Venkatesh (Venki) Uddameri, Ph.D., P.E., F. AWRA

Professor and Chair, Civil and Environmental Engineering,
William B. and Mary G. Mitchell Endowed Chair in Engineering
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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

Salient Administrative & Leadership Experience

Professional Experience:

07/2022 - Present: William B. and Mary G. Mitchell Endowed Chair in Engineering, Lamar University
07/2002 - Present: Professor and Chair, Civil and Environmental Engineering, Lamar University
09/2021 – 07/2022: Co-Director, Texas Produced Water Reuse Consortium
09/2018 – 07/2022: Honorary Professor of Civil Engineering, Jimma Institute of Technology, Ethopia
08/2012 – 07/2022: Director, TTU Water Resources Center, Texas Tech University, Lubbock, TX 79409
08/2012 – 07/2022: Professor, Civil, Environmental & Construction Engineering, Texas Tech University
08/2009 – 07/2012: Director, CREST-RESSACA, NSF funded Center for Research Excellence; TAMUK
08/2002 – 07/2008: Assoc. Director (Research), CREST-RESSACA, Texas A&M University-Kingsville
09/2011 – 08/2012: Professor; Environmental Engineering, Texas A&M University-Kingsville
09/2004 – 08/2011: Associate Professor; Environmental Engineering, Texas A&M University-Kingsville
09/2001 – 08/2004: Assistant Professor; Environmental Engineering, Texas A&M University-Kingsville
02/1999 – 08/2001: P. G. Research Engineer; Civil & Environmental Eng., University of California, Davis
05/1997 – 08/1997: Staff Research Assistant; EES-4, Los Alamos National Labs, Los Alamos, NM
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:

2021 George T. and Gladys Abel-Hanger Award for Teaching Excellence; Texas Tech University
2020 Fellow, American Water Resources Association
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 (1/5 awards)
1992 Member Chi-Epsilon, National Civil Engineering Honor Society
1992 Frank Sleeper Sawyer Environmental Scholarship; University of Maine, Orono, ME

Editorships:

2018 – 2022: Editor-in-Chief, Journal of American Water Resources Association; Wiley Interscience Inc.

2021 – Present: Associate Editor (Water Resources Management); Frontiers of Water; Frontiers, UK
2010 – 2017: Associate Editor, 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; Springer Verlag Inc.
2014: Guest Co-Editor– Aquifer Management in Semi-Arid South Texas – Advanced Decision Support Systems (AMISTADss); Environmental Earth Sciences; Springer-Verlag Inc

Memberships (Professional Societies):

- American Water Resources Association (AWRA)
- National Groundwater Association (NGWA)
- University Council on Water Resources (UCOWR) – Lead Delegate
- American Society of Engineering Education (ASEE)

Recent Reviewer Activities

- Review Panel – National Science Foundation, Washington,DC
- Reviewer – Site Visit Committee – Natural Sciences and Engineering Research Council, Canada
- Reviewer for all major journals in Hydrology, Water Resources and Environmental Engineering

Regional, State and National Service and Committees (Recent):

2017 – 2019: Chair Organizing Committee, American Water Resources Association, 2019 Summer Specialty Conference –Minimizing Water Risks through Resilient Adaptation
2017 – 2020: Co-Chair, Future Risks (Climate Change, Natural Disasters) Committee, American Water Resources Association
2015 – 2020: Member, Groundwater Modeling Advisory Panel, National Groundwater Association
2012 – Present: Lead Delegate of Texas Tech University, University Council on Water Resources (UCOWR)
2016 Invited Discussant - Nation's Water Policy, President's Office of Science, Technology and Policy, Washington, DC
2014 Co-Chair Planning Committee, Fracturing Impacts and Technologies Specialty 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
2005 – Present; Member, Groundwater Availability Modeling – Technical Advisory Group (GAM-TAG); Texas Water Development Board

Publications (Books - Published):

B. Dixon and V. Uddameri (2015); **GIS and Geocomputation for Water Resources Science and Engineering**; John Wiley and Sons; ISBN - 978-1118354131; 504 pp (selected to be part of AGU book series on water resources)

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

Publications (Books - Forthcoming):

V. Uddameri (2021); **Computational Skills for Engineers using Python Programming;** Texas Tech

University Raider Press; Open Education Resource (OER) Textbook (Forthcoming Fall 2022)

A. Gupta, V. Uddameri, et al., (2023); **Sustainable Wastewater Management– Principles and Practices**; CRC Press (Forthcoming)

Publications (Journal Articles – Current Submissions):

V. Uddameri, A. Ghaseminejad, E. A. Hernandez (2021); Crop Yield Reliability under Water Availability Risks; Agricultural Water Management (submitted, revisions being completed)

F. Forghanparast, E. A. Hernandez, V. Uddameri (2021); Combining Copula Theory and Bayes Theorem for Forecasting Aquatic States in Intermittent Rivers and Ephemeral Streams; Journal of Hydrology (under review)

F. Forganparast, E. A. Hernandez, V. Uddameri (2022); An Integrated Classification-Regression Framework for Modeling Streamflow in Intermittent Rivers and Ephemeral Streams (IRES); Journal of Hydrology (Under Review)

Publications (Journal Articles - Published):

Zaman, D., Gupta, A.K., Uddameri, V., Tiwari, M.K. and Sen, D., 2022. Robust sensor placement for sustainable leakage management in water distribution networks of developing economies: A hybrid decision support framework. **Journal of Environmental Management,** *320*, p.115816.

