VENKI UDDAMERI, PH.D., P.E.

Professor of Civil, Environmental & Construction Engineering and Director Water Resources Center

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Education:

Ph.D. (Civil and Environmental Engineering)	University of Maine	1998
M.S. (Civil Engineering)	University of Maine	1993
B.E. (Civil Engineering)	Osmania University	1991

Professional Experience:

08/2012 – Present: Director, TTU Water Resources Center, Texas Tech University, Lubbock, TX 79409

08/2012 – Present: Professor, Civil, Environmental & Construction Engineering, Texas Tech University

08/2011 – 07/2012: Professor, Environmental Engineering, Texas A&M University-Kingsville (TAMUK)

08/2009 – 07/2012: Director, CREST-RESSACA, NSF funded Center for Research Excellence; TAMUK

08/2004 – 07/2011: Associate Professor; Environmental Engineering, Texas A&M University-Kingsville

08/2001 – 07/2004: Assistant Professor; Environmental Engineering, Texas A&M University-Kingsville

02/1999 – 08/2001: P. G. Research Engineer; Civil & Environmental Eng., University of California, Davis

08/1991 – 06/1998: Graduate Research and Teaching Assistant; Civil Engineering, University of Maine

Certifications:

Professional Engineer, State of Texas – Registration No. 110361 (active)

Faculty Workshop on Assessment of ABET Program Outcomes; ABET Inc (2008).

Faculty Leadership and Management Workshop; MIT School of Continuing Education (2007)

Honors and Awards:

2012 Outstanding Professor of the Year – Department of Environmental Engineering, TAMUK 2008 Javelina Alumni Association Distinguished Researcher Award, Texas A&M University-Kingsville

2004 Presidential Distinguished Researcher Award, Frank Dotterweich College of Engineering, TAMUK

1994 American Petroleum Institute/National Ground Water Association Student Scholarship (1 of 5 awards internationally)

1992 Member Chi-Epsilon, National Civil Engineering Honor Society

1992 Frank Sleeper Sawyer Environmental Scholarship; University of Maine, Orono, ME

Editorships:

2009 – Present: Associate Editor (Subsurface Hydrology) Journal of American Water Resources Association; Wiley Interscience Inc.

2004 – 2013: Editorial Board – Clean Technologies and Environmental Policy; Springer Verlag Inc.

2007: Guest Editor – System Analysis Techniques for Aquifer Management in South Texas; Environmental Geology; Vol 51 (6)

2014: Guest Co-Editor– Aquifer Management in Semi-Arid South Texas – Advanced Decision Support Systems; Environmental Earth Sciences Vol 71 (6)

Representative Regional, State and National Service:

2015 TTU Lead Delegate – University Council for Water Resources (UCOWR)

2014 Co-Chair Planning Committee, Fracturing Impacts and Technologies Speciality Conference, Air and Waste Management Association, Lubbock, TX Sept 5 – 7 2014

2014 Member, Editor-in-Chief Search Committee, Journal of American Water Resources Association

2012 Invited Speaker – Importance of Groundwater to the US Economy; USEPA Workshop on the Importance of Water to the National Economy; Washington, DC, Sept 19th 2012

2011 NSF Proposal Review Panel

2005 – Present; Member, Groundwater Availability Modeling – Technical Advisory Group (GAM-TAG); Texas Water Development Board

Publications (Books):

B. Dixon and V. Uddameri (2015); **GIS and Geocomputation for Water Resources Science and Engineering**; John Wiley and Sons; ISBN - 978-1118354131; 504 pp

V. Uddameri, A. Morse, K. Tindle (2015); **Hydraulic Fracturing Impacts and Technologies – A Multidisciplinary Perspective**; CRC Press; ISBN - 978-1498721172; 312 pp

Publications (Journal Articles):

Hernandez, E. A., & Uddameri, V. (2015). Simulation-optimization model for water management in hydraulic fracturing operations. **Hydrogeology Journal**, 1-19. DOI 10.1007/s10040-015-1249-y (available online as an early view article)

S. Morse, A. Morse, V. Uddameri, E. A. Hernandez, D. Ernst (2015); The Impact of Reducing Numerical Methods and Programming Courses on Undergraduate Performance; **ASEE Computers in Education Journal**; (In press)

Menkiti, M. C., Ndaji, C. R., Ezemagu, I. G., & Uddameri, V. (2015) Application of Periwinkle Shell Coagulant (PSC) for the Remediation of Petroleum Produced Water (PPW) by Coag-Flocculation. **Journal of Dispersion Science and Technology (**In press)

M. Imteaz, V. Uddameri, A. Ahsan (2015) Numerical Model for Transport and Degradation of Pollutants in a Wetland; International Journal of Water (In press)

Enciso, J., Nelson, S. D., Perea, H., Uddameri, V., Kannan, N., & Gregory, A. (2014). Impact of residue management and subsurface drainage on non-point source pollution in the Arroyo Colorado. **Sustainability of Water Quality and Ecology**, 3-4, 25-32

Uddameri, V., Hernandez, E. A., & Estrada, F. (2014). A fuzzy simulation–optimization approach for optimal estimation of groundwater availability under decision maker uncertainty. **Environmental Earth Sciences**, *71*(6), 2559-2572.

Hernandez, E. A., & Uddameri, V. (2014). Standardized precipitation evaporation index (SPEI)-based drought assessment in semi-arid south Texas. **Environmental Earth Sciences**, *71*(6), 2491-2501.

Hernandez, E. A., & Uddameri, V. (2014). Semi-analytical solutions for stream–aquifer interactions under triangular stream-stage variations and its application to study urbanization impacts in an ungaged watershed of south Texas. **Environmental Earth Sciences**, *71*(6), 2547-2557.

Hernandez, E. A., Uddameri, V., & Arreola Jr, M. A. (2014). A multi-media planning model for assessing co-located energy and desalination plants. *Environmental earth sciences*, *71*(6), 2673-2686.

Uddameri, V., Honnungar, V., & Hernandez, E. A. (2014). Assessment of groundwater water quality in central and southern Gulf Coast aquifer, TX using principal component analysis. *Environmental earth sciences*, *71*(6), 2653-2671.

Uddameri, V., Singaraju, S., & Hernandez, E. A. (2014). Identifying influencing wells for gradient estimation

in the confined portion of the Gulf Coast aquifer near Kingsville, TX. *Environmental earth sciences*, *71*(6), 2629-2640.

Uddameri, V., Singaraju, S., & Hernandez, E. A. (2014). Impacts of sea-level rise and urbanization on groundwater availability and sustainability of coastal communities in semi-arid South Texas. *Environmental earth sciences*, *71*(6), 2503-2515.

Uddameri, V., & Andruss, T. (2014). A GIS-based multi-criteria decision-making approach for establishing a regional-scale groundwater monitoring. *Environmental earth sciences*, *71*(6), 2617-2628.

Uddameri, V., & Andruss, T. (2014). A statistical power analysis approach to estimate groundwater-monitoring network size in Victoria County Groundwater Conservation District, Texas. *Environmental earth sciences*, *71*(6), 2605-2615.

