

TEXAS STATE VITA

I. ACADEMIC/PROFESSIONAL BACKGROUND

A. Name: Vicente L. Lopes, PhD

Professor, Department of Biology
Affiliated Doctoral Faculty, Department of Geography
Fulbright Scholar, Bremen University, Germany (2012-13)

Address: Department of Biology
Texas State University
San Marcos, TX 78666
Phone: 512-245-6709

Research/Scholarly Interests:

My work is grounded in ecology, hydrology, ecophilosophy, and systems thinking and is directed towards integrating environment, culture, and place using watersheds as context and setting for the purpose of building more ecologically-resilient communities.

B. Educational Background

| Degree | Year | University | Major | Thesis/Dissertation |
|--------|------|---------------------------------------|----------------------------------|---|
| Ph.D. | 1987 | University of Arizona, Tucson, AZ | Watershed Hydrology & Management | A Numerical Model of Watershed Erosion and Sediment Yield |
| M.S. | 1980 | Federal University of Paraiba, Brazil | Water Resources Engineering | Soil Erosion by Raindrop Splash and Overland Flow |
| B.S. | 1975 | Federal University of Ceara, Brazil | Agricultural Engineering | |

C. Academic/Scholarly Appointments

| Position | Institution | Date |
|---|------------------------|--------------------|
| Professor of Environmental Studies, Department of Biology | Texas State University | Sep 2006 - present |

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| Associate Professor of Aquatic Resources, Department of Biology | Texas State University | Jan 2005 – Aug 2006 |
| Associate Professor of Agr. and Biosystems Engineering, Dept. of Agricultural and Biosystems Engineering | University of Arizona | Sep 2002 – Dec 2004 |
| Associate Professor of Watershed Management, School of Natural Resources | University of Arizona | Sep 1995 – Dec 2004 |
| Visiting Research Fellow Department of Geography Exeter, United Kingdom | University of Exeter, UK | Sep 1995 - Aug 1996 |
| Assistant Professor of Watershed Management, School of Natural Resources | University of Arizona | Sep 1989 - Aug 1995 |
| Research hydrologist/Systems Analyst Southwest Watershed Research Center, Tucson, AZ | USDA/ARS | Jan 1988 – Aug 1989 |
| Associate Professor of Agricultural Engineering, Department of Agricultural Engineering | Escola Superior de Agricultura de Mossoro, Brazil | Sep 1980 – Dec 1987 |
| Assistant Professor of Agricultural Engineering, Department of Agricultural Engineering | Escola Superior de Agricultura de Mossoro, Brazil | Sep 1976 - Aug 1980 |

II. TEACHING

A. Teaching Honors and Awards

| | | |
|--|--|-----------|
| Texas State University The Honors College | Honors College Professor of the Year | 2011-2012 |
| Texas State University | Alpha Chi Favorite Professor of the Year | 2011 |
| University of Arizona | Outstanding dissertation advisor, School of Renewable Natural Resources. | 1999 |

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| University of Arizona | Outstanding dissertation advisor, School of Renewable Natural Resources | 1998 |
| University of Arizona | Outstanding dissertation advisor, School of Renewable Natural Resources, | 1994 |

B. Courses Taught

| University | Course Title | Date |
|--|--|-------------|
| Texas State University | BIO7412 – Environmental Hydrology | Spring 2016 |
| | BIO 7360U – Sustainability in a Chang. World | Spring 2016 |
| | HON 3395B - Integral Ecology | Fall 2015 |
| | BIO 7103A – Ecology & Society | Fall 2015 |
| | BIO 7412 – Environmental Hydrology | Spring 2015 |
| | BIO 7360U – Sustainability in a Chang. World | Spring 2015 |
| | HON 3395B – Integral Ecology | Fall 2014 |
| | BIO 7103A – Ecology & Society | Fall 2014 |
| | BIO 7412 – Environmental Hydrology | Spring 2014 |
| | BIO 7360U – Sustainability in a Chang. World | Spring 2014 |
| | BIO 7310 – Global Aquatic Resources | Fall 2013 |
| | HON 3395B – Integral Ecology | Fall 2013 |
| | BIO 7103A – Ecology & Society | Fall 2013 |
| | BIO 7412 – Environmental Hydrology | Spring 2012 |
| | BIO 7360U – Sustainability in a Chang. World | Spring 2012 |
| BIO 7103A – Ecology and Society | Spring 2012 | |
| HON 3395B – Integral Ecology | Fall 2011 | |
| BIO 7103A – Ecology and Society | Fall 2011 | |
| BIO 7360B – Human-Environment Linkages | Spring 2011 | |
| BIO 7360U – Sustainability in a Chang. World | Spring 2011 | |
| BIO 7703A – Ecology & Society | Spring 2011 | |
| HON 3395B – Integral Ecology | Fall 2010 | |
| BIO 7103A – Ecology & Society | Fall 2010 | |

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| | BIO 7412 – Environmental Hydrology | Spring 2010 |
| | BIO 7103A – Ecology & Society | Spring 2010 |
| | HON 3395B – Integral Ecology | Fall 2009 |
| | BIO 7103 – Watershed Issues | Fall 2009 |
| | BIO 7360U – Sustainability in a Chang. World | Spring 2009 |
| | HON 3395B – Integral Ecology | Fall 2008 |
| | BIO 7103 – Sustainability Science | Fall 2008 |
| | BIO 7421 – Landscape Dynamics | Spring 2008 |
| | BIO 7103 – Watershed Issues | Spring 2008 |
| | BIO 7412 – Environmental Hydrology | Fall 2007 |
| | BIO 7102 – Integration Science | Fall 2007 |
| | BIO 7302 - Applied Watershed Modeling | Spring 2007 |
| | BIO 7102 - Participatory Watershed Mgmt | Spring 2007 |
| | BIO 7412 - Environmental Hydrology | Fall 2006 |
| | BIO 7366 - Integrated Water Resources Mgmt | Spring 2006 |
| | BIO 7102 - Landscape Dynamics | Spring 2006 |
| | BIO 7421 - Landscape Ecology | Fall 2005 |
| | BIO 7352 - Aquatic Resources Hydrology | Spring 2005 |
| University of Arizona | WSM 560 - Watershed Hydrology, School of Renewable Natural Resources | 1999 - 2004 |
| | WSM 605 - Watershed Modeling, School of Renewable Natural Resources | 1990 - 2004 |
| | WSM 565 - Erosion and Environment, School of Renewable Natural Resources | 1998 - 2004 |
| | WSM 535 - Watershed Management in Dryland Ecosystems, School of Renewable Natural Resources/Arid Land Sciences | 1993 - 1998 |
| Federal University of Paraiba, Brazil | Fundamentals of Fluid Mechanics, Department of Civil Engineering | 1979 |

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|---|--|-------------|
| Escola Superior de Agricultura de Mossoro, Brazil | Hydraulic Engineering and Agricultural Hydrology, Department of Agricultural Engineering | 1976 - 1982 |
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C. Graduate Theses/Dissertations Directed

a. Doctoral Dissertations Directed (10)

- 2012 Kathy Alexander, "Facilitating Sustainable Use of the Rio Grande: The Nature and Effectiveness of Existing Water Management Institutions." Department of Biology, Texas State University (co-advisor)
- 2011 Vogl, Adrian L. A Systems Approach to Modeling and Impact Assessment in an Urbanizing Watershed. Doctoral Dissertation, Department of Biology, Texas State University
- 2010 Mix, Ken. A Multi-Dimensional Analysis of the Upper Rio Grande Social-Ecological System: The San Luis Valley, Colorado. Doctoral Dissertation, Department of Biology, Texas State University (co-advisor)
- 2009 Moltz, Heidi L. N. A Framework for Integrated Assessment of Non-Point Source Pollution in Large Basins. Doctoral Dissertation. Department of Biology, Texas State University (co-advisor)
- 2008 Fernandez-Reynoso, Demetrio S. Evaluation of Sustainable Agricultural Systems in Central Mexico. Doctoral Dissertation. School of Natural Resources, University of Arizona
- 2001 Lopez-Sabater, Carlos Joaquín. An Empirical Model of Hydraulic Roughness for Overland Flow. Doctoral Dissertation, Department of Agricultural and Biosystems Engineering, University of Arizona
- 2000 Gonzalez, Angel Bustamante. Hydrologic Effects of Vegetative Practices on Ponderosa Pine Watersheds in Arizona. Doctoral Dissertation, School of Renewable Natural resources, University of Arizona
- 1999 Espinosa, Miguel. Prediction of Bedload Discharge for Alluvial Channels. Doctoral Dissertation, School of Renewable Natural resources, University of Arizona
- 1998 Canfield, Evan Howard. Use of Geomorphic Indicators in Parameterizing an Even-Based Sediment-Yield Model. Doctoral Dissertation, Agricultural and Biosystems Engineering, University of Arizona

