Michael H. Young

Professional Summary

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Business address:	The University of Texas at Austin Bureau of Economic Geology 10100 Burnet Rd., Bldg. 130 Austin, TX 78758
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Professional Preparation

Academic Background

Ph.D., Soil and Water Science (Soil Physics/Hydrology), University of Arizona, Tucson, Arizona, 1995

M.S., Geological Sciences (Hydrogeology), Ohio University, Athens, Ohio, 1985

B.A., Geology (cum laude with honors), Hartwick College, Oneonta, New York, 1983

Professional Appointments

Associate Dean for Research, Jackson School of Geosciences, University of Texas at Austin (September 2023-Present)

Associate Director for Environment and Senior Research Scientist, Bureau of Economic Geology, Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas (August 2010-Present)

Acting Executive Director, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas, Nevada (2008-2010)

Assistant/Associate/Research Professor, Desert Research Institute, Las Vegas, Nevada (2000 - 2010).

Deputy Executive Director, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas, Nevada (2003 - 2008).

Senior Research Scientist, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, Georgia (1998 - 2000).

Assistant Research Scientist, Department of Soil, Water and Environmental Science, University of Arizona, Tucson, Arizona (1996 - 1998).

Principal/Hydrologist, GeoSystems Analysis, Tucson, Arizona (1991-1996)

Research Specialist (Senior), Department of Soil, Water and Environmental Science, University of Arizona, Tucson, Arizona (1990 - 1996).

Hydrogeologist, C. C. Johnson & Malhotra, Silver Spring, Maryland (1988-1990)

Hydrogeologist/Project Manager, Division of Waste Management, U.S. Nuclear Regulatory Comm., Wash., D.C. (1986-1988)

Professional Registrations and Certificates

Certified Environmental Manager--State of Nevada, No. 1766

Certified Professional Geologist--State of Virginia, No. 728

Registered Geologist--State of Arizona, No. 26532

Registered Geologist--State of Georgia, No. 1494

Dissertations

Young, M. H., 1995, Monitoring near surface soil water loss with time domain reflectometry and weighing lysimeters, University of Arizona, PhD dissertation, 144 p.

Theses

Young, M. H., 1986, A comparative study to determine the effects of coal mining on the hydrology of small watersheds in southeastern Ohio: Ohio University, Master's thesis, 400 p.

Areas of Expertise

Areas of Expertise

Design and implementation of monitoring systems for above-ground and near-surface below-ground environments

Ecohydrology of arid and semiarid landscapes

Groundwater recharge in both managed agriculture and natural (arid and semiarid) systems

Influence of soil structure and vegetation on water cycling

Awards

Awards and Honorary Societies

Joseph C. Walter Jr. Excellence Award, Jackson School of Geosciences, 2017

Elected Fellow, Geological Society of America, 2016

Elected Fellow, Soil Science Society of America, 2016

Nominated for Excellence in Reviewing Award, Water Resources Research, 1995-1996

Outstanding Research Staff Award, College of Agriculture, University of Arizona, 1994

Member, Gamma Sigma Delta Honor Society, 1992

Nominated for John Christopher Hartwick Award, 1982

Service

External Committees Participation

Co-Director, International Soil Modeling Consortium, 2016-Present

Consulting Editor, Vadose Zone Journal, 2016-Present

Member, National Academies, Geosciences Briefing Consortium, 2015-Present

Member, Graduate Studies Committee, Energy and Earth Resources Program, UT-Austin, 2014-Present

Member, Soil Systems and Critical Zone Processes Technical Committee, American Geophysical Union, 2011 - present

Member, Graduate Studies Committee, Jackson School of Geosciences, 2010 - present

Co-Director, International Soil Modeling Consortium, 2016-2018

Member (Chair 2017), Soil Physics and Hydrology Mentoring Committee, Soil Science Society of America (SSSA), 2015-2017

Member, Critical Needs Working Group, American Geosciences Institute, July 2014-June 2016

Member, Geoscience Briefing Consortium, National Academies of Science, July 2014-June

2016

Liaison between GSA Hydrogeology Division and SSSA, 2014-2016

Member, SSSA-AGU Partnership Committee (S682.1), SSSA, 2014-2016

Founding Chair, Soils and Soil Processes Interdisciplinary Interest Group, GSA, 2013-2015

Managing Editor, Vadose Zone Journal, 2013-2015

Member, Joint Technical Program Committee, Geological Society of America, 2013-2015

Member, Soil Physics Division Executive Committee, SSSA, 2013-2015

Co-organizer, Soil as a Controller and Integrator of Geological Processes, GSA National Meetings, Vancouver, Canada, 2014

Member, Steering Committee, Hydropedology Working Group, ACS 837, 2002-2014

Co-organizer, Environmental Geosciences Symposium and Plenary, AAPG International Conference and Exposition, Cartagena, Colombia, 2013

Co-organizer, Impacts of Land-Use Change and Disturbances on Unsaturated-Zone Ecohydrology and Process Characterization, GSA National Meetings, Denver, Colorado, 2013

Co-organizer, Soil as a Mediator of Geological Processes, GSA South-Central meeting, Austin, Texas, 2013

Co-organizer, Soil Mediated Drivers of Coupled Biogeochemical and Hydrological Processes Across Scales, Chapman Conference sponsored by AGU, Tucson, Arizona, September, 2013

Co-organizer, Soil Systems and Critical Zone Processes--Integrating Life Support Functions across Disciplines, Monte Veritas, Ascona, Switzerland, March, 2013

Member, Technical Planning Committee for Environmental Geosciences, AAPG International Conference and Exposition, Cartagena, Colombia, 2013

Member, Technical Review Panel, Division of Computational, Environment and Life Sciences, Argonne National Labs, 2013

Co-convenor, Impacts of Bioenergy Crops on Water Quantity and Quality, SSSA Meeting, Cincinnati, Ohio, 2012

Co-convenor, Non-point source fluxes in the vadose zone and groundwater, AGU Fall Meeting, San Francisco, California, 2012

Co-Editor, Vadose Zone Journal, 2010-2012

Member, American Nuclear Society Standards Committee, 2.17 and 2.9, 2008-2012

Member, Standard Committees 2.17 and 2.9, American Nuclear Society, 2008-2012

Associate Graduate Faculty, Department of Geosciences, University of Nevada Las Vegas, 2003-2012

Graduate Faculty, Hydrologic Sciences Program, University of Nevada Reno, 2000-2012