Uddameri, V., Singaraju, S., & Hernandez, E. A. (2014). Temporal variability of freshwater and pore water recirculation components of submarine groundwater discharges at Baffin Bay, Texas. *Environmental earth sciences*, *71*(6), 2517-2533.

Uddameri, V., Hernandez, E. A., & Singaraju, S. (2014). A successive steady-state model for simulating freshwater discharges and saltwater wedge profiles at Baffin Bay, Texas. *Environmental earth sciences*, *71*(6), 2535-2546.

Hernandez, E. A., Uddameri, V., & Singaraju, S. (2014). Combined optimization of a wind farm and a well field for wind-enabled groundwater production. *Environmental earth sciences*, *71*(6), 2687-2699.

Hernandez, E. A., Uddameri, V., & Arreola Jr, M. A. (2014). A multi-period optimization model for conjunctive surface water–ground water use via aquifer storage and recovery in Corpus Christi, Texas. *Environmental earth sciences*, *71*(6), 2589-2604.

Uddameri, V., Kakarlapudi, C., & Hernandez, E. A. (2014). A GIS enabled nested simulation-optimization model for routing groundwater to overcome spatio-temporal water supply and demand disconnects in South Texas. *Environmental earth sciences*, *71*(6), 2573-2587.

Uddameri, V., Hernandez, E. A., & Estrada, F. (2014). A multidimensional fuzzy least-squares regression approach for estimating hydraulic gradients in unconfined aquifer formations and its application to the Gulf Coast aquifer in Goliad County, Texas. *Environmental earth sciences*, *71*(6), 2641-2651.

V. Uddameri and K. Venkataraman (2013); Assess the effect of initial vapor-phase concentrations on inhalation risks of disinfection-by-products (DBP) in multi-use shower facilities; **Clean Technologies and Environmental Policy;** 15(4); 591-606

Hernandez, E., Uddameri, V. (2012). An assessment of optimal waste load allocation and assimilation characteristics in the Arroyo Colorado River watershed, TX along the US–Mexico border. **Clean Technologies and Environmental Policy**, 15(4); 617-631

K. Venkataraman and V. Uddameri (2012); Modeling Simultaneous Exceedance of Drinking-Water Standards of Arsenic and Nitrate in the Southern Ogallala Aquifer using Multinomial Logistic Regression; **Journal of Hydrology**; 458-459; 16-27

K. Venkataraman and V. Uddameri (2012); A GIS-based Evaluation of Risks due to Trihalomethane Exposure during Showering in Coastal Texas; **Clean Technologies and Environmental Policy;** Vol 14, 551-561

E. A. Hernandez and V. Uddameri (2010); A Multi-attribute Decision Making Model for Agricultural Best Management Practice Selection using Intuitionistic Fuzzy Sets; **Water Resources Management; 24;** 4589-4612

V. Uddameri and V. Honnungar (2010); An Optimization Model for Transport of Hazardous Wastes from Maquiladoras along the Texas-Mexico border; **International Journal of Environmental Technology & Management; 13;** 4-20

V. Uddameri (2010); An Analytical Solution to Model Aquaculture Wetland under Intermittent Loadings and Variable Initial Conditions; **Environmental Modeling and Assessment; 15;** 27-35

R. Jensen and V. Uddameri (2009) Using Communications Research to Gather Stakeholder Preferences to Improve Groundwater Management Models; **Journal of Science Communication**; **8;** A2-A10

V. Uddameri and B. Dyson (2007) Decision Analytic Approaches for Designing Aquaculture Treatment Wetlands Subject to Intermittent Loadings Under Uncertainty; **Water Air and Soil Pollution;** 186; 297-309

V. Uddameri (2007); Systems Analysis for Sustainable Aquifer Management in Semi-Arid South Texas; **Environmental Geology**; 51 (6) 883-884

V. Uddameri (2007); Using Statistical and Artificial Neural Network Models to Forecast Potentiometric Levels at a Deep Well in South Texas; **Environmental Geology**; 51 (6) 885-895

V. Uddameri and M. Kuchanur (2007); Estimating Aquifer Recharge in Mission River Watershed, TX - Model Development and Calibration using Genetic Algorithms; **Environmental Geology**; 51 (6) 897-910

V. Uddameri and V. Honnungar (2007); Interpreting Sustainable Yield of an Aquifer using a Fuzzy Framework; **Environmental Geology**; 51(6) 911-919

V. Uddameri and M. Kuchanur (2007); Simulation-optimization Approach to Assess Groundwater Availability in Refugio County, TX; **Environmental Geology**; 51(6) 921-929

V. Uddameri and V. Honnungar (2007); Combining Rough Sets and GIS Techniques to Assess Aquifer Vulnerability Characteristics in Semi-Arid South Texas; **Environmental Geology**; 51(6) 931-939

V. Uddameri (2007); Bayesian Analysis of Groundwater Quality in a Semi-arid Coastal County of South Texas; **Environmental Geology**; 51(6) 941-951

V. Uddameri (2007); A Dynamic Programming Model for Optimal Planning of Aquifer Storage and Recovery (ASR) Facility Operations; **Environmental Geology**; 51 (6) 953-962

Hernandez and V. Uddameri (2006); Hazardous Waste Assessment Management and Minimization – A Review; **Water Environment Research**; 78 (10): 1802 - 1808

V. Uddameri and S. Mohan (2006); An Optimal Control Approach to Assess Baseflow Externalities; **Clean Technologies and Environmental Policy;** 8 (4): 261-272

V. Uddameri (2005); Groundwater and Sustainability; **Clean Technology & Environmental Policy**; 7: 1 -2

S. Jones and V. Uddameri (2005); Hazardous Waste Assessment Management and Minimization-A Review; **Water Environment Research**; 77: 2310-2143

S. Jones and V. Uddameri (2004); Hazardous Waste Assessment Management and Minimization – A Review; **Water Environment Research;** 76(6); 1857-1871

V. Uddameri (2004); Relationships of Longitudinal Dispersivity and Scale Developed from Fuzzy Least square Regression; **Environmental Geology**; Vol 45(8); 1172-11178

V. Uddameri and M. Kuchanur (2004); Fuzzy QSARs for Predicting $\log K_{oc}$ of Persistent Organic Pollutants; **Chemosphere;** Vol 54(6); 771-776

V. Uddameri and E. Hernandez (2004); Comment on the Association of Hydrophobic Organic Contaminants with Soluble Organic Matter: Evaluation of the Database of Kdoc Values by Henry Mott; **Advances in Environmental Research**; Vol 8(3-4); 727-728

V. Uddameri (2003); Estimating Natural Attenuation Rate Constants using a Fuzzy Framework; **Ground Water Monitoring and Remediation**; Vol. 23(3); 105-111

V. Uddameri and M. Kuchanur (2003); Technology and Knowledge Transfer Opportunities along the South Texas-Mexico Border; **International Journal of Technology Transfer and Commercialization**; Vol. 2(4); 429-450

V. Uddameri (2003); Implementation Considerations for Development of a Web-based Decision Support System for Risk-Based Corrective Action Analysis; **International Journal of Technology Transfer and Commercialization**; Vol. 2(3); 328-338