Zaman, D., Gupta, A.K., Uddameri, V., Tiwari, M.K. and Sen, D., 2022. Exploring the key facets of leakage dynamics in water distribution networks: Experimental verification, hydraulic modeling, and sensitivity analysis. **Journal of Cleaner Production,** p.132236.

S. Sahu, S., Yadav, M.K., Gupta, A.K., Uddameri, V., Toppo, A.N., Maheedhar, B. and Ghosal, P.S.; (2022); Modeling defluoridation of real-life groundwater by a green adsorbent aluminum/olivine composite: Isotherm, kinetics, thermodynamics and novel framework based on artificial neural network and support vector machine. **Journal of Environmental Management**, 302, p.113965.

Uddameri, V., 2022. Discussion of "Nonoverlapping Block Stratified Random Sampling Approach for Assessment of Stationarity" by Ramesh SV Teegavarapu and Priyank J. Sharma. **Journal of Hydrologic Engineering**, 27(9), p.07022005.

M. Gonzalez. Cruz, M.G., Hernandez, E.A. and Uddameri, V.; (2021); Vulnerability assessment of agricultural production systems to drought stresses using robustness measures**. Nature - Scientific Reports**; 11(1), pp.1-21.

A Ghaseminejad, A. and Uddameri; (2020); Physics-inspired integrated space–time artificial neural networks for regional groundwater flow modeling; **Hydrology and Earth System Sciences**, 24(12), pp.5759-5779.

M. Gonzalez Cruz., Hernandez, E.A. and Uddameri, V.; (2020); Climatic Influences on Agricultural Drought Risks Using Semiparametric Kernel Density Estimation. **Water**, 12(10), p.2813.

Uddameri, V., Ghaseminejad, A. and Hernandez, E.A.; (2020); A tiered stochastic framework for assessing crop yield loss risks due to water scarcity under different uncertainty levels**. Agricultural Water Management**, 238, p.106226.

J. A. Rodrigues, Viola, M.R., Alvarenga, L.A., de Mello, C.R., Chou, S.C., de Oliveira, V.A., Uddameri, V. and Morais, M.A;, (2020); Climate change impacts under representative concentration pathway scenarios on streamflow and droughts of basins in the Brazilian Cerrado biome. **International Journal of Climatology**, 40(5), pp.2511-2526.

M.R. Rad, Haacker, E.M., Sharda, V., Nozari, S., Xiang, Z., Araya, A., Uddameri, V., Suter, J.F. and Gowda, P., (2020); MOD $$ AT: A hydro-economic modeling framework for aquifer management in irrigated agricultural regions. Agricultural Water Management, 238, p.106194.

Karim, A., Gonzalez Cruz, M., Hernandez, E.A. and Uddameri, V., 2020; A GIS-based fit for the purpose assessment of brackish groundwater formations as an alternative to freshwater aquifers. **Water**, 12(8), p.2299.

V. Uddameri, Silva, A.L.B., Singaraju, S., Mohammadi, G. and Hernandez, E.A., (2020); Tree-Based Modeling Methods to Predict Nitrate Exceedances in the Ogallala Aquifer in Texas. **Water**, 12(4), p.1023.

D. Temam, Uddameri, V., Mohammadi, G., Hernandez, E.A. and Ekwaro-Osire, S; (2019); Long-term drought trends in Ethiopia with implications for dryland agriculture. **Water**, 11(12), p.2571.

D. Teweldebirhan Tsige, Uddameri, V., Forghanparast, F., Hernandez, E.A. and Ekwaro-Osire, S., 2019. Comparison of meteorological-and agriculture-related drought indicators across Ethiopia. **Water**;11(11), p.2218.

V. Uddameri, Singaraju, S. and Hernandez, E.A., (2019); Is standardized precipitation index (SPI) a useful indicator to forecast groundwater droughts?—Insights from a Karst aquifer***;*** **JAWRA Journal of the American Water Resources Association**; 55(1), pp.70-88.

S. Singaraju, S. Pasupuleti, E. A. Hernandez, V. Uddameri (2018); Prioritizing Groundwater Monitoring in Data Sparse Regions using Atanassov Intuitionistic Fuzzy Sets (A-IFS); **Water Resources Management;** 32(4)**;** 1483 – 1499**;** DOI: https://doi.org/10.1007/s11269-017-1883-3

V. Uddameri, S. Singraju, E. A. Hernandez (2018); Evaluating Seasonal Changes in Nutrient Concentrations in Agricultural Drainage Ditches in the Lower Rio Grande River Valley Region of Texas; **Environmental Monitoring and Assessment**; 190(3); 157 - 167

V. Uddameri and D. Reible (2018); Food-Energy-Water Nexus to Mitigate Sustainability Challenges in a Groundwater Reliant Agriculturally Dominant Environment (GRADE); **Environmental Progress and Sustainable Energy** vol 37; 21-36; (https://doi.org/10.1002/ep.12726)

V. Uddameri, S. Singaraju, A. Karim, P. Gowda, R. Bailey and M. Schipanski (2017); Understanding Climate-Hydrologic-Human Interactions to Guide Groundwater Model Development for Southern High Plains; **Journal of Contemporary Water Research and Education; vol (162);** 77-99

E. A. Hernandez and V. Uddameri (2016); Heard it through the Grapevine - Using Social Network Analysis to Understand Informal Pathways of Learning in an Engineering Hydrology Class; **Journal of Contemporary Water Research and Education**; 158(1), 85-97