1994 Tiscareno-Lopez, Mario. A Bayesian Monte-Carlo Approach to Assess Uncertainties in Process-Based, Continuo Simulation Models. Doctoral Dissertation, School of Renewable Natural Resources, University of Arizona

b) MS Theses Directed (17)

2014 Lawrence, Dustin. Reliability Analysis of Rainwater Harvesting in Three Texas Cities. MS Thesis, Department of Biology, Texas State University

2013 Dascher, Erin D. Residential Water Use and Conservation: A Texas Drought Perspective. MS Thesis, Interdisciplinary Sustainability Studies, Texas State University (co-advisor)

2010 Fawcett, Elizabeth. Land Use-Water Quality Interactions in the Central Brazos River Basin, Texas. MS Thesis, Department of Biology, Texas State University

2009 Vining, Pam. Energy Efficiency: A Study of Practices and Policies, Greenhouse Gas Emissions, and Potential Reduction Strategies at Texas State University – San Marcos. Department of Geography, Texas State University (co-advisor)

2008 Oliver, Leonard L. Hydrologic Assessment of the Pedernales River Watershed. MS Thesis, Department of Biology, Texas State University

2005 Porovskyy, Serhiy. Analysis of the Integrated Watershed Management in the Danube River Basin. MS Thesis, School of Natural Resources, University of Arizona

2004 Yamaguchi, Yuko. Simulating Hydrologic Response from Arizona Ponderosa Pine Watersheds Using the BASINS-SWAT Modeling System. MS Thesis, School of Renewable Natural resources, University of Arizona

1998 Long, Larry Dean. Transport of Cryptosporidium through the Perched Zone of a Wastewater Recharge Basin. MS Thesis, School of Renewable Natural Resources, University of Arizona

1996 Freedman, Vicky. Erosion Parameter Identification in Overland Flow Areas: Application of Global and Local Algorithms. MS Thesis, School of Renewable Natural Resources, University of Arizona

Dong, Chunying. Effects of Vegetative Manipulation on Sediment Concentrations in North-Central Arizona. MS Thesis, School of Renewable Natural Resources, University of Arizona

1994 Ulman, Peggy. Determining Soil Erodibility of Forest Roads. MS Thesis, School of Renewable Natural Resources, University of Arizona

Rapp, John Francis. Error Assessment of the Revised Universal Soil Loss Equation Using Natural Runoff Plot Data. MS Thesis, School of Renewable Natural Resources, University of Arizona

Wigdor, Yakov. Applicability of Selected Sediment Transport Equations to Pinion Juniper Woodlands. MS Thesis, School of Renewable Natural Resources, University of Arizona (co-advisor)

1992 Andreassian Vazken. Comparative Hydrology of Mediterranean Shrubland Watersheds. MS Thesis, School of Renewable Natural Resources, University of Arizona

Freimund, Jeremy. Potential Error in Hydrologic Field Data Collected from Small Semiarid Watersheds. MS Thesis, School of Renewable Natural Resources, University of Arizona

1991 Tiscareno-Lopez, Mario. Sensitivity Analysis of the WEPP Watershed Model. MS Thesis, School of Renewable Natural Resources, University of Arizona

Moreira-Beita, Carlos. Input Data Development for the SWRRB Model Using Geographic Information Systems. MS Thesis, School of Renewable Natural Resources, University of Arizona

c. Undergraduate Theses Directed (3)

2015 Wallace, Taylor. Riding for Gaia: Expanding Ecological Awareness Through Cycling. Honors Thesis, Honors College, Texas State University

2014 Sanchez, Brittney, L. The San Marcos River, a Community River: Threats, Impacts, and Strategies. Honors Thesis, Honors College, Texas State University

2011 Faure, Danielle K. A Qualitative Analysis of the Perceptions of Iowa Corn Farmers Regarding Alternative Energy Usage and a Proposal for Policy Change. Honors Thesis, Honors Program, Texas State University

D. Courses Prepared and Curriculum Development

Developed three upper-level doctoral courses in aquatic resources at Texas State University and an undergraduate course on integral ecology for the Honors students:

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| Fall 2013: | BIO 7310 – Global Aquatic Resources |
| Spring 2012: | Civic Ecology: A Pathway to Sustainability. On-line course, Open Education Europa, Bremen University, Germany http://www.openeducationeuropa.eu/en/course/civic-ecology |
| Spring 2011: | BIO 7360B – Human-Environment Linkages |
| Fall 2008: | HON 3395B - Integral Ecology |
| Fall 2006: | BIO 7412 – Environmental Hydrology |
| Spring 2006: | BIO 7366 - Integrated Water Resources Management |
| Fall 2005: | BIO 7421 – Landscape Ecology |
| Spring 2005: | BIO 7352 – Aquatic Resources Hydrology |

E. Funded External Teaching Grants and Contracts

Training in Erosion Modeling for Moroccan Scientists. Duration of award: July 1997. Total award amount: \$24,000. Other PI's: Dr. Donald Slack (University of Arizona) and Dr. Kenneth Renard (USDA) Source of support: FAO of the United Nations, Grant No. UA421430

F. Submitted, but not Funded, External Teaching Grants and Contracts: N/A

G. Funded Internal Teaching Grants and Contracts

Establishment of an Experimental Perimeter for Natural Resources Studies in Sonora, Mexico. Duration of award: 4/1994 - 3/1996. Total award amount: \$10,000. Other PI's: N/A Source of support: University of Arizona/University of Sonora (Hermosillo, Mexico) Cooperative Studies, Project No. 433924

H. Submitted, but not Funded, Internal Teaching Grants and Contracts: N/A

I. Other

a. Research and Educational Software Development

Designed, coded and tested the following software systems (computer models). These software systems have been used as research (doctoral dissertations and master theses)

and educational (graduate courses and workshops) tools in graduate programs at the University of Arizona and Federal University of Paraiba (Brazil).

- 2002 Developed a computer program called SEDLOAD for computing bed load and total load discharge in alluvial streams using selected sediment transport formulas.
- 2001 Developed a computer simulation model called CHDM (Catchment Hydrology Distributed Model) - a catchment-scale, distributed hydrologic transport model based on modern infiltration theory and principles of soil physics, overland and channel-flow hydraulics, and erosion mechanics.
- 1992 Developed a computer program called NORMDPTH for computing the geometric elements of complex channel cross-sections.
- 1989 Developed a computer simulation model called WESP (Watershed Erosion Simulation Program) - a process-based, distributed model for analysis and simulation of catchment runoff and sediment yield in dryland environments.

III. SCHOLARLY/CREATIVE

A. Works in Print

1. Books: N/A

a. Scholarly Monographs: NA

b. Textbooks: N/A

c. Edited Books: N/A

d. Book Chapters

Lopes, V. L. and Luizzi, V. L. (2008). Participatory Sustainability: Building Sustainability for Complexity and Change. In: Osborne, R. and Kriese, P. (eds). Global Community, Global Security. Value Inquiry Book Series 198, Rodopi, pp. 217-227

Lopes, V. L., Ffolliott, P. F. and Baker, M. B., Jr. (1999). Impacts of Vegetative Manipulations on Sediment Concentrations from Pinyon-Juniper Woodlands. In: Monsen, S. B. and Stevens, R. (eds). Ecology and Management of Pinyon-Juniper Communities Within the Interior West. USDA Forest Service, Rocky Mountain Research Station, (RMRS-P-000), pp. 302-305.