V. Uddameri (2003); Using the Analytic Hierarchy Process for Selecting an Appropriate Fate and Transport Model for Risk-Based Decision Making at Hazardous Waste Sites; **ASCE Practice Periodical for Hazardous, Toxic and Radioactive Wastes;** Vol 7(2); 139-146

V. Uddameri (2002); Knowledge Management to Support Fate and Transport Modeling Efforts in Risk-based Decision Making Frameworks – Salient Issues and Model Development; **Clean Technologies and Environmental Policy**; Vol 4(3); 140-150

V. Uddameri (2001); MTBE Transport Screening Analysis in Vadose Zone Risk and Liability Apportionment; **Environmental Forensics**; Vol 2(4); 105-112

V. Uddameri (2001); A Systems Based Approach to Managing Leaking Underground Fuel Tank Sites; **Journal of Environmental Engineering and Policy**; Vol 2(3); 140-150

P. Roberts, A. Sharma, V. Uddameri, L. Steck (2001); Enhanced DNAPL Transport in a Sand Core during a Dynamic Stress Stimulation; **Environmental Engineering and Science**; Vol 18(2); 67-80

V. Uddameri, S. Norton, J. Kahn, J. Scofield; (1995); Randomized Intervention Analysis of the Response of West Bear Brook Watershed in Maine; **Water Air and Soil Pollution**; 79(1/4); 131-140

Publications (Book and Magazine Chapters – Peer Reviewed):

V. Uddameri and S. Singaraju (2015) Environmental Impacts of Unconventional Natural Gas Production; **Environmental Manager**; Aug. 2015 Issue; Air and Waste Management Association (in press) (invited contribution)

V. Uddameri, A. Morse, D. Reible (2014) Unconventional Oil and Natural Gas Resources and Development and their Potential Environmental Impacts; **Environmental Manager**; July 2014 issue; Air and Waste Management Association, pp 18-25 (invited contribution).

V. Uddameri and V. P. Singh (2012); The Competition between Environmental, Urban and Rural Groundwater Demands and the Impacts on Agriculture in the Edwards Aquifer Area, Texas; (In press) **Soil Water and Agronomic Productivity**; Special Issue on Climate Change and its Impacts on Agriculture and Food Security; Vol 19; (Eds. Dr. Rattan Lal and B. A. Stewart); 117-130

V. Uddameri and V. Honnungar (2011); A Fuzzy Arithmetic Approach to Characterize Aquifer Vulnerability Considering Geologic Variability and Decision Maker's Imprecision; **Geoinformatics in Applied Geomorphology;** S. Anbazhagan, S. K. Subramanian and X. Yang (editors); CRC Press Inc; pp 141-152 (Invited contribution)

V. Uddameri and V. P. Singh (2008); The U.S. Experience on water supply and sanitation with particular reference to the interaction between public policy and management; **Water and Sanitation Services: Public Policy and Management**; José Esteban Castro and Léo Heller (editors); Earth Scan Publishers; ISBN: 978-1-84407-656-7; 261-272 (invited contribution)

Uddameri, V. and Parvathinathan, G., 2007; Climate Change Impacts on Water Resources in South Texas. In: **The Changing Climate of South Texas 1900-2100: Problems and Prospects Impacts and Implications**; J. Norwine and J. Kuruvilla (Editors); ISBN: 978-0-9798426-0-3**;** 109-126

V. Uddameri; M. Kuchanur and N. Balija (2006); Simulation-Optimization Approaches for Groundwater Availability Estimation; **In Studies in the Gulf Coast Aquifer**; R. Mace, et al., editors; 151-163; Texas Water Development Board; Report 165; Austin, TX (invited contribution)

V. Uddameri and D. Kumar (2005); A Multimedia Fate and Transport Model to Assess the Fate of Organic Pollutants in a South Texas Lake; **In Contaminated Soils Vol. 10 – Successes and Challenges;** E. J. Calabrese, P. T. Kostecki and J. Dragun (editors); 141-162; Springer Verlag Inc.

V. Uddameri (2004); A Review of Fuzzy Set Theoretic Approaches and their Application in Environmental Practice; **In Contaminated Soils Vol. 9 – Science in the Real World;** E. J. Calabrese, P. T. Kostecki and J. Dragun (editors); 501-516; Springer Verlag Inc.

V. Uddameri, L. Katz, W. Brutsaert and B. Hunter (1998); An Evaluation of SESOIL/AT123D Model at a Gasoline Contaminated Site in Maine; **In Contaminated Soils Vol. 3;** E. J. Calabrese, P. T. Kostecki and M. Bounazountas (editors); 343-356; Amherst Scientific Publishers

Publications (Selected Conference Proceedings - Reviewed)

V. Uddameri and S. Singaraju (2015) Environmental Impacts of Unconventional Natural Gas Production; Environmental Manager; Natural Gas Use Benefits Issue; 20 - 27

V. Uddameri, A. Morse and D. Reible (2014) Unconventional Oil and Natural Gas Resources and their Potential Environmental Impacts; Environmental Manager; Bridge Fuels and Impacts Issue; 18 - 25

K. Venkataraman, V. Uddameri (2012) Evaluation of the Potential for Wind-powered Desalination in Coastal South Texas using Geo-spatial Techniques; AWRA GIS & Water Resources VII Specialty Conference; 6 pp

V. Uddameri and T. Andruss (2012) An Integrated Statistical GIS-based MCDM Framework for Groundwater Monitoring Network Design; AWRA GIS & Water Resources VII Specialty Conference; 6 pp

K . Venkataraman and V. Uddameri (2012) Delineating Simultaneous Arsenic and Nitrate Exceedances in the Southern Ogallala Aquifer, Texas; AWRA GIS & Water Resources VII Specialty Conference; 6 pp

M. Yilmaz and V. Uddameri (2010) Modeling and Robust Optimization of an Interconnected Lake-Aquifer System; IEEE International Conference on Control Applications; pp 2154-2159

V. Uddameri and J. Biswas (2010) Assessing the Dependence between Rainfall and Streamflow in the Bhagirathi River West Bengal India; Proceedings 3rd International Conference on Hydrology and Watershed Management with a Focal Theme on Climate Change, Food and Environmental Security; Feb 2-6, 2010, Vol I, 462-469.

V. Uddameri (2008) A Simulation-Optimization Model for Transport of Hazardous Wastes from Maqiladora's along US-Mexico Border; Proceedings Department of Defense Workshop on Sustainable Hazardous Waste Management; San Francisco, CA, (on CD-ROM)

Publications (Editorials, Op-Ed, News Items)

Hernandez, E. A., & Uddameri, V. (2014). Aquifer Management in South Texas: Advanced Decision Support Systems (AMISTADss). *Environmental Earth Sciences*, *71*(6), 2489-2490.