Menkiti, M. C., Ndaji, C. R., Ezemagu, I. G., & Uddameri, V. (2016); Application of Periwinkle Shell Coagulant (PSC) for the Remediation of Petroleum Produced Water (PPW) by Coag-Flocculation; **Journal of Dispersion Science and Technology**; 37(6), 760-774

Imteaz, Monzur A., Venkatesh Uddameri, and Amimul Ahsan (2016); Numerical model for the transport and degradation of pollutants through wetlands; **International Journal of Water**; 10(1); 1-12

Menkiti, M. C., M. I. Ejimofor, I. G. Ezemagu, and V. Uddameri (2016); Turbid-Metric Approach on the Study of Adsorptive Component of Paint Effluent Coagulation Using Snail Shell Extract; **Arabian Journal for Science and Engineering**; 1-17

Hernandez, E. A., & Uddameri, V. (2015); Simulation-optimization model for water management in hydraulic fracturing operations; **Hydrogeology Journal**, 23(6), pp.1247-1265

Morse, S., Morse, A., Uddameri, V., Hernandez, A., Ernst, D. (2015). The Impact of Reducing Numerical Methods and Program Courses on Undergraduate Peformance. **Computers in Education Journal,** *ASEE, 6*(2), 82-89.

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 Journal of Hazardous, Toxic and Radioactive Waste**; (formerly 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; **Clean Technologies and Environmental 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 Chapters – Peer or Technical Editorial Team Reviewed):

B. Guerrero, Jourdan Bell, Dana Porter, John Tracy, Chuck West, and Venki Uddameri (2021); The Importance of Best Management Practices, Policy Analysis, and Modeling Future Projections for the Ogallala Aquifer in **Texas 2021 Ogallala Aquifer Virtual Summit White Paper** (http://ogallalawater.org/wp-content/uploads/2021/02/Texas-White-Paper-Ogallala-Summit-Feb-15_DD.pdf)

V. Uddameri, A. Karim, E. A. Hernandez, P. K. Srivastava (2017); Sensitivity of Wells in a Large Groundwater Monitoring Network and its Evaluation using GRACE Satellite Derived Information; **Sensitivity Analysis in Earth Observation Modelling**; G. P. Petropolous and P. K. Srivastava (editors); Elsevier; pp 235-256

V. Uddameri and D. Reible (2015); Water Availability in the Permian Basin Region of West Texas; **Hydraulic Fracturing Impacts and Technologies**; V. Uddameri, A. Morse, K. Tindle (editors); CRC Press; pp 133-158

A GIS Based Assessment of Wastewater Disposal Impacts in Permian Basin, Texas; **Hydraulic Fracturing Impacts and Technologies**; V. Uddameri, A. Morse, K. Tindle (editors); CRC Press; pp 187-206

V. Uddameri and S. Singaraju (2015); Environmental Impacts of Unconventional Natural Gas Production; **Environmental Manager**; Aug. 2015 Issue; Air and Waste Management Association; pp 20 – 27 (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; **Soil Water and Agronomic Productivity** - **Special Issue on Climate Change and its Impacts on Agriculture and Food Security**; Vol 19; Dr. Rattan Lal and B. A. Stewart (editors); pp 117-130 (invited contribution)

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; pp 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**;** pp 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); Texas Water Development Board; Report 165; Austin, TX; pp 151-163 (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); Springer-Verlag, Inc.**;** pp 141-162

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); Springer Verlag Inc.**;** pp 501-516

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); Amherst Scientific Publishers; pp 343-356

Publications (Editorial/Op-Ed)

Uddameri, V., (2019); JAWRA: Fifty-Five Years of Sustained Contributions for Improved Water Resources Management—The First Decade (1965–1974). *JAWRA Journal of the American Water Resources Association*, *55*(1), pp.1-2.

Uddameri, V., (2019); JAWRA: Fifty-Five Years of Sustained Contributions for Improved Water Resources Management—The Second Decade (1975–1984). *JAWRA Journal of the American Water Resources Association*, *55*(2), pp.285-286.

Uddameri, V., (2019); JAWRA: Fifty-five Years of Sustained Contributions for Improved Water Resources Management—The Third Decade (1985–1994). *JAWRA Journal of the American Water Resources Association*, *55*(3), pp.523-525.

Uddameri, V., (2019); JAWRA: Fifty-Five Years of Sustained Contributions for Improved Water Resources Management—The Fourth Decade (1995–2004). *JAWRA Journal of the American Water Resources Association*, *55*(4), pp.773-776.

Uddameri, V., (2019); JAWRA: Fifty-Five Years of Sustained Contributions for Improved Water Resources Management—The Fifth Decade (2005–2014). **JAWRA Journal of the American Water Resources Association. 55(5);** 956-957

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Gowda, P., Bailey, R., Kisekka, I., Lin, X. and Uddameri, V. (2019); Featured series introduction: optimizing Ogallala aquifer water use to sustain food systems. **JAWRA Journal of the American Water Resources Association**, 55(1), pp.3-5.

Uddameri, V., (2019); Featured Collection Introduction: Climate Change Solutions. **JAWRA Journal of the American Water Resources Association**, *55*(4), pp.777-779.

Uddameri, V. (2018); Times They Are a Changin'—The Altered Landscape of Technical Publishing; **Journal of the American Water Resources Association**; 54(1), 1-4.

Uddameri, V. (2018); Publishing in the Journal of the American Water Resources Association; **Journal of the American Water Resources Association**; 54(3), 583-585.

