



Developers CONFERENCE

MAY 27 - 29, 2026 | SALT LAKE CITY, UTAH

2026 CIROH Developers Conference sponsors:



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Time	Room	Activity	Topic Presenter(s)
8:30 AM	6200	Welcome Community Update	Introduction Sagy Cohen, CIROH Deputy Director, University of Alabama Steve Burian, CIROH Executive Director, University of Alabama
8:50 AM	6200	Plenary Keynote	Jakob Jenson, University of Utah Associate Vice President for Research
9:00 AM		Plenary Keynote	Research to Operational Realities Allison Allen & Edward Clark, NOAA OWP
9:20 AM		Plenary Keynote	4212 to 4188: The Lake in My Lifetime Robert Sowby, Brigham Young University
9:40 AM		Plenary Keynote	Colorado River Basin - Western Water Forecast Concerns and Research Priorities James Prairie, Bureau of Reclamation
10:00 AM			Coffee Break
10:30 AM	6200	Workshop (NextGen)	Model Integration in NextGen, NGIAB and NRDS Josh Cunningham (University of Alabama), Jordan Laser (Lynker), Harsha Vemula (University of Alabama), Quinn Lee (University of Alabama), Nia Minor (University of Alabama), Gio Romero (Aquaveo), Arpita Patel (University of Alabama), Zach Wills (Lynker) and Nels Frazier (Lynker)
	6623	Workshop (FIM)	Building a Multi-source Flood Inundation Database and Visualizing HAND and Model-Generated Flood Maps Pitamber Wagle (BYU)
	6619	Workshop (HI)	Essential Geospatial Data and Coding Skills for CIROH Researchers Tony Castronova, Abner Bogan, Danielle Tijerina-Kreuzer, Irene Garousi-Nejad (CUAHSI)
	6500	Workshop (Social Sci)	Integrating User and Community Perspectives into Your R2O Pipeline to Improve Impact Schuyler DeBree (RTI) & Corinne Schuster-Wallace (University of Saskatchewan)
	6613	Workshop (AI/ML & RS)	Foundations of ML: From Architecture to Optimization Savalan Neisary (University of Alabama) & Leo Lonzarich (Penn State)
12:00 PM			Lunch
1:30 PM	6200	Workshop (NextGen)	Getting Hands-on with the CIROH Community HydroFabric Tony Castronova (CUAHSI), James Halgren (BYU), Irene Garousi-Nejad (CUAHSI), Josh Cunningham (University of Alabama)
	6623	Workshop (FIM)	Using Streamflow Forecasts to Produce Flood Impact Forecasts Joseph Gutenson & Mike Follum (Follum Hydrologic Solutions)
	6619	Workshop (HI)	Developing Interactive CIROH Research Applications with Python-only Tethys Component Apps Shawn Crawley (Lynker), Nathan Swain (Aquaveo), Dan Ames (BYU)
	6500	Workshop (Social Sci)	Why and How to Use Economics to Evaluate Forecasts and Value Their Impacts George Van Houtven & Daniel Lapidus (RTI)
	6613	Workshop (AI/ML & RS)	Sensitivity-Aware Gradient Estimation for Continental-Scale Training of Hydrologic Models Jasper Vrugt (UC Irvine) & Jonathan Frame (University of Alabama)
3:00 PM			Coffee Break Group photo
3:30-4:30PM	6200		Lightning Talks Two-minute presentations
4:30-6:30PM	1st Floor		Poster Session 1 Light refreshments
6:30-9:00PM	Swaner Forum Level 5		The Research Exchange Event Natural History Museum of Utah, Rio Tinto Center Light refreshments

