

CIROH Developers Conference 2024

Salt Lake City, Utah

Schedule [Draft - updated on May 2, 2024]

Pre-conference Field Trip (Tuesday, May 28)

Evening (2:45 pm to 8:30 pm) visit to Atwater Study Plot near the top of Little Cottonwood Canyon in the Wasatch Mountains for educational activity and interactive points or hike to scenic view spots. Depart from Little America Hotel at 2:45 PM.

Day 1 (Wednesday, May 29)

Time	Activity	Presenter(s)	Topic	Room
9:00 AM	Welcome Community update	Sagy Cohen, <i>CIROH Deputy Director</i> Steve Burian, <i>CIROH Executive Director</i> , <i>University of Alabama</i>	Introduction CIROH: Strengthening the water prediction research community	6200
9:30 AM	Plenary Keynote	Ed Clark, NOAA OWP	TBD	6200
9:50 AM	Plenary Keynote	Jake Serago, UU	The Great Salt Lake Basin Integrated Plan	6200
10:10 AM	Plenary Keynote	Jack Schmidt, USU	Negotiating the future of the Colorado and Rio Grande Rivers: the roles of science, values, and applied research	6200
10:30 AM	Coffee Break			
11:00 AM	Workshop (Cross-cutting/NextGen)	Arpita Patel, James Halgren, Purushotham Bangalore, Jeff Carver	CIROH CyberInfrastructure and AWS Case Studies	6200
	Workshop (Hydroinfo./NextGen Tracks)	Mike Johnson	The NextGen Hydrofabric: What is it, how to get it, and how to make your own?	
	Workshop (Cross-Cutting)	Patrick Clemins	Data Workflows 101: Acquisition, Manipulation, and Visualization	
12:30 PM	Lunch			
1:30 PM	Workshop (Cross-cutting/ML)	Scott Hendrickson, Savalan Naser Neisary, Eric Christensen, Arpita Patel	Working with National Water Model data in Amazon SageMaker and demo of Amazon BedRock (AI tool)	
	Workshop (Cross-cutting/NextGen)	Keith Jennings, Nels Frazier	Get your model ready for NextGen with BMI	
	Workshop (Cross-cutting)	Jeff Carver, Sepehr Karimi	Introduction to GitHub	
	Workshop (Cross-cutting/Hydroinfo.)	David Tarboton, Tony Castronova, Irene Garousi-Nejad, Furqan Baig	Enabling collaboration through data and model sharing with CUAHSI HydroShare	
3:00 PM	Coffee Break	Group Photo		
3:30 PM	Lightning Talks		2-minutes/1-slide presentations	6200
5:00-6:30 PM	Poster Session 1		Light refreshments	

Day 2 (Thursday, May 30)

Time	Activity	Presenter(s)	Topic	Room
9:00 AM	Welcome	Sagy Cohen, <i>University of Alabama</i>		6200
9:10 AM	Plenary Keynote (Abby Shao and Asim Zia)	Thomas J Cova, UU	Spatial and temporal dimensions of emergency alerts and warnings	6200
9:30 AM	Plenary Keynote	Jill Brown, RTI	What we know about emergency communication pathways and their application to FIM	6200
9:50 AM	Plenary Keynote	Chris Koliba, KU	Managing and communicating risk: early lessons for research to operations	6200
10:10 AM	Plenary Keynote	Scott Merrill, UVM	Behavioral Dynamism: A necessary factor for understanding how people respond in flood hazard emergencies	6200
10:30 AM	Coffee Break			
11:00 AM	Workshop (NextGen Track)	Arpita Patel, Zach Wills	NGIAB Workshop: Running NextGen In a Box	
	Workshop (ML Track)	Savanna Wolvin	CNN for downscaling climate forcing variables	
	Workshop (FIM Track)	Carson Pruitt, Derek Giardino	Introduction to OWP HAND-FIM	
	Workshop (Hydroinfo. Track)	Nathan Swain, Gio Romero, Dan Ames	Develop Scientific Web Applications for the CIROH Hydroinformatics Portal with HydroShare and Tethys Platform	
	Roundtable (Cross-Cutting Track)	Asim Zia	Enhancing Social and Coupled Natural and Human Science in CIROH Training	
12:30 PM	Lunch	Buffet Lunch	Accessing National Water Model using Google Big Query lunch workshop (Kel Markert and Dan Ames) (Cross-Cutting track)	6200
1:30 PM	Workshop (Nextgen Track)	Josh Cunningham, Jordan Laser	NextGen Simulation Development Tools	
	Workshop (FIM Track)	Anupal Baruah, Pranav Sundararajan, Carson Pruitt	OWP HAND-FIM Compilation	
	Workshop (ML Track)	Kel Markert	Google AI modeling workshop – Vertex AI	
	Workshop (Cross-Cutting Track)	Melissa A. Gallagher, Emad Habib, Courtney DiVittorio, Irene Garousi-Nejad, Cat Maiorca, David Tarboton	Introduction to HydroLearn	
3:00 PM	Coffee Break			
3:30-5:00 PM	Working Group Meetings			
5:00-6:30 PM	Poster Session 2		Light refreshments	

