

U.T. HYDROGEOLOGY NEWS – January, 2023

Ashley Matheny and her students are investigating mangroves around the world with the goal of estimating the ability of mangroves to remediate waste water effluent contamination along coastlines



Above: Mangroves in Jamaica with (left) Myriam Loving (MS student) and (right) Suvan Cabraal (BS, 2018, Ph.D. candidate).

Right: Suvan, Myriam, and Ashley at a weather station in Jamaica.

Awards:

Daniella Rempe (BS, 2008; faculty) received the 2022 Knebel Teaching Award, which is selected by the JSG student voting, for the graduate course Physical Hydrology.

Daniella also has just been awarded a National Science Foundation Career Grant for studying “How hydroclimate variability is transmitted through the critical zone.” NSF Faculty Early Career Development (CAREER) Program grants are awarded to junior-level university faculty.

Ashley Matheny (faculty) and Suvan Cabraal (Ph.D. candidate) received an NSF I-Corps grant for their project: Monitoring trees for water stress via a smart sensing system. The project explores the market for using the LEAF logger and new capacitance sensor for smart irrigation systems and fire risk warning systems.

Bridget Scanlon (BEG) was named the AGU’s 2022 William Bowie Lecturer. The William Bowie Lecture is presented annually and recognizes significant contributions to the fundamentals of geophysics, as well as unselfish cooperation in research.

Upcoming events:

The 2013 GSA South-Central Section meeting will take place on 12-14 March at Oklahoma State University.

Alumni and faculty news:

Bayani Cardenas (faculty) spent part of the Christmas break back in the Philippines. He was also in Bangladesh with two of his PhD students working with the ‘Texas Trinity’ (collaborating scientists from UT, A&M, and UTSA).

Kelly (Iacono) Daniel (BS, 2004) is active in NAWIC Austin Chapter (an association of women in the construction industry promoting motivation for growth through education) that recently volunteered for the Travis County Sherriff’s Brown Santa Drive.

Barbara Everett (BS, 1983) has been with NV5 consulting in Albuquerque since 2015. She is a Senior Project Manager currently overseeing environmental work at the Mt. Taylor uranium mine in San Mateo, NM. The mine is in closure and in the midst of conducting groundwater assessment for the remediation of a uranium and nitrate plume. .

Luisa Florez (BS, 2017) recently became an Environmental and Permitting Advisor at BP in their Gas & Low Carbon Energy entity. She says, “ I will be supporting new energy projects and opportunities ranging from offshore and onshore wind to hydrogen and solar. I got to visit my first offshore wind farm off the coast of Rhode Island a couple months ago; it was some awesome engineering in action. Exciting times!”

Also, she now has visiting Iceland for the purpose of standing on two tectonic plates simultaneously on her bucket list!

Patrick Fortson (BS, 2005) is with Braun Intertec in Austin where he is currently a Business Unit Leader, Senior Scientist for the Austin Investigation & Remediation group.

Wendy Gordon (PhD, 2003) is with ICF in Austin where she is a Principal in Environmental & Planning with expertise in habitat, climate, and water.

Dave Hill (MA, 1993) still lives “in Round Rock, in the same house we bought just after grad school.” Dave works in environmental consulting with ECS Southwest.

Russ K. Johnson (BS, 1997) is Senior Project Manager at Weston Solutions, Inc., in Austin.

Tiffany Kocis (BS, 2014) is a Senior Environmental Scientist in the Groundwater Protection Program, Department of Pesticide Regulation of the California Environmental Protection Agency. Tiffany says. “I am doing great! Other than fieldwork (which I did a lot of this year -- developing new passive sampling methods for pesticides in groundwater). I am full-time teleworking which has been a big positive change from the pandemic ... Commuting is the worst!”

Roger Lee (PhD, 1996) is rumored to have celebrated his birthday with his grandchildren at Disney World.

Pete McMahon (MA, 1984) is a co-author on the USGS Open-File Report on identifying redox processes in groundwater, building on an earlier paper (McMahon and Chapelle, 2008).

Jurgens, B.C., McMahon, P.B., Chapelle, F.H., and Eberts, S.M., 2009, An Excel® workbook for identifying redox processes in ground water: U.S. Geological Survey Open-File Report 2009–1004 8 p. Available at <http://pubs.usgs.gov/of/2009/1004/>.

McMahon, P.B., and Chapelle, F.H., 2008, Redox processes and water quality of selected principal aquifer systems: *Ground Water*, v. 46, no. 2, p. 259–271.

Jenna Kromann Rao (MS, 2015) reports a new member to her family, Sonya, who was born last April. Jenna works at the TWDB as a Senior Water Resources Engineer in the flood modeling group.