Time	Room	Activity	Topic Presenter(s)
8:30 AM	6200	Welcome	
8:40 AM	6200	Plenary Keynote	CIROH and the Federal Partners Allison Allen & Edward Clark, NOAA OWP
9:00 AM		Plenary Keynote	Recent Advances from USGS Water Michael Mahoney, USGS
9:20 AM		Plenary Keynote	NOAA's National Ocean Service: Recent Advances and Future Directions Cristina Urizar, NOAA NOS
9:40 AM		Plenary Keynote	NOAA's National Integrated Drought Information System (NIDIS): Current and Future Priorities for Enhancing Drought Early Warning Elliot Wickham, NIDIS
10:00 AM		Plenary Keynote	Bridging Hydrologic Models and Water Management: The Extended Hydrofabric Framework Early Career Paper Award: Ehsan Ebrahimi, Utah State University
10:15 AM			Coffee Break
10:45 AM	6200	Workshop (NextGen)	Orchestrating End-to-end Reproducible NextGen and NextGen Adjacent Workflows – Part 1: Model Setup and Configuration Darri Eythorsson (University of Calgary), Raymond Spiteri (University of Saskatchewan), Jordan Read (CUAHSI), James Halgren (Brigham Young University), Martyn Clark (University of Calgary)
	6623	Workshop (FIM)	Flood inundation mapping with FLDPLN Xingong Li (University of Kansas)
	6619	Workshop (HI)	Collecting, Organizing, Managing, and Standards-Based Sharing of Hydrologic Observations Using HydroServer Jeff Horsburgh, Ken Lippold, Daniel Slaugh, Maurier Ramirez (Utah State University)
	6500	Workshop (Social Sci)	Challenges and Opportunities in Bridging Hydrology Research and Practice: Co-Developing FloodSavvy Through Interdisciplinary Collaboration and Community Engagement Kristin Raub (Northeastern University), Irene Garousi-Nejad & Tony Castronova (CUAHSI)
	6613	Workshop (AI/ML & RS)	Hands-on LSTM and Transformer for Operational Streamflow Prediction Jiangtao Liu (Penn State)
12:15 PM			Buffet Lunch
1:30 PM	6200	Workshop (NextGen)	Orchestrating End-to-end Reproducible NextGen and NextGen Adjacent Workflows – Part 2: Orchestrating Parallel Model Calibration Raymond Spiteri (University of Saskatchewan), Darri Eythorsson (University of Calgary), Jordan Read (CUAHSI), James Halgren (Brigham Young University), Martyn Clark (University of Calgary), Tristan Montoya (University of Saskatchewan)
	6623	Workshop (FIM)	Topographically Derived High-water Thresholds for Flood Inundation Mapping Noelle Patterson (Utah State University)
	6619	Workshop (HI, AI/ML)	HydroBlox: AI-Assisted Visual Programming Framework for Enhanced Scientific Reproducibility in Hydrology Carlos Erazo, Ibrahim Demir (Tulane University)
	6500	Workshop (Social Sci)	In Their Shoes: Flash Flood Decision-making Under Forecast Uncertainty Katie van Werkhoven, Schuyler DeBree, Hannah Loman, & Yu-fen Huang (RTI)
	6613	Workshop (AI/ML & RS, HI)	Satellite Data Projection and Georeferencing with Satpy Baya Cherif, Jorge Bravo, and Marouane Temimi (Stevens)
3:00 PM			Coffee Break
3:00-5:00 PM	1st Floor		Poster Session 2 Light refreshments
5:00-6:00 PM		Meeting Time	Meetings sign up sheet Meetings and rooms will be announced

Time	Room	Activity	Topic Presenter(s)
8:30 AM	6200	Welcome	Sagy Cohen
8:40AM	6200	Plenary Keynote	Building the Future of NWS Flood Services Derek Giardino, NOAA
9:00 AM		Plenary Keynote	Data and Science in Emergency Management: Answering Risk Questions to support Policy and Operations Robin Bourke, Public Safety Canada
9:15 AM		Plenary Keynote	AI for Global Hydrologic Modeling and Inundation Mapping Martin Gauch, Google
9:30 AM		Plenary Keynote	Advancing Flood Inundation Mapping at Scale: CIROH's FIM Portfolio and Strategic Vision Mohamed Abdelkader, University of Iowa
9:45 AM		Plenary Keynote	Not Another Sandbox – Unifying Differentiable Modeling for the Next Generation of Operational Streamflow Forecasting Student Developer Award: Leo Lonzarich, Pennsylvania State University
10:00 AM			Coffee Break
10:30 AM	6613	Workshop (NextGen)	Theory and Applications of Uncertainty Analysis for Extreme Event Hydrometry Mohamed Abdelkader & Marian Muste (University of Iowa)
	6623	Workshop (FIM)	FIMserv v.1.1: A Tool for Streamlining Flood Inundation Mapping (FIM) using the United States Operational Hydrological Forecasting with Deep Learning Surrogacy Anupal Baruah & Supath Dhital (University of Alabama)
	6619	Workshop (HI)	Using TEEHR Dashboards to Explore Hydrologic Model Performance Matt Denno, Sam Lamont, Katie van Werkhoven, and Sam Landsteiner (RTI)
	6500	Workshop (Social Sci)	Using Machine Learned Emulator Models to Quantify Uncertainty for Water Quality Predictions Asim Zia, Patrick Clemins, Muhammad Adil (University of Vermont)
	6200	Workshop (AI/ML & RS)	Incorporating Process-based Models into NeuralHydrology Daniel McKenzie & Ziyu Li (School of Mines)
12:00 PM			Lunch
1:30 PM	6613	Workshop (NextGen)	Developing a Physics-based Modeling Framework to Predict Water Quality from Hillslope to Watershed Scales Jesus Gomez-Velez, Felipe Quintero, Ruben Molina, Larry Weber (University of Iowa)
	6623	Workshop (FIM)	FIMEval: A Python-based Engine for Evaluation of Flood Inundation Mapping over Large-scale Benchmark Database Dipsikha Devi & Supath Dhital (University of Alabama)
	6619	Workshop (HI, AI/ML)	Talk to NRDS: Building an LLM Chat for TethysDash to Explore the NextGen Research Data Stream Giovanni Romero, N. Swain, C. Krewson, D. Ames, A. Patel (Aquaveo, BYU, University of Alabama)
	6500	Workshop (Social Sci)	Podcasting for R2O: Sharing CIROH Science Beyond the Code Brock Parker & Kim Byers (University of Alabama)
	6200	Workshop (AI/ML & RS, Social Sci)	GeoAI-Driven Flood Risk Modeling: Integrating Hazard, Exposure, and Vulnerability Hemal Dey (University of Alabama)
3:00 PM			Coffee Break
3:15 PM	6200	Closing	
3:30-5:00 PM		Meeting Time	Meetings sign up sheet Meetings and rooms will be announced