

The University of Arizona
Department of
Hydrology & Atmospheric Sciences
Presents

El Día del Agua y la Atmósfera

March 19, 2024
“Future HAS Horizon”



"Arizonian Shower"

A distant thunderstorm as seen from
the I-89 between Flagstaff and Page

Photo Taken By
Anik Das

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General Theme

This has been a transformative year for HAS, and we eagerly anticipate bringing the community together. This year's El Día - titled "**Future HAS Horizon**" - is set to be an even more interactive and inclusive event. As we gather for the annual El Día event, we aim to envision, connect, and innovate. Therefore, this year's theme will be Future HAS Horizon. We aim to consider the future of Hydrology and Atmospheric Sciences as a connected field and department, making the event more interactive and inclusive.

Today, we are using *artificial intelligence* and *machine learning* to predict and understand hydrogeological and atmospheric process. These advanced technologies are being implemented to enhance our understanding and prediction capabilities in the field of Hydrology and Atmospheric Sciences.

The event will host a blend of research presentations and collaborative discussions, with a special emphasis on the role of AI and machine learning in our field.

In the afternoon, World (Global) Café will be held to unite students and all attendees to discuss a broad and subjective topic. This will essentially form a simple, effective, and flexible format for hosting large group dialogue, thereby helping to shape and identify the future of the nexus of the hydrologic and atmospheric sciences.

Message from the El Día Planning Committee

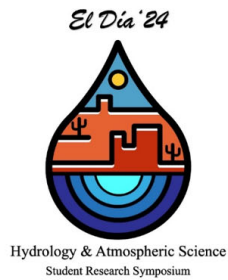
On behalf of the students at the University of Arizona Department of Hydrology and Atmospheric Sciences (HAS), we welcome you to our Annual Student Research Symposium, El Día del Agua y la Atmósfera 2024. El Día is one of the five symposia held during Earth Week. This year, a dedicated committee of HAS students - with essential support from staff and faculty - have managed and organized the event. El Día is a great opportunity for students with background and interest in hydrology and atmospheric sciences to present their research, and get to know peers, prospective students, faculty members, alumni, and working professionals in the fields of hydrology, atmospheric sciences, and other disciplines.

The success of El Día is made possible through the continued support of our sponsors, the efforts of students, faculty and staff members, the School of Earth and Environmental Sciences, and the College of Science.

Enjoy the symposium and thank you for participating in El Día del Agua y la Atmósfera 2024! We hope to see you next year!

~ 2024 El Día Planning Committee

El Día del Agua y la Atmósfera 2024 Planning Committee



Hector Venegas Quinones
Chairperson



Mohammad Farmani
Website Coordinator



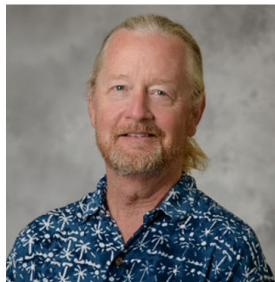
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Omid Zandi
Volunteer Coordinator



Ty Ferré
Distinguished Professor
EDDAA Advisor



Erma Santander
Executive Assistant
Project Coordinator

El Día del Agua y la Atmósfera Agenda

- 8:00** Registration & Continental Breakfast - Courtyard
- 8:40** Welcome and Opening Remarks by Hector Venegas Quinones, El Dia Chair
- 8:45** Dr. Christopher Castro, Interim Department Head ~ S107 Lecture Hall
- 9:00** Keynote Speaker: Peter Troch ~ S107 Lecture Hall
- 9:30** Oral Session One ~ S107 Lecture Hall
- 10:45** Coffee Break ~ Courtyard
- 11:00** Poster Session ~ Courtyard
- 12:00** Lunch ~ Served in the Courtyard
Dining Areas: S215, S225, S107 & Courtyard
- 13:00** Oral Session Two ~ S107 Lecture Hall
- 14:00** Poster Session & Coffee Break ~ Courtyard
- 15:00** Oral Session Three ~ S107 Lecture Hall
- 16:00** World/Global Café ~ S107 Lecture Hall
- 17:00** Closing Statements & Presentations of Awards ~ S107 Lecture Hall
- 18:00** El Día Reception ~ Frog & Firkin, =<9%Z sn{jwry~%
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Tom Meixner Award

Accepting Nominations the day of El Dia through QR Code

The year 2022 was a difficult year for our HAS community. In August we lost Jetal Agnihotri, in September we lost Rodrigo Delgado, and in October we lost Thomas Meixner. We feel these three losses very deeply and we take time to remember that the spirits of Jetal, Rodrigo, and Tom are with us during El Día.