Lopes, V. L. and Ffolliott, P. F. (1996). A Framework for Modeling Sediment Processes in Upland Watersheds. In: Singh, V. P. and Kumar, B. (eds.). Water-Quality Hydrology, Kluwer Academic Publishers, pp. 93-111

Nearing, M. A., Lane, L. J. and Lopes, V. L. (1994). Modeling Soil Erosion. In: R. Lal (ed). Soil Erosion Research Methods. 2nd Ed., Soil and Water Conservation Society, pp. 127-156

Ffolliott, P. F., Lopes, V. L., Esquivel, C. and Sanchez-Cohen, I. (1993). Conservation and Sustainable Development of Encinal Woodlands: A Watershed Management Approach. In: Rocky Mountain Forest and Range Experiment Station (RM-240), pp. 61-66.

e. Creative Books: N/A

2. Journal Articles

Clark, T. and Lopes, V. L. The Role of Participatory Modeling in Watershed Governance: A Case Study in South-Central Texas. *Human Ecology Review* (in review)

Lawrence, D. and Lopes, V. L. Reliability Analysis of Urban Rainwater Harvesting for Three Texas Cities. *Texas Water Journal* (in review)

Moltz, H. L. N., Smith, C. L., Lopes, V. L., and Rast, W. Sediment Control and Social Inequality in the Santa Fe River Watershed, New Mexico: A Case Study of Organizations and Stakeholder Interactions. *European Water Review* (in review)

Mix, K., Lopes, V. L. and Rast, W. (2015). A Systems Approach to Understanding the Evolution of the Agro-Social-Ecological System of the Upper Rio Grande – San Luis Valley, Colorado. *Journal of Water Resources Management*, 29(2): 233-251

Saunders, B., Rast, W. and Lopes V. L. (2014). Stakeholder Evaluation of the Feasibility of Watershed Management Alternatives Using Integrated Lake Basin Management Principles. *Lakes & Reservoirs: Research and Management*, 19(4): 255-268

Mix, K., Lopes, V. L. and Rast, W. (2012a). Growing Season Expansion and Related Changes in Monthly Temperature and Growing Degree Days in the Inter-Montane Desert of the San Luis Valley, Colorado. *Journal of Climatic Change*, 114(3): 723-744

Mix, K., Lopes, V. L. and Rast, W. (2012b). Semiquantitative Analysis of Water Appropriations and Allocations in the Upper Rio Grande Basin, Colorado. *Journal of Irrigation and Drainage Engineering*, 138(7): 602-674

Mix, K., Lopes, V. L. and Rast, W. (2012c). Environmental Drivers of Streamflow Change in the Upper Rio Grande. *Journal of Water Resources Management*, 26(1): 253-272

- Mix, K., Lopes, V.L. and Rast, W. (2011). Annual and Growing Season Temperature Changes in the San Luis Valley, Colorado. *Journal of Water, Air & Soil Pollution*, 220(1): 189-203
- Smith, C. L., Lopes, V. L. and Carrejo, F. M. (2011). Recasting Paradigm Shift: "True" Sustainability and Complex Systems. *Human Ecology Review*, 18(1): 67-75
- Moltz, H. L. N., Rast, W., Lopes, V. L. and Ventura, S. J. (2011). Use of Spatial Surrogates to Assess the Potential for Non-point Source Pollution in Large Watersheds. *Lakes & Reservoirs: Research and Management*, 16(1): 3-13
- Vogl, A.L. and Lopes, V. L. (2010). Evaluating Watershed Experiments through Recursive Residual Analysis. *Journal of Irrigation and Drainage Engineering*, 136(5): 348-353
- Moltz, H.L.N., Lopes, V. L., Rast, W. and Ventura, S. J. (2010). A Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico. *Journal of Hydrologic Engineering*, 15(4): 308-317
- Mix, K., Rast, W. and Lopes, V. L. (2010). Increases in Growing Degree Days in the Alpine Desert of the San Luis Valley, Colorado. *Journal of Water, Air & Soil Pollution*, 205(1): 289-304
- Vogl, A. L. and Lopes, V. L. (2009). Impacts of Water Resources Development on Flow Regimes in the Brazos River. *Journal of Environmental Monitoring and Assessment*, 157:331-345
- Lopes, V. L. and Vogl, A. L. (2008). Integrating Modeling and Field Experiments to Evaluate Impacts of Vegetative Practices on Ponderosa Pine Watersheds. *Journal of the American Water Resources Association*, 44(5):1284-1294.
- Chaves, I. B., Lopes, V. L., Ffolliott, P. F. and Paes-Silva, A.P. (2008). Uma Classificacao Morfo-Estrutural para Descricao e Avaliacao da Biomassa da Vegetacao da Caatinga. *Revista Caatinga*, 21(2): 204-213
- Lopes, V. L., Osterkamp, W. R. and Bravo-Espinosa, M. and (2007). A Method for Improving Predictions of Bed-load Discharges to Reservoirs. *Lakes & Reservoirs: Research and Management*, 12(1):59-72
- Lopes, V.L. and Canfield, H.E. (2004). Effect of Watershed Representation on Runoff and Sediment Yield Modeling. *Journal of the American Water Resources Association*, 40(2): 311-320

Canfield, H.E. and Lopes, V.L. (2004). Parameter Identification in a Two-Parameter Sediment Yield Model. *Journal of the American Water Resources Association*, 40(2): 321-332

Bravo-Espinosa, M., Osterkamp, W. R. and Lopes, V. L. (2004). Transporte de Sedimentos en Corrientes Naturals: Revision Tecnica de Ecuaciones Empiricas de Prediccion del Arrastre de Sedimentos de Fondo. *Terra Latino Americana*, 22(3): 377-386

Bravo-Espinosa, M., Osterkamp, W. R. and Lopes, V. L. (2003). Bedload Transport in Alluvial Channels. *ASCE Journal of Hydraulic Engineering*, 129(10): 783-795

Lopez-Sabater, C. J., Renard, K. G. and Lopes, V. L. (2002). Neural-Network-Based Algorithms of Hydraulic Roughness for Overland Flow. *Transactions of the ASAE*, 45(3): 661-667

Lopes, V. L., Ffolliott, P. F. and Baker, M. B. Jr. (2001). Impacts of Vegetative Practices on Suspended Sediment from Watersheds of Arizona. *ASCE Journal of Water Resources Planning and Management*, 127(1):41-47

Canfield, H. E., Lopes, V. L. and Goodrich, D. C. (2001). Hillslope Characteristics and Particle Size Composition of Surficial Armoring on a Semiarid Watershed in the Southwestern United States, *CATENA* 44(2001): 1-11

Freedman, V. L., Lopes, V. L. and Hernandez, M. (2001). Parameter Identifiability for three Sediment Entrainment Equations. *ASCE Journal of Irrigation and Drainage Engineering*, 127(2): 92-99

Lopes, V. L., Andreassian, V. P. and Andrade, E. M. (1999). Analise Comparativa do Comportamento de Bacias sob Clima Tipo Mediterraneo. *Revista Brasileira de Recursos Hidricos*, 4(1): 49-56

Lopes, V. L., Ffolliott, P. F. and Baker, M. B., Jr. (1999). Impacts of Vegetative Treatments on Sediment Concentrations from the Beaver Creek Watersheds in North-Central Arizona. *Hydrology and Water Resources in Arizona and the Southwest*, pp. 49-55

Freedman, V. L., Lopes, V. L. and Hernandez, M. (1998). Parameter Identifiability for Catchment-Scale Erosion Modelling: A Comparison of Optimization Algorithms. *Journal of Hydrology*, 207(1988): 83-97

Sanchez-Cohen, I., Lopes, V. L., Slack, D. C. and Fogel, M. M. (1997). A Water Balance Model for Small-Scale Water Harvesting Systems. *ASCE Journal of Irrigation and Drainage Engineering*, 123(2): 123-128

Lopes, V. L. (1996). On the Effect of Uncertainty in Spatial Distribution of Rainfall on Catchment Modelling. *CATENA*, 28(1996): 107-119

Wigdor, Y., Lopes, V. L. and Ffolliott, P. F. (1996). Comparison of Sediment Discharge Predictions for Small Watersheds in the Southwestern United States. *International Journal of Sediment Research*, 11(1): 22-33

Zeigler, B. P., Moon, Y., Lopes, V. L. and Kim, J. (1996). DEVS Approximation of Infiltration Using Genetic Algorithm Optimization of a Fuzzy System. *Journal of Mathematical and Computer Modeling*, 23:215-228