Member, Vadose Zone Committee, American Geophysical Union, 1998-2012

Co-convenor, Past Land Use Changes on Water Resources: An Analog for Assessing Effects of Proposed Bioenergy Crops, American Geophysical Union Annual Meeting, San Francisco, 2011

Elected S-1 Technical Chair, Soil Science Society of America, 2010 - 2011

Elected S-1 Technical Chair, Soil Science Society of America, 2010-2011

Associate Editor, Soil Science Society of America Journal, 2008 - 2010

Associate Editor, Vadose Zone Journal, 2002 - 2010

Co-convenor, Landscapes in Semiarid and Arid Environments: A Hydrological and Ecological Perspective, American Geophysical Union Fall Meeting, 2009

Lead Proposal Writer, Multi-State Research Project, CSREES, W-188, 2009

Member, Fall Meeting, Environmental Vadose Zone Hydrology, American Geophysical Union, 2009

Member, S-1 Early Career Award Committee, American Society of Agronomy, 2006 - 2009

Co-convenor, Meeting, Soil, Water and Plants: Linking Physical Processes in Water Controlled Ecosystems, Ecological Society of America, 2008

Member, Fall Meeting, Environmental Vadose Zone Hydrology, American Geophysical Union, 2008

Member, Kirkham Award Committee, American Society for Agronomy, 2006 - 2007

Co-convenor, Fall Meeting, Bridging Hydrology, Soil Science and Ecology: Hydropedology and Ecohydrology, American Geophysical Union Fall Meeting, 2006

Chair, Vadose Zone Committee, American Geophysical Union, 2002 - 2004

Faculty Senate, Desert Research Institute, 2001-2004

Member, Fall Meeting, Environmental Vadose Zone Hydrology, American Geophysical Union, 2000 - 2004

Co-convenor, Subsurface Fluid, Energy, and Solute Transport Processes: Concepts, Models, and Observations, American Geophysical Union Spring Meeting, Nice, France, 2003

Chair, Technical Committee, CSREES, W-188, 2002 - 2003

Secretary, Faculty Senate, Desert Research Institute, 2002 - 2003

Technical Committee Chair, CSREES, W-188, 2002-2003

Co-convenor, Scaling Issues in Vadose Zone Hydrology, American Geophysical Union Fall Meeting, 1998

Teaching and Advising

University Courses Taught

Vadose Zone Processes in Ecohydrology: presented at the Department of Geosciences, The University of Texas at Austin, Austin, Texas, 2012.

Introduction to Vadose Zone Hydrology: presented at the Department of Geosciences, University of Nevada Las Vegas, Las Vegas, Nevada, 2009.

Ecohydrology of Arid Lands: presented at the Department of Geosciences, University of Nevada Las Vegas, Las Vegas, Nevada, 2008.

Introduction to Vadose Zone Hydrology: presented at the Department of Geosciences, University of Nevada Las Vegas, Las Vegas, Nevada, 2007.

Introduction to Vadose Zone Hydrology: presented at the Department of Geosciences, University of Nevada Las Vegas, Las Vegas, Nevada, 2005.

Introduction to Vadose Zone Hydrology: presented at the Department of Geosciences, University of Nevada Las Vegas, Las Vegas, Nevada, 2004.

Activities of a Professional Nature

Professional Societies

American Geophysical Union

American Society for Agronomy

Gamma Sigma Delta Honor Society

Joint Technical Program Committee, Geological Society of America

Soil Science Society of America

Activities of a Professional Nature

Technical reviewer (last 5 years): National Science Foundation, Water Resources Research, Journal of the American Water Resources Association, Vadose Zone Journal, Soil Science Society of America Journal, Journal of Contaminant Hydrology, Journal of Ecohydrology, Hydrological Processes, Hydrogeology Journal (2009-Present)

Student advisor, Benjamin Bass--Undergraduate, and committee member for Undergrad Special Thesis with Cardenas (graduated), The University of Texas at Austin, 2012

Student advisor, Jeremy Koonce--Ph.D., co-advisor with Zhongbo Yu, University of Nevada Las Vegas, 2012

Student advisor, Joseph Asante--Ph.D., committee member (graduated), University of Nevada Las Vegas, 2012

Student advisor, Kerstan Wallace--M.S., co-advising with Meckel, The University of Texas at Austin, 2012

Student advisor, Lena Wright--M.S., committee member (graduated), University of Nevada Las Vegas, 2012

Student advisor, Mary Hingst--M.S., co-advising with Romanak, The University of Texas at Austin, 2012

Student advisor, Nathan Meyer--M.S., committee member with Dan Breeker (graduated), The University of Texas at Austin, 2012

Student advisor, Sean Porse--M.S., co-advisor with Hovorka, The University of Texas at Austin, 2012

Student advisor, Todd Caldwell--Ph.D. (graduated), University of Nevada Reno, 2012

Student advisor, Travis Swanson--Ph.D., committee member, The University of Texas at Austin, 2012

Publications

Peer Reviewed Journal Articles

Gülen, G., Das, J., and Young, M. H., 2026, Assessing economic costs of two reliable generation mix scenarios in the ERCOT system: Energies, v. 19, no. 9, article no. 2195, 21 p., http://doi.org/10.3390/en19092195.

Gülen, G., Das, J., and Young, M. H., 2026, System-based comparison of environmental, reliability, and cost trade-offs across three generation mix scenarios: AAPG Bulletin, v. 110, no. 4, p. 323-336, http://doi.org/10.1306/03052625145.

Bakhshian, S., Dashtian, H., Chavoshi, A., Haddad, M., Hovorka, S. D., Young, M. H., Romanak, K. D., and Ahmadian, M., 2025, Near-surface monitoring of plugged and abandoned wells for real-time leakage detection in geologic carbon storage: International Journal of Greenhouse Gas Control, v. 147, no. 104483, 12 p., http://doi.org/10.1016/j.ijggc.2025.104483.

Chavoshi, A., Dashtian, H., Bakhshian, S., Young, M. H., and Niyogi, D., 2025, PINN-SM: a physics-informed neural networks model for vadose zone soil moisture profile prediction: Journal of Geophysical Research--Machine Learning and Computation, v. 2, no. 4, article no. e2024JH000547, 20 p., http://doi.org/10.1029/2024JH000547.

Das, J., Gülen, G., and Young, M. H., 2025, Environmental tradeoffs of alternate energy transition scenarios for the ERCOT service area of Texas: Environment, Development and Sustainability, v. 27, no. 11, p. 28333-28353, http://doi.org/10.1007/s10668-025-06691-6.