In that vein, “The Tom Meixner Award” has been established. This award will go to a student(s) who have embodied the community spirit of El Día, something that was very important to Tom Meixner.

Whenever you see or hear someone do or say something that you think embodies the spirit of El Día - offers a constructive comment, asks a thoughtful question, adds humor to the day - you can nominate them using the QR code provided below. We will announce the winner(s) during the award ceremony.

This award has been generously sponsored by the Salt River Project.



Interview with El Dia's Photo Contest Winner Anik Das



Anik Das is a second year PHD student in Dr. Xiquan Dong's research group. Anik received his Integrated MSc degree in Physics, Birla Institute of Technology, Mesra, India. Anik's research interest is atmospheric physics, chemistry, and social sciences.

Interviewer: Can you share a bit about your interests and the story behind your winning photo in the recent contest?

Anik: Sure, I've always had a natural inclination towards appreciating the beauty of nature and framing it in unique ways. The winning photo was actually captured quite spontaneously. I was on a trip with some friends, returning from a visit to Page where we explored Antelope Canyon and the Horseshoe Bend. As we were driving back to our Airbnb in Flagstaff, the sky caught my attention with its intriguing hues as dusk approached. Despite being somewhat drowsy from the day's adventures, I instinctively grabbed my phone and snapped the photo while still in motion. Sometimes, the best shots come from those unexpected moments of inspiration.

Interviewer: Could you tell us about your experience working in our department and perhaps shed some light on your hobbies outside of academia?

Anik: Absolutely, I've thoroughly enjoyed my time here in Dr. Xiquan Dong's group during my second year of PhD, particularly focusing on cloud microphysics. Outside of research, my interests tend to lean towards indoor activities. I find solace in immersing myself in world cinema, constantly exploring different cultures and storytelling techniques. Additionally, I have a passion for folk art sketching, finding joy in expressing creativity through various artistic mediums. My reading habits have evolved over time, initially gravitating towards fiction but now venturing into the realms of non-fiction to broaden my understanding of the world. On occasions, I dabble in creative writing, particularly poetry, finding it to be a cathartic outlet for self-expression. In terms of my hobbies, I have a keen eye for capturing moments, whether it's through documenting culinary delights on my food blog "Geeky Gastronomy" or capturing the serene beauty of nature through photography.

Interviewer: Winning the photo contest must have been quite an achievement. How do you feel about this accomplishment, and would you like to share a few words with the department?

Anik: Winning the photo contest was truly a humbling experience for me. I'm incredibly grateful to everyone who took the time to vote for my picture, whether out of the kindness of friendship or genuine admiration for the image. It's heartwarming to know that my work resonated with others in some way. To the department, I extend my sincere thanks for the support and encouragement throughout this journey. Your acknowledgment means a great deal to me, and I look forward to continuing to contribute to our collective academic endeavors.

Special Thanks to Our Sponsors

Legacy Awards

Errol L. Montgomery & Associates, Inc.
E. Philip Krider

Corporate Student Awards

Arizona Hydrological Society
Geosystems Analysis, Inc.
Matrix New World Engineering
Peter Mock Groundwater Consulting, Inc.
Pima County Flood Control District
Salt River Project
Tucson Water

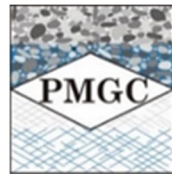
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2024 El Día Sponsors



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Awards and Prizes ~ Legacy Sponsors

Thank you to our legacy sponsors for their sponsorships of our major prizes and awards. You have our most profound gratitude for your continued loyalty and support. Students are recognized for their superior achievement in oral and poster presentations by juried committees.

