

17th Annual Hydrologic Sciences Symposium

Schedule



University of Colorado **Boulder**

17th Annual Hydrosociences Student Symposium

Sponsored by BOASE, CEAE, ENVS, GEOG, GEOL



Reimagining the applied hydrologic sciences

2023 Darcy Lecture | Student Presentations | Lightning talks | Fun events | Food

Submit your abstracts now!



tinyurl.com/CUBHSS23



APRIL 12-13

HYBRID



SEEC (CU Boulder)
Room S228

| **ZOOM**

Invited Speakers



Thomas Adams

Senior Hydrometeorological
Hazards Advisor at USAID

Keynote Address -- The evolution of Hydrologic
Forecasting - serendipity from failure and when
things don't quite work out



Alicia Wilson

Professor, University of South
Carolina

Darcy Lecture -- Please check your assumptions at
the coastline: 15 years of wading through salt
marshes

- **Mazdak Arabi**
Professor, CSU
- **Sharon Bywater-Reyes**
Assistant Professor, UNCO
- **Hillary Hamann | Meghan McCarroll**
Teaching Professor/PhD student, DU
- **Mike Kerwin**
Associate Professor, DU
- **Upmanu Lall**
Director, Columbia Water Center
- **Dan Scott**
Senior Geomorphologist, WSE

For more information, visit: <https://www.colorado.edu/program/hydrosociences/>

Wednesday, April 12, 2023

8:30 - 9:00	Breakfast	Continental: coffee, bagels, fruit
9:00 - 9:10	Introduction Student Steering Committee	
9:10 - 9:35	Invited Speaker Mike Kerwin	Mega-drought Demands Mega-changes: Can the Western USA Learn from South Africa's Response to the Day Zero Drought?
9:35 - 9:45	Student presentation Madeline Pernat	The Relative Importance of Model Structure and Predictor Variables for Water Supply Forecasting in the Southwest US
9:45 - 10:00	Break	
10:00 - 10:10	Student presentation Jared Collins	Evaluating the Use of Aerial Drones to Provide Early Indicators of Algal Blooms in Wonderland Lake
10:10 - 10:40	Invited Speaker Mazdak Arabi	
10:40 - 10:50	Student presentation Nathan Bonham	post-MORDM: mapping policies to synthesize optimization and robustness results for decision-maker compromise
10:50 - 11:00	Break	
11:00-12:00	KEYNOTE Thomas Adams	The evolution of Hydrologic Forecasting — serendipity from failure and when things don't quite work out
12:00-12:45	Lunch	Pizza for speakers & registered attendees

12:45 - 1:30	Lightning Talks	Group 1 (see page 6)
1:30 - 2:15	Invited Speaker (virtual) Upmanu Lall	The Co-evolution of Humans, Climate, Water, Earth and Biota: The Next Chapter?
2:15 - 2:30	Break	
2:30 - 3:00	Bingo	
3:00 - 3:10	Student presentation Huck Rees	Beaver dams as sites of carbon accretion and sediment storage and implications for river restoration
3:10 - 3:20	Student presentation Katherine McCredie	Stream Water Quality and Soil Health After Compound Disturbance: A History of Forest Harvesting, Severe Wildfire, and Post-Fire Management in a Western Oregon Watershed
3:20 - 3:50	Invited Speaker Sharon Bywater-Reyes	The Good, The Bad, The Ugly: Lessons Learned from Colorado River Restoration Projects
6:00 - 8:00		Dinner for Student Presenters with Invited Speakers

Thursday, April 13, 2023

8:00 - 9:00	Breakfast	Continental: coffee, bagels, fruit
9:10- 9:20	Student presentation Abby Eckland	Flash floods sequester organic matter at drought-stricken Elephant Butte Reservoir, New Mexico
9:20 - 9:30	Student presentation Santiago Ramírez-Núñez	Understanding how urbanization affects streamflow in the Denver Metro area
9:30 - 10:00	Invited Speakers Hillary Hamann and Meghan McCarroll	Impacts of innovative water security solutions on water literacy: A case-study from Aurora, Colorado
10:00- 10:15	Break	
10:15 - 10:25	Student presentation Kevin Rozmiarek	Atmosphere to surface profiles of water vapor isotopes and meteorological conditions over the northeast Greenland ice sheet reveals the role of sublimation to the ice sheet hydrological cycle
10:25- 10:35	Student presentation William Johnson	Shifts in riverine biofilms induced by WUI-fires and wastewater effluent
10:35 - 11:05	Invited Speaker Dan Scott	Understanding the Wood Regime to Support Stream Management
11:05 - 11:15	Student presentation Sean Leister	Understanding Arctic Precipitation: How and When Does it Change in CESM2?