Uddameri, V. Big Data, Computing, and Water Resources Hazards. **Journal of the American Water Resources Association**; 54(4); 765-766

Publications (Select Conference Proceedings):

T. Dang, L. H. Nguyen, A. Karim, and V. Uddameri (2017). STOAViz: Visualizing Saturated Thickness of Ogallala Aquifer; ENVIRVIS 17 - The Visualization in Environmental Sciences Workshop; European Association for Computer Graphics; In press.

V. Uddameri (2015); "Historical Assessment of Droughts in the Middle East and their Implications for Water Resources Management in the 21st Century; Arab Academy of Sciences Annual Meeting, Dec. 8- 9, Amman Jordan.

S. Singaraju, V. Uddameri and E. A. Hernandez (2015) Impacts on Drought and Future Climate Change on Groundwater Dependent Systems; American Water Resources Association, Annual Conference, Denver.

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)

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

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

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

News and Media Interviews (Recent):

V. Uddameri (2022): https://www.ksl.com/article/50454660/how-utah-data-centers-can-save-money-on-water-needs (Interview)

V. Uddameri (2022): https://news-bulletin.com/facebook-announces-los-lunas-data-center-expansion-water-use-restoration-to-new-mexico-watersheds/ (Interview)

V. Uddameri (2021); Microsoft Plans to Make Data Centers Less Thirsty; https://www.theverge.com/2021/10/27/22747394/microsoft-data-centers-water-drought-climate-change-energy-emissions (Interview)

V. Uddameri (2021); Drought Stricken Communities Push Back against Data Centers; NBC News Item https://www.nbcnews.com/tech/internet/drought-stricken-communities-push-back-against-data-centers-n1271344 (Interview)

V. Uddameri (2021); Webinar on UN 2030 agenda for sustainable development; The Hindu; https://www.thehindu.com/news/cities/Hyderabad/webinar-on-un-2030-agenda-for-sustainable-development/article33571104.ece (News Coverage of the webinar presented)

V. Uddameri (2017); Television Interview – TTU Experts Explain Why Surrounding Rural Communities Will also Struggle for Clean Water after Hurricane Harvey (Sept. 05, 2017) http://www.everythinglubbock.com/news/klbk-news/ttu-experts-explain-why-surrounding-rural-communities-will-also-struggle-for-clean-water/805054268?utm_medium=social&utm_source=facebook_KLBK_News_-_EverythingLubbock.com

V. Uddameri (2016); Featured Research Episode - Pre-Historic Water Runs Deep; Texas Tech University Research in the Field (series) Episode 6; https://www.depts.ttu.edu/vpr/inthefield/

V. Uddameri (2016); News Article Interview – Special Report on the State of the Water in San Angelo; - San Angelo Standard Times; http://archive.gosanangelo.com/news/local/a-special-report-on-the-state-of-water-in-san-angelo-3ae8894c-2e67-58f8-e053-0100007f6b98-391518091.html

V. Uddameri (2016); News Article Interview - Farmer adapting irrigation techniques amidst Ogallala Supply concerns; Lubbock Avalanche Journal http://lubbockonline.com/filed-online/2016-08-06/farmers-adapting-irrigation-techniques-amid-ogallala-supply-concerns

V. Uddameri (2016); Television Interview – Lubbock Locations Cited for Contaminating Groundwater; http://www.onenewspage.com/video/20160908/5482284/Lubbock-Locations-Cited-For-Contaminating-Ground-Water.htm

V. Uddameri (2016); News Article Interview - Water Withdrawal; TTU Discoveries in Research and Scholarship Magazine; http://www.depts.ttu.edu/vpr/discoveries/fall-2016/water-withdrawal.html

V. Uddameri (2015); Television Interview - Water system investigation uncovers hundreds of violations –

American Broadcasting Corporation (ABC), KCBD Lubbock, http://www.kcbd.com/story/30601070/kcbd-investigates-whats-in-your-water (part 1)

V. Uddameri (2015); Television Interview - What's in your Water - Interview; American Broadcasting Corporation (ABC), KCBD Lubbock, TX; http://www.kcbd.com/story/30601070/kcbd-investigates-whats-in-your-water (part 2)

V. Uddameri (2014); News Feature Interview - Texas Perspective – Water; **Public Broadcasting System (PBS)**; http://video.klru.tv/video/2365345995/

V. Uddameri (2014); Radio Interview - 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); Radio Interview - 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); Radio Feature Episode - Virtual Water – Moving the Mighty Mississippi into the Great State of Texas; **NPR Series on Engineering Marvels;** KEDT Corpus Christi

Select Presentations (partial listing from over 150 presentations):

V. Uddameri (2021); Action Plans and Implementation Strategies to Meet Sustainable Development Goal 6 – Water and Sanitation; Keynote Address; Department of Civil Engineering, Centre for Sustainable Technologies for Eco-Social Resilience to Global Climate Change (CST-ERG) and Centre for Water Resources Engineering and Management (CREAM) of Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), India.

