality Modeling (August 2000). Three-day course. Oklahoma City, Oklahoma.

UNIVERSITY OF BRASILIA – DEPARTMENT OF CIVIL ENGINEERING (BRAZIL)

- Geographic Information Systems (GIS) in Water Resources (April 1999). One-week course. Funded by the Institute for Research for Development of the French Government for the Hydrology and Geochemistry of the Amazon Basin program. Brasilia, Brazil.

INSTITUTE FOR WATER (PORTUGAL)

- Use of Geographic Information Systems (GIS) for Modeling the Portuguese Hydrologic System (August 1998). One-week training session. Lisbon, Portugal.

DEPARTMENT OF HYDRAULICS (MOROCCO)

- Use of Geographic Information Systems (GIS) for Water Resources Management of the Souss Basin in Morocco (October 1995). Two-week training session. Funded by Food and Agriculture Organization (FAO) of the United Nations Organization (UNO). Rabat, Morocco.

CATHOLIC UNIVERSITY – COLLEGE OF SCIENCES AND ENGINEERING (PERU)

- Design of Earth and Concrete Dams (October 1985 and July 1986). One-week course. Lima, Peru.
- Computational Methods Applied to Hydraulic Engineering (November 1985). One-week course. Lima, Peru.
- Design of Spillways (December 1985). One-week course. Lima, Peru.

VIII. PROFESSIONAL ACTIVITIES**JOURNAL EDITORIAL BOARD**

- Associate Editor of the **Journal of Water Resources Planning and Management** published by the American Society of Civil Engineers (ASCE). Best ASCE Journal out of 32 according to 2008 five-year impact factors.
- Associate Editor of the **Journal of Hydrologic Engineering** published by the American Society of Civil Engineers (ASCE). Third best ASCE Journal out of 32 according to 2008 five-year impact factors.
- Member of the Editorial Board of the **Journal of Earth Sciences** published by the Spanish Geological Survey (IGME) since 1874.

JOURNAL REVIEWER

- **Atmosphere – Ocean** published by the Canadian Meteorological and Oceanographic Society (CMOS).
- **Computers and Geosciences** published by Elsevier Science B.V.
- **Geographical and Environmental Modeling** published by Carfax Publishing of the Taylor & Francis Group.
- **Hydrological Sciences Journal** published by the International Association of Hydrological Sciences (IAHS) Press.
- **Hydrological Processes** published by John Wiley and Sons, Ltd.
- **Journal of Atmospheric and Solar-Terrestrial Physics** published by Elsevier Science B.V.
- **Journal of Climate** published by the American Meteorological Society (AMS).
- **Journal of Computing in Civil Engineering** published by the American Society of Civil Engineers (ASCE).
- **Journal of Environmental Management** published by Academic Press.
- **Journal of Hydraulic Engineering** published by the American Society of Civil Engineers (ASCE).
- **Journal of Hydrologic Engineering** published by the American Society of Civil Engineers (ASCE).
- **Journal of Hydrology** published by Elsevier Science B.V.

- **Journal of Hydrometeorology** published by the American Meteorological Society (AMS).
- **Journal of Professional Issues in Engineering Education and Practice** published by the American Society of Civil Engineers (ASCE).
- **Journal of Soil and Water Conservation** published by the Soil and Water Conservation Society.
- **Journal of the American Water Resources Association** published by the American Water Resources Association (AWRA).
- **Journal of Water Resources Planning and Management** published by the American Society of Civil Engineers (ASCE).
- **Natural Hazards** published by Springer.
- **Natural Hazards and Earth System Sciences** published by European Geosciences Union.
- **Natural Hazards Review** published by the American Society of Civil Engineers (ASCE).
- **Photogrammetric Engineering & Remote Sensing** published by the American Society for Photogrammetry & Remote Sensing (ASPRS).
- **Transactions of the American Society of Agricultural and Biological Engineers** published by the American Society of Agricultural and Biological Engineers (ASABE).
- **Transportation Research Record** published by the Transportation Research Board of the National Research Council.
- **Water Resources Research** published by the American Geophysical Union (AGU).

PROPOSAL REVIEWER

- **National Science Foundation (NSF)** – Environmental Sustainability CAREER Panel.
- **National Science Foundation (NSF)** – Collaborations in Mathematical Geosciences.
- **National Science Foundation (NSF)** – Hydrologic Sciences Program – CAREER.
- **National Science Foundation (NSF)** – Hydrologic Sciences Program.
- **National Science Foundation (NSF)** – International Research Experience for Students (IRES) Program.
- **National Science Foundation (NSF)** – Instrumentation and Facilities Program - Geoinformatics.
- **National Science Foundation (NSF)** – Water Cycle Research Competition.
- **U.S. Department of Agriculture (USDA)** – Cooperative State Research, Education, and Extension Service (CSREES) – Small Business Innovation Research (SBIR) Program.
- **U.S. Department of Agriculture (USDA)** – Cooperative State Research, Education, and Extension Service (CSREES) – National Research Initiative (NRI) Competitive Grants Program: Soils and Soil Biology.