V. Uddameri (2014); Interviewed for Texas Perspective – Water; **Public Broadcasting System (PBS)**; http://video.klru.tv/video/2365345995/

V. Uddameri (2014); Interviewed for The Last Drop: America's Breadbasket Faces Dire Water Crisis; **NBC News.com;** http://www.nbcnews.com/news/us-news/last-drop-americas-breadbasket-faces-dire-water-crisis-n146836

V. Uddameri (2013); Interviewed for Who Controls the Water Flow?; **National Public Radio**; http://www.npr.org/2013/06/15/192034094/rivers-run-through-controversies-over-who-owns-the-water

V. Uddameri (2012); Virtual Water – Moving the Mighty Mississippi into the Great State of Texas; **NPR Series on Engineering Marvels;** KEDT Corpus Christi

V. Uddameri (2004); Characterization of Environmental Systems; **Remediation Weekly**

V. Uddameri (2004); Mathematical Models: Begin with the End in Mind; **Remediation Weekly**

V. Uddameri (2003); Models Know Your Type; **Contaminated Soils and Sediments Magazine**

Selected Presentations (over 100 and several invited)

V. Uddameri, Importance of Groundwater for Sustainability of Arid and Semi-Arid Regions of the World; Plenary Presentation; Arab Academy of Sciences; Beirut, Lebanon, Dec 2014 (Invited Plenary)

Annette Hernandez, Texas Tech University, Lubbock, TX (co-authors: S. Singaraju, V.Uddameri) An Integrated Optimization Model for Wind-Driven Desalination of Brackish Groundwater Resources. 2013 - AWRA Annual Water Resources Conferences, American Water Resources Association, Portland, Oregon

Venki Uddameri, (co-authors: M. A. Arreola, E. A. Hernandez) A Multi-Period Optimization Model for Conjunctive Surface Water - Ground Water use via Aquifer Storage and Recovery – 2013 - AWRA Annual Water Resources Conferences, American Water Resources Association, Portland, Oregon

Estrada, F. (Presenter & Author), Hernandez, E., Uddameri, V., 2012 AWRA Annual Water Resources Conferences, American Water Resources Association, Jacksonville, Florida, "Comparative Study of a Watershed Management Tool across International Boundaries (AWRA Outstanding Student Presentation Award),"

Hernandez, E. (Presenter & Author), Uddameri, V., Schuetze, B., 2012 AWRA Annual Water Resources Conference, American Water Resources Association, Jacksonville, Florida, "An Integrated Optimization Model for Sizing Wind-Driven Desalination of Brackish Groundwater Resources," International, published in proceedings. (November 14, 2012).

V. Uddameri (2012); Importance of Groundwater on the US Economy; Invited Presentation at the USEPA Workshop on the Importance of Water on the US Economy; Sept 2012; Washington, DC

K. Venkataraman and V. Uddameri (2011); Impacts of Sea-Level Rise on Groundwater Resources in Coastal Texas; Presented at the American Geophysical Union (AGU) Fall Conference; San Francisco, CA, Dec 8-11

V. Uddameri and E. A. Hernandez (2011); Impacts of Climate Change on Stream Water Quality; Presented at the American Water Resources Association Annual Conference, Special Session on Climate Change Impacts on Hydrologic Cycle; Albuquerque NM, Nov 6-8

V. Uddameri (2011); A Simulation-Optimization model for modeling Managed Infiltration Facilities; Presented at the American Water Resources Association Annual Conference, Special Session on artificial Recharge; Albuquerque NM, Nov 6-8

V. Uddameri (2010); A Simulation Modeling Approach to Evaluate Groundwater Quality Impacts due to Porous Pavement; National Ground Water Association Summit; Denver, CO, Apr. 29 - 24

V. Uddameri (2010); Groundwater Supply and Demand Optimization in Semi-Arid South Texas; International Workshop on Water Resources, Zacatecas, MX May. 29

V. Uddameri (2009); Impacts of Alternate Climatic Conceptualizations on the Groundwater Planning Process; National Ground Water Association Groundwater Summit; Tuscon, AZ, Apr. 19-23

E. A. Hernandez and V. Uddameri (2009); Management of Water Resources under Uncertainty using Copula Theory; American Water Resources Association – Managing Water Resources in a Changing Climate Conference; Anchorage AK; May 4 - 6

V. Uddameri and E. A. Hernandez (2009); Management of Agricultural Water Resources under uncertainty; American Water Resources Association – Managing Water Resources in a Changing Climate Conference; Anchorage AK; May 4 - 6

M. Kuchanur, V. Uddameri and N. Blandford (2008); A Fuzzy Goal Programming Approach for Groundwater Management in Refugio County, TX; Geological Society of America Annual Meeting; Houston, TX Oct. 4 – 6.

V. Uddameri (2008); A Simulation-Optimization Model for Transport of Hazardous Wastes from Maqiladora's along US-Mexico Border; (Invited Presentation); Department of Defense Workshop on Sustainable Waste Management; San Francisco, CA May 28 - 20

V. Uddameri (2008); Estimating Groundwater Availability using Regional Groundwater Flow Models and Decision Analytic Techniques; National Groundwater Association; Memphis, TN, Mar 30 – Apr. 4

V. Uddameri (2007); Sustainable Groundwater Management in Semi-Arid South Texas; International Groundwater Conference; Coimbatore, India; Feb 7 – 10

V. Uddameri (2007); An Integrated GIS-ANN approach for estimating Aquifer Vulnerability; International Groundwater Conference; Coimbatore, India; Feb 7 – 10

V. Uddameri and C. Kakarlapudi (2007); A Nested-Optimization Approach for Sustainable Groundwater Management; National Ground Water Summit; Albuquerque, NM; Apr 20 – 23

V. Uddameri (2006); A Dynamic Programming Model for ASR operations in Corpus Christi, TX; Ground Water Summit; National Ground Water Association; San Antonio, TX; Apr 20 – 23

M. Kuchunur and V. Uddameri (2006); Calibration Non-Uniqueness – An obstacle or Opportunity; Ground Water Summit; National Ground Water Association; San Antonio, TX; Apr 20 – 23

V. Uddameri (2005); Sustainable Groundwater Decision Making in Semi-Arid South Texas; Groundwater Summit; National Ground Water Association; San Antonio, TX; Apr 20 – 23

V. Uddameri and V. Honnungar (2005); A Dynamic Programming Approach for Estimating Groundwater Availability; Groundwater Summit; National Ground Water Association; San Antonio, TX; Apr 20 – 23

V. Uddameri (2004); Sustainable Groundwater Research in the Central Gulf Coast Aquifer, TX; Texas Water 2004 – Towards Sustainability; Austin, TX Nov 18 – 19 (Invited)

V. Uddameri (2004); A Multicounty Groundwater Availability Model in the Central Gulf Coast Aquifer; South Texas Farm and Ranch Show; Victoria, TX Oct 26 (Invited)

M. Kuchanur and V. Uddameri (2003) Sustainable Groundwater Management in Coastal Semi-Arid Region of South Texas; National Ground Water Association National Conference; Orlando, FL; Dec 9 -13

V. Uddameri (2003) Utility of Fuzzy Logic Based Schemes in Risk-Based Decision Making; 19th Annual Conference on Contaminated Soils and Sediments; Amherst, MA; Oct 20-23

V. Uddameri (2003) Ultrasonic Oxidation as A Point-of-Entry Treatment Technology; Tech Transfer 2003; Kiwah Island, SC; Jul 29-30 (Invited)

M. Kuchanur and V. Uddameri (2003) Assessment of Groundwater Availability in Refugio County, TX; Refugio; Texas Water Summit; Austin, TX; Nov 9 –10 (poster presentation)