Montgomery Prize

Most Outstanding Oral Presentation In Hydrology
Certificate and Award of \$2,500

Philip E. Krider Award

*Most Outstanding Oral Presentation
In Atmospheric Sciences*
Certificate and Award of \$2,500

Benjamin M. Herman Award

Best Oral Presentation In Atmospheric Sciences
Certificate and Award of \$1,000

HAS Awards of Excellence

Best Oral and Poster
Certificate and Award of \$500 for each award

Donald R. Davis Undergraduate Distinction Award

Outstanding Undergraduate Poster Award
Certificate and Award of \$500

Eugene S. Simpson Undergraduate Poster Award

*Best Undergraduate Poster in Hydrogeology,
Subsurface Hydrology, or Groundwater*
Certificate and Award of \$500

Stanley N. Davis Poster Award

Outstanding Poster in Hydrology
Sponsored by Peter Mock Groundwater Consulting, Inc.
Certificate and Award of \$500

Awards and Prizes ~ Corporate Sponsors

Thank you to our corporate sponsors who have pledged their contribution. We appreciate your support, Students are recognized for their superior achievement in oral and poster presentations by juried committees.

Arizona Hydrological Society, Oral Award
Best Presentation in the field of Hydrology
Certificate and Award \$1,000

GeoSystem Analysis, Inc., Oral Award
Best Presentation in Applied Subsurface Hydrogeology
Certificate and Award of \$500

Matrix New World Engineering, Oral Award
Outstanding Oral Presentation
Certificate and Award of \$500

Pima County Flood Control, Poster Award
Outstanding Poster Presentation
Certificate and Award of \$500

Salt River Project Best Poster Award
Outstanding Poster Presentation
Certificate and Award of \$500

Tucson Water Outstanding Poster Award
Excellence in Technical Communication in Poster Format
Certificate and Award of \$500

Spirit of Tom Meixner Award
Embodies the Community Spirit of El Día
Sponsored by the Salt River Project
Certificate and Award of \$500

The Montgomery Prize

We would like to thank Errol L. Montgomery & Associates, Inc., a

LEGACY SPONSOR

for their support. For many years, Montgomery & Associates has sponsored the premier cash award, *The Montgomery Prize*, for the Best Oral Presentation at our annual student research symposium.

This “best of the best” prize is made in addition to the departmental Awards of Excellence for best oral and best paper presentations and is presented to the winner by a representative from Montgomery & Associates. The award symbolizes the company’s commitment to encouraging and rewarding excellence in oral presentation of hydrologic research. Montgomery & Associates offers similar awards during annual events at the University of Arizona and Northern Arizona University Geology Departments.

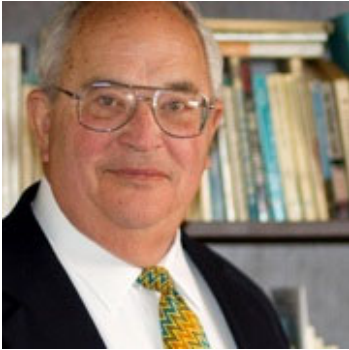


Errol L. Montgomery & Associates, Inc., founded by HWRS Alumnus Errol L. Montgomery, is a water resource consulting group with more than 25 years of experience addressing groundwater availability, sustainability, and quality issues for municipal, industrial, mining, and governmental clients. Professional services include:

- Groundwater exploration and development
- Contaminant assessment and remediation
- Artificial groundwater recharge
- Assured and Adequate Water Supply demonstrations
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- Satellite image analysis
- Groundwater flow and solute transport modeling

The firm’s principal office is located in Tucson, Arizona, and branch offices are maintained in Scottsdale, Arizona, Lima, Perú, and in Santiago de Chile.