V, Uddameri (2021); In a Land Plagued by Water Scarcity – How Should Data Centers Plan for Stewardship; https://www.datacenterdynamics.com/en/profile/venkatesh-uddameri/

V. Uddameri, I. Nwapanka, S. Singraraju, E. A. Hernandez, T. Arsuffi, J. Banner (2017); Climate Impacts on Hydrologic Responses in a Spring-Fed Watershed near the 100th Meridian – The Llano River Watershed, TX; Geological Society of America – 51st Annual South Central Regional Meeting, San Antonio, TX, March 13-14, 2017

V. Uddameri; Now that We have a Mathematical Model – What do we do with it? (2016); 3rd International Conference on the Application of Fluid Dynamics – ICAFD 2016; Dhanbad, India, Dec 19 – 21, 2016 **(Invited Keynote Presentation**)

V. Uddameri, D. Reible and S. Honarparvar (2016); Water Management for Hydraulic Fracturing; 251st American Chemical Society Annual Meeting and Exposition; San Diego, CA, March 13 – 16, 2016

V. Uddameri (2016); Understanding Food-Energy-Water Nexus for Sustainability of the Planet; IX International Civil Engineering Congress; Foz do Iguacu, Brasil, May 8 – 10, 2016 (**Invited Keynote Presentation**)

V. Uddameri (2015); Historical Assessment of Droughts in the Middle East and their Implications for Water

Resources Management in the 21st Century; Arab Academy of Sciences Annual Meeting, Dec. 2015, Amman Jordan. **(Invited Plenary Presentation)**

V. Uddameri (2014); 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 Keynote Presentation**)

E. A. Hernandez, S. Singaraju, V.Uddameri (2013); An Integrated Optimization Model for Wind-Driven Desalination of Brackish Groundwater Resources. 2013 - AWRA Annual Water Resources Conferences, American Water Resources Association, Portland, Oregon

V. Uddameri, M. A. Arreola, E. A. Hernandez (2013); A Multi-Period Optimization Model for Conjunctive Surface Water - Ground Water use via Aquifer Storage and Recovery, AWRA Annual Water Resources Conferences, American Water Resources Association, Portland, Oregon, 4- 7 Oct. 2013

F. Estrada, Hernandez, E., Uddameri, V. (2012); Comparative Study of a Watershed Management Tool across International Boundaries; AWRA Annual Water Resources Conferences, American Water Resources Association, Jacksonville, Florida, Nov 14-16, 2012 (**AWRA Outstanding Student Presentation Award**),"

Hernandez, E., Uddameri, V., Schuetze, B. (2012); An Integrated Optimization Model for Sizing Wind-Driven Desalination of Brackish Groundwater Resources," AWRA Annual Water Resources Conference, American Water Resources Association, Jacksonville, Florida, November 14-16, 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; Washington, DC, Sept 2012

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. 2012
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 (Competitive Grants):

SCC-PG: Development of Resilience Roadmap for Rio Grande Valley; A. Nejat (PI); J. Benavides (co-PI); A. Ross (co-PI); V. Uddameri (co-PI); $149,922 (Sep 2021 – Sep. 2022); **National Science Foundation – Smart and Connected Communities (S&CC) Program**; (status: Active)

Techno-Economic Feasibility of Reuse of Produced Water in Non-Oil&Gas Sectors – Texas Produced Water Consortium; co-PI and Co-Director; Oct 2021 – Sep 2022; $1,000,000; **Texas Water Development Board**; K. Tindle, PI; V. Uddameri, E. Bernard, M. Watson , D. Reible (co-PIs); (status: Active)

Evaluation of Impacts of Using Brackish Groundwater as a Nontraditional Irrigation Source on Food, Soil, and Water in the Texas High Plains; **US Department of Agriculture – National Institute of Food and Agriculture**; Junyu Qi (UMD), PI and V. Uddameri (co-PI); $499,999 (Share $2 75,000) (Oct – 2020 – Sep 2024); (status: Active)

Risks to Agricultural Production in the Ogallala Aquifer of Texas under Climate Change and Groundwater Depletion V. Uddameri, PI; $66,000; **US. Department of Agriculture – Agricultural Research Service** (Oct 2020 – Sep. 2022); (status: Active)

Hydroeconomic Evaluation of Cotton Production in Limited Thermal Environments; **US. Department of Agriculture – Agricultural Research Service**; Multiple PIs from Kansas State, West Texas A&M, Texas A&M, and Texas Tech ($2,000,000 – Share 100K); Aug 2020 – Aug 2023 (status: Active)

Categorization of Watersheds Along the Texas Gulf Coast for State and Regional Flood Planning Activities; (J. Benavides (UTRGV) and V. Uddameri (TTU); $100,000 (TTU share: 50K); Aug 2020 – Aug 2022; **Texas Water Development Board** (status: Active)

Evaluation of the Edwards-Trinity (High Plains) Aquifer as an alternative Source of Water in the Southern High Plains Region of Texas; V. Uddameri, PI; $51,000; **High Plains Underground Water District, Research Grant Program**; $51,000 (Oct. 2021 – Oct 2022); (status: Active)

Data and Informatics in Civil Engineering (DICE) – Online Graduate Certificate Program Development; **TTU Worldwide E-Learning Grant Program** $30,000 Feb 2020 – Jan 2021 (extended to Aug 2022 due to Covid); V. Uddameri, PI (status-Active)

The New 100th Meridian – Urban Water Resiliency in a Climatic and Demographic Hot Spot; J. Banner (PI), S. A. Pierce, L. B. Potter, V. Uddameri and K. Wagner (Co-PIs); **National Science Foundation**; $499,249; Aug. 2015 – Jul. 2021 (status: Complete)

Sustaining Agriculture through Adaptive Management Resilient to a Declining Ogallala Aquifer and Changing Climate; Meagan Schipanski (PI); V. Uddameri (Co-PIs) along with 19 other investigators; **U.S. Department of Agriculture;** $9,000,000 (committed); PI Share: $350,000 Feb 2016 – Feb 2021**;** (status: Completed)