Das, J., Young, M. H., Gülen, G., Harner, Z. Q., and Singh, S., 2025, Lithium supply chains: environmental impacts and trade-offs analysis using life cycle assessment and multi-criteria decision making: Energy Reports, v. 13, p. 6566-6583, http://doi.org/10.1016/j.egyr.2025.05.075.

Das, J., Kleiman, A., Rehman, A. U., Verma, R., and Young, M. H., 2024, The Cobalt supply chain and environmental life cycle impacts of lithium-ion battery energy storage systems: Sustainability, v. 16, no. 5, article no. 1910, 28 p., http://doi.org/10.3390/su16051910.

Das, J., Rehman, A. U., Verma, R., Gulen, G., and Young, M. H., 2024, Comparative life-cycle assessment of electricity-generation technologies: West Texas case study: Energies, v. 17, no. 5, article no. 992, 23 p., http://doi.org/10.3390/en17050992.

Dashtian, H., Young, M. H., Young, B. E., McKinney, T., Rateb, A. M., Niyogi, D., and Kumar, S. V., 2024, A framework to nowcast soil moisture with NASA SMAP level 4 data using in-situ measurements and deep learning: Journal of Hydrology: Regional Studies, v. 56, no. 102020, 16 p., http://doi.org/10.1016/j.ejrh.2024.102020.

Thompson, J. C., and Young, M. H., 2024, A hydro-economic approach for quantifying well performance thresholds and recoverable groundwater yields in Texas: Texas Water Journal, v. 15, no. 1, p. 1-33, http://doi.org/10.21423/twj.v15i1.7160.

Hopmans, J. W., Green, T. R., and Young, M. H., 2023, Western U.S. multistate research project on "water movement in soils": a retrospective: Vadose Zone Journal, v. 22, no. e20245, 7 p., http://doi.org/10.1002/vzj2.20245.

Acevedo, J. P., Lemons, C. R., Young, M. H., McDaid, G., and Scanlon, B. R., 2022, Analysis of wastewater injection and prospect regions for induced seismicity in the Texas panhandle, United States: AAPG Bulletin, v. 106, no. 4, p. 679-699, http://doi.org/10.1306/EG.01072120005.

Arciniega-Esparza, S., Hernández-Espriú, A., and Young, M. H., 2022, Implications of unconventional oil and gas development on groundwater resources: Current Opinion in Environmental Science and Health, v. 27, no. 100346, 9 p., http://doi.org/10.1016/j.coesh.2022.100346.

Burnham, B. S., Flaig, P. P., Brice, R. R., Spagnolo, M., and Young, M. H., 2022, Rapid sediment re-deposition may limit carbon release during catastrophic thermokarst lake drainage: GSA Today, v. 32, no. 5, p. 60-61, http://doi.org/10.1130/GSATG529GW.1.

Rueda, V., Young, M. H., Faust, K., Rateb, A., and Leibowicz, B. D., 2022, System dynamics modeling in local water management: assessing strategies for the city of Boerne, Texas: Water, v. 14, no. 3682, 19 p., http://doi.org/10.3390/w14223682.

Vereecken, H., Amelung, W., Bauke, S. L., Bogena, H., Brüggemann, N., Montzka, C., Vanderborght, J., Bechtold, M., Blöschl, G., Carminati, A., Javaux, M., Konings, A. G., Kusche, J., Neuweiler, I., Or, D., Steele-Dunne, S., Verhoef, A., Young, M., and Zhang, Y., 2022, Soil hydrology in the Earth system: Nature Reviews Earth and Environment, v. 3, p. 573-587, http://doi.org/10.1038/s43017-022-00324-6.

Gearon, J. H., and Young, M. H., 2021, Geomorphic controls on shrub canopy volume and spacing of creosote bush in northern Mojave Desert, USA: Landscape Ecology, v. 36, no. 2, p. 527-547, http://doi.org/10.1007/s10980-020-01149-8.

Abolt, C. J., and Young, M. H., 2020, High-resolution mapping of spatial heterogeneity in ice wedge polygon geomorphology near Prudhoe Bay, Alaska: Scientific Data, v. 7, no. 87, 7 p., http://doi.org/10.1038/s41597-020-0423-9.

Abolt, C. J., Young, M. H., Atchley, A. L., Harp, D. R., and Coon, E. T., 2020, Feedbacks

between surface deformation and permafrost degradation in ice wedge polygons, Arctic Coastal Plain, Alaska: Journal of Geophysical Research: Earth Surface, v. 125, no. 3, article no. e2019JF005349, 17 p., http://doi.org/10.1029/2019JF005349.

Arciniega-Esparza, S., Hernández-Espriú, A., Breña-Naranjo, J. A., Young, M. H., and Pedrozo-Acuña, A., 2020, A multivariate outlier detection approach for water footprint assessments in shale formations: case Eagle Ford play (Texas): Environmental Earth Sciences, v. 79, no. 454, 18 p., http://doi.org/10.1007/s12665-020-09197-8.

Devitt, D. A., Young, M. H., and Pierre, J. P., 2020, Assessing the potential for greater solar development in West Texas, USA: Energy Strategy Reviews, v. 29, no. 100490, 10 p., http://doi.org/10.1016/j.esr.2020.100490.

Fatichi, S., Or, D., Walko, R., Vereecken, H., Young, M. H., Ghezzehei, T. A., Hengl, T., Kollet, S., Agam, N., and Avissar, R., 2020, Soil structure is an important omission in Earth System Models: Nature Communications, v. 11, no. 522, 11 p., http://doi.org/10.1038/s41467-020-14411-z.

Pierre, J. P., Andrews, J. R., Young, M. H., Sun, A. Y., and Wolaver, B. D., 2020, Projected landscape impacts from oil and gas development scenarios in the Permian Basin, USA: Environmental Management, v. 66, no. 3, p. 348-363, http://doi.org/10.1007/s00267-020-01308-2.

Smith, F. S., Pierre, J. P., Young, M. H., and Devitt, D. A., 2020, Estimation of future native seed demand for restoration of oil and gas-energy sprawl in West Texas, USA: Ecological Restoration, v. 38, no. 4, p. 237-245, http://doi.org/10.3368/er.38.4.237.

Thompson, J. C., Kreitler, C. W., and Young, M. H., 2020, Exploring groundwater recoverability in Texas: maximum economically recoverable storage: Texas Water Journal, v. 11, no. 1, p. 152-171, http://doi.org/https://doi.org/10.21423/twj.v11i1.7113.

Thompson, J. C., Kreitler, C. W., and Young, M. H., 2020, Exploring groundwater recoverability in Texas: maximum economically recoverable storage: Texas Water Journal, v. 11, no. 1, p. 152-171.