E. Philip Krider Award Most Outstanding Oral Presentation In Atmospheric Sciences



Dr. E. Philip Krider is known worldwide for his work on lightning and thunderstorm electricity and writings on Benjamin Franklin's electrical experiments. He led the group that developed the first gated, wideband magnetic direction-finders that are now the basis of the U.S. Na-

tional Lightning Detection Network. Dr. Krider is a Fellow of the American Geophysical Union and the American Meteorological Society and a former Co-Chief Editor and Editor of the *Journal of the Atmospheric Sciences*; he is also past President of the International Commission on Atmospheric Electricity.

Dr. Krider received his MS in Physics (1964) and PhD in Physics (1969) from the University of Arizona. Dr. Krider joined the faculty at The University of Arizona in 1971 and retired in 2009. His research has focused primarily on the physics of lightning detection and protection, and related problems in atmospheric electricity. Dr. Krider is the author or co-author of more than 130 reviewed publications, and holds 8 patents.

Benjamin M. Herman

Oral Presentation Awards



Benjamin M. Herman was the first PhD student in the newly founded Department of Meteorology at the University of Arizona and went on to become Professor and Chair of the Department of Atmospheric Sciences. He excelled in classroom instruction particularly in teaching atmospheric radiation, remote sensing, and physical meteorology. As a result of his previous experience as an US Air Force meteorological officer, he loved to challenge the Departments students in Synoptic Meteorology.

Ben's research career was at a time when large-scale electronic computers became available at the University of Arizona and precise radiation sensing instruments were being developed for Earth orbiting satellites. He was a noted researcher, developing and applying the first numerical techniques to calculate scattering, emission and absorption of radiation in Earth and planetary atmospheres. Ben was recognized as an international leader in applying these techniques to quantitatively interpret satellite measurements, mentoring his many collaborating students to develop successful careers with NASA, NOAA, and other agencies.

He authored or co-authored over 80 publications in peer reviewed literature, many of which are still cited today. His papers on aerosol size and optical depth, as well as two of his papers on the use of GPS measurements to determine H₂O vapor profiles have each been cited over 400 times.

Ben retired in 2005 as a Professor Emeritus, after 45 years of service. In 2006, NASA and DOI bestowed Ben and others with the William T. Pecora Award for satellite techniques to infer O₃ and SO₂. He also received the Distinguished Public Service Medal by NASA. Ben was a Fellow of the American Meteorological Society.

Donald R. Davis

Undergraduate Distinction Award



Donald R. Davis joined the UA Department of Hydrology and Water Resources in 1972 and was one of the most senior members of the faculty at the time of his death in February 2009. His primary research focus was decision making under hydrologic and other uncertainties, and his basic approach utilized Bayesian decision theory in a general system setting. During the last decade of his life, even though the halcyon days of funded research were behind him, Don was still actively engaged in independent statistical studies with individuals both inside and outside the university. He continued to serve on MS and PHD exams and to advise masters and especially doctoral students who were majoring or minoring in Hydrology with the statistical aspects of their research projects. He was an active faculty examiner for the doctoral qualifying examinations in surface hydrology and water resources. Don served as the Undergraduate Coordinator and was the primary advisor to undergraduates with a major or minor in Environmental Hydrology and Water Resources. He taught the year-long Senior Capstone and Senior Honors Thesis courses and, when the department was part of the College of Engineering, was a rotating instructor for the COE's freshman course, Engineering 102. With Gary Woodard, he designed and oversaw the Master of Engineering degree program in Water Resources Engineering and helped that fledgling program get off the ground. Upon his death, he left an endowment to the Department of Hydrology and Water Resources specifically for undergraduates whom he especially supported and encouraged.

The evaluation for the Davis Undergraduate Distinction Award is made by a committee appointed by the department and recognizes an outstanding undergraduate who demonstrates excellence in writing, speaking, or technical communication or provides outstanding service through volunteerism or extracurricular activities that benefit the department or the profession.

Don will be remembered not only for his academic and advising contributions, but also for his love of the undergraduate program he nurtured.