V. Honnungar and V. Uddameri (2003) Interpreting Sustainable Yield Using a Fuzzy Framework; Texas Water Summit; Austin, TX; Nov 9 –10 (poster presentation)

D. Cravey and V. Uddameri (2003) Mechanisms of Baseflow Discharges in Coastal Bays of South Texas; Texas Water Summit; Austin, TX; Nov 9 –10 (poster presentation)

V. Uddameri (2002) Technology/Knowledge Transfer Opportunities along the South Texas-Mexico Border Region; National Technology Transfer Workshop; Kauai, Hawaii, Jul 29 - Jul 30 (Invited)

V. Uddameri (2001) Development of a Knowledge Management Paradigm and a Web-based Decision Support System for Corrective Action Assessments; National Technology Transfer Workshop; Maui, Hawaii, Jul 29 - Jul 31 (Invited)

V. Uddameri (2001) A Knowledge Management Paradigm for Environmental Applications – An Illustration using Soil-Water Mass-Transfer; Santa Clara Univ., Santa Clara, CA, Apr 20 (Invited)

R.S. Teegavarapu, V. Uddameri, M. Marino (2001) Risk-Based Corrective Action Analysis using Artificial Neural Networks; AWRA 2001 specialty conference: Water Quality, Monitoring and Modeling, San Antonio, Texas. April 30 - May 2, (Invited)

Research Funding (28 Grants totaling over 13 Million)

Characterizing Salinity Profiles in the Dockum aquifer and Its implications on water availability; **High Plains Underground Water Conservation District; $**19,266; V. Uddameri (PI); Oct 2015 – May 2016

The New 100th Meridian – Urban Water Resiliency in a Climatic and Demographic Hot Spot; **National Science Foundation**; J. Banner (PI), S. A. Pierce, L. B. Potter, V. Uddameri and K. Wagner (Co-PIs); $4799,249; Aug. 2015 – Jul. 2020

Evaluation of Dockum as an Alternative Source to Reduce Freshwater Footprint of the Ogallala Aquifer; $ 112423; V. Uddameri (PI) and N. Howell (Co-PI); Oct 2015 – Jul 2017

Water for Environmental and Resources Sustainability (WAFERS) Cluster; **Texas Tech University Office of Vice-President for Research Competitive Grant**; $210,000; V. Uddameri (PI); Glenn Cummins, Tom Arsuffi, C. West, D. Reible (Co-PIs); March 2014 – Sep. 2017; Status - Current

Characterization of Brackish and Produced Waters and their Suitability for use in Unconventional Oil and Gas Production; **Apache Corporation**; $100,000 D. Reible (PI); V. Uddameri, C. Chen, M. Watson (co-PIs); Jan 2014 – Aug 2015; Status - Current

Phase-I Assessment of Groundwater Resources in Irion and Sterling County Texas; **Irion and Sterling County Groundwater Conservation Districts;** $30,000; K. Rainwater (PI); V. Uddameri, T. Cleveland, E. A. Hernandez (co-PIs); March 2013 – Sept. 2013. Status – Completed.

Research on Environmental Sustainability of Semi-Arid Coastal Areas (CREST-RESSACA); **National Science Foundation**; V. Uddameri, PI; K. Jones; J. Ren and D. Ramirez (Co-PIs); $ 5,000,000.00; Sep. 2007 – Aug 2012; Served as the project director 2009 - 2012 (status: transferred PI status and completed)

Characterizing Non-Point Source Contributions from Agricultural Field Runoff in Arroyo Colorado River Watershed, TX; **Texas Soil Water Conservation Board/USEPA;** TAMUK is Sub-contract to Texas Water Resources Institute**;** $400,000; Dec. 2008 – Feb. 2012; PI; (Status: Completed)

Water Quality Modeling and Characterization in the Capri Baribe River Watershed, Pernambuco, Brazil; **National Science Foundation;** V. Uddameri (TAMUK); E. A. Hernandez and A. C. Correa (TTU); $100,000; October 2009 – August, 2011; PI (Status: Completed)

Water Balance and Groundwater Flow Studies in Mission River Watershed; **Refugio Groundwater Conservation District;** $39000; Dec. 2007 – June 2009; PI; (Status: Complete)

Groundwater Modeling to Estimate Water Availability in Victoria County, TX; **Victoria County Groundwater Conservation District;** $40,000; Oct. 2006 – Sep. 2007; PI; (Status: completed)

Hydrologic Investigations in Support of Aquifer Management in Kenedy County Groundwater Conservation District; **Kenedy County Commissioners Office;** $25, 000.00**;** Jan 2006 – Jan 2007; PI; (Status: completed)

An Assessment of Urbanized Induced Stresses in Coastal Bays and Estuaries of South Texas; **National Oceanic and Atmospheric Administration;** $300,000.00; Sep 2003 – Sept 2007; PI (Status – completed)

Elucidation of Mechanisms Affecting Submarine Groundwater Discharges to Coastal Bays and Estuaries in South Texas; **National Science Foundation;** $100,000; Sep. 2005 – Aug 2007; PI; (Status completed)

Hydrologic and Policy Investigation in Mission River Watershed; **Refugio Groundwater Conservation District;** $34,636; Aug 2005 – Dec 2006; PI; (Status – completed)

Game Theoretic Approaches to Sustainable Groundwater Management; **Texas Water Resources Institute / United States Geological Survey;** $5000 + $10,000 Match; Feb 2005 – Feb 2006; PI; (Status – complete)

Hydrologic and Hydrogeologic Data Compilation for Groundwater Availability studies for Kenedy Groundwater Conservation District, **Kenedy County Commissioners Office;** $6,000; Jun 2005 – Oct 2005; PI; (Status – completed)

A Fuzzy Sets Approach for Calculating Sustainable Groundwater Yields; **Texas Water Resources Institute / United States Geological Survey;** $5000+ $10,000 Match; Feb 2004 – Feb 2005; PI; (Status – completed)

Investigation of Groundwater Resources and Availability in Refugio County, TX; **Refugio Groundwater Conservation District;** $30,936; Jun 2002 – Jun 2003; PI; (Status: completed)

Development and Application of a Multimedia Model for Persistent Organic Pollutants in South Texas; **University Research Council – Texas Excellence Funds;** $6770.00; March 2003 – Sep. 2003; PI (Status – completed)

Assessment of Hydrologic and Hydrogeologic Characteristics for Groundwater Availability and Management in Refugio County, TX; **Refugio Groundwater Conservation District;** $31658.74; Oct 2003 – Jan 2005; PI; (Status – completed)

Enhancing Instrumentation Capabilities at TAMUK to Perform Advanced Environmental Research; **Department of Defense;** $399,897.00; Oct 2003 – Oct 2004; PI; (Status: completed)

A Multicounty Groundwater Availability Model in Central Gulf Coast Aquifer Texas; **Goliad Groundwater Conservation District;** $49,877.35; March 2004 – Feb 2005; PI; (Status – completed)