Abolt, C. J., Young, M. H., Atchley, A. L., and Wilson, C. J., 2019, Rapid machine-learning-based extraction and measurement of ice wedge polygons in high-resolution digital elevation models: The Cryosphere, v. 13, p. 237-245, http://doi.org/10.5194/tc-13-237-2019.

Caldwell, T. G., Bongiovanni, T., Cosh, M. H., Jackson, T. J., Colliander, A., Abolt, C. J., Casteel, R., Larson, T., Scanlon, B. R., and Young, M. H., 2019, The Texas Soil Observation Network: a comprehensive soil moisture dataset for remote sensing and land surface model validation: Vadose Zone Journal, v. 18, no. 1, 20 p., http://doi.org/10.2136/vzj2019.04.0034.

Hernández-Espriú, A., Wolaver, B. D., Arciniega-Esparza, S., Scanlon, B. R., Young, M. H., Nicot, J.-P., Macías-Medrano, S., and Breña-Naranjo, J. A., 2019, A screening approach to improve water management practices in undeveloped shale plays, with application to the transboundary Eagle Ford Formation in northeast Mexico: Journal of Environmental Management, v. 236, p. 146-162, http://doi.org/10.1016/j.jenvman.2018.11.123.

Weintraub, S. R, Flores, A. N., Weider, W. R., Sihi, D., Cagnarini, C., Goncalves, D. R. P., Young, M. H., and five others, 2019, Leveraging environmental research and observation networks to advance soil carbon science: Journal of Geophysical Research: Biogeosciences, v. 124, p. 1047-1055, http://doi.org/10.1029/2018JG004956.

Abolt, C. J., Young, M. H., Atchley, A. L., and Harp, D. R., 2018, Microtopographic control on the ground thermal regime in ice wedge polygons: The Cryosphere, v. 12, p. 1957-1968, http://doi.org/10.5194/tc-12-1957-2018.

Baatz, R, Sullivan, P. L., Li, L., Weintraub, S. R., Loescher H. W., Mirtl, M., Groffman, P. M.,

Young, M. H., and others, 2018, Steering operational synergies in terrestrial observation networks: opportunity for advancing Earth system dynamics modelling: Earth System Dynamics, v. 9, no. 2, p. 593-609, http://doi.org/10.5194/esd-9-593-2018.

Caldwell, T. G., Bongiovanni, T., Cosh, M. H., Halley, C., and Young, M. H., 2018, Field and laboratory evaluation of the CS655 soil water content sensor: Vadose Zone Journal, v. 17, no. 1, 16 p., http://doi.org/10.2136/vzj2017.12.0214.

Abolt, C. J., Young, M. H., and Caldwell, T., 2017, Numerical modelling of ice-wedge polygon geomorphic transition: Permafrost and Periglacial Processes, v. 28, no. 1, p. 347-355, http://doi.org/10.1002/ppp.1909.

Anderson, J. S., Romanak, K. D., Yang, C., Lu, J., Hovorka, S. D., and Young, M. H., 2017, Gas source attribution techniques for assessing leakage at geologic CO2 storage sites: Evaluating a CO2 and CH4 soil gas anomaly at the Cranfield CO2-EOR site: Chemical Geology, v. 454, p. 93-104, http://doi.org/10.1016/j.chemgeo.2017.02.024.

Arciniega-Esparza, S., Breña-Naranjo, J. A., Hernández-Espriú, A., Pedrozo-Acuña, A., Scanlon, B. R., Nicot, J.-P., Young, M. H., Wolaver, B. D., and Alcocer-Yamanaka, V. H., 2017, Baseflow recession analysis in a large shale play: Climate variability and anthropogenic alterations mask effects of hydraulic fracturing: Journal of Hydrology, v. 533, p. 160-171, http://doi.org/10.1016/j.jhydrol.2017.07.059.

Pierre, J.P., Young, M. H., Wolaver, B. D., Andrews, J. R., and Breton, C., 2017, Time series analysis of energy production and associated landscape fragmentation in the Eagle Ford Shale Play: Environmental Management, v. 60, no. 5, p. 852-866, http://doi.org/10.1007/s00267-017-0925-1.

Young, M. H., Andrews, J. H., Caldwell, T. G., and Saylam, K., 2017, Airborne LiDAR and aerial imagery to assess potential habitats for the desert tortoise (Gopherus agassizii): Remote Sensing, v. 9, no. 458, 16 p., http://doi.org/10.3390/rs9050458.

Young, M. H., Fenstermaker, L. F., and Belnap, J., 2017, Monitoring water content dynamics of biological soil crusts: Journal of Arid Environments, v. 142, no. 7, p. 41-49, http://doi.org/10.1016/j.jaridenv.2017.03.004.

Kelleners, T. J., Koonce, J., Shillito, R., Dijkema, J., Berli, M., Young, M. H., Frank, J. M., and Massman, W. J., 2016, Numerical modeling of coupled water flow and heat transport in soil and snow: Soil Science Society of America Journal, v. 80, no. 2, p. 247-263, http://doi.org/10.2136/sssaj2015.07.0279.

Vereecken, H., Schnepf, A., Hopmans, J. W., Javaux, M., Or, D., Roose, T., Vanderborght, J., Young, M. H., and 42 others, 2016, Modeling soil processes: Review, key challenges, and new perspectives: Vadose Zone Journal, v. 15, no. 5, 57 p., http://doi.org/10.2136/vzj2015.09.0131.

Chen, L., Long, X, Young, M. H., Yin, J., Yu, Z., and van Genuchten, M.Th., 2015, Optimal parameters for the Green-Ampt infiltration model under rainfall conditions: Journal of Hydrology and Hydromechanics, v. 63, no. 2, p. 93-101, http://doi.org/10.1515/johh-2015-0012.

Karagunduz, A., Young, M. H., and Pennell, K. D., 2015, Influence of surfactants on unsaturated water flow and solute transport: Water Resources Research, v. 51, no. 4, p. 1977-1988, http://doi.org/10.1002/2014WR015845.

Pierre, J.P., Abolt, C. J., and Young, M. H., 2015, Impacts from above-ground activities in the Eagle Ford Shale play on landscapes and hydrologic flows, La Salle County, Texas: Environmental Management, v. 55, no. 6, p. 1262-1275, http://doi.org/10.1007/s00267-015-0492-2.

Skaggs, T., Young, M. H., and Vrugt, J., 2015, Reproducible research in vadose zone sciences: Vadose Zone Journal, v. 14, no. 10, 5 p., http://doi.org/10.2136/vzj2015.06.0088.