Eugene S. Simpson Undergraduate Poster Award



Eugene S. Simpson began his professional career with the U.S. Geological Survey in 1946 where he was involved with problems of migration and dispersion of radioactive wastes that might accidentally or operationally be discharged into groundwater. In 1963, he was hired by Dr. John W. Harshbarger as a member of HWR's inaugural faculty, and he continued to pursue his research interests in aquifer mechanics, the migration of pollutants in groundwater, and the application of environmental tracers to problems of groundwater circulation. Simpson served as HWR Department Head from 1974-75 and 1979-81.

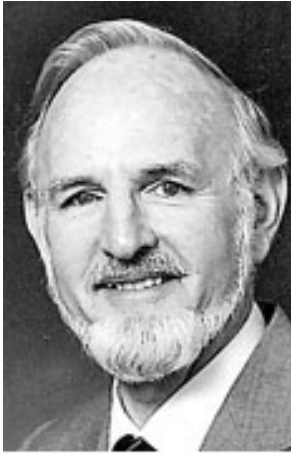
After his retirement in 1985, he remained active in the profession, serving the U.S. Chapter of the International Association of Hydrogeologists as Secretary-Treasurer from 1984-89 and as President from 1989-92. During his tenure as President, he became the Founding Editor and first Editor-in-Chief of the IAH journal, *Applied Hydrogeology*, which later became *Hydrogeology Journal* (Springer), the official journal of the IAH. The Geological Society of America Hydrogeology Division honored him with the Distinguished Service Award in 1992, and the International Association of Hydrogeologists elected him an Honorary Member in 1993.

Following retirement, he resided in Tucson until his death at the age of 78 in December 1995. At that time, the Eugene S. Simpson Endowment was established to provide financial support for undergraduate and graduate students, especially those studying hydrogeology and subsurface hydrology.

In March 2012, the inaugural Eugene S. Simpson Undergraduate Poster award was made for the best undergraduate poster with priority given to hydrogeology, subsurface hydrology, or groundwater content, Simpson's areas of expertise. Evaluation for the award is made by a committee appointed by the department.

The department would like to thank the family, friends, and former students of Eugene S. Simpson for their continued support and contributions to this endowment fund.

Stanley N. Davis Poster Presentation Awards



Dr. Davis was internationally recognized expert in the study of ground water. Dr. Davis also served on the faculty of Stanford University, the University of Chile, the University of Missouri--Columbia, and Indiana University--Bloomington. Additionally, over his career, he was a consultant for the United States Bureau of Reclamation, the Kansas and Missouri geological surveys, the Arctic Institute of North America, Princeton University, and the University Oriente and the University de los Andes, both of Venezuela. He also was the recipient of multiple honors throughout his career, in 1989 he was presented with the O.E. Meinzer Award by the Geological Society of America, and in 1996 he was made a Fellow of the American Geophysical Union. Over the course of his career, Dr. Davis was author or coauthor of more than 100 scholarly publications, and coauthor of the seminal textbook "Hydrogeology" with Dr. Roger DeWiest. From 1943-1946, Dr. Davis served in the U.S. Army during World War II in the Pacific Theater.

El Dia Speaker ~ Dr. Peter Troch
ENR2 Room S107 ~ 9:00 am



Dr. Peter A. Troch studied Agricultural Engineering at the University of Ghent, Belgium, and graduated with Highest Distinction. He holds a MSc degree in Systems Control Engineering, and he obtained his Ph.D. degree in Hydrology in 1993 at the same university.

In November of 2005, Dr. Peter A. Troch joined the Department as a Professor of Surface Water Hydrology. Prior to coming to Tucson, he was Chair of the Hydrology & Quantitative Water Management group of Wageningen University, Netherlands. From 1996 to 1999 he was associate professor at the Laboratory of Hydrology & Water Management (LHWM) at University of Gent. In 1992 he was scientific researcher at the Water Resources Program of Princeton University. He was involved in several international airborne and space borne remote sensing experiments in hydrology. He was scientific coordinator of a European Commission 5th FP RTD project on Data assimilation within a unifying modeling framework for improved river basin water resources management (DAUFIN) and organized international workshops on catchment scale hydrological modeling and data assimilation (CAHMDA) in September 2001 (Wageningen), October 2004 (Princeton), January 2007 (Melbourne) and July 2010 (Lahsa).

