

# 2013 CUAHSI Conference on Hydroinformatics and Modeling

## July 17 – 19, 2013, Utah State University, Logan UTAH

### SCHEDULE

#### Tuesday, July 16, 2013: Pre-conference Workshop

Time		Location
9:00AM – 4:30PM	Software Carpentry Boot Camp	Engineering Room 302

#### Wednesday, July 17, 2013

Time		Location
9:00 AM – 4:30PM	Software Carpentry Boot Camp	Engineering Room 302
<b>Conference Opening Session and Banquet (included in registration)</b>		
5:30 PM	Registration/Cash Bar	Logan Country Club
6:15 PM	Banquet Dinner Service	Logan CC – Sage Room
6:45 PM	<b>Opening Keynote Address</b> <i>“Enabling Water Science at the CUAHSI Water Data Center” – Alva Couch, Director, CUAHSI WDC</i>	Logan CC – Sage Room
7:15 PM	<b>Community Discussion: CUAHSI-HIS and the WDC</b>	Logan CC – Sage Room
8:00 – 9:00PM	Social Hour/ Cash Bar open	Logan CC – Sage Room

#### Thursday, July 18, 2013

*All events take place at the Eccles Conference Center*

Time		Location
7:30-8:00 AM	Registration and continental breakfast	2 <sup>nd</sup> Floor atrium
<b>Plenary Session 1: Enabling Science and Serving Society through Hydroinformatics</b>		2 <sup>nd</sup> Floor Auditorium
8:00 AM	Welcome – <i>Jennifer Arrigo (CUAHSI)</i>	
8:05 AM	<b>Keynote: Addressing the Intersection of Biogeochemistry and (Geo)informatics</b> - <i>Emilio Mayorga, University of Washington</i>	
8:35 AM	<b>Invited: The Integrated Data Management System for Critical Zone Observatories</b> - <i>Anthony Aufdenkampe, Stroud Water Research Center</i>	
9:00 AM	The NorWeST Stream Temperature Database, Model, and Climate Scenarios – <i>Dan Isaak, RMRS/U.S. Forest Service</i>	
9:15 AM	Making Water Resources Data and Modeling Tools Accessible to Local Stakeholders: An Ongoing Experiment in the Occoquan Watershed – <i>Saurav Kumar, Virginia Tech</i>	
9:30 AM	Decision Support Systems Connected to Forecasting and Warning Subsystems for Flood Management – <i>Fidel Perez, Brigham Young University</i>	
9:45 AM	WaDE: Using Web-Services, XML and GIS to Share Water Availability, Use and Allocation Data – <i>Sara Larsen, Western States Water Council</i>	

10:00-10:20AM	Networking and Coffee Break	2 <sup>nd</sup> Floor Atrium
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<b>Plenary Session 2: Addressing Agency and Academic Needs</b>		2 <sup>nd</sup> Floor Auditorium
10:20 AM	<b>Keynote: Building Community Resources, Infrastructure, and Collaboration through a Water Science Software Institute</b> - <i>Stan Ahalt, Renaissance Computing Institute (RENCI)</i>	
10:50 AM	<b>Invited: NASA EARTH EXCHANGE: A Virtual Collaborative for Global Change Research</b> - <i>Rama Nemani, NASA</i>	
11:15 AM	<b>Invited: SEAD: A System for Active and Social Curation of Scientific Data</b> – <i>Praveen Kumar, University of Illinois, Urbana</i>	
11:40 AM	<b>Invited: USGS Partnerships and Innovations in Modern Hydroinformatics</b> – <i>Jordan Read, USGS</i>	
12:05 PM	The National Watershed Boundary Dataset (WBD), Current Events – <i>Karen Hanson, USGS</i>	
12:20 PM	Poster Highlights and Session Overview – <i>presented by David Tarboton (USU)</i>	

12:30 – 1:30PM	Lunch on your own
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<b>Posters, Workshops, and Discussion Sessions</b>			
Time/Location	Room 205-207	Room 201	Room 203
1:30 – 2:30 PM	Poster Session	Workshop: HydroDesktop I	Meet the WDC Staff and Users Committee – An Open Discussion
2:30 – 3:30 PM		Workshop: HydroDesktop II	

3:30-4:00 PM	Networking and Coffee Break	2 <sup>nd</sup> Floor Atrium
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<b>Plenary Session 3: Advancements in Geo- and Hydro- Informatics Software and Tools</b>		2 <sup>nd</sup> Floor Auditorium
4:00 PM	<b>Keynote: CyberGIS for Enabling Data-Intensive Geospatial Research and Education - Shaowen Wang, University of Illinois at Urbana-Champaign</b>	
4:30 PM	Software and Algorithms for Solving Calibration, Management and Uncertainty Analysis for Computationally Expensive Nonlinear Simulation Models in Hydrology – <i>Christine Shoemaker, Cornell University</i>	
4:45 PM	The Digital Crust – A Prototype for a 3D Subsurface Data Repository – <i>Norm Jones and Derek Whitman, Brigham Young University</i>	
5:00 PM	The Intersection of Big Data, Data Visualization, and Hydrology: A Comparative Analysis of Hydroinformatics Platforms – <i>Andrew Dow, IBM, Smarter Water Sensor Visualization Project</i>	
5:15 PM	A collaborative Resource Management Workspace and Project Management Application for Data Collection, Analysis and Visualization: OpenNRM – <i>Amye Osti, 34 North/OpenNRM.org</i>	
5:30 PM	Interactive Visualization of Large-Scale Hydrological Data using Graphical Processing Unit and Latest Web Technologies – <i>Ibrahim Demir, University of Iowa</i>	