Lopes, V. L., Ffolliott, P. F., Gottfried, G. J. and Baker, Jr. M. (1996). Sediment Rating Curves for Pinyon-Juniper Watersheds in Northern Arizona. *Hydrology and Water Resources in Arizona and the Southwest*. 26:29-33

Sanchez-Cohen, I., Lopes, V. L., Slack, D. C. and Yanez, C. H. (1995). Assessing Risk for Water Harvesting Systems in Arid Environments. *Journal of Soil and Water Conservation*, 50(5): 446-449

Tiscareno-Lopez, M., Wertz, M. A. and Lopes, V. L. (1995). Assessing Uncertainties in WEPP's Soil Erosion Predictions on Rangelands. *Journal of Soil and Water Conservation*, 50(5): 512-516

Gimblett, H. R., Ball, G., Lopes, V. L., Zeigler, B. P., Marefat, M. and Sanders, B. (1995). Massively Parallel Simulations of Complex, Large-Scale, High Resolution Ecosystem Models. *Complexity International* (an electronic journal), vol, 2 (April 1995)

Tiscareno-Lopez, M., Lopes, V. L., Stone, J. J. and Lane, L. J. (1994). Sensitivity Analysis of the WEPP Watershed Model for Rangeland Applications - II. Channel Processes. *Trans. of American Society of Agricultural Engineers*, 37(1): 151-158

Lopes, V. L. and Shirley E. D. (1993). Computation of Flow Transitions in Open Channels with Steady Uniform Lateral Inflow. *ASCE Journal of Irrigation and Drainage Engineering*, 119(1): 187-200

Lopes, V. L. and Ffolliott, P. F. (1993). Sediment Rating Curves for a Clear-Cut Ponderosa Pine Watershed in Northern Arizona. *Water Resources Bulletin*, 29(3): 369-382

Lopes, V. L. and Ffolliott, P. F. (1993). Modeling Sediment Processes on Small Watersheds: A Conceptual Framework. II. Concentrated Flow Processes. *International Journal of Sediment Research*, 8(1): 1-23

Lopes, V. L. and Meyer, J. (1993). Watershed Management Program on Santiago Island, Cape Verde. *Journal of Environmental Management*, 17(1): 51-57

Lopes, V. L. and Meyer, J. (1993). Watershed Development Project on Santiago Island, Cape Verde. *African Environment*, Vol. 8(3-4), no. 31/32:49-65

Tiscareno-Lopez, M., Lopes, V. L., Stone, J. J. and Lane, L. J. (1993). Sensitivity Analysis of the WEPP Watershed Model for Rangeland Applications - I. Hillslope Processes. *Trans. of American Society of Agricultural Engineers*, 36(6): 1659-1672

Lopes, V. L. and Ffolliott, P. F. (1992). Modeling Sediment Processes on Small Watersheds: A Conceptual Framework. I. Broad Shallow Flow Processes. *International Journal of Sediment Research*, 7(3): 21-44

Shirley, E. D. and Lopes, V. L., (1991). Normal Depth Calculations in Complex Channel Sections. *ASCE Journal of Irrigation and Drainage Engineering*, 117(2): 220-232

Lopes, V. L. (1991). Using Erosion Equations to Predict Sediment Yield from Overland Flow Systems. *Hydrology and Water Resources in Arizona and the Southwest*. 21:1-9

3. Conference Proceedings

Smith, C. L., Lopes, V. L. and Carrejo, F. (2010). Holism, Justice and Structuration: A Paradigm Shift for a Sustainable Future. A paper presented at the Annual Meeting of the American Sociological Association, Atlanta, GA, August 2010

Mix, K., Lopes, V. L. and Rast, W. (2010). A Method for Identifying Changes in Drivers and Linkages in a Social-Ecological System: The San Luis Valley, Colorado. *International Society for the Systems Sciences, General Systems Bulletin*, Vol. 39, pp. 12-14

Chaves, I. B., Slack, D. C., Ffolliott, P., Lopes, V. L. and Paes-Silva, A. P. (2004). Uma Classificacao Morfo-Estrutural para Descricao e Avaliacao da Vegetacao da Caatinga. *Proceedings of the XV Meeting of the Soil Water Conservation and Management, Santa Maria, Rio Grande do Sul, Brazil.*

Chaves, I. B., Slack, D. C., Guertin, D. P. and Lopes, V. L. (2004). Estimativa da Erodibilidade e sua Relacao com Outros Atributos dos Solos do Estado da Paraiba. *Proceedings of the XV Meeting of the Soil Water Conservation and Management, Santa Maria, Rio Grande do Sul, Brazil.*

De Steiguer, J. E., Duberstein, J. and Lopes, V. L. (2003). The Analytic Hierarchy Process as a Means for Integrated Watershed Management. In: Renard, K. et al., eds. 2003. First Interagency Conference on Research in the Watersheds, October 27-30, 2003. U.S. Department of Agriculture, Agricultural Research Service, pp. 736-740

Canfield, H.E., Lopes, V.L. and Goodrich, D.C. (2002). Watershed Geometric Representation and the Search for Effective Parameter Values for Sediment Yield

Prediction in a Distributed Hydrologic Model. ASAE Paper No. 02-2226. In: Proceedings of the International Meeting of the American Society of Agricultural Engineers and the CIGR. July 28-July 31, 2002. Chicago, IL.

Canfield, H.E., Lopes, V.L. and Goodrich, D.C. (2002). Catchment Geometric Representation and Identification of Sediment Yield Parameters in a Distributed Catchment Model. In: Proceedings of the 2nd Federal Interagency Hydrologic Modeling Conference (CD-ROM), July 28-August 1, 2002. Las Vegas, NV. Session 8B, p. 1-12

Lopes, V. L., Osterkamp, W. R. and Bravo-Espinosa, M. (2001). Evaluation of Selected Bedload Equations under Transport- and Supply-Limited Conditions. In: 7th Federal Interagency Sedimentation Conference, Reno, Nevada, March 25-29, 2001, pp. I.192-I.195

Rapp, J. F., Lopes, V. L. and Renard, K. G. (2001). Comparing Soil Erosion Estimates from RUSLE and USLE on Natural Runoff Plots. In: Ascough II, J. C. and Flanagan, D. D. (eds). Soil erosion research for the 21st century, International Symposium, Honolulu, Hawaii, pp. 24-27

Lopez-Sabater, C. J., Renard, K. G. and Lopes, V. L. (2001). An Empirical Model of Hydraulic Roughness for Overland Flow. In: Ascough II, J. C. and Flanagan, D. D. (eds). Soil erosion research for the 21st century, International Symposium, Honolulu, Hawaii, pp. 615-618

Lopes, V. L., Ffolliott, P. F. and Baker, M. B., Jr. (2000). Effects of Watershed Management Practices on Sediment Concentrations in the Southwestern United States: Management Implications. In: Conference on Land Stewardship in the 21st century: The Contributions of Watershed Management, Tucson, Arizona, pp. 352-355

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Ffolliott, P. F., Baker, M. B. Jr. and Lopes, V. L. (2000). Watershed Management Perspectives in the Southwest: Past, Present, Future. Conference on Land Stewardship in the 21st century: The Contributions of Watershed Management, Tucson, Arizona, pp. 30-36

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Lopes, V. L. and Renard, K. G. (1996). Hydrology of Semiarid Rangeland Watersheds. In: Casas-Rodriguez, J. (ed). Second International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, pp. 17-42

Lopes, V. L. (1995). CHDM - Catchment Hydrology Distributed Model. ASCE Watershed Management Symposium, ASCE, San Antonio, Texas (August 1995), pp. 144 -154

Lopes, V. L. and Ffolliott, P. F. (1995). Effects of Forest Harvesting Practices on Streamflow-Sediment Relationships for Southwestern Ponderosa Pine Watersheds. ASCE Watershed Management Symposium, San Antonio, Texas (August 1995), pp. 64-72

Tiscareno-Lopez, M., Weltz, M. and Lopes, V. L. (1994). Soil Erodibility Parameter Estimates for WEPP Application on Rangelands Utilizing Bayesian Theory. Current and Emerging Erosion Prediction Technology. Soil and Water Conservation Society, Norfolk, Virginia (August 1994), pp. 77-84

Lopes, V. L. and Ffolliott, P. F. (1993). A Distributed Model of Erosion and Sediment Transport on Small Watersheds. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico (November 1992), pp. 1-12