His current research involves hillslope to catchment scale hydrological processes, seasonal, decadal and climate predictions of water availability in semi-arid river basins, as well as developing research infrastructure to investigate Critical Zone processes across climate gradients. He is also studying the role of vegetation in catchment-scale hydrological response.

Dr. Troch was Science Director of Biosphere 2 from 2012 to 2022 and is editor of *Water Resources Research*. He has published over 180 papers in refereed international journals dealing with (flash) flood forecasting, catchment classification and similarity, land slide and debris flow modeling, remote sensing applications in hydrology and data assimilation, climate variability and climate change impacts on water availability, and the role of vegetation on hydrologic partitioning at catchment scales. He received the John Dalton Medal in 2011 by the European Geophysical Union for distinguished research in hydrology evaluated as an earth science, and the 2011 Boussinesq Lecturer at the Netherlands Royal Academy of Sciences, Amsterdam. He has been AGU Fellow since 2015 and Agnese Nelms Haury Chair in Environment and Social Justice.

Starting fall of 2024, Dr. Troch will lead the Hydrology and Atmospheric Science Department.

Oral Session One: 9:30 ~ S107

- 9:30 **Wenqian Zhang** ~ Anomalous Adsorption of PFAS at the Thin-Water-Film Air–water Interface and the Impact on PFAS Leaching in the Vadose Zone
- 9:45 **Dylan Girone** ~ A Forecast Assessment of AZ WRF-HRRR in its First Operational North American Monsoon Season
- 10:00 **Mohammad Farmani** ~ What Are the Key Soil Hydrological Processes to Control Soil Moisture Memory?
- 10:15 **Lin Ji** ~ Machine Learning Analysis of Martian Valley Networks: Paleoclimatic Implications
- 10:30 **Benjamin West** ~ Demonstrating Reservoirs in ParFlow, a fully integrated physical hydrology model

Oral Session Two: 13:30 ~ S107

- 13:00 **Sahar Mohsenzadeh Karimi** ~ Projected Changes of Precipitation at the Fresnillo Mining Sites in Mexico: A Hybrid RCMs and a Weather Generator Approach
- 13:15 **Patrick Neri** ~ How Plant Fluorescence is Affecting Our Understanding of Carbon Assimilation in a Changing Climate
- 13:30 **Lauren Cutler** ~ Evaluating the Relationship Between Low Cloud Fraction and Atmospheric Stability Indices Over the Western North Atlantic
- 13:45 **Lauren Porter** ~ The evolution of Atlantic hurricanes that undergo extreme rapid intensification

Oral Session Three: 13:30 ~ S107

- 15:00 **Cassidy Soloff** ~ What Are the Key Soil Hydrological Processes to Control Soil Moisture Memory?
- 15:15 **Jordann Bredecke** ~ Evaluation of Clear-Sky Surface Downward Shortwave Fluxes Computed by MODTRAN6.0, CCCma, and CERES over different Climatic Regimes
- 15:30 **Xueyan Zhang** ~ Impacts of Topography-Driven Water Redistribution on Terrestrial Water Storage Change in California Through Ecosystem Responses
- 15:45 **John McKinnon** ~ Statistical Analysis of The Seasonal Variability of Atmospheric Composition using EOF and Fourier

Poster Sessions ~ Courtyard

11:00 - 12:00 and 14:00 - 15:00

Claire Acke ~ Temperature Trends in Mexico: Enhancing Risk Assessment for Mining Operations using Statistical Analysis. Poster #1

Taiwo Ajayi ~ Vertical variability of aerosol properties and trace gases over a remote marine region: A case study over Bermuda. Poster #2

Grace Betito ~ Influence of transboundary pollution on the variability of surface ozone concentration in the Desert Southwest of the U.S.: Case study for Arizona. Poster #3

Luis De la Fuente ~ Exploring Catchment Regionalization through HydroLSTM. Poster #4

Gigi Giralte ~ Mechanistic Drivers of the North American Monsoon. Poster #5

Tong Guo ~ Reactive Transport Modeling of Fluid-Rock-Microbial Interactions in the Deep Critical Zone. Poster #6