Acquisition of a High Performance Computing Cluster (HPCC); S. Ozelick PI; V. Uddameri, R. Nekovei, et al. Co-PIs; **National Science Foundation;** $200,000; Aug. 2006 – Aug. 2008; Co-PI; (Status – completed)

Research on Environmental Sustainability of Semi-Arid Coastal Areas (CREST-RESSACA); **National Science Foundation***;* K. John, PI; V. Uddameri, K. Jones and A. Martinez (Co-PIs); Aug 2002 – Aug 2007; $ 5,000,000.00; Co-PI (Status – completed)

Acquisition of a GC-MS system to Study Hydrocarbons in South Texas Environment; **National Science Foundation***;* K. John, PI; V. Uddameri, K. Jones, A. Martinez and N-B Chang (Co-PIs); Sep. 2002 – Aug 2005; $180,368.00; Co-PI; (Status – completed)

Environmental Informatics in Coastal Margins; **National Science Foundation;** J. Bonner PI; K. John, J. Froyd, T. Cahill and T. Kramer Co-PIs; V. Uddameri and F. Olivera (Senior Personnel); May 2003 – Feb 2007; $400,000.00; Co-PI; (Status – completed)

HBCU/MI Environmental Technology Consortium; K. Jones, PI; L. Clapp, V. Uddameri co-PI; **Department of Energy;** June 2007 – May 2008; $187,500; Co-PI (Status – completed)

Courses Taught

Courses Taught at TTU

CE 3354 Engineering Hydrology:

Introduction to surface water and subsurface hydrology with emphasis on design of hydraulic structures for land development and flood control; HEC-HMS Modeling; junior level; the class is designated as writing intensive class and is the first design experience in the Civil Engineering curriculum.

CE 5331: Advanced Work in Water Resources – GIS:

Introduction to GIS and its applications in Water Resources and Environmental Engineering; Project Based - ArcGIS and Python Programming; Graduate level elective.

CE 5310: Numerical Methods in Engineering:

Introduction to programming and numerical methods used in engineering analysis and design; MATLAB and R programming environments; Core class for MS in Civil Engineering.

CE 4363/5363: Groundwater Hydrology 3(3-0)

Fundamentals of Groundwater hydrology including Darcy's law, well hydraulics, introduction to groundwater quality, water well design and introduction to numerical modeling using MODFLOW, R and spreadsheets

CE 5364: Groundwater Transport Phenomena 3(3-0)

Introduction to groundwater transport processes including advection, dispersion, reactions, retardation, inter-phase mass transfer. Flow through the vadose zone, multi-phase flow and transport and chemical partitioning among different phases; LNAPLs, DNAPLs and Risk-based Corrective Action; Project Based – MODFLOW/MT3DMS; Core class for MS in Environmental Engineering.

Courses Taught at TAMUK

EVEN 3320: CHEMICAL PRINCIPLES FOR ENVIRONMENTAL ENGINEERS 3(3-0)

Application of fundamental concepts from general, inorganic and organic chemistry to environmental engineering problems, chemical thermodynamics including entropy, enthalpy and heat balance. Acid-Base chemical reaction equlibria, pC-pH diagrams; Redox chemistry, pE-pH diagrams; algebraic and numerical solution schemes; introduction to chemical kinetics; wet chemistry and introduction to instrumental analysis.

EVEN 2304: COMPUTER METHODS FOR ENVIRONMENTAL ENGINEERS 3(3-0)

Basic computer methods useful for environmental engineering and design. Introduction to programming analysis and application software with hands-on application. Topics to be covered include – Applications of spreadsheets, structured, event-driven and object-oriented programming and relational databases for environmental problems.

EVEN 2372: ENVIRONMENTAL ENGINEERING FOR GLOBAL SOCIETY 3(3-0)

Introduction to atmosphere, hydrosphere, lithosphere and biosphere, their interactions as well as management of energy and natural resources. Pollution problems including toxicology, water pollution and sanitation, air pollution, solid and hazardous wastes. Fundamentals of sustainability and Environmental economics

EVEN 2310: INTRODUCTION TO ENVIRONMENTAL ENGINEERING 3(3-0)

An introduction to fundamental principles of environmental engineering including unit conversions, material balance equations; reaction kinetics; hydrology and meteorology as related pollutant transport, water quality, air quality, solid, hazardous and radioactive waste management and regulations.

EVEN 6320: RISK ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL RISKS 3(3-0)

Risk definition and characterization; univariate and multivariate probability distributions, maximum likelihood estimation; functions of random variables; archemedian copulas, functions of random variables and monte-carlo simulations; Bayesian statistics, markov chain monte carlo methods; Poisson and Logistic regression for risk mapping; applications emphasize hydrological, human health and ecological risk assessments and management.

EVEN 6332: ENVIRONMENTAL DATA ANALYSIS 3(3-0)
Topics concerning the unique characteristics of environmental data, the process of statistical characterization; the identification of system changes; the usefulness of non-parametric approaches and the utilization of data in characterizing risk and the determination of acceptable environmental cleanup standards to manage risk. Prerequisites: MATH 3320.

EVEN 6356: APPLIED GEOSTATISTICS FOR WATER RESOURCES AND ENVIRONMENTAL ENGINEERS 3(3-0)
Theory of regionalized variables; autocorrelation and cross-correlation among random variables and their representation using correlogram and semi-variograms; Licit Semi-variogram models and weighted least squares fitting; deterministic interpolation using inverse distance weighting techniques (IDW) fundamentals of Simple and Ordinary Kriging; Indicator kriging and Co-kriging. Practical examples will use real-world hydrogeologic and geochemical data.

EVEN 6342: ENGINEERING OPTIMIZATION OF ENVIRONMENTAL SYSTEMS 3(3-0)
This course provides the fundamentals optimization theories and their real-world application potential for environmental systems planning and pollution control. Class discussions of fundamental operational research techniques cover linear programming, integer programming, dynamic programming and nonlinear programming. Case studies are designed to deal with typical planning, design and operational problems for environmental infrastructural design and operations problems with complex multidisciplinary decision-making

EVEN 6340: DECISION SCIENCES FOR ENVIRONMENTAL SYSTEMS 3(3-0)
This course provides the fundamentals of decision science theory in support of large-scale complex environmental systems analysis. Discussions and lectures will cover the realm of multi-criteria decision-making. The basics of multi-attribute decision-making and multi-objective programming techniques, risk and uncertainty-based decision analysis, such as multi-objective stochastic programming, gray programming, fuzzy programming, and their combinations will be emphasized.

EVEN 6341: ENVIRONMENTAL INFORMATICS 3(3-0)
Introduction to environmental data types and structures; Discussion of database design and tools, data warehousing; environmental information management using Geographic Information Systems (GIS); theory and environmental application of remote-sensing technologies; environmental knowledge management and decision support using knowledge-based systems.

EVEN 6356: VADOSE ZONE HYDROLOGY 3(3-0)
Advanced topics in vadose zone hydrology with special emphasis on multiphase fluid flow and transport. Special emphasis placed on modeling the movement of water in the vadose zone including infiltration,

redistribution and recharge processes. Semi-empirical and first-principles based approaches to modeling solute transport in vadose zone.