Lopes, V. L. and Renard, K. G. (1993). Hidrologia de las Cuencas Hidrograficas de Pastizales Semiaridos. In: Galvan, C. H. A. and Sahagun, L. V. (eds). 1993. Manejo Integral y Sostenible del Pastizal, IX Congreso Nacional sobre Manejo de Pastizales, Hermosillo, Sonora, Mexico, pp. 21-50

Lopes, V. L., Ffolliott, P. F. and Fogel, M. M. (1993). Integrated Watershed Management for Sustainable Use of Natural Resources: A Framework for Consideration. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico (November 1992), pp. 105-114

Ffolliott, P. F. and Lopes, V. L. (1993). Acidity and Chemistry of Snowpacks in Arizona: A Preliminary Analysis. ASCE National Conference on Irrigation and Drainage Engineering, Park City, Utah (July 1993), pp. 305-310

Ffolliott, P. F. and Lopes, V. L. (1993). Opportunities for Water Yield Improvement in Dryland Regions: A Review of Catchment Experiments. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). 1993. First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico (November 1992), pp. 24-29

Ffolliott, P. F. and Lopes, V. L. (1993). Process Studies in Watershed Hydrology: A Worldwide Review. In: Gurrola, J. C., Tiscareno-Lopez, M. and Sanchez-Cohen, I. (eds). 1993. First International Seminar of Watershed Management, Hermosillo, Mexico (November 1992), pp. 87-104

Tiscareno-Lopez, M., Lopes, V. L., Stone, J. J. and Lane, L. J. (1993). Testing a Non-Linear Hydrologic Model through a Sensitivity Analysis. In: Allen, R. G. and Neale, C. M. (eds.). ASCE National Conference on Irrigation and Drainage Engineering, Park City, Utah (July 1993), pp. 319-326

Lopes, V. L. and Fogel, M. M. (1992). Mountainous Convective Storm Rainfall Model: Hydrologic Applications. International Symposium on Hydrology of Mountainous Areas, Shimla, India (May 1992), pp. 39-47

Lopes, V. L. and Ffolliott, P. F. (1992). Hydrology and Watershed Management of Oak Woodlands in Southeastern Arizona. Symposium on Ecology and Management of Oak and Associated Woodlands: Perspectives in the Southwestern United States and Northern Mexico. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Sierra Vista, Arizona (April 1992), pp. 71-77

Lopes, V. L., Fogel, M. M., Duckstein, L. and Imam, B. M. (1991). Event-based Models of Precipitation for Analyzing Occurrence and Severity of Summer Droughts in Southern Arizona and New Mexico. In: Kirby, W. H. and Tan, W. Y. (eds). 1991. US-China Bilateral Symposium on Droughts and Arid-Region Hydrology, Tucson, Arizona (September 1991), pp. 247-253

Hawkins, R. H., Lopes, V. L., Parker R. A. and Wertz, M. A. (1991). Effects of Global Climate Change on Erosion Stability in Arid Environments. In: Kirby, W. H. and Tan, W. Y. (eds). US-China Bilateral Symposium on Droughts and Arid-Region Hydrology, Tucson, Arizona (September 1991), pp. 85-90

Van der Zweep, R., Lopes, V. L. and Stone, J. J. (1991). Validation of the WEPP Watershed Model. Paper No. 91-2552, ASAE winter meeting, Chicago, IL.

Lopes, V. L. and Lane, L. J. (1990). Simulating Runoff and Sediment Yield on Semiarid Watersheds. ASCE National Symposium on Watershed Management, Durango, CO. (July 1990), pp. 174-183

Stone, J. J., Lopes, V. L. and Lane, L. J. (1990). Water Erosion Prediction Project (WEPP) Watershed Model: Hydrologic and Erosion Calculations. ASCE National Symposium on Watershed Management, Durango, CO. (July 1990), pp. 184-190

Lopes, V. L., Nearing, M. A., Foster, G. R., Finkner, S. C. and Gilley, J. E. (1989). The Water Erosion Prediction Project: Erosion Processes. ASCE National Water Conference and Symposium, Newark, DE, (October 1989), pp. 503-510

Lopes, V. L. and Lane, L. J. (1988). Modelling Sedimentation Processes in Small Watersheds. IAHS Symposium on Sediment Budgets, Porto Alegre, Brazil (December 1988), IAHS Publication # 174, pp. 497-508

Lane, L. J., Schertz, D. L., Alberts, E. E., Laflen, J. M. and Lopes, V. L. (1988). The US National Project to Develop Improved Erosion Prediction Technology to Replace the USLE. IAHS Symposium on Sediment Budgets, Porto Alegre, Brazil (December 1988), IAHS Publication # 174, pp. 473-481

4. Abstracts

Lopes, V. L. (2013). Civic Ecology: Reconnecting Communities, Renewing the Earth. Fall Meeting of the American Geophysical Union (AGU), San Francisco, December 2013

Lopes, V. L. (2011). Sustainability Science: Reconciling Human and Natural Systems. The 14th World Lake Conference – Lakes, Rivers, Groundwater, and Coastal Areas: Understanding Linkages, Austin, TX, 31 October – 4 November, 2011

McNeil, J. and Lopes, V. L. (2010). Relational Human Ecology: Reconciling the Boundaries Of Humans and Nature. American Geophysical Union (AGU), Fall Meeting, San Francisco, December 13-17, 2010

Lopes, V. L. (2009). Systemic Intervention: A Unified Framework for Managing Social-Ecological Systems. The 84th Annual Conference of the Western Economic Association International, Vancouver, June 29 – July 3, 2009

Lopes, V. L. (2008). Integration Science: Reconciling the Boundaries of Humans and Nature. The 52nd Annual Conference of the International Society for the Systems Science, Madison, WI, July 13-18, 2008

Lopes, V. L. (2007). Integration Science: Linking Social and Ecological Systems for Sustainability. The 92nd Annual Meeting of the Ecological Society of America (ESA), San Jose, California, August 5-10, 2007

Lopes, V. L. (2006). Interactive Landscape Management Science: Dealing with Complexity. The 50th Annual Conference of the International Society for the Systems Science, Sonoma, CA July 9-14, 2006

Lopes, V. L. (2006). Interactive Watershed Science: An Integrative Paradigm Linking Science, Policy and Community Participation. The 21st Annual Symposium of the U.S. - International Association of Landscape Ecology, San Diego, CA, March 28 – April 1, 2006

Lopes, V. L. (2005). Watershed Science: An Emerging Paradigm for Linking Social and Natural Sciences. The 90th Annual Meeting of the Ecological Society of America (ESA), Montreal, Canada, August 7-12, 2005

Lopes, V. L. (2003). Integrated Watershed Management: A New Paradigm for Natural Resources Management. The First Interagency Conference on Research in the Watersheds, October 27-30, 2003. U.S. Department of Agriculture, Agricultural Research Service, pp. 736-740

Canfield, H. E., Lopes, V. L. and Goodrich, D. C. (1999). Hillslope Characteristics and Particle Size Composition of Surficial Armoring on a Semiarid Watershed. Fall Meeting of the American Geophysical Union (AGU), Supplement to EOS, Vol. 80, No. 46

Canfield, H.E., and Lopes, V.L. (1998). Use of Multivariate Geostatistical Techniques to Estimate Spatial Variability of Soil Erodibility. The 11th Annual Symposium of the Arizona Hydrological Society (AHS), September 23-26, 1998, Tucson, Arizona

Canfield, H.E. and Lopes, V.L. (1998). Simulating Soil Moisture Change on a Semiarid Watershed. Spring Meeting of the American Geophysical Union (AGU), Supplement to EOS, Volume. 79, Number 17

Canfield, H.E., Lopes, V.L. and Goodrich, D.C. (1998). Parameterization of a Distributed Catchment Model Using Geomorphic Indicators. International Meeting of the American Society of Agricultural Engineers (ASAE), Orlando, Florida, July 11-16, 1998

Canfield, H.E., Goodrich, D.C. and Lopes, V.L. (1998). Estimating the Spatial Variability of Soil Erodibility Using Geomorphic Indicators. Spring Meeting of the American Geophysical Union (AGU), Supplement to EOS, Volume. 79, Number 17

5. Reports

Lopes, V. L. and Oliver, L. L. (2008). Hydrologic Assessment of the Pedernales River Watershed. Technical Report. The River Systems Institute/ Nature Conservancy

Lopes, V.L., Ulman, P.L. and Luce, C. (1994). Techniques for improved erosion prediction models. Technical Report INT-92716-RJVA, U.S. Forest Service Intermountain Research Station, Moscow, Idaho, 83 pp.