Sueki, S., Acharya, K., Huntington, J., Liebert, R., Healey, J., Jasoni, R., and Young, M. H.,

2015, Defoliation effects of Diorhabda carinulata on tamarisk evapotranspiration and groundwater levels: Ecohydrology, v. 8, p. 1560-1571, http://doi.org/10.1002/eco.1604.

Zhu, J., Sun, D., Young, M. H., Caldwell, T., and Pan, F., 2015, Shrub spatial organization and partitioning of evaporation and transpiration in arid environments: Ecohydrology, v. 8, p. 1218-1228, http://doi.org/10.1002/eco.1576.

Meyer, N., Breeker, D. O., Young, M. H., and Litvak, M. E., 2014, Simulating the effect of vegetation in formation of pedogenic carbonate: Soil Science Society of America Journal, v. 78, p. 914-924, http://doi.org/10.2136/sssaj2013.08.0326.

Wolaver, B. D., Cook, C. E., Sunding, D. L., Hamilton, S. F., Scanlon, B. R., Young, M. H., Xu, X., and Reedy, R. C., 2014, Potential economic impacts of environmental flows following a possible listing of endangered Texas freshwater mussels: JAWRA: Journal of the American Water Resources Association, v. 50, no. 5, p. 1081-1101.

Yang, C., Hovorka, S. D., Young, M. H., and Treviño, R. H., 2014, Geochemical sensitivity to CO2 leakage: detection in potable aquifers at carbon sequestration sites: Greenhouse Gases: Science and Technology, v. 4, p. 384-399, http://doi.org/10.1002/ghg.1406.

Young, M., Green, R., Conkle, J. L., McCullough, M., Devitt, D. A., Wright, L., Vanderford, B., and Snyder, S. A., ed., 2014, Field-scale monitoring of pharmaceutical compounds applied to active golf courses by recycled water: Journal of Environmental Quality, v. 43, no. 2, p. 658-670, doi: 10.2134/jeq2013.07.0299.

Caldwell, T., Wöhling, T., Young, M. H., Boyle, D. P., and McDonald, E. V., 2013, Characterizing disturbed desert soils using multiobjective parameter optimization: Vadose Zone Journal, v. 12, p. 1-23, http://doi.org/10.2136/vzj2012.0083.

Devitt, D. A., Wright, L., and Young, M. H., 2013, Water and salt balances of turfgrass and bare soil irrigated with recycled water in an arid environment: Agronomy Journal, v. 105, p. 1051-1060, http://doi.org/10.2134/agronj2012.0126.

Scanlon, B. R., Reedy, R. C., Duncan, I. J., Mullican, W. F., III, and Young, M. H., 2013, Controls on water use for thermoelectric generation: Case study Texas, U.S.: Environmental Science & Technology, v. 47, no. 19, p. 11326-11334, http://doi.org/10.1021/es4029183.

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Young, M. H., 2009, Near-surface water content and carbon flux in biological soil crust (abs.):

AGU Chapman Conference, Sun Valley, Idaho.

Young, M. H., Fenstermaker, L. F., and Zhu, J., 2009, Dynamics of very near-surface water contents in an arid setting (abs.): presented at the American Society of Agronomy Meeting, Pittsburgh, Pennsylvania.

Young, M. H., Fenstermaker, L. F., and Zhu, J., 2009, Near-surface water content and carbon flux in biological soil crust (abs.): presented at the AGU Chapman Conference, Sun Valley, Idaho.

Berli, M., Ghezzehei, T. A., Menon, M., Tyler, S. W., Young, M. H., and Dexter, A., 2008, Modeling rhizosphere soil mechanics and hydraulics--an overview (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Berli, M., Menon, M., Tyler, S. W., and Young, M. H., 2008, Root induced changes in physical properties of desert soils (abs.): Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10.

Caldwell, T. G., McDonald, E. V., Young, M. H., Bacon, S., and Marion, B. P., 2008, Numerical simulations of salt accumulation in a hyper-arid soil chronosequence in the Sonoran Desert (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Caldwell, T. G., Young, M. H., Miller, J. J., and Dalldorf, G., 2008, Characterizing hydraulic properties in an arid watershed to aid in flood control and uncertainty analysis (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Caldwell, T. G., Young, M. H., Zhu, J., and McDonald, E. V., 2008, Gradation of soil hydraulic properties from canopy to interspace on a Mojave Desert soil chronosequence (abs.): presented at the European Geosciences Meeting, Vienna, Austria, April 14-18, 2008.

Caldwell, T. G., Young, M. H., Zhu, J., and McDonald, E. V., 2008, Heterogeneity of soils and hydraulic properties from canopy to interspace in the Mojave Desert (abs.): Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10, 2008.

Chief, K., and Young, M. H., 2008, Spatial variability of soil air permeability and hydraulic properties in desert soils (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Chief, K., Young, M. H., Healey, J., Johnson, E., Knight, E., Koonce, J., Yu, Ziye, and Tyler, S. W., 2008, Scaling environmental processes in heterogeneous arid soils (SEPHAS) weighing lysimeter facility: construction, installation, and preliminary infiltration experiment data (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Conrad, B., Devitt, D. A., Young, M. H., and Fenstermaker, L. F., 2008, Estimating sensible heat in the Great Basin, NV, using a large aperture scintillometer (abs.): Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10, 2008.

Devitt, D. A., Conrad, B., Fenstermaker, L. F., Young, M. H., and Bird, B. M., 2008, Basinwide evapotranspiration estimates in northern Nevada (abs.): Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10, 2008.

Knight, E., Young, M. H., Chief, K., Healey, J., Zhu, J., Mon, J., Menon, M., Tyler, S. W., and Yu, Ziye, 2008, Installation, calibration, and instrumentation of the Boulder City, Nevada, weighing lysimeters (abs.): Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10, 2008.

Koonce, J., Young, M. H., Yu, Ziye, Chief, K., Healey, J., and Tyler, S. W., 2008, Relating temperature propagation and wetting front in arid soils using distributed temperature sensing (DTS) coupled with multiple technologies (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Menon, M., Berli, M., Ghezzehei, T. A., Nico, P. S., Young, M. H., and Tyler, S. W., 2008, Visualizing rhizosphere soil structure around living roots (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Mon, J., Yu, Z., and Young, M. H., 2008, Tracer characteristics of brilliant blue FCF and FD&C Green No. 3 in arid soils (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Nie, W., Nicholl, M. J., Young, M. H., and Yu, Ziye, 2008, Impact of soil layering on evaporation driven flow and transport in arid soils (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Xiang, L., Mon, J., Yu, Ziye, Young, M. H., Stone, M., and Acharya, K., 2008, Simulating one dimensional water flow and solute transport in arid soils (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Young, M. H., 2008, Examining arid soil processes in Nevada USA using weighing lysimeters (abs.): European Geosciences Meeting, Vienna, Austria.