- **National Aeronautics and Space Administration (NASA)** – New Investigator Program (NIP) in Earth Sciences.
- **National Oceanic and Atmospheric Administration (NOAA) and University of New Hampshire** – The Cooperative Institute for Coastal and Estuarine Technology (CICEET).
- **U.S. Department of Defense (USDOD)** – Strategic Environmental Research and Development Program.
- **Purdue University** – Joint Transportation Research Program.
- **Smithsonian Institution** – Indo-US Science and Technology Forum.
- **Oklahoma Water Resources Research Institute (OWRRI).**
- **Natural Environment Research Council's** (United Kingdom) – Flood Risk from Extreme Events.
- **Natural Environment Research Council** (United Kingdom) – Freshwater Sciences Research.

ORGANIZATION OF CONFERENCES AND CONVENING OF CONFERENCE-SESSIONS

- Chair of the Technical Committee and member of the Organizing Committee of the Spring Specialty Conference – Geographic Information Systems (GIS) and Water Resources VI of the American Water Resources Association (AWRA), Orlando, Florida, 2010.
- Chair of the Student Committee and member of the Organizing Committee of the Spring Specialty Conference – Geographic Information Systems (GIS) and Water Resources V of the American Water Resources Association (AWRA), San Mateo, California, 2008.
- Co-convenor of the Surface Water Hydrology and Water Resources session of the American Geophysical Union (AGU) 2006 Spring Meeting, Baltimore, Maryland, 2006.
- Chair of the Student Committee and member of the Organizing Committee of the Spring Specialty Conference – Geographic Information Systems (GIS) and Water Resources IV of the American Water Resources Association (AWRA), Houston, Texas, 2006.
- Member of the Organizing Committee of the Spring Specialty Conference – Geographic Information Systems (GIS) and Water Resources III of the American Water Resources Association (AWRA), Nashville, Tennessee, 2004.
- Co-convenor of the Spatial Analysis, Landscape Discretization and Catchment Classification for Hydrological Modeling session of the American Geophysical Union (AGU) and European Geophysical Society (EGS) 2003 Meeting, Nice, France, 2003.
- Member of the Advisory Committee of the Fourth International Conference on Hydrodynamics - HydroInformatics 2000 sponsored by the International Association for Hydraulic Research (IAHR), Cedar Rapids, Iowa, 2000.

ORGANIZATION OF WORKSHOPS

- **Soil and Water Assessment Tool (SWAT)** (software package) organized by the University of Castilla-La Mancha in Spain and Texas A&M University, Toledo, Spain, 2010.

PRESENTATIONS IN WORKSHOPS

- **Communication and Information Technologies for Modernizing Irrigation Systems** organized by Red Riegos CYTED and Red Riegos PROCISUR, Florianopolis, Brazil, 2008.
- **International Workshop on GIS Applications to Hydrology** organized by the College of Engineering and Water Sciences of the National University of the Litoral, Santa Fe, Argentina, 2008.
- **World Water Assessment Program (WWAP) Data and Databases Workshop** sponsored by the United Nations World Meteorological Organization (WMO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), Geneva, Switzerland, 2001.
- **Ecosystem Expert Meeting of the Millennium Assessment of the State of the World Ecosystem** sponsored by the World Resources Institute (WRI), United Nations Environmental Program (UNEP), United Nations Development Program (UNDP) and World Bank, Washington DC, 1999.
- **Rapid Integrated River Basin Assessment Workshop** sponsored by United Nations Environmental Program (UNEP), Stephenville, Texas, 1996.

PROFESSIONAL COMMITTEES

- **Technical Advisory Panel of the Research Management Committee #5 (Structures and Hydraulics)** of the Texas Department of Transportation (TxDOT), Austin, Texas, 2008 - present.
- **GIS and Remote Sensing Technical Committee** of the American Water Resources Association (AWRA), 2003 – present.
- **Hydrology and Watershed Management Technical Committee** of the American Water Resources Association (AWRA), 2003 – present.
- **International Technical Committee** of the American Water Resources Association (AWRA), 2003 – present.
- **Surface Water Technical Committee** of the Hydrologic Section of the American Geophysical Union (AGU), 2001 – present.
- **Technical Advisory Panel of the Research Management Committee #3 (Geometric Design, Right of Way, Environmental and Hydraulics)** of the Texas Department of Transportation (TxDOT), Austin, Texas, 1999 - 2008.
- **Integrated Water Resources Management Task Committee** of the American Society of Civil Engineers (ASCE), 2002 – 2004.
- **Distributed Hydrologic Models Task Committee** of the American Society of Civil Engineers (ASCE), 2003 – 2004.
- **Task Committee on GIS Modules and Distributed Models** of the Watershed of the American Society of Civil Engineers (ASCE), 1996 - 1999.

IX TEXAS A&M UNIVERSITY SERVICE

- Division Head of Environmental and Water Resources Engineering. Department of Civil Engineering. October 2008 – present.
- Member of the Curriculum Committee. Department of Civil Engineering. September 2007 – present.

