Developers CONFERENCE

May 29 - June 1, 2024 | Salt Lake City, Utah

DAY 1 — Wednesday | May 29 | 2024

Time / Activity	Room	Topic / Presenter(s)
9:00 AM Welcome Community update	6200	CIROH: Strengthening the water prediction research community Sagy Cohen, CIROH Deputy Director Steve Burian, CIROH Executive Director, University of Alabama
9:30 AM Plenary Keynote	6200	CIROH and the National Water Center: Collaborations and Opportunities Ed Clark, NOAA OWP
9:50 AM Plenary Keynote	6200	The Great Salt Lake Basin Integrated Plan Jake Serago, UU
10:10 AM Plenary Keynote	6200	Negotiating the future of the Colorado and Rio Grande Rivers: the roles of science, values, and applied research Jack Schmidt, USU
10:30 AM		Coffee Break
11:00 AM Workshop (Cross-cutting/ NextGen)	6200	CIROH CyberInfrastructure and AWS Case Studies Arpita Patel, James Halgren, Purushotham Bangalore, Jeff Carver
11:00 AM Workshop (Hydroinfo./ NextGen Tracks)	6619	The NextGen Hydrofabric: What is it, how to get it, and how to make your own? Mike Johnson
11:00 AM Workshop (Cross-Cutting)	6623	Data Workflows 101: Acquisition, Manipulation, and Visualization Patrick Clemins
12:30 PM		Lunch
1:30 PM Workshop (Cross-cutting/ ML)	6623	Working with National Water Model data in Amazon SageMaker and demo of Amazon BedRock (AI tool) Scott Hendrickson, Savalan Naser Neisary, Eric Christensen, Arpita Patel
1:30 PM Workshop (Cross-cutting/ NextGen)	6619	Get your model ready for NextGen with BMI Keith Jennings, Nels Frazier
1:30 PM Workshop (Cross-cutting)	6500	Introduction to GitHub Jeff Carver, Sepehr Karimi
1:30 PM Workshop (Cross-cutting/ Hydroinfo.)	6613	Enabling collaboration through data and model sharing with CUAHSI HydroShare David Tarboton, Tony Castronova, Irene Garousi-Nejad, Furqan Baig
3:00 PM		Coffee Break Group Photo
3:30 PM	6200	Lightning Talks 3-minute presentations
5:00-6:30 PM	1st Floor	Poster Session 1 Light refreshments

DAY 2 Thursday | May 30 | 2024

Time / Activity	Room	Topic / Presenter(s)
9:00 AM	**6200**	Welcome Sagy Cohen, University of Alabama
9:10 AM Plenary Keynote	**6200**	Spatial and temporal dimensions of emergency alerts and warnings Thomas J Cova, UU
9:30 AM Plenary Keynote	**6200**	What we know about emergency communication pathways and their application to FIM Jill Brown, RTI
9:50 AM Plenary Keynote	**6200**	Managing and communicating risk: early lessons for research to operations Chris Koliba, KU
10:10 AM Plenary Keynote	**6200**	Behavioral Dynamism: A necessary factor for understanding how people respond in flood hazard emergencies Scott Merrill, UVM
10:30 AM		Coffee Break
11:00 AM Workshop (NextGen Track)	**6619**	NGIAB Workshop: Running NextGen In a Box Arpita Patel, Zach Wills, Giovanni Romero
11:00 AM Workshop (ML Track)	**6623**	CNN for downscaling climate forcing variables Savanna Wolvin
11:00 AM Workshop (FIM Track)	**6613**	Introduction to OWP HAND-FIM Carson Pruitt, Derek Giardino
11:00 AM Workshop (Hydroinfo. Track)	**6500**	Develop Scientific Web Applications for the CIROH Hydroinformatics Portal with HydroShare and Tethys Platform Nathan Swain, Gio Romero, Dan Ames
11:00 AM Roundtable (Cross-Cutting Track)	**6200**	Enhancing Social and Coupled Natural and Human Science in CIROH Training Asim Zia
12:30 PM Lunch	**6200**	Buffet Lunch Accessing National Water Model using Google Big Query lunch workshop (Kel Markert and Dan Ames) (Cross-Cutting track)
1:30 PM Workshop (Nextgen Track)	**6619**	NextGen Simulation Development Tools Josh Cunningham, Jordan Laser
1:30 PM Workshop (FIM Track)	**6613**	OWP HAND-FIM Compilation Anupal Baruah, Pranav Sundararajan, Carson Pruitt
1:30 PM Workshop (ML Track)	**6623**	Google AI modeling workshop – Vertex AI Kel Markert
1:30 PM Workshop (Cross-Cutting Track)	**6500**	Introduction to HydroLearn Melissa A. Gallagher, Emad Habib, Courtney DiVittorio, Irene Garousi-Nejad, Cat Maiorca, David Tarboton
3:00 PM		Coffee Break
3:30-5:00 PM		Working Group Meetings WG1:6200; WG2:6619; WG3:6613; WG4:6623
5:00-6:30 PM	**1st Floor**	Poster Session 2 Light refreshments