SCC-Planning: Enhancing water resource management and infrastructure improvement through sensing, computation, and community engagement; F. Jin (PI); V. Uddameri (co-PI), A. Namin (co-PI), R. Hewitt (co-PI); **National Science Foundation**; $100,000; Oct 2017 – Sep 2017 (status: Complete)

Effects of Seasonality on the Salinity Gradients in the Dockum Aquifer; V. Uddameri (PI), J. Stout (collaborator); **U.S. Department of Agriculture** $ 75,308; Jul 2016 – Jun 2018 (status: Complete)

Salinity Characterization Mapping in the Dockum Aquifer Texas and Its Implications to Freshwater Availability; V. Uddameri (PI), J. Stout (collaborator); **High Plains Groundwater Conservation District** $ 43,655; Oct 2016 – May 2018 (status: Complete)

Breaking the Thirty Feet Barrier – Use of Horizontal Wells in the Ogallala Aquifer, V. Uddameri (PI); **U.S. Department of Agriculture**; $32,000; Oct 2017 – Sep. 2018 (status: Complete)

International University Partnership for the Establishment of Postgraduate Programmes in Ethiopia; S. Ekwaro-Osire (PI); Aranha, J. (Co-Principal), Louis, D. (Co-Principal), Ghebrab, T. (Co-Principal), Senadheera, S. (Co-Principal), Uddameri, V. (Co-Principal); **The British Council**; $1,098,000 (Phase 1) + $600,0000 (Phase 2); Oct. 2015 – Jan. 2020(status: Complete)

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 2020; Ogallala Aquifer Program, **U.S. Department of Agriculture;** Status: Complete

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 – Aug 2016; Status - Complete

Texas Water Project Supporting the Future Economic Needs of the State; **Tx Department of Agriculture;** D. Reible (PI), V. Uddameri (co-PI); $52,000 ; Sep 2015 – Aug., 2016; Status - Completed

Water for Food, Energy 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 – Completed

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 - Completed

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: 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: Completed)

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 – completed)

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

Courses Taught:

Courses Taught at TTU (courses < 5000 are undergraduate and > 5000 are graduate)
Courses Taught (Formal Teaching)
CE5319 Machine Learning for Civil Engineers (New course)
CE 5315 Probabilistic Methods for Civil Engineers (New Course)

CE 5331 Computational Skills for Engineers (New Course)
CE 5331 Optimization and Decision Making for Civil Engineers (co-Taught with E. A. Hernandez)
CE 5331 Sensors for Civil Engineers (course development; mentoring a new faculty to teach the course)
CE 3105 Fluids Mechanics Laboratory
CE 3354 Engineering Hydrology
CE 5360 Surface Water Hydrology
CE 5310: Numerical Methods in Engineering:
CE 4363/5363: Groundwater Hydrology
CE 5364: Groundwater Transport Phenomena
Courses Taught to Water Resources Group Members (semi-formal teaching)
CE 5331: Advanced Work in Water Resources – Groundwater Data Analysis
CE 5331: Advanced Work in Water Resources - GIS and Geoinformatics in Water Resources
CE 5331: Advanced Work in Water Resources - Vadose Zone Hydrology
CE 5331: Advanced Work in Water Resources – Data Analysis for Water Resources Management
CE 7000: Research – Publishing a Journal Article
CE 7000: Research – Machine Learning Methods in Water Resources Engineering

Courses Taught at TAMUK (courses < 5000 are undergraduate and > 5000 are graduate)
EVEN 2304: Computer Methods for Environmental Engineers
EVEN 3320: Chemical Principles for Environmental Engineers
EVEN 2372: Environmental Engineering for Global Society (Satisfied Gen-Ed requirement)
EVEN 2310: Introduction to Environmental Engineering
EVEN 6320: Risk Assessment and Management of Environmental Risks
EVEN 6332: Environmental Data Analysis
EVEN 6356: Applied Geostatistics for Water Resources and Environmental Engineers
EVEN 6342: Engineering Optimization of Environmental Systems
EVEN 6340: Decision Sciences for Environmental Systems
EVEN 6341: Environmental Informatics
EVEN 6356: Vadose Zone Hydrology
EVEN 6312: Surface Water Quality Modeling
EVEN 6313: Groundwater & Contaminant Transport Modeling
EVEN 6315: Fundamentals of Water Quality Engineering
EVEN 6318: Environmental Systems Modeling
EVEN 5311: Environmental and Occupational Health
EVEN 6329: Environmental Monitoring and Measurements
EVEN 6102: Graduate Seminar in Environmental Engineering

Administrative Staff Supervision:
Suzette Mason – Admin Asst./ Unit Coordinator; TTU Water Resources Center; Oct 2015 – Present
Brad Thornhill – Unit Manager (Technical); TTU Water Resources Center; Oct 2012 - Present
Alisa Dollar – Admin Asst / Book Keeper; TTU Water Resources Center; Oct 2012 – Jan. 2015
Kimberly Prady – Admin Asst.; TTU Water Resources Center; Jan 2015 – Aug 2015
Rose Rodriguez –Associate Director / Accounts; TAMUK CREST-RESSACA, Aug 2009 – Aug 2012
Harriet Lamm – Technical Writer; CREST-RESSACA; Aug 2009 – Aug 2012
Tamara Guillen – Administrative Assistant; CREST-RESSACA; Aug 2009 – Aug 2012
Also oversaw several temporary student workers hired to assist with day-to-day center activities