EVEN 6312: SURFACE WATER QUALITY MODELING 3(3-0)
Ecological and human effects assessment; environmental decision criteria; monitoring strategies; environmental exposure assessment; development of pollutant transport, fate and persistence models; model parameter estimation. Prerequisites: MATH 3320 or equivalent.

EVEN 6313: GROUNDWATER & CONTAMINANT TRANSPORT MODELING 3(3-0)
Advanced topics in groundwater flow problems and contaminant transport modeling, including groundwater transport model selection, initialization, and calibration with an emphasis on model application to regional water resources protection and planning. Prerequisites: MATH 3320.

EVEN 6315: FUNDAMENTALS OF WATER QUALITY ENGINEERING 3(3-0)
Overview of pertinent regulations and regulatory infrastructure; Introduction to fundamental principles of water supply and pollution control; Characterization of water quality and its relationship to quantity; Development and application of analytical methods for modeling and modifying water quality and in natural and engineering systems.

EVEN 6318: ENVIRONMENTAL SYSTEMS MODELING 3(3-0)
This course is designed to introduce the basic approaches for modeling environmental systems; Impacts from anthropogenic activities to the environment will be systematically evaluated via the use of various simulation approaches; Multi-media Case studies in understanding complex environmental systems will be incorporated to enhance the integrated skills available for model synthesis via multidisciplinary analysis; Prerequisites: MATH 3320 or equivalent.

EVEN 5311: ENVIRONMENTAL AND OCCUPATIONAL HEALTH 3(3-0)
Overview of pertinent environmental regulations and regulatory infrastructure; Development and application of the fundamental principles that determine environmental and occupational health; Discussion of methods for controlling environmental occupational hazards; Introduction to Environmental Health and Safety Information Systems.

EVEN 6329: ENVIRONMENTAL MONITORING AND MEASUREMENTS 3(1-3)
An integrated experience in developing and designing laboratory experiments and field sampling campaigns; acquiring and analyzing high quality data for understanding environmental phenomena; and presenting experimental results using state-of-the-art communication tools. Emphasis is also on project-oriented, team-based projects that promote collaborative learning.

EVEN 6102: GRADUATE SEMINAR IN ENVIRONMENTAL ENGINEERING 1(1-0)
The objective of this course is to provide students with exposure to multidisciplinary opinions on current and future environmental issues from industrial, scientific, academic, governmental and engineering experts, in an environmental that fosters productive exchange of ideas. Credit / non-credit grades will be issued for this course. Prerequisite: graduate standing in EVEN or related discipline.

Post-Doctoral Supervision

Dr. Matthew Menkiti; Water treatment technologies; Produced water reclamation. October 2014 – June 2015. Visiting Senior Fulbright Scholar from Nigeria

Dr. Sreeram Singaraju: Water Resources Management; Drought in Groundwater dependent systems**;** November 2014 – October 2016

Dr. Kartik Venkataraman: Risk-assessment of disinfection byproducts (DBPs); January 2011 – August 2012; Currently Assistant Professor at Tarleton State University, Texas

Dr. Vivek Honnungar: Aquifer vulnerability mapping; GIS and soft computing; May 2009 – May 2010; Currently Associate Fellow with TERI India

Dr. Brian Dyson: Mathematical modeling of constructed wetlands for aquaculture wastes; Jan 2007 – Jan 2008; Currently with USEPA, Cincinnati, OH

Ph.D. Students:

Mr. Abdullah Karim: Food-Energy-Water Nexus in West Texas; Ongoing – expected completion date – May 2017

Mr. Jorge Ruiz-Vinispre: Potential of Brackish and Produced Waters for Energy and other uses; Ongoing – expected completion date August 2017

Dr. Sreeram Singaraju: Runoff and Non-point source loadings from Agricultural Drainage Ditches; Aug 2014 (TTU); Post-Doctoral Research Associate, Texas Tech University, TX

Dr. Shaun Kusek: Submarine Groundwater Discharges in Baffin Bay, TX (co-chair with Dr. Kim Jones); Currently Project Engineer with Fluor Inc., Houston, TX

Dr. Martin Alcala: Modeling nutrient transport in the Arroyo Colorado River Watershed, TX (co-chair with Dr. Kim Jones); Engineering and GIS specialist, City of Houston, TX

Dr. Joseph Amaya: Game-theoretic approaches for sustainable groundwater management; May 2013; Currently Visiting Asst. Professor at Texas A&M University-Kingsville

Dr. Josue DeLara Bashulto: Mathematical modeling of Aquifer Storage and Recovery (ASR) systems; May 2011; Currently Researcher Engineer at IPICYT, San Louis Patosi, Mexico

Dr. Vivekanand Honnungar: Structural and Application enhancements to aquifer vulnerability characterization; Currently Associate Fellow TERI, India

Dr. Shankar Parvathinathan: Surfacewater-Groundwater interactions in the Mission River Watershed, TX; Currently with MWH Americas, Sacramento, CA

Dr. Annette Hernandez: Risk-Based Total Maximum Daily Load (TMDL) allocation schemes; Currently Associate Professor Texas Tech University

Dr. Brian Dyson: Mathematical modeling for sizing constructed wetlands subject to intermittent loadings; Dec 2006; Currently with USEPA, Cincinnati

Dr. Muthu Kuchanur: Simulation-Optimization modeling for sustainable groundwater management; Aug 2006**;** Currently with Wyoming Department of Environmental Protection

M.S. Students

Mr. Juan Guiterrez: Modeling the saturated thickness of the Ogallala Aquifer using Geographically Weighted Regression; August 2014

Mr. Michael Holmberg: Surface Water-Groundwater Interactions in Fountain Creek Watershed, CO; August 2014

Mr. Marcelo Arreola: A Simulation-Optimization Model for Conjunctive Management of Choke Canyon and Lake Corpus Christi Reservoirs and Proposed Corpus Christi Aquifer Storage and Recovery (ASR) Facility; Graduated December, 2011

Ms. Kiran Khembavimatada: A Decision Support System for Irrigation Scheduling Considering Water Requirements and Water Quality Constraints; Graduated August 2011 (Report Option)

Ms. Daisy Cantu: A Decision Support System for Design for Stormwater Treatment Wetlands; Graduated August, 2011

Mr. Uduzei Ovabiagle: A Scenario-based Robust Optimization of Amistad/Falcon International Reservoir System under US-Mexico Border Region; Graduated August 2010

Mr. Ogentega Iyasere: Evaluation of Water Quality Trading and Wastewater Redistribution in the Arroyo Colorado River Watershed, TX; Graduated August 2009

Ms. Swapna Patil: A Decision Analytic Approach for Multi-Model Averaging of Watershed Models for the Mission River Watershed, TX; Graduated May 2009

Ms. Lizeth Soto: Aquifer Vulnerability Assessment using Interval Regression and Data Envelopment Analysis Appraoches in US and Mexico; Graduated December 2007

Ms. Chandana Kakarlapudi: A Nested Optimization Approach for Sustainable Regional-Scale Water Development; Graduated August 2007

Mr. Josue DeLara: Modeling Inflows in San Marcos Springs, TX using Genetic Programming; Graduated August 2007