Young, M. H., 2008, Monitoring and examining soil water balance to support riparian restoration (abs.): Lower Colorado River Basin Riparian Revegetation Workshop, Las Vegas, Nevada.

Young, M. H., 2008, Multi-scale variability of soil and hydraulic properties and impacts to arid water balance (abs.): American Society of Agronomy Meeting, Houston, Texas.

Young, M. H., 2008, Relating mass and energy fluxes to arid soil development (abs.): American Society of Agronomy Meeting, Houston, Texas.

Young, M. H., 2008, Using terrain forecasting and field measurements to predict runoff potential (abs.): American Society of Flood Plain Managers National Meeting, San Diego, California.

Young, M. H., Caldwell, T. G., and McDonald, E. V., 2008, Evolution of arid alluvial soils: linking texture and structure to the partitioning of water at different spatial scales (abs.): presented at the 1st International Conference on Hydropedology, Pennsylvania State University, State College, Pennsylvania.

Young, M. H., Caldwell, T. G., Miller, J. J., Chen, L., Dalldorf, G., Bacon, S., and McDonald, E. V., 2008, Using terrain forecasting and field measurements to predict runoff potential (abs.): presented at the American Society of Flood Plain Managers National Meeting, San Diego, California.

Young, M. H., Caldwell, T. G., Zhu, J., Fenstermaker, L. F., and McDonald, E. V., 2008, Multi-scale variability of soil and hydraulic properties and impacts to arid water balance (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Young, M. H., McDonald, E. V., and Caldwell, T. G., 2008, Relating mass and energy fluxes to arid soil development (abs.): presented at the American Society of Agronomy Meeting, Houston, Texas.

Young, M. H., Yu, Ziye, Tyler, S. W., Chief, K., Knight, E., Healey, J., Zhu, J., Menon, M., and Mon, J., 2008, Examining arid soil processes in Nevada USA using weighing lysimeters (abs.): presented at the European Geosciences Meeting, Vienna, Austria, April 14-18, 2008.

Zhu, J., Caldwell, T. G., Young, M. H., and McDonald, E. V., 2008, Implications of under-canopy and interspace soil hydraulic property distributions in large scale desert ecosystems (abs.): presented at the European Geosciences Meeting, Vienna, Austria, April 14-18, 2008.

Zhu, J., Caldwell, T. G., Young, M. H., and McDonald, E. V., 2008, Scaling under-canopy and interspace soil hydraulic properties in desert ecosystems (abs.): Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10, 2008.

Abd El Naser, M. H., Young, M. H., Yu, Z., and Tyler, S. W., 2007, Large weighing lysimeters for studying environmental processes in arid soils (abs.): presented at the Unsaturated Zone

Interest Group meetings, Los Alamos, New Mexico, August 27-29, 2007.

Arrowood, T., Young, M. H., Yu, Ziye, Labahn, S., and Moser, D., 2007, Fate and transport of acrylamide in soil and groundwater systems: sorption, retardation and numerical simulations (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Caldwell, T. G., McDonald, E. V., Young, M. H., Hamerlynck, E. P., and Bacon, S., 2007, Soil development and hydrology of an arid soil chronosequence in the Sonoran Desert (abs.): presented at the Unsaturated Zone Interest Group meetings, Los Alamos, New Mexico, August 27-29, 2007.

Caldwell, T. G., Young, M. H., Zhu, J., and McDonald, E. V., 2007, Small-scale heterogeneity of soil hydraulic properties on large-scale water balance simulations (abs.): presented at the American Society of Agronomy Meeting, New Orleans, Louisiana.

Caldwell, T. G., Young, M. H., Zhu, J., Fenstermaker, L. F., and McDonald, E. V., 2007, Scaling heterogeneous soil hydraulic properties using canopy/interspace distributions in a Mojave Desert ecosystem (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Chen, L., Zhu, J., and Young, M. H., 2007, Polyacrylamide transport in water delivery canals (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Conrad, B., Devitt, D. A., Young, M. H., and Fenstermaker, L. F., 2007, Estimating sensible heat in the Great Basin, NV, using a large aperture scintillometer (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Devitt, D. A., Baghzouz, M., Bird, B. M., and Young, M. H., 2007, Surface temperature, heat loading and spectral reflectance of artificial turfgrass (abs.): presented at the American Society of Agronomy Meeting, New Orleans, Louisiana.

Devitt, D. A., Bird, B. M., and Young, M. H., 2007, Spatial and temporal assessment of soil moisture redistribution, evaporation, and transpiration (abs.): presented at the American Society of Agronomy Meeting, New Orleans, Louisiana.

Labahn, S., Moser, D., Arrowood, T., and Young, M. H., 2007, Fate of acrylamide in soil and groundwater systems: microbial degradation (abs.): presented at the Fall AGU Meeting, San Francisco, California.

McDonald, E. V., Young, M. H., Caldwell, T. G., Benner, S. G., and Meadows, D. G., 2007, Hydraulic properties of a desert soil chronosequence in the Mojave Desert, USA (abs.): presented at the Unsaturated Zone Interest Group meetings, Los Alamos, New Mexico, August 27-29, 2007.

Yin, A., Young, M. H., and Yu, Ziye, 2007, Effects of paleoclimate and time-varying canopy structures on paleo-water fluxes (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Young, M. H., 2007, Combining pedotransfer functions and detailed geomorphic mapping to characterize runoff potential on an arid alluvial fan complex (abs.): Fall AGU Meeting, San Francisco, California.

Young, M. H., 2007, Groundwater characterization and monitoring strategies II (abs.): presented at the American Nuclear Society Meeting, Washington, D.C., November 11-15, 2007.

Young, M. H., 2007, Measuring water content in near-surface soils with large changes in ambient temperature (abs.): presented at the Environmental Sensors Symposium, Boise State University, Boise, Oct 26-27, 2007.

Young, M. H., 2007, Spatial variability of soil hydraulic properties at interspace/canopy microsites (abs.): American Society of Agronomy Meeting, New Orleans, Louisiana.

Young, M. H., Caldwell, T. G., and Zhu, J., 2007, Spatial variability of soil hydraulic properties at interspace/canopy microsites (abs.): presented at the American Society of Agronomy Meeting,

New Orleans, Louisiana.