- Member of the Pre-Faculty Fellow Committee. Department of Civil Engineering. February 2009 – June 2009.
- Chair/member of the Peer Review of Teaching Committees. Department of Civil Engineering.
- Member of the Water Resources Engineering Assistant/Associate Professor Search Committee. Department of Civil Engineering. September 2008.
- Member of the P&T subcommittees of Assistant Professors being considered for promotion and tenure. Department of Civil Engineering.
- Chair of the Water Resource Engineering Associate Professor/Professor Search Committee. Department of Civil Engineering. October 2007.
- Member of the Water Resources Engineering Associate Professor/Professor Search Committee. Department of Civil Engineering. October 2006.
- Faculty member of the Sloan Scholarship Program for minority Ph.D. students. College of Engineering. February 2003 – present.
- Member of the Transportation Engineering Assistant Professor Search Committee. Department of Civil Engineering. December 2005.
- Faculty Advisor of the American Water Resources Association (AWRA) – Texas A&M University Student Chapter. Department of Student Activities. 2003 – 2006.
- Member of the Civil Engineering Graduate Curriculum Committee (GCC). Department of Civil Engineering. November 2004 – November 2006.
- Faculty Advisor of the Peruvian Student Association. Department of Student Activities. September 2003 – present.
- Member of the Infrastructure Monitoring/Assessment Assistant/Associate Professor Search Committee. Department of Civil Engineering. October 2004.
- Member of the Hydrology and Hydraulics Subcommittee of the Civil Engineering Curriculum Committee. Department of Civil Engineering. September 2004.
- Member of the Fluid Mechanics Subcommittee of the Civil Engineering Curriculum Committee. Department of Civil Engineering. September 2004.
- Graduate Council Representative (GCR) on two opportunities. Office of Graduate Studies. 2001 - 2002.
- Member of the Structural/Construction Engineering Assistant Professor Search Committee. Department of Civil Engineering. December 2001.

X. AWARDS

- **Texas A&M University – Zachry Department of Civil Engineering, 2008**
2008 – 2010 Wiley Developmental Professorship

- **Texas A&M University – Zachry Department of Civil Engineering, 2007**
2006 – 2007 Dick and Joyce Birdwell Endowed Teaching Award
- **Chi Epsilon Honor Society** for Civil and Environmental Engineers, 2004
Inducted.
- **American Society of Civil Engineers, 2003**
Excellence in Civil Engineering Education (ExCEED) 2003 Fellow.
- **Texas Department of Transportation, 1999**
Top Ten Research Findings and Innovations Award for the research project “System of GIS-Based Hydrologic and Hydraulic Applications for Highway Engineering.”
- **Environmental Systems Research Institute, 1996**
2nd Place in the 16th ESRI International Users Conference ArcView and Avenue Application Competition for the “Map-Based Surface and Ground Water Flow Simulation Model.”
- **American Society of Civil Engineers – Texas Section, 1994 – 1995**
J. Walter Porter Fellowship for graduate study in water resources engineering awarded to individuals who demonstrate outstanding ability and promise of excellence in engineering.
- **Netherlands Universities Foundation for International Cooperation, 1982 – 1983**
Full financial support for one-year Diploma in Hydraulic Engineering studies at the International Institute for Hydraulic and Environmental Engineering (IHE) at Delft, The Netherlands.

XI. PROFESSIONAL ORGANIZATIONS

- American Society of Civil Engineers (ASCE)
- American Geophysical Union (AGU)
- American Water Resources Association (AWRA)
- International Association of Hydrological Sciences (IAHS)

XII. PROFESSIONAL LICENSES

- Professional Engineer in the State of Texas since May 4, 2001.
- Registered Engineer in Peru since 1981.

XIII. CONSULTING

- **INCLAM, S.A.** – Madrid, Spain, 2007 – present
Use of computer application GUAD2D for 2D flow modeling and floodplain delineation.
- **MLAW Consultants & Engineers** – Austin, Texas, 2003
Technical review of the “Water Balance Study on Portions of #4 Humboldt Circle: Moritz vs. Vanderslice.”

- **HydroGeoLogic, Inc.** – Austin, Texas, 2000
Support on the use of geographic information systems (GIS) for water resources engineering.
- **ARMCO** – Lima, Peru, 1989
Hydraulic design of the Huancane culvert bridge in Puno, Peru.
- **DESCO** – Alto Puchka, Peru, 1987
Feasibility study of the drinking water supply system for the Alto Puchka communities in Ancash, Peru.
- **Graña and Montero Engineering** (*Graña y Montero Ingeniería*) – Lima, Perú, 1986
Design of the 50-foot Santa Catalina tailing dam at the Quiruvilca mining complex in La Libertad, Peru.
- **Engineering Projects** (*Proyectos de Ingeniería*) – Lima, Peru, 1984
Design of the shore protection of the Los Delfines beach in Bujama, Peru.

April 9, 2010