Post-Doctoral Supervision:

Dr. Partha Majumdar; Integrating SWAT-DSSAT-MODFLOW models to Better Characterize Pumping and Recharge; Sep – Oct. 2018

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 – Feb. 2018

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 (Current)

Mr. Ali Ghaseminajad: Physics-Inspired Artificial Neural Networks for Regional Groundwater Flow Expected Completion Date August 2022

Ms. Ghazal Mohammadi: Modeling Groundwater Drought Dynamics in the Edwards Aquifer, TX (Expected Completion Date August, 2022

Mr. Aalok Sharma Kafle: Use of Brackish Groundwater from the Dockum Hydrostratigraphic Unit (HSU) to Sustain Agricultural Production in the Ogallala Aquife; Completion Date Aug 2024

Ph.D. Students (Graduated)

Mr. Abdullah Karim: Decision Support Framework for Fit for Purpose Assessments in Brackish Groundwater Units; Aug. 2018; Senior Engineer, California State Water Resources Control Board, Sacramento, CA.

Dr. Sreeram Singaraju: Runoff and Non-point source loadings from Agricultural Drainage Ditches; Aug 2014; Relocated to India after a stint at Savannah State University

Dr. Shaun Kusek: Submarine Groundwater Discharges in Baffin Bay, TX (co-chair with Dr. Kim Jones); Last Known Position 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 (Current)

Jawwad Siddique: Characterizing Watersheds along the Texas Gulf Coast for Regional Flood Mapping and Planning; Expected Completion Date Summer 2022.

M.S. Students (Graduated)

Ms. Eva Schexnider: Comparison of Stationary and Non-Stationary Models for Assessing Flood Risks and Return Periods in the Greater Houston Area – Pre and Post-Hurricane Harvey (Report Option); Graduated Spring 2021

Mr. Henry Forku Boateng: Spatial Variability of Geochemical Evaluation of Groundwater in Dockum Hydrostratigraphic Unit, Texas; Spring 2021

Mr. Aalok Sharma Kafle: Hydroclimatic Influences over the Ogallala Aquifer Region of the US – Relational Database Development and Trend Analysis; Graduated Spring 2021

Ms. Ghazal Mohammadi: Recurrent Neural Network Models to Predict Groundwater Dynamics in Edwards Aquifer, TX; Graduated Summer 2020 (report option)

Mr. Deepak Bhandari: Evaluation of Joint risks of Arsenic and Nitrate Exceedance using Probit Models; Spring 2020; (report option)

Mr. Kenneth Nwpanka: Baseflow Recession and its Relationship to Meteorological Drought in the Llano River Watershed; Graduated August 2016

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

Mr. Michael Holmberg: Surface Water-Groundwater Interactions in Fountain Creek Watershed, CO; Graduated 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: Sensitivity 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 Carmona (2011-2012)
Debbie Garcia (2012)	Chris Callahan (2014 – 2015)	Ana Louisa Besilva (2015)
Jessica LaFond (2017 – 2018)	Bruno Alves (2016)	Jessica Martins Rodriguez (2016)
Austin Starkey (2017 – 2018)	Andrea Gurrero (2018)	Daniela Ducon (2018)
Sydney Stegint (2018 – 2019)	Diego Ramirez (2018 – 2019)	Katie Snyder (2018 –2019)

Advisee Accomplishments

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

Ali Ghaseminejad: $1,5000 Travel Grant Award from South Nevada Water Authority and University Council for Water Resources to attend and present at the Water Smart Innovation Conference, Las Vegas NV, Oct. 2021

F. Forghanparast: 1st Prize Poster Presentation; AWRA Summer Specialty Conference; Sparks NV, June 2019

Jorge Ruiz-Vinaspre: $1,200 Travel Grant Award from South Nevada Water Authority and University Council for Water Resources to attend and present at the Water Smart Innovation Conference, Las Vegas NV, Oct. 2016

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

Representative Service to the University (Department, College and University Level) - Recent

Chair, Civil Engineering Mid-Term Review of Tenure Track Faculty Committee; Department of Civil, Environmental and Construction Engineering, Spring 2021 – Present.

Chair, Civil Engineering Faculty Search Committee, Department of Civil, Environmental and Construction Engineering, Fall 2021 – Present

Director and Chair, Civil Sensing and Informatics (CSI) Graduate Program Committee; Department of Civil, Environmental and Construction Engineering, Fall 2019 – Present

Member, Faculty Promotion and Tenure (P&T) Committee – Department of Computer Science; Texas Tech University; Fall 2021 – Present

Member, TTU Academic Engagement Committee, Office of the Provost, Texas Tech University, Lubbock, TX, Spring 2016 – August 2018

Member, Whitacre College of Engineering, Teaching and Service Awards Committee, Texas Tech University, TX, Fall 2016 – Spring 2018

Member, Water Conference Planning Committee, Office of Vice-President for Research, Texas Tech University, Lubbock, TX, Fall 2014 – Fall 2015

Member, Promotion and Tenure Committee, Whitacre College of Engineering, Texas Tech University, Lubbock, TX, Fall 2013 – Fall 2016

Member, Executive Committee, Department of Civil, Environmental and Construction Engineering, Texas

Tech University, Lubbock, TX, Fall 2014 – Summer 2016

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

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 – Summer 2014.