Nicks, A. D., Lopes, V. L., Nearing, M. A. and Lane, L. J. (1989). Overview of WEPP hillslope profile erosion model. In: Lane, L. J. and Nearing, M. A. (eds). 1989. USDA – Water Erosion Prediction Project: Hillslope Profile Version, NSERL, Report No. 2, W. Lafayette, IN, pp. 1.1-1.8.

6. Book Reviews: N/A

7. Other

a. Presentations at Professional Meetings

Sustainability Science: Reconciling Human and Natural Systems. The 14th World Lake Conference – Lakes, Rivers, Groundwater, and Coastal Areas: Understanding Linkages, Austin, TX, 31 October – 4 November, 2011

Relational Human Ecology: Reconciling the Boundaries of Humans and Nature. American Geophysical Union (AGU), Fall Meeting, San Francisco, December 13-17, 2010

Systemic Intervention: A Unified Framework for Managing Social-Ecological Systems. The 84th Annual Conference of the Western Economic Association International, Vancouver, June 29 – July 3, 2009.

Integration Science: Reconciling the Boundaries of Humans and Nature. Presented at the 52nd Annual Conference of the International Society for the Systems Science, Madison, WI, July 13-18, 2008

Integration Science: Linking social and Ecological Systems for Sustainability. Presented at The 92nd Annual Meeting of the Ecological Society of America (ESA), San Jose, California, August 5-10, 2007

Interactive Landscape Management Science: Dealing with Complexity. Presented at the 50th Annual Conference of the International Society for the Systems Science, Sonoma, CA July 9-14, 2006

Interactive Watershed Science: An Integrative Paradigm Linking Science, Policy and Community Participation. Presented at the 21st Annual Symposium of the U.S. - International Association of Landscape Ecology, San Diego, CA, March 28 – April 1, 2006

Watershed Science: An Emerging Paradigm for Linking Social and Natural Sciences. Presented at the 90th Annual Meeting of the Ecological Society of America (ESA), Montreal, Canada, August 7-12, 2005

Integrated Watershed Management: A New Paradigm for Natural Resources Management. Presented at the First Interagency Conference on Research in the Watersheds, U.S. Department of Agriculture, Agricultural Research Service, Benson, Arizona, October 27-30, 2003

Hillslope characteristics and particle size composition of surficial armoring on a semiarid watershed. Presented at the Fall Meeting of the American Geophysical Union (AGU), San Francisco, 1999

Simulating Soil Moisture Change on a Semiarid Watershed. Presented at the Spring Meeting of the American Geophysical Union (AGU), New Orleans, 1998

The Water Erosion Prediction Project: erosion processes. Presented at the ASCE National Water Conference and Symposium, Newark, DE, October 1989

b. Invited Talks & Lectures

Invited Visiting Scholar, Institute of Subtropical Agriculture/Chinese, Summer 2014
National Academy of Science, Changsha, China

Invited speaker, Graduate Seminar, School of Natural Resources and the Environment,
University of Arizona, Tucson, AZ, February 19, 2014

Invited speaker, Faculty Speaker Series, Texas State University – Round Rock Campus,
November 6, 2013

Invited speaker, Colloquium of the Institute of Anthropology and Cultural Research,
University Of Bremen, Germany, January 19th, 2013

Invited speaker, Research Center for Sustainability Studies (artec), University of Bremen,
Germany, December 19th, 2012

Invited guest lecturer, Department of Geography, Exeter University, Exeter, UK,
December 13th, 2012

Invited guest lecturer, Department of Systems Science, Hull University Business School,
Hull, UK, September 18th, 2012

Invited panelist, Panel Discussion on Water and Sustainability, Symposium on
Sustainability, Water and Society, Center for Social Inquiry/Department of Sociology,
Texas State University, San Marcos, April 13, 2011

Invited speaker (with philosophy student Joshua Hill) at the Philosophy Dialogue Series –
Spring 2011, Department of Philosophy, Texas State University, talking about
Sustainability, Liberation and Society, March 28, 2011

Invited panelist, Panel Discussion on Sustainability, International Research Conference
for Graduate Students, Texas State University, November 2010

Invited panelist, Panel Discussion on Environmental Justice and Human Rights,
Philosophy Dialogues, Department of Philosophy, Texas State University, October 2010

Invited panelist, Building Productive Mentoring Relationships with Graduate Students
Workshop, Graduate College, Texas State University, October 2010

Invited speaker at the Philosophy Dialogue Series – Fall 2010, Department of Philosophy/Texas State University, talking about Relational Human Ecology, October 2010

Invited speaker at the Land, Water & People Conference, San Marcos, Texas, November 16-18, 2009, talking about “Adaptive Co-Management of Watersheds.”

Invited participant at the round table discussion on sustainability and presenter at the 84th Annual Conference of the Western Economic Association International, Vancouver, June 29 – July 3, 2009

Invited speaker at the Philosophy Dialogue Series – Fall 2008, Department of Philosophy/Texas State University, talking about “Pathways to Sustainability”

Invited speaker at the Philosophy Dialogue Series – Fall 2007, Department of Philosophy/Texas State University, talking about “Guattari’s Environmental Philosophy and its Implications for an Integral Ecology”

Invited speaker at the Philosophy Dialogue Series – Spring 2006, Department of Philosophy, Texas State University, talking about “Sustainability and the Environment”

Invited speaker at the Philosophy Dialogue Series – Fall 2005, Department of Philosophy/Texas State University, talking about “Philosophy and Sustainability in High Education”

Keynote speaker at the Fifth Brazilian Symposium of Water Resources held in Natal, Rio Grande do Norte, Brazil, November 21-24, 2000, talking about “Dryland Hydrology: Integrating Models and Experiments”

Invited speaker at the Texas A&M Agricultural Experiment Station in San Angelo, Texas, March 2000, talking about "Spatially Explicit Modeling of Rangeland Hydrology"

Invited speaker at the Department of Agricultural Engineering, Federal University of Ceara, Fortaleza, Brazil, July 1997, talking about “An Evolutionary Approach to Understanding Land Degradation in Northeastern Brazil”

Invited Lecturer at the Department of Geography at King’s College, London, January 1996, talking about “Process-based Erosion Prediction models”

Invited speaker at the Second International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, 1996, talking about “Hydrology of semiarid rangeland watersheds”

Invited speaker at the IX Congreso Nacional sobre Manejo de Pastizales, Hermosillo, Sonora, Mexico, 1993, talking about “Hidrologia de las cuencas hidrograficas de pastizales semiaridos”

Invited speaker at the First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, November 1992, talking about “A distributed model of erosion and sediment transport on small watersheds”

Invited speaker at the First International Seminar of Watershed Management, Hermosillo, Sonora, Mexico, November 1992, talking about “Integrated watershed management for sustainable use of natural resources: a framework for consideration”

Invited speaker at the Symposium on Ecology and Management of Oak and Associated Woodlands: Perspectives in the Southwestern United States and Northern Mexico. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Sierra Vista, Arizona, April 1992, talking about “Hydrology and watershed management of oak woodlands in southeastern Arizona”

c. Consultancies: N/A

d. Workshops

Designed and facilitated the following international workshops:

| | | |
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| University of Fortaleza, Fortaleza, Brazil | <u>Integral Ecology: Reconciling the Boundaries of Humans and Nature</u> , Dept. Environmental Engineering | 2008 |
| Federal University of Paraiba, C. Grande, Brazil | <u>Distributed Modeling of Watershed Hydrology</u> , Department of Civil Engineering | 1999 |
| Federal University of Ceara, Fortaleza, Brazil | <u>Modeling Small Watershed Hydrology</u> , Dep. of Agricultural Engineering | 1998 |
| Federal University of Paraiba, C. Grande, Brazil | <u>Distributed Modeling of Watershed Hydrology</u> , Department of Civil Engineering | 1997 |
| Federal University of Paraiba, C. Grande, Brazil | <u>Distributed Modeling of Watershed Hydrology</u> , Department of Civil Engineering | 1995 |
| University of Sao Paulo, Sao Paulo, Brazil | <u>Diffuse Water Pollution Modeling</u> , Escola Politecnica, Universidade de Sao Paulo | 1994 |