Eden Harper ~ Investigating Seneca Park Basin Storage And Establishing Replicable Analysis Protocols. Poster #7

Jonathan Hasenstab ~ Determining the source and quality of groundwater in the headwaters of the Babocomari watershed. Poster #8

Justin Headley ~ Seasonal Variability In Metals Concentrations And Their Transport Mechanisms In Intermittent Streams, Poster #9

Charles Hoopes ~ Effects of ~27-Day Solar Ultraviolet Variations on Tropical Precipitation and the Madden-Julian Oscillation . Poster #10

Poster Session (Continued)

ICREWW Team: Kyle Skoda, Daniel Williams, Dylan Girone, Ava Lasater, Brandolyn Baeza, Alex Winter ~ How well do phenology models established in Michigan and Ohio predict the timing of activity in plants and insects across their ranges? Poster #11

Min Ma ~ Evaluating the representativeness of suction lysimeter for sampling PFAS porewater concentration in the vadose zone , Poster #12

Thabo Elias Makgoale ~ Evaluation of Storm-Resolving Models in Simulating Precipitation Efficiency over the Asian Monsoon Region. Poster #13

Mohammad Amin Mirrezaei ~ Evaluating the impact of horizontal resolution on surface ozone over Arizona using Multi-Scale Infrastructure for Chemistry and Aerosols (MUSICAV0). Poster #14

Jessi Moeschl ~ Snowpack Productivity to Surface Water of the Salt and Verde Watersheds. Poster #15

Jacob Natale ~ Do monsoon storms start later in the day than they did decades ago? An assessment of monsoon-season cloud cover in Tucson from 1994-2023. Poster #16

Marleigh Nicholas ~ The New Mexico Streamgage Catalog. Poster #17

Patricia Puente ~ Understanding Changes in Surface Water in the Colorado River Basin Using Remote Sensing Data. Poster #18

Roswell Robertts IV ~ An In-Depth Analysis of Daily Precipitation Start Times During Monsoon Seasons from 1949-2023 in Tucson, Arizona. Poster #19

Dylan Simpson ~ Annual Groundwater Withdrawals By Agriculture In The Willcox Basin, 2023. Poster 20

Poster Session (Continued)

Jacob Smith ~ An integrated analytical modeling framework for determining site-specific soil screening levels for PFAS. Poster #21

Holland Sterling ~ A live, interactive demonstration of the Arizona Streamgauge Catalog (AZStreamCAT). Poster #22

Danielle Tadych ~ Scaling Down: Unveiling Heterogeneity in Arizona's Groundwater Landscape. Poster #23

Amanda Triplett ~ A parameter inversion framework for computationally expensive, physically-based hydrologic models using deep-learning methods. Poster #24

Sabrina Wilson ~ Parameterizing Biochar Effect on Climate-Smart Agriculture Using Artificial Intelligence and Land Surface Model. Poster #25

Yike Xu ~ Advancing Understanding of Planetary Boundary Layer Height: Insights from dropsonde and HSRL2 lidar measurements during the ACTIVATE Field Campaigns. Poster #26

Hossein Yousefi Sohi ~ Comparative Assessment of IMERG and ERA5 Precipitation Products Over Snow-Ice-Covered and Snow-Ice-Free Surfaces. Poster #27

Natalie Yurek ~ Tracking and Comparing the Daily Start Times of Monsoon Events in Tucson and Phoenix 1949-2023. Poster #28

Omid Zandi ~ Developing a Novel Long-Term ML-based Precipitation Product from AVHRR in High Latitudes Using Various Observational Datasets and Auxiliary Variables from Reanalysis. Poster #29

Xiang Zhong ~ Tracing the physical signatures among the calculated global clear-sky spectral shortwave radiative flux distribution. Poster #30

World/Global Café

16:00 - 17:00 ~ ENR2 S107

In the afternoon, we'll gather for a dynamic World Café session where students and attendees will come together to discuss, envision, connect, and innovate the future of Hydrology and Atmospheric Sciences. We'll kickstart this workshop session by framing questions that encourage active participation and diverse perspectives. Check flyer for more information

Your input will be invaluable as we dive into the most pressing challenges and opportunities facing our field. To ensure we capture your insights effectively, we've prepared a Google Form where you can confidentially share your thoughts. Use QR code to access the questionnaire. Please take a moment to complete the form before the workshop.