External Consulting and Professional Service (Recent Projects)

Revision of Groundwater Management Plan for Kenedy County Groundwater Conservation District; Jan 2022 - Present

Rules for Management of Brackish Groundwater Resources in Kenedy County Groundwater Conservation District (Jan 2020 – Aug 2021)

Texana Groundwater Conservation District; Influences of the Gulf Coast on the Aquifer Water Quality in Texana Groundwater Conservation District at Ekstrom Aquaculture LLC site; Jan 2019 - Present

Victoria County Groundwater Conservation District; Permit Variance Application Evaluation- Castleman Power Systems LLC; Feb 2018)

Expert Witness on Groundwater Hydrology; Texas Railroad Commission; Contested Case Hearing on a CO_2 Sequestration/Enhanced Oil Recovery Project; Jul 2016 – Sep, 2016

Texana Groundwater Conservation District; Development of a Groundwater Monitoring Plan at West Ranch Oil Field, Jackson County, TX

Texana Groundwater Conservation District; Development of a Groundwater Monitoring Plan at Formosa Plastics Facility, Jackson County, TX

Kenedy County Groundwater Conservation District; Evaluation of Brackish Groundwater Zones within Kenedy County Groundwater Conservation District, Sarita, TX

Kenedy County Groundwater Conservation District; Technical Support – Groundwater Management Plan Update

Recent Workshops and Outside Guest Lectures:

Water Resources Considerations for Clean and Green Campus Development; Indo-Universal Collaboration on Engineering Education; Short-Course to students in India; Jul 2021.

Recent Advances in Geocomputational Modeling in Water Resources and Environmental Sciences and Engineering; Indian Institute of Technology – Indian School of Mines (IIT-ISM) Dhanbad; Global Initiative of Academic Networks (GIAN) Program – Ministry of Higher Education, Government of India; Sep 17 – Sep 23, 2018

Data Driven Modeling using R; Short-Course/Workshop presented at Jimma Institute of Technology, Jimma, Ethiopia; June 12 – 15, 2018

Advanced in Groundwater Contaminant Transport; Indian Institute of Technology-Kharagpur; Global Initiative of Academic Networks (GIAN) Program – Ministry of Higher Education, Government of India; May 15 – 27, 2018

Strategies for Sustaining Groundwater Reliant and Agricultural Dominant Environments (GRADES); Institute for Water Resources and Water Supply (www.tuhh.de/wwv) at TUHH, Hamburg University of Technology; Hamburg, Germany, July 24th 2017.

Virtual Workshop on Food-Energy-Water Nexus and its Role in Water Resources Management in Texas; co-moderators: V. Uddameri (Texas Tech University) and M. Young (Bureau of Economic Geology, Texas); April 19th 2017.

Stochastic Hydrology using R – Jimma University in support of their Home Grown Ph.D. Program in Civil Engineering; Nov – Dec, 2016 (online instruction)

Groundwater Contaminant Transport Modeling – Indian Institute of Technology – Indian School of Mines, Dhanbad, India; Dec 18-19, 2016 (hands-on computer based instruction)

Recent Advances in Computational Environmental and Water Resources Engineering – Joint Workshop conducted by Texas Tech University and Indian School of Mines; Dec 23 – Dec 28, 2015 (theory and hands-on computer-based instruction)

Synergistic Activities (Recent)

Ph.D. Program in Sustainable Water Resources Engineering at Jimma Institute of Technology and MSc program in Sustainable Water Resources Engineering at Arba Minch Institute of Technology, Ethiopia. (2015 – 2020)

Short-Courses at Indian Institute of Technology (Indian School of Mines), IIT-ISM and Indian Institute of Technology-Kharagpur (IIT-KGP) – Ministry of Human Resources Development, Government of India Global Initiative of Academic Networks (GIAN) Program

Program Evaluator for MS in Civil Engineering Program; Prince Mohammad Bin Fahd University, Saudi Arabia

CE Curriculum Evaluation and Modernization Specialist – American University of Iraq – Sulaimani (AUIS), Iraq

Founding Member – Texas Water Research Network (TWRN) a consortium of researchers from Texas Universities focused on Water Resources Research

LYPHT pronounced LIFT (Laboratory on your Phone or Tablet); Used QR code technology to provide access to video lectures and hands-on demonstrations to students to help during laboratory report presentations.

Developed Android / IPhone App to educate public on the dwindling water levels in the Ogallala Aquifer

in Texas (collaboration with Tommy Dang, Asst. Professor in Computer Science, TTU); Fall 2016

Traveled to Oman as part of TTU delegation to establish research collaborations on water resources issues related to food-water nexus in arid and semi-arid regions; January 5 – 12, 2017

Developed Video modules on Brackish Groundwater Resources and Water Conveyance Infrastructure to assist with Regional Workforce Development; Spring 2017

WateR – Using R for Water Resources – Open Source Tutorials to teach the use of R programming Language Techniques for use in Hydrology and Water Resources.
https://www.researchgate.net/project/WateR-R-for-Water-Resources

Developed an R package (rrv) to conduct risk, resilience and vulnerability calculations; available on Github: https://github.com/vuddameri/rrvpackage

Python Concepts and Examples: Open-Source, Cloud-based Google Colab Jupyter Notebooks to teach algorithms and Python programming constructs: Accessible from: https://uddameri.com/python-notebooks/

Added several sensors (temperature, turbidity, total dissolved solids, flow measurements, potential energy measurement) to CE3105 Mechanics of Fluids Laboratory to enhance and modernize laboratory experiences.