C. Grants and Contracts

1. Funded External Grants and Contracts

a. State

Cypress Creek Watershed Nonpoint Source Characterization and Pollution Prevention. Duration of Award: 9/2007 – 8/2010. Total Award Amount: \$120,000. Other PI's: Jason Pinchback, Source of Support: US Environmental Protection Agency /Texas Commission on Environmental Quality, Contract # 582-8-77059

Integrated Assessment of the Lower Brazos Basin. Duration of Award: 1/2008 – 12/2009. Total Award Amount: \$48,000.00. Other PI's: N/A. Source of Support: Houston Endowment/River Systems Institute

Integrated Assessment of the Pedernales Watershed. Duration of Award: 5/2007 – 5/2008. Total Award Amount: \$30,000. Other PI's: N/a. Source of Support: Texas Nature Conservancy/River Systems Institute Project with Texas Nature Conservancy/River Systems Institute

Fish Assemblage Changes in Three Western Gulf Slope Drainages. Duration of Award: 1/2006 – 4/2007. Total Award Amount: \$59,000. Other PI's: Dr. Timothy H. Bonner. Source of Support: Texas Water Development Board, Contract # 2005-483-033

Texas Impaired Water Systems Assessment. Duration of Award: 4/2006 – 12/2006. Total Award Amount: \$71,000. Other PI's: Dr. Walter Rast. Source of Support: Texas Commission on Environmental Quality.

Modeling Soil Erosion Using a Strip Model Approach. Duration of Award: 6/1998 - 5/1999. Total Award Amount: \$4,767. Other PI's: N/A. Source of Support: Small Grants Program – The University of Arizona, Foundation Grant No.425951.

b. Federal

Comprehensive Watershed Management for the Valley of the Sun. Duration of Award: 06/2002 – 05/2004. Total Award Amount: \$180,000, Other PI's: Dr. David Walker (Department of Soil, Water and Environmental Science, University of Arizona). Source of Support: National Science Foundation (NSF)/University of Arizona Water Quality Center/City of Peoria/Central Arizona Project, Grant No. UA471156.

Improved Erosion Prediction Technology for Sediment TMDL Compliance on Rangeland Watersheds. Duration of Award: 7/2001- 9/2004. Total Award Amount: \$50,467. Other PI's: N/A. Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139023-M-12-154.

Fluvial Material Budget in a Changing Forest Environment. Duration of Award: 9/1997- 9/2001. Total Award Amount: \$60,000. Other PI's: N/A. Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139015-M-12-122

Sediment Budgets on Forested Watersheds (Phase II). Duration of Award: 9/1993 - 8/1995. Total Award Amount: \$25,900. Other PI's: N/A Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139015-M-12-122

Massive Parallel Simulation of Large Scale, High Resolution Ecosystem Models. Duration of Award: 9/1993 - 8/1996. Total Award Amount: \$900,000. Other PI's: Drs. B. Zeigler, W. Sanders, M. Marefat, G. Ball, and R.Gimblett. Source of Support: National Science Foundation (NSF) – High Performance Computing and Communications Grant Challenge No. BIR9318169

Mathematical Modeling of Sediment, Fluid, and Flow Characteristics: Applications to the Ozark-Ouachita Highlands. Duration of award: 9/1993 - 10/1995. Total Award Amount: \$50,000. Other PI's: Dr. Peter F. Ffolliott (University of Arizona) Source of Support: USDA Forest Service, Southern Forest Experiment Station, Hot Springs, Arkansas, Cooperative Agreement No. 19-93-088

Development of an Approach for Assessing Management- Induced Risks to Water and Riparian Resources in Southwestern Forests: Water Quality and Quantity Conceptual Modeling. Duration of Award: 1995. Total Award Amount: \$14,550. Other PI's: Drs. R. H. Hawkins and George Ball. Source of Support: USDA Forest Service Rocky Mountain Forest & Range Experiment Station, Contract No. 53-82FT-2-33

Evaluation of Interrill Erodibility for Improved Erosion Prediction Models. Duration of Award: 7/1992 - 9/1994. Total Award Amount: \$51,000. Other PI's: N/A. Source of Support: USDA Forest Service Intermountain Research Station, Moscow, Idaho, Contract No. INT-92716-RJVA

Habitat Use by Humpback Chub, Gila Cypha, in the Little Colorado River and other Tributaries of the Colorado River: Evaluation of the Impacts of Streamflow Fluctuations by River Simulation Analysis. Duration of award: 2/1991 - 9/1994. Total Award Amount: \$154,504. Other PI's: Dr. Eugene Maughan. Source of Support: U.S. Bureau of Reclamation/Fish and Wildlife Service, Glenn Canyon Environmental Studies Phase II Research, Contract No. 1416000291222

Sediment Budgets on Forested Watersheds (Phase I). Duration of Award: 9/1990 - 8/1993. Total Award Amount: \$45,000. Other PI's: N/A. Source of Support: Arizona Agricultural Experiment Station, USDA McIntire-Stennis Grant No. ARZT-139015-M-12-122

Development and Evaluation of Model Parameter Estimates of Improved Erosion Prediction Models. Duration of Award: 9/1989 - 9/1992. Total Award Amount: \$30,000. Other PI's: N/A. Source of Support: USDA Agricultural Research Service, Southwest Watershed Management Research Unit, Tucson, Arizona, Cooperative Agreement No. 58-91H2-8-141.

c. International

An Evaluation of Soil Erosion Hazard in Southeast Africa Using Geomatics Technology. Duration of Award: 2/1996 - 7/1999. Total Award Amount: \$250,000. Other PI's: Dr. Stuart Marsh (University of Arizona). Source of Support: U.S. Agency for International Development (USAID), Malawi/Arid Lands Grant No. 6900235A00606000

Tepetate Reclamation Using Erosion Prediction Technology, Montecillo, Mexico. Duration of Award: 1/1993 - 12/1995. Total Award Amount: \$150,000. Other PI's: Dr. Leonard J. Lane (USDA-ARS) and Dr. Jose Luis Oropeza (Colegio de Post-graduados, Montecillo, Mexico). Source of Support: U.S. Agency for International Development (USAID), Grant No. PSTC-936-5600-523-11.453

2. Submitted, but not Funded, External Grants and Contracts

Improving Collaborative Watershed Management in the Central Texas Hill Country. Duration of Award: 08/2010 – 07/2012. Total Award Amount: \$109,149.00. Other PI's: Dr. Laura Stroup (Geography). Source of Support: Norman Hackerman Advanced Research Program

Developing a Support Program for Adaptive Co-Management of Bee Creek Watershed in the Texas Hill Country. Duration of Award: 2006 – 2009. Total Award Amount: \$610,025. Other PI's: Drs. Dittmar Hahn (Biology, TSU), Michael Forstner (Biology, TSU), Raymond Slade (USGS; EARDC) and Rene A. Barker (USGS; EARDC). Source of Support: US Environmental Protection Agency

Developing a Support Program for Adaptive Management of Human-Impacted Watersheds in the Rio Conchos Basin. Duration of Award: 9/2006 – 8/2007. Total Award Amount: \$124,944. Other PI's: Drs. David L. Villarreal, Melida Gutierrez, Pablo A. L. Murcio, Michael R. J. Forstner, Dittmar Hahn, Timothy H. Bonner, Alan W. Groeger and Weston H. Nowlin. Source of Support: New IDEAS Partnership Program/US Agency for International Development.

Cluster Environment for Computational Topology and Quantitative Ecology. Duration of Award: 06/01/06 – 08/31/07. Total Award Amount: \$96,791. Other PI's: Drs. Susan Schwinning (Biology/TSU), David Snyder (Math/TSU), Lucius Meredith, (Oregon State). Source of Support: National Science Foundation (NSF).

Institutional and Social Ecology for Integrated Water Resources Management in the Pecos River. Duration of Award: 09/01/06 – 08/31/07. Total Award Amount: \$75,000. Other PI's: N/A. Source of Support: Rio Grande Basin Initiative - Sustainable Agricultural Water Conservation in the Rio Grand Basin Research.