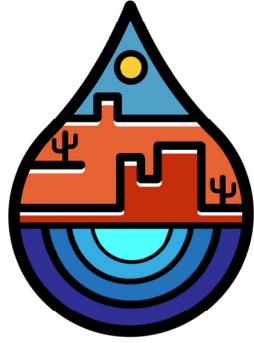
Here are the questions we'll explore:

- What do you think the major emphasis of a re-imagined HAS undergraduate degree should be?
- If you were tasked with defining the core curriculum for all MS programs in hydrogeology, what are the most important things to include? What should be left out that might be surprising? Do you have recruiting ideas for a re-defined MS in hydrogeology?
- How can we encourage more students to consider HAS as an undergraduate major?
- We are hoping to raise funds to help to support a highly competitive professor of practice position to run the one year MS in hydrogeology. Can you propose any possible sources of financial support that we might not have considered?

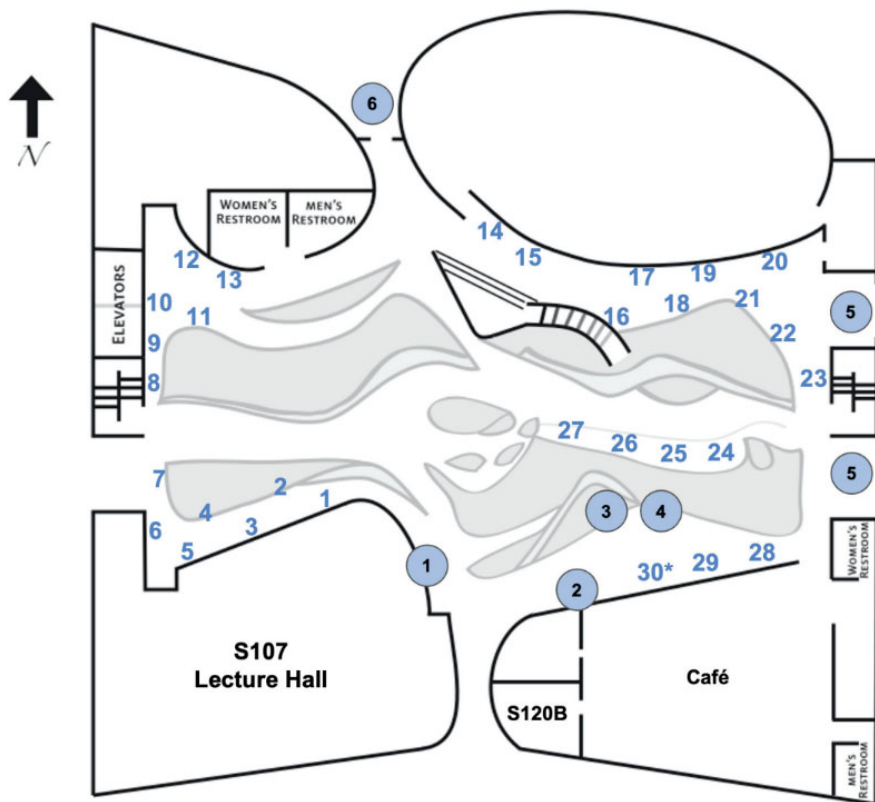
Your contributions will shape our discussions and pave the way for innovative solutions. We look forward to your participation in shaping the future of Hydrology and Atmospheric Sciences at El Día!

~ NOTES ~

El Dia'24



Hydrology & Atmospheric Science
Student Research Symposium



*Poster Presentation by St. Cyril of Alexandria Catholic School

Floor Plan

1. Registration Table
2. Breakfast & Lunch Table
3. HASSA Table
4. Sponsors Table
5. Sixth Street Garage Entrance
6. Lowell Street Entrance