11:15- 11:25	Student Presentation Dylan Blaskey	Optimizing a high-resolution river temperature model for Alaskan Rivers
11:25- 11:35	Postdoc Presentation Peyton Thomas	Hindcasted bioenergetics modeling of juvenile Chinook salmon (<i>Oncorhynchus tshawytscha</i>) within the Kenai River system to inform future climate projections
12:00 - 12:45	Lunch	Sandwiches for speakers & registered attendees
1:00 - 1:30	Water Trivia	
1:15 - 2:00	Lightning Talks	Group 2 (see page 7)
2:00 - 2:15	Break	
2:15 - 3:15	Darcy Lecture Alicia Wilson	Please check your assumptions at the coastline: 15 years of wading through salt marshes
3:15 - 3:30	Student Awards Hydrologic Sciences Program Faculty	Best Student Presentation Best Lightning Talk
4:00 - 5:00	Water Buffs Happy Hour	Location The Dark Horse

LIGHTNING TALKS

Group 1 Wednesday 12:45 - 1:30

Speaker	Title	Time
Cole Cochran	Constraining carbon stocks and sediment residence times of geomorphic surfaces in a permafrost river system	12:45-12:50
Kaitlyn Bishay	Can Remotely Sensed Snow Disappearance Explain Seasonal Water Supply?	12:50-12:55
Nicholas Guthro	Examining Outdoor Residential Water Use in the Urban Areas of the Colorado River Basin	12:55-1:00
Dixie Poteet	Non-Perennial Stream Monitoring in a Semi-Arid Rangeland Slated for Development	1:00-1:05
Joshua Ferry	Grain Size Distribution Analysis of Coastal Deltaic Sediments in Wake of Hurricane Ida	1:05-1:10
Christina Rorres	Investigation of Barium as a Temperature Proxy in Corals	1:10-1:15
Natalie Aranda	Tardigrade Abundance and Grazing Habits in the Freshwater Streams of the Dry Valleys	1:15-1:20
	Questions	1:20-1:30

LIGHTNING TALKS

Group 2 Thursday 1:15-2:00

Speaker	Title	Time
Tina Geller	Variability of Residence Time in Arctic Back-Barrier Estuaries	1:15-1:20
Brianna Undzis	Bed Shear Stress on the Alaskan Beaufort Sea Shelf: A Numerical Modeling Study	1:20-1:25
Stacie DeSousa	Using Citizen-Reported Data to Determine Spatiotemporal Trends in Pluvial Flooding in Denver, Colorado	1:25-1:30
Jacob Kravits	Incorporating Programming Into an Undergraduate Hydrology Course: Lessons Learned	1:30-1:35
Harry Brodsky	The Well Geochemistry Logger (WGL): An open-source platform for continuous, in-situ groundwater chemistry measurement	1:35-1:40
Leo Zook	Niwot Ridge Snow Hydrology Intern Research	1:40-1:45
	Questions	1:45-2:00

Professional Organizations for Hydrologic Sciences Students

Water Buffs CU Student Club

<https://www.colorado.edu/program/hydrosciences/water-buffs>

American Water Resources Association of Colorado

<http://awracolorado.org/Membership>

National Ground Water Association

<https://www.ngwa.org/members/join-ngwa/Students>

American Meteorological Society

<https://www.ametsoc.org/index.cfm/ams/membership/memberships-for/students-early-career/>

Thank you!

Hydrologic Sciences Program Steering Committee

Shemin Ge, Roseanna Neupauer, Katja Friedrich, Mike Gooseff, Holly Barnard, and Sarah Rogers

Sponsors

BOASE, CEAE, ENVS, GEOG and GEOL

Host

INSTAAR

Especially Chad Stoffel

Symposium Steering Committee

Abby Eckland, Taylor Johaneman, Parth Modi, Millie Spencer, Prasad Thota, and David Woodson