Young, M. H., Caldwell, T. G., Miller, J. J., and Dalldorf, G., 2007, Combining pedotransfer functions and detailed geomorphic mapping to characterize runoff potential on an arid alluvial fan complex (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Cabik, M. E., Zhu, J., Kratt, C., Jasoni, R., Young, M. H., Thomas, J. K., and Arnone, J. A., III, 2006, Multi-scale remote sensing observations as a basis for estimating evapotranspiration across the eastern Great Basin Desert, Nevada, USA (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Caldwell, T. G., McDonald, E. V., Young, M. H., Hamerlynck, E. P., and Bacon, S., 2006, Ecohydrology of an arid soil chronosequence in the Sonoran Desert, Yuma Proving Ground, USA (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Chen, L., and Young, M. H., 2006, A physically-based two-dimensional rainfall-runoff model for small-scale watersheds (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Chen, L., Zhu, J., and Young, M. H., 2006, Modelling polyacrylamide transport in water delivery canals (abs.): presented at the American Society of Agronomy Meeting, Indianapolis, Indiana.

Meadows, D. G., Young, M. H., and Fenstermaker, L. F., 2006, Impact of spatial variability of soil properties on local water balance in a Mojave Desert ecosystem (abs.): presented at the American Society of Agronomy Meeting, Indianapolis, Indiana.

Moran, E. A., Young, M. H., and Yu, Ziye, 2006, Mechanisms for reducing infiltration in laboratory columns using polyacrylamide (PAM) (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Susfalk, R. B., Epstein, B. J., Schmidt, M., Goreham, J. O., Fitzgerald, B., Young, M. H., Martin, C., Swihart, J., and Smith, D., 2006, Seepage reduction from unlined irrigation canals: water quality and seepage reduction effectiveness (abs.): presented at the Fall AGU Meeting, San Francisco, California.

Young, M. H., 2006, Evolution of soil hydraulic properties on arid alluvial fans (abs.): AGU-Western Pacific Geophysics Meeting, Beijing, China.

Young, M. H., 2006, Field and laboratory evaluation of a soil-applied, organic emulsion (abs.): American Society of Agronomy Meeting, Indianapolis, Indiana.

Young, M. H., 2006, Hydrologic and air quality impacts of a soil-applied, organic emulsion (abs.): World Congress of Soil Science, Philadelphia, Pennsylvania.

Young, M. H., 2006, Scaling environmental processes in heterogeneous arid soils (SEPHAS): a new research facility in Nevada USA (abs.): World Congress of Soil Science, Philadelphia, Pennsylvania.

Young, M. H., Caldwell, T. G., Meadows, D. G., Etyemezian, V., Nikolich, G., McDonald, E. V., Shafer, D. S., Miller, J. J., and Goreham, J. O., 2006, Field and laboratory evaluation of a soil-applied, organic emulsion (abs.): presented at the American Society of Agronomy Meeting, Indianapolis, Indiana.

Young, M. H., Caldwell, T. G., Meadows, D. G., Etyemezian, V., Nikolich, G., Shafer, D. S., McDonald, E. V., Miller, J. J., and Goreham, J. O., 2006, Hydrologic and air quality impacts of a soil-applied, organic emulsion (abs.): presented at the World Congress of Soil Science, Philadelphia, Pennsylvania.

Young, M. H., McDonald, E. V., Caldwell, T. G., Meadows, D. G., and Shafer, D. S., 2006, Evolution of soil hydraulic properties on arid alluvial fans: impacts on near-surface water resources: (abs.): presented at Hohai University, School of Hydraulic Engineers, Nanjing, China.

Young, M. H., Meadows, D. G., Caldwell, T. G., Shafer, D. S., and McDonald, E. V., 2006, Evolution of soil hydraulic properties on arid alluvial fans (abs.): presented at the AGU Western

Pacific Geophysics Meeting, Beijing, China.

Young, M. H., Yu, Ziye, and Tyler, S. W., 2006, Scaling environmental processes in heterogeneous arid soils (SEPHAS): a new research facility in Nevada USA (abs.): presented at the World Congress of Soil Science, Philadelphia, Pennsylvania.

Zhu, J., Sun, D., and Young, M. H., 2006, Aggregating hydraulic property measurements to large scale hydrologic processes (abs.): presented at the AGU Western Pacific Geophysics Meeting, Beijing, China.

Zhu, J., Young, M. H., and Moran, E. A., 2006, Effects of polyacrylamide treated soils on water seepage in unlined water delivery canals (abs.): presented at the American Society of Agronomy Meeting, Indianapolis, Indiana.

Presentations

Invited Presentations

Projected landscape impacts from energy development scenarios in the Trans-Pecos: presented to Texas Agricultural Land Trust, Espino Conference Center, Sul Ross State University, Alpine, Tex., November 14, 2019.

Developing aquatic ecosystem science to inform environmental performance: presented to Water-Energy Regulatory Environment and Trends Session, presented at The University of Texas at Austin/Exxon Mobil 2018 Energy-Water Workshop, Austin, Tex., December 3, 2018.

Critical linkages between environment, energy resource development, and economics: presented to OLLI SAGE Lecture Series, Austin, Tex., October 2018.

Mid-century resilience in the face of climate extremes and population growth: experiences from the Lone Star State: presented to Desert Research Institute, Reno, Nev., September 2018.

Update on TexNet Seismic Monitoring Program: Testimony presented to Texas House Committee on Energy Resources, Austin, Tex., April 18, 2018.

Mid-century resilience in the face of climate extremes and population growth: experiences from the Lone Star State: presented to Hartwick College, Les Rude Lecture Series, Oneonta, NY, April 2018.

Planet Texas 2050: Mid-century resilience in the face of climate extremes and population growth: presented to Defense Advanced Research Projects Agency, Washington, DC, April 2018.

Characterizing Soil and Landscape Attributes at Different Scales: Applications in Desert Ecosystems: presented to Brazilian Soil Physics Meeting, Universidade de São Paulo, Brazil, 2017.

Improving Soil Models by Connecting Scientific Disciplines: presented to Community Surface Dynamics Modeling System, Annual Meeting, Boulder, Colo., 2017.

TexNet-CISR: An Integrated Response to Seismicity in Texas: presented to American Geosciences Institute, presented at Critical Issues Program webinar, 2017.

Time Series Analysis of Energy Production and Associated Landscape Fragmentation in the Eagle Ford Shale Play: presented to South Texas Geological Society Meeting, San Antonio, Tex., 2017.