Modeling Land Management Impacts on Water Quality and Quantity in the Pecos River Watershed, Duration of Award: 09/01/05 – 08/31/07. Total Award Amount: \$120,000. Other PI's: N/A. Source of Support: Rio Grande Basin Initiative - Sustainable Agricultural Water Conservation in the Rio Grand Basin Research.

3. Funded Internal Grants and Contracts: N/A

4. Submitted, but not Funded, Internal Grants and Contracts

Resilience and Adaptation in western Gulf Slope Watersheds: The Impact of Social-Ecological Interactions on Watershed Condition. Duration of award: 01/01/06 – 12/31/06. Total Award Amount: 16,000. Other PI's: Dr. Timothy H. Bonner. Source of Support: Texas State University/ Research Enhancement Program.

D. Fellowships, Awards, Honors

| | | |
|---|---|------|
| Fulbright Scholarship | Fulbright US Scholar Grant at the University of Bremen, Bremen, Germany, October 2012 – February 2013 | 2012 |
| Texas State University | Texas State Quarterly Team Award in recognition of outstanding service to Texas State as a member of the 2010-2011 Common Experience Sustainability Team | 2011 |
| American Society of Agricultural Engineers (ASAE) | Outstanding Reviewer - Soil & Water Division | 1997 |
| USDA-ARS | Unit Award for Superior Service "For outstanding research, innovation and teamwork in designing, producing, and transferring a new generation of erosion prediction technology to user agencies." | 1990 |

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| USDA-ARS | Certificate of Appreciation “In recognition of your excellent work as a member of the WEPP Core Team, for your outstanding efforts in leading the system analysis and programming for the WEPP model, for your contributions to development of the model structure, for your help in model documentation, and for your dedication and loyalty to the Project.” | 1989 |
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IV. SERVICE

A. University

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| Member, graduate committee for the MS/MA in Sustainability Studies | 2010-present |
| Program Coordinator of the MS/MA in Interdisciplinary Sustainability Studies, Texas State University | 2010-2012 |
| Member of the 2010/11 Common Experience Planning Committee on Sustainability, Texas State University | 2010-2011 |
| Member of the Academic Review Team for the Occupational Education Program, Texas State University | 2010 |
| Member, Committee for Graduate Program in Arid Lands Sciences, Office of Arid Lands, University of Arizona | 1996 - 2004 |
| Member, Global Change Program, University of Arizona | 1998 - 2004 |

B. Department

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| Chair, Opportunity Minority Committee, Department of Biology, Texas State University | 2008-present |
| Member, Freeman Building Operations Committee, Department of Biology, Texas State University | 2006-present |
| Member, Search Committee for Wildlife/Conservation Biologist, Department of Biology, Texas State University | 2008 |
| Chair, Search Committee for Groundwater Hydrologist/Hydrogeologist, Department of Biology, Texas State University | 2006/07 |

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|--|----------------|
| Member, Search Committee for General Science Lecturer, Department of Biology, Texas State University | 2006 |
| Member, Search Committee for Stream Ecologist position, Department of Biology, Texas State University | 2005/06 |
| Member, Search Committee for Department Chair, Department of Biology, Texas State University | 2005/06 |
| Member, Curriculum Committee, Department of Biology, Texas State University | 2005/06 |
| Member, Graduate Committee, Department of Biology, Texas State University. | 2005 - 2008 |
| Member, Aquatic Biology Committee, Department of Biology, Texas State University. | 2005 - present |
| Chair, Environmental Hydrology Committee, Department of Biology, Texas State University. | 2005 |
| Advisor, Undergraduate Program in Watershed Hydrology and Management, School of Renewable Natural Resources, University of Arizona | 2002 - 2004 |
| Member, Curriculum and Instruction Committee (CRIC), School of Renewable Natural Resources, University of Arizona | 2002 - 2004 |
| Member, Agricultural Systems Management Committee, Department of Agricultural and Biosystems Engineering, University of Arizona | 2002 - 2004 |
| Member, RNR Studies Committee (RNRSC), School of Renewable Natural Resources, University of Arizona | 2001 - 2004 |
| Member, SRNR Computer Resources Committee (CRC), School of Renewable Natural Resources, University of Arizona | 2001 - 2004 |
| Member, SRNR Computer Resources and ART Advisory Committee, School of Renewable Natural Resources, University of Arizona | 1999 - 2000 |
| Member, SRNR Policy Committee, School of Renewable Natural Resources, University of Arizona | 1999 - 2000 |
| Member, SRNR Program for Dryland Ecosystem Analysis and | 1998 - 2000 |

Management Steering Committee, School of Renewable Natural Resources, University of Arizona

Member, SRNR Post Tenure Review Committee, School of Renewable Natural Resources, University of Arizona 1998 - 1999

Member, SRNR Awards Committee 1989 - 1995

Member, SRNR Computer Teaching Lab Committee 1989 - 1998

C. International

Associate Editor for International Journal of Urban and Environmental Engineering [Online: <http://periodicos.ufpb.br/ojs2/index.php/juee/index>] 2007-present

Chair, Socio-Ecological Systems Group, International Society for the Systems Sciences (ISSS) [<http://iss.org/world/index.php>] 2009-present

Associate Editor for Ecosphere – Journal of the Ecological Society of America (ESA) [<http://www.esajournals.org/page/ecsp/>] 2010-2015

Co-chair, Oral Session “Complex Systems in Hydrology.” The 14th World Lake Conference - Lakes, Rivers, Groundwater, and Coastal Areas: Understanding Linkages, Austin, TX, 31 October – 4 November, 2011 2011

Organizer and Moderator, Oral Session “Community Engagement for Sustainability: Linking Research, Policy, and Education.” The 96th Annual Meeting of the Ecological Society of America (ESA), Austin, TX, August 7-12, 2011. 2011

Member, Conference Organizing Committee, the 14th World Lake Conference – Lakes, Rivers, Groundwater, and Coastal Areas: Understanding Linkages, Austin, TX, 31 October – 4 November, 2011. 2011

Organizer, Interdisciplinary Symposium on Sustainability, Texas State University, San Marcos, Texas 2009

Organizer, Technical Session on Sustainability and Environmental Justice, Third International Conference on Race, Ethnicity, and Place, Texas State University, San Marcos, Texas, November 1-4, 2006 2006

Member, Watershed Hydrology and Management Committee of the American Water Resources Association 2002 - 2005

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| Member, Native American Issues Committee of the American Water Resources Association | 2002 - 2005 |
| Member, Surface Hydrology and Sedimentation Committee, Associacao Brasileira de Hidrologia e Recursos Hidricos (ABRH), Sao Paulo, Brazil. | 2001 - 2005 |
| Organizer, Technical Session on Watershed Hydrology, Symposium of the Arizona Hydrological Society, Tucson, Arizona. | 1998 |
| Member, Organizing Committee, Watershed Management Symposium, American Society of Civil Engineers, San Antonio, Texas. | 1995 |
| Member, Organizing Committee, Second International Seminar of Watershed Management, University of Sonora (Mexico)/University of Arizona, Hermosillo, Mexico. | 1995 |
| Member, Urban Hydrology, International Affairs, and Education Committees, American Water Resources Association. | 1994 - 1995 |
| Member, Advisory Committee, UNESCO International Research and Training Center on Urban Drainage for Tropical Climates (IRTCUD-TC), Sao Paulo, Brazil. | 1994 - 1996 |
| Chair, Watershed Management Committee, Irrigation and Drainage Division, American Society of Civil Engineers (ASCE) | 1992 - 1994 |
| Secretary, Watershed Management Committee, Irrigation and Drainage Division, American Society of Civil Engineers (ASCE) | 1990 - 1991 |
| Expert participant, Watershed Development Project, USAID/Cape Verde | 1990 |

E. Organizations

1. Honorary: N/A

2. Professional/Scholarly

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|---|----------------|
| American Geophysical Union (AGU) | 1984 – present |
| American Society of Civil Engineers (ASCE) | 1985 – present |
| Ecological Society of America (ESA) | 2005 – present |
| International Society for Systems Science (ISSS) | 2006 – present |
| Association for Environmental Studies and Sciences | 2011 – present |
| American Water Resources Association | 2013 – present |
| Society for Human Ecology (SHE) | 2014 - present |
| International Society for the Study of Religion, Nature & Culture | 2015 – present |