Ms. Sandhya Acha: An Integrated GIS-based Watershed Vulnerability Indicator for Nueces River Watershed, TX; Graduated May 2007 (Report Option)

Mr. Senthil Gobal: A Fuzzy Simulation-Optimization Approach for Deriving MTBE Soil Cleanup Levels; Dec 2006 (Report Option)

Ms. Abhilasha Akunuri: A GIS-based Approach for Estimating Artificial Recharge Potential in Texas; May 2006 (Report Option)

Ms. Jay-Hyung Ji: A Fuzzy Multi-stakeholder Preference Maximization Approach For Estimating Freshwater Inflows into Corpus Christi Estuary System; May 2006

Mr. Naresh Balija: A Transient Simulation-Optimization Model for Estimating Groundwater Availability; Dec 2005 (Co-advised with Dr. Joe Sai – Report Option)

Mr. Kiran. Srinivasiah: Decision Support Tools for Managing Constructed Wetlands to Treat Aquaculture Wastes using Cellular Automata; Aug 2005

Mr. Sravan. Moorthy: Hydrologic Field Investigations in Refugio County, TX; May 2005

Ms. Rupali Sabnis: Hydroclimatological Analysis of Small Watersheds in the Coastal Bend Region of Texas; Dec 2004

Mr. Rahul Deuskar: Forecasting Ozone in Corpus Christi, TX – A Comparison of Regression, Neural Networks and Fuzzy Logic Approaches; Aug 2004

Ms. Leila Pezeshki: Impacts of Physical and Policy Interventions on Freshwater Inflows into Corpus Christi Bay, TX; May 2004

Mr. Ranganath Surpaneni: Alternative Methods for Estimating Organic Liquid-Water Interfacial Tension – Using Fuzzy and Neural Approaches; Aug. 2003

Ms. Bela Deshpande: Senstivity and Uncertainty Analysis of Multimedia Environmental Models; Graduated May 2003

Ms. Alondra Barnes: Statistical Assessment of Water Quality in the Lower Rio Grande River Basin; August 2002 (Co-Advised with Dr. A. Ernest)

Undergraduate Research Assistants

Eli Goana (2009 – 2012)	Diamond Yocum (2010 –2012)	Maricelo Areola (2007 – 2009)
Brian McFall (2004 – 2006)	Jennifer Pena (2008)	Zahra Elkassabgi (2005 – 2007)
Jacob Arroyo (2004-2005)	Chris Vera (2004 – 2008)	Javier Davila (2005 – 2007)
William Allen (2005)	Connie Saavedra (2005 – 2006)	Gerardo Carnona (2011-2012)
Debbie Garcia (2012)	Chris Callahan (2014 – 2015)	Ana Louisa Besilva (2015)

Advisee Accomplishments

Students working under my supervision have won the following accolades for their research:

Chris Callahan: 1st Prize at the Air and Waste Management Association Fracturing Impacts and Technology Speciality Conference; Sept 2014

Joseph Amaya; 2nd Prize at the Environmental Sustainability Conference; Houston, TX, April 2012

Joseph Amaya; Provost Award for Best Presentation at the Fall Javelina Research Symposium; Texas A&M University-Kingsville, TX, October 2011

Daisy Cantu; First Prize Environmental Sciences at the AAAS Emerging Researchers National Conference in STEM, Washington DC Feb 2011

Daisy Cantu; Travel Grant to Present at the Emerging Researchers National Conference in STEM; Washington, DC, Feb 11, 2011

Maricelo Arreola; Deans Award for Best Presentation at the Fall Javelina Research Symposium; Texas A&M University-Kingsville, TX, October 2010

Sreeram Singaraju; Presidential Award for Best Presentation at Javelina Research Symposium; Texas A&M University-Kingsville, TX; March 2010

Maricelo Areola; 1st Prize Poster Competition (Environmental Science); TAMUS Pathway Symposium; Tarleton State University, TX; Nov. 2007

Gomatishankar Parvathinathan; 1st Prize Poster Competition (Water Management); Charting the Course: A Water Plan and Policy for Texas; Austin, TX; Nov. 2006

Jae-Hyung Ji; 1st Prize Poster Competition (Water Science); Charting the Course: A Water Plan and Policy for Texas; Austin, TX; Nov. 2006

Josue DeLara; Honorable Mention Poster Competition; Environmental Sustainability Conference; US-Mexico Issues; Monterrey, MX Nov. 2006

Gomatishankar Parvathinathan; 1st Prize Poster Competition (Water Management); Flows for the Future Environmental Conference; San Marcos, TX; Nov. 2005

Annette Hernandez; Honorable Mention Poster Competition (Water Management); Flows for the Future Environmental Conference; San Marcos, TX; Nov. 2005

Brian Dyson; 2nd Place Oral Presentation; Society of Wetland Scientists; South Central Chapter Meeting; San Marcos, TX; Oct. 2005

Muthu Kuchanur; 1st Place Poster Competition; Conference on Sustainable Technologies; South Padre Island; TX; Oct 2005

Connie Saavedra and Brian Dyson; 2nd Place Poster Competition; Conference on Sustainable Technologies; South Padre Island; TX; Oct 2005

Brian Dyson; Honorable Mention Poster Competition; International Conference on Environmental Modeling &Informatics; San Antonio, TX Mar. 2005

Muthu Kuchanur; 1st Place Poster Competition (Water Policy); Texas Water 2004 – Towards Sustainability; Austin, TX; Oct. 2004

Vivek Honnungar; Honorable Mention Poster Competition (Water Policy); Texas Water 2004 – Towards Sustainability; Austin, TX; Oct. 2004

Muthu Kuchanur; Honorable Mention Poster Competition (Water Science); Texas Water 2004 – Towards Sustainability; Austin, TX; Oct

Dustin Cravey; 2nd Place Poster Competition; Rio Bravo/Rio Grande Environmental Conference; South Padre Island; TX Feb. 2003

Muthu Kuchanur; 1st Place Poster Competition; Rio Bravo/Rio Grande Environmental Conference; South Padre Island; TX Feb. 2003

Muthu Kuchanur; Funded Proposal $5000.00; USGS / Texas Water Resources Institute; Student/Faculty Proposal Competition; Feb 2005

Vivek Honnungar; Funded Proposal $5000.00; USGS / Texas Water Resources Institute; Student/Faculty Proposal Competition; Feb 2004

Recent Representative Service (Department, College and University)

Member, Water Conference Planning Committee, Office of Vice-President for Research, Texas Tech University, Lubbock, TX, Fall 2014 – Present

Member, Promotion and Tenure Committee, Whitacre College of Engineering, Texas Tech University, Lubbock, TX, Fall 2013 – Present

Member, Executive Committee, Department of Civil, Environmental and Construction Engineering, Texas Tech University, Lubbock, TX, Fall 2014 – Present

Chair, Research Active Definition Committee, Department of Civil, Environmental and Construction Engineering, Texas Tech University, Lubbock, TX, Spring 2014 – Present

Member, Curriculum Committee, Department of Civil, Environmental and Construction Engineering, Texas Tech University, Lubbock, TX, Fall 2012 – Present

Chair, Department of Civil and Environmental Engineering Chairman Search Committee; Fall 2013 – Spring 2014.