Day 3 (Friday, May 31)

Time	Activity	Presenter(s)	Topic	Room
9:00 AM	Welcome	Steve Burian, CIROH Executive Director, <i>University of Alabama</i>		6200
9:10 AM	Plenary Keynote	Cory Angeroth, USGS	Highlights of USGS-CIROH collaborations	6200
9:30 AM	Plenary Keynote	Ahmad Tavakoly, USACE	The U.S. Army Engineer Research and Development Center (ERDC)'s Advances in Bridging Hydrology Research to Operations	6200
9:50 AM	Plenary Keynote	Joel Lisonbee – NOAA, National Integrated Drought Information System (NIDIS)	Integrating Low-Flow and other Drought Information to Create Impactful Solutions	6200
10:10 AM	Plenary Keynote			6200
10:30 AM	Coffee Break			
11:00 AM	Workshop (Nextgen Track)	Tony Castronova, Irene Garousi-Nejad	Building and Executing Cloud Workflows to Support NGEN Modeling Applications	
	Workshop (ML Track)	Dane Liljestrand	Neural Networks for Snow Modeling	
	Workshop (FIM Track)	Mike Follum	AutoRoute – Rapid flood inundation mapping using tools developed for the U.S. Military	
	Workshop (Hydroinf. Track)	Mohamed Abdelkader, Marouane Temimi	Integrating Citizen Science and Remote Sensing products in Google Earth Engine to support Hydrological Monitoring	
	Roundtable (Cross-Cutting Track)	Fred Ogden	R2O - Transitioning Your CIROH Advances into Operations by NWS	
12:30 PM	Lunch	Sagy Cohen	Awards and Recognitions Presentation by the 2024 Student Developer Awardee	6200
1:30 PM	Workshop (NextGen Track)	Matt Denno, Katie van Werkhoven, Sam Lamont	Using TEEHR to explore, compare and evaluate streamflow simulations from different model formulations.	
	Workshop (ML Track)	Jonathan Frame	Long Short Term Memory modeling	
	Workshop (FIM Track)	BYU Team	Expanding the Impact of the NWM FIM Capability	
	Workshop (Hydroinfo.Track)	Ibrahim Demir, Carlos Erazo Ramirez	HydroSuite: Open-Source Community-Oriented Software Suite for Hydrological Research and Education	
	Roundtable (Cross-Cutting Track)	Sagy Cohen	Feedback and Ideas Toward DevCon 2025	
3:00 PM	Coffee Break			
3:30–5:00 PM	Working Group Updates			6200
5:30 PM	Networking Event			

Day 4 (Saturday, June 1)

Time	Activity	Presenter(s)	Topic	Room
9:00 AM	Welcome	Steve Burian, CIROH Executive Director, <i>University of Alabama</i>		6200
9:10 AM	Workshop (Nextgen Track)	Raymond Spiteri, Kyle Klenk	Using Actors for Parallelization in Hydrology	
	Workshop (ML Track)	Abdol Medhi Behroozi	Physics-Informed Machine Learning	
	Workshop (FIM Track)	Dan Tian, Sagy Cohen	Remote Sensing Flood Inundation Mapping and Enhancement with High-Resolution DEM	
	Roundtable (Cross-cutting Track)	Lanna Nations, Steve Burian	Discussion of Innovative Ideas for CIROH's Approaches to Education and Training	
10:40 AM	Coffee Break			
	Workshop (ML Track)	Savalan Neisary	Machine Learning: Decision tree models for post-processing national water model streamflow outputs	
	Workshop (FIM Track)	Sagy Cohen, Dan Tian	Tools for Robust FIM Evaluation Using Remote Sensing Benchmarks	
	Roundtable (Cross-cutting Track)	Steve Burian	CIROH Office Hour: Ideas, Recommendations, Concerns	
12:30-1:00 PM	Closing remarks		Box Lunch	6200