#### Conference Day 1 Adjourns 5:45 PM

### Friday, July 19, 2013

All events take place at the Eccles Conference Center

Time		Location
7:30-8:00 AM	Registration and continental breakfast	2 <sup>nd</sup> Floor atrium
<b>Plenary Session 1A: Extending CUAHSI HIS and Enhancing Collaboration</b>		2 <sup>nd</sup> Floor Auditorium
8:00 AM	<b>Keynote: HydroShare: An Online, Collaborative Environment for the Sharing of Hydrologic Data and Models - David Tarboton, Utah State University</b>	
8:30 AM	ODM2: Developing a Community Information Model and Supporting Software to Extend Interoperability of Sensor and Sample Based Earth Observations – <i>Jeff Horsburgh, Utah State University</i>	
8:45 AM	A Python-Based HydroShare Plugin for HydroDesktop to Facilitate Simplified Data and Model Sharing– <i>Daniel P. Ames, Brigham Young University</i>	
<b>Plenary Session 2A: International Collaborations and Systems</b>		2 <sup>nd</sup> Floor Auditorium
9:00 AM	<b>Keynote: A Federated Global National Regional Hydrologic Data Sharing by the CUAHSI HIS Architecture - Silvano Pecora, ARPA Emilia-Romagna</b>	
9:30 AM	New Zealand Hydrologic Information Systems: The Place of Architectural Agnosticism – <i>Sean Hodges, Horizons Regional Council, New Zealand</i>	
9:45 AM	CUAHSI in Ethiopia: First Implementation and Perspective – <i>Xavier Thomas, BRLi</i>	
10:00-10:20AM	Networking and Coffee Break	2 <sup>nd</sup> Floor Atrium

<b>Plenary Session 2A: Ontology and Semantics</b>		2 <sup>nd</sup> Floor Auditorium
10:20 AM	<b>Invited: The Value of Community-moderated Ontologies</b> - Ilya Zaslavsky, San Diego Supercomputing Center	
10:35 AM	<b>Invited: The Shared (Onto)Logic of Surface and Subsurface Water</b> - Boyan Broderic, Geological Survey of Canada	
<b>Plenary Session 2B: Advances in Hydrologic Modeling</b>		2 <sup>nd</sup> Floor Auditorium
11:00 AM	<b>Invited: Using CUAHSI HIS for Regional-scale River Flow Modeling – How Hydroinformatics can Support Computational Hydrology</b> – Cedric David, University of California Center for Hydrologic Modeling	
11:15 AM	HydroTerre: Essential Terrestrial Variable Data Workflows for Distributed Water Resources Modeling – Lorne Leonard, Penn State University	
11:30 AM	Data and Algorithmic Uncertainty in the Transition from Research to Operations – Matthijs Lemans, Deltares USA, Inc	
11:45 AM	Models as HydroShare Resources: Focus on Model Metadata Standardization – Jon Goodall, University of South Carolina	
12:00 PM	Toward a Common Framework for Ecohydrology Model Data Preparation Workflows: EcohydroWorkflowLib – Brian Miles, University of North Carolina, Chapel Hill	
12:15 PM	Distributed Hydrologic Modeling Apps for Decision Support in the Cloud – Nathan Swain, Brigham Young University	

12:30 – 1:30PM	<b>Lunch on your own</b>
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<b>Posters, Workshops, and Concurrent Technical Session</b>				
Time/Location	Room 205-207	Room 201	Room 203	2 <sup>nd</sup> Floor Auditorium
1:30 – 2:30 PM	Poster Session	Workshop: Publishing Data with the WDC	Meet the WDC Staff and Users Committee – An Open Discussion	Special Session: Standards and Ontology (see details below)
2:30 – 3:30 PM		Workshop: Writing Plugs for HydroDesktop		

<b>Special Concurrent Session: Standards and Ontology</b>		2 <sup>nd</sup> Floor Auditorium
1:30 PM	<b>Invited: The iPlant Collaborative uses SSWAP (Simple Semantic Web Architecture and Protocol) to Enable Semantic Web Integration</b> - Damien Gessler, Semantic Web Architect	
1:45 PM	<b>Invited: The Development of a National Hydrography Dataset for the Semantic Web</b> – Dalia Varanka, USGS	
2:00 PM	<b>Invited: Ideas to Improve Semantics for CUAHSI Controlled Vocabularies</b> – Gary Berg-Cross, SOCoP	
2:15 PM	The Impact of a National Quality Coding Schema from Data Collection to Delivery – Brent Watson, Horizons Regional Council, New Zealand	
2:30 PM	A Key to Simplifying the Complexity of Searching Data from Hydrologic Information System – Dinesh Grover, pLine Technologies	
2:45 PM	Developing RiverML to Support the Sharing of 3D River Geometry and Flow Unit– Stephen Jackson, CRWR, University of Texas at Austin	
3:30 PM	Open Discussion – led by Rick Hooper and Ilya Zaslavsky	

<b>Closing Plenary Session: Looking Toward the Future</b>		2 <sup>nd</sup> Floor Auditorium
3:30 PM	<b>Keynote Closing Remarks:</b> David Maidment, CRWR, University of Texas at Austin, and Leader of the CUAHSI HIS Project	

Conference Day 2 Adjourns 4:00 PM