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DAY 3 Friday | May 31 | 2024

Time / Activity	Room	Topic / Presenter(s)
9:00 AM	**6200**	Welcome Steve Burian, CIROH Executive Director, University of Alabama
9:10 AM Plenary Keynote	**6200**	Highlights of USGS-CIROH collaborations Cory Angeroth, USGS
9:35 AM Plenary Keynote	**6200**	The U.S. Army Engineer Research and Development Center (ERDC)'s Advances in Bridging Hydrology Research to Operations Ahmad Tavakoly, USACE
10:00 AM Plenary Keynote	**6200**	Integrating Low-Flow and other Drought Information to Create Impactful Solutions Joel Lisonbee – NOAA, National Integrated Drought Information System (NIDIS)
10:25 AM		Coffee Break
11:00 AM Workshop (Nextgen Track)	**6619**	Building and Executing Cloud Workflows to Support NGEN Modeling Applications Tony Castronova, Irene Garousi-Nejad
11:00 AM Workshop (ML Track)	**6623**	Neural Networks for Snow Modeling Dane Liljestrand
11:00 AM Workshop (FIM Track)	**6500**	AutoRoute – Rapid flood inundation mapping using tools developed for the U.S. Military Mike Follum
11:00 AM Workshop (Hydroinf. Track)	**6613**	Integrating Citizen Science and Remote Sensing products in Google Earth Engine to support Hydrological Monitoring Mohamed Abdelkader, Marouane Temimi
11:00 AM Roundtable (Cross-Cutting Track)	**6620**	R2O - Transitioning Your CIROH Advances into Operations by NWS Fred Ogden
12:30 PM Lunch	**6200**	Awards and Recognitions Presentation by the 2024 Student Developer Awardee Sagy Cohen
1:30 PM Workshop (NextGen Track)	**6619**	Using TEEHR to explore, compare and evaluate streamflow simulations from different model formulations. Matt Denno, Katie van Werkhoven, Sam Lamont
1:30 PM Workshop (ML Track)	**6623**	Long Short Term Memory modeling Jonathan Frame
1:30 PM Workshop (FIM Track)	**6613**	Expanding the Impact of the NWM FIM Capability BYU Team
1:30 PM Workshop (Hydroinfo.Track)	**6500**	HydroSuite: Open-Source Community-Oriented Software Suite for Hydrological Research and Education Ibrahim Demir, Carlos Erazo Ramirez
1:30 PM Roundtable (Cross-Cutting Track)	**6620**	Feedback and Ideas Toward DevCon 2025 Sagy Cohen
3:00 PM		Coffee Break
3:30–5:00 PM	**6200**	Working Group Updates

DAY 4 Saturday | June 1 | 2024

Time Activity	Room	Topic Presenter(s)
9:00 AM	**6200**	Welcome Steve Burian, CIROH Executive Director, University of Alabama
9:10 AM Workshop (Nextgen Track)	**6619**	Using Actors for Parallelization in Hydrology Raymond Spiteri, Kyle Klenk
9:10 AM Workshop (ML Track)	**6623**	Physics-Informed Machine Learning Abdol Medhi Behroozi
9:10 AM Workshop (FIM Track)	**6613**	Remote Sensing Flood Inundation Mapping and Enhancement with High-Resolution DEM Dan Tian, Sagy Cohen
9:10 AM Roundtable (Cross-cutting Track)	**6500**	Discussion of Innovative Ideas for CIROH's Approaches to Education and Training Lanna Nations, Steve Burian
10:40 AM		Coffee Break
11:00 AM Workshop (ML Track)	**6623**	Machine Learning: Decision tree models for post-processing national water model streamflow outputs Savalan Neisary
11:00 AM Workshop (FIM Track)	**6613**	Tools for Robust FIM Evaluation Using Remote Sensing Benchmarks Sagy Cohen, Dan Tian
11:00 AM Roundtable (Cross-cutting Track)	**6500**	CIROH Office Hour: Ideas, Recommendations, Concerns Steve Burian
12:30-1:00 PM	**6200**	Box Lunch Closing remarks

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