TexNet and CISR: Integrated Seismicity Monitoring and Research in Texas: presented to the Association of American State Geologists (AASG), presented at annual meeting, Flagstaff, AZ, June 2015.

From Athens to Austin: Field Experiences of a Geoscientist: presented to Department of Geological Sciences, Ohio University, presented at 2015 Alumni Symposium, Athens, OH, April 2015.

Understanding the Water/Land/Energy Nexus in Texas: presented to the University of Arkansas at Little Rock, presented at a symposium on Reducing the Impact of Hydraulic Shale Fracturing and Natural Gas Drilling on Environments, Little Rock, AR, April 2015.

Water/Land/Energy Nexus for Unconventional Energy in Texas: presented to the University of South Carolina, Department of Earth and Ocean Sciences Seminar Series, Columbia, SC, February 2015.

Experiences in Texas: water, land and unconventional fossil energy exploration: presented at the 79th North American Wildlife and Natural Resources Conference, Denver, Colorado, 2014.

Seismic experiences in Texas: presented at the IPAA's 84th Midyear Meeting and Land Access & Environmental Issues Conference, Colorado Springs, Colorado, 2014.

Water/land/energy nexus for unconventional energy in Texas: presented at the Air and Waste Management Association, Fall 2014 Symposium Energy and the Environment: Progress and Possibilities, Austin, Texas, 2014.

Water/land/energy nexus for unconventional energy in Texas: presented at the University of Minnesota, Biosystems Engineering Seminar Series, St. Paul, Minnesota, 2014.

Environmental impacts of hydraulic fracturing--truth or fiction: presented at AAPG International Conference and Exposition, Cartagena, Colombia, 2013.

Water/land/energy nexus for unconventional energy in Texas: presented at Argonne National Laboratories, 2013.

Energy from unconventionals: new hope, new challenges: presented at Division of Earth and Life Studies, National Research Council, Washington, D.C., November 2012.

Monitoring pharmaceutical compounds applied to active golf courses from recycled water: presented to invited talk presented to Texas Council on Environmental Quality, Austin, Texas, August 2012.

CO2 EOR in Texas: research, resources, and opportunities: presented to the Texas House Subcommittee on Energy Resources, June 2012.

Energy, water, and hydrofracking in Texas: presented to invited talk presented at the Association of American State Geologists National Meeting, Austin, Texas, June 2012.

National cooperative geologic mapping, 20 years and counting, Part 3a--where do we go from here, or what hath lidar wrought?: presented to invited talk presented at the Association of American State Geologists National Meeting, Austin, Texas, June 2012.

Update on Bureau of Economic Geology research in geologic sequestration: project description and update: presented to invited talk presented at TCEQ Trade Fair, Austin, Texas, May 2012.

Adapting to sea level rise and managing risk along the Texas Gulf Coast,": presented to invited talk presented to UT-Austin Energy Institute Advisory Committee, Austin, Texas, April 2012.

Energy/environmental aspects of unconventional gas and hydrofracking: presented to invited talk presented at AIPG meeting, Austin, Texas, March 2012.

Multi-scale characterization of arid soil properties for predicting landscape processes: presented at New Mexico Tech, Hydrology seminar series, Austin, Texas, March 2012.

University of Texas experimental and scientific collaboratory for earth surface assessment and research (UTEXAS CESAR): presented to invited talk presented to UT-Austin Jackson School Advisory Committee, Austin, Texas, March 2012.

Energy from unconventionals: new hope, new challenges: presented at Division of Earth and Life Studies, National Research Council, Washington, D.C., 2012.

Above-ground energy/water aspects of unconventional gas and hydrofracking: presented to

presented at the Association of American State Geologists National Meeting, Dubuque, Iowa, June 2011.

Gulf of Mexico Miocene CO2 site characterization mega transect: presented to presented at the Association of American State Geologists National Meeting, Dubuque, Iowa, June 2011.

Multi-scale characterization of arid soil properties for predicting landscape processes: presented at the Texas A&M Scholars Program, College Station, Texas, 2011.

Water-related research activities being conducted by the Bureau of Economic Geology, UT-Austin: presented to presented at the Texas Water Conservation Association, Austin, Texas, 2011.

Monitoring and examining soil water balance to support riparian restoration: presented at the Lower Colorado River Basin Riparian Revegetation Workshop, Las Vegas, Nevada, May 7, 2008.

Installation, calibration, and instrumentation of the Boulder City, Nevada, weighing lysimeters: presented at the Symposium--Understanding Near-Surface Environmental Processes, Las Vegas, Nevada, April 9-10, 2008.

Evolution of arid alluvial soils: linking texture and structure to the partitioning of water at different spatial scales: presented at the 1st International Conference on Hydropedology, State College, Pennsylvania, 2008.

Groundwater characterization and monitoring strategies II: presented at the American Nuclear Society Meeting, Washington, D.C., November 11-15, 2007.

Measuring water content in near-surface soils with large changes in ambient temperature: presented at Environmental Sensors Symposium, Boise State University, Boise, Idaho, October 26-27, 2007.

Large weighing lysimeters for studying environmental processes in arid soils: presented to presented at Unsaturated Zone Interest Group meetings, Los Alamos, New Mexico, August 27-29, 2007.

Evolution of soil hydraulic properties on arid alluvial fans: impacts on near-surface water resources: presented at Hohai University, School of Hydraulic Eng, Nanjing, China, 2006.

Presentations

Using eddy covariance to investigate ecosystem and climate controls on evapotranspiration (ET) across the Edwards Aquifer recharge region of central Texas (oral): presented to Geological Society of America (GSA), presented at Annual GSA Conference, Pittsburgh, Pa., October 14-19, 2023.

Using Eddy Covariance to Investigate Ecosystem and Climate Controls on Evapotranspiration Across the Edwards Aquifer Recharge Region of Central Texas: presented to AmeriFlux, presented at Annual AmeriFlux Meeting, Gardner, Mass., October 2-6, 2023.

Research Activities in Texas: Cal/Val for SMAP and Sensor Evaluations: presented to W-3188, presented at Multi-State Soil Physics Group, Riverside, Calif., January 10-11, 2019.

Green Water and Vulnerable Ecosystems in Unconventional Energy Plays: presented to Soil Science Society of America, presented at International Soils Meeting, San Diego, Calif., January 6-9, 2019.

Landscape Alteration from Energy Development in the Greater Big Bend Region of Texas: presented at Soil Science Society of America International Soils Meeting, San Diego, Calif., January 8, 2019.