Dan Reyes (BS, 2012) recently became Technical Co-Founder and VP of Research and Innovation for a company called Mycocycle that is exploring the use of lignin-degrading fungi in the field of environmental bioremediation. Dan says that “We're growing a ton and am excited to combine my skills as a trained Hydrogeologist with my passion for fungi that I've nurtured over the past 7 years immersing myself in the emerging fields of Applied Mycology and Mycoremediation through projects like CoRenewal in Ecuador and MycoAlliance which later became the Central Texas Mycological Society based out of Austin, TX. I am currently living down in Merida, Yucatan in southeast Mexico but will be traveling back and forth to the company's HQ in a suburb right outside of Chicago, IL. In addition, we also have a solid R&D team in Poland taking on projects in the EU under my supervision.”

Here are a couple of links for more info:

<https://youtu.be/siH7ZTdnI5c>

https://www.prweb.com/releases/mycocycle_announces_addition_of_two_experienced_leaders/prweb19051552.htm

Katherine Romanak (PhD, 1997) recently taught at the IEAGHG (International Energy Agency Greenhouse Gas) R&D Programme International Summer School in Indonesia.

Sachin Shah (BS, 1997) is with the USGS in Austin, where he serves as the Manager of the Social and Economic Drivers Program for the USGS Water Mission Area and as the lead of the Socio-Hydrology Team at the Oklahoma-Texas Water Science Center in Austin. He is also the USGS Environmental Justice Science Advisor to the Department of Interior Office of Environmental Policy and Compliance.

Virginia Smith (PhD, 2012) presented a poster at the recent AGU entitled “Comparing urban flood dynamics using SAR imagery and Google Earth engine: Case studies in Dhaka and Houston.” Virginia is an Assistant professor of civil and environmental engineering at Villanova University.

HydroSpeak (from an anonymous non-hydrogeologist graduate student of about 20 years ago):
“Totally saturated” or “Mondo porous” is expressing approval of something
A bar is a “recharge zone.”

Obituaries

Dwight Deal (BEG, 1972-73) Don Parker () informs us the Dwight Deal recently passed away. He was a caver and a groundwater geologist who used to teach at Sul Ross. At the Beg, he conducted environmentally oriented groundwater studies, including mapping of the Edwards Aquifer recharge zone. From 1973-1978, he was with the Texas Natural Areas Survey.

Pete Rose (BS, 1957, MA 1959, & PhD, 1968) Peter Pope, President of the Austin Geological Society (AGS), informs us that Peter R. (Pete) Rose passed away Monday, December 19 while in hospice care at the Christopher House in Austin. He states that “His daughters were with him when he passed. Pete’s passing is a significant loss, but his positive influence and contributions to the geoscience community carry forward in the contributions of those who knew him, worked with him, and learned from him. His professional accomplishments were abundant and wide-ranging. He particularly valued field observations as a teaching tool, and he led many field trips to the Texas Hill Country.” He was a president of the AGS and the American Association of Petroleum Geologists (AAPG). He was the leading authority on the geology and history of the Edwards Plateau, starting with his definitive monograph on the Edwards Limestone.

Rose, P.R., 1972, Edwards Group, Surface and Subsurface, Central Texas. The University of Texas, Bureau of Economic Geology Report of Investigations 74, 198 pages,
<http://www.beg.utexas.edu/publications/edwards-group-surface-and-subsurface-central-texas>.
His obituary can be found at <https://www.statesman.com/obituaries/paco0384227>.

Discussions are currently underway about actions to honor Pete., including the possibility of a scholarship in his name and/or a fund in his name to provide financial support for field experiences. More information about these efforts will become available by the AGS. Meanwhile, members who wish to contribute to the society’s student scholarships in memory of Dr. Rose may do so through the AGS website (<http://www.austingeosoc.org/ags-scholarships>), or by sending checks to the Austin Geological Society’s mailbox at PO Box 1302, Austin TX, 78767-1302.

A memorial service will be held January 21, 2023 at 2:00 PM at Westlake Hills Presbyterian Church in Austin.

Russ Slayback (not an alumnus, but he was active in the Geology Foundation). Russ and his wife endowed the Russ and Judy Slayback Fund for Hydrogeologic Field Experiences

Note: As I am now emeritus, these newsletters come out irregularly and not nearly monthly, as had been common since 1985, barring my sabbatical and research leaves. Please send me any news items that might be shared, especially some “blasts from the past.”

If you would like to stop receiving these newsletters, please let me know, and I will strike your name off the email lists.

If you know a friend or alum who is not receiving these, but would like to, please let me know and will shoot a copy to them.