

Conference Program
AGU Hydrology Days 2014
 March 24 - March 26, 2014

Program at a Glance			
	March 24	March 25	March 26
8 - 6		Posters	Posters
8	Registration	Registration	Registration
8 - 10	Snow Hydrology		Poster Session
	Mid-morning break	Mid-morning break	Mid-morning break
10 - 12	Soil Moisture - Vegetation - Eco Hydrology	Colorado Floods	Erosion and Sedimentation
			I-WATER Symposium
12 - 2	Lunch Borland Lecture in Hydrology	Lunch Hydrology Days Award Lecture	Lunch Borland Lecture in Hydraulics
2 - 4	Stochastic Approaches	Contaminant Hydrology - Groundwater	Urban Hydrology - Flood Routing - Water Quality
			I-WATER Symposium
	Mid-afternoon break	Mid-afternoon break	Mid-afternoon break
4 - 6	Watershed Modeling - Irrigation	Reactive Transport - Salinity - Arsenic - Sellenium	Global Hydrologic Issues
	The Emerald Mile		
	Adjourn	Adjourn	Hydrology Days Ends

Hydrology Days 2014 Program	
Monday	
Time	Session
8:00	Registration - Cherokee Park Room - Lory Student Center
8:00	Snow Hydrology Chair: Professor Steven Fassnacht Department of Ecosystem Science and Sustainability, CSU Cherokee Park Room - Lory Student Center
8:00	Estimating the uncertainty associated with calculated snowpack sublimation Douglas M. Hultstrand and Steven R. Fassnacht Geosciences, Colorado State University
8:15	Soil moisture variability beneath a melting snowpack Ryan W. Webb and Steven R. Fassnacht Department of Civil and Environmental Engineering, Colorado State University
8:30	Spatio-temporal Variability in Snowmelt Rates Observed Across the Southern Rocky Mountains, U.S.A. Karen K. Burke and Steven R. Fassnacht ESS-Watershed Science, Colorado State University
8:45	The Influence of Pollution Aerosols on Local and Regional Scale Colorado Snowpack Stephen M. Saleeby Department of Atmospheric Science, Colorado State University
9:00	Measuring Snowpack Sublimation in the Upper Colorado River Basin using the Bowen Ratio Energy Balance Method Graham A. Sextstone, David W. Clow and David I. Stannard Colorado Water Science Center, U.S. Geological Survey, Denver, Colorado
9:15	Rainfall and Snowmelt Rates at Montane Elevations across the Southern Rocky Mountains, U.S.A. Steven R. Fassnacht, Rosemary M. Records, Glen G. Patterson, Graham A. Sextstone, William E. Sanford, Doug Laraby, Douglas M. Hultstrand, Niah B.H. Venable ESS-Watershed Science, Colorado State University
9:30	Niveograph Interpolation to Estimate Peak Accumulation of SWE in Rocky Mountain National Park Glenn G. Patterson and Steven R. Fassnacht Department of Geosciences, Colorado State University
9:45	Mid-morning break
10:00	Soil Moisture - Vegetation - Eco Hydrology Chair: Professor Jeffrey Niemann Department of Civil and Environmental Engineering, CSU Cherokee Park Room - Lory Student Center
10:00	Evaluation of a method to estimate root-zone soil moisture based on optical and thermal satellite imagery Nathan E. Alburn, Jeffrey D. Niemann, and Aymn Elhaddad Department of Civil and Environmental Engineering, Colorado State University
10:15	Evaluation of a Method to Downscale Intermediate-Resolution Soil Moisture to a Fine-Resolution using Topographic, Vegetation, and Soil Data Kayla J. Ranney, Jeffrey D. Niemann, Timothy R. Green, and Andrew S. Jones Department of Civil and Environmental Engineering, Colorado State University

10:30	Ecological Optimality of Canopy-Scale Vegetation Properties – Theoretical Perspectives and Empirical Evidence
	Jon Quebbeman and Jorge A Ramirez Department of Civil and Environmental Engineering, Colorado State University
10:45	Implementation of an Optimal Stomatal Control Approach in the Variable Infiltration Capacity (VIC) Model
	Jon Quebbeman and Jorge A Ramirez Department of Civil and Environmental Engineering, Colorado State University
11:00	Thresholds for runoff generation in ephemeral streams with varying morphology in the Sonoran Desert in Arizona, USA
	Joshua D. Faulconer, Stephanie K. Kampf, David J. Cooper and Jeremy Shaw Department of Ecosystem Science and Sustainability, Colorado State University
11:15	Developing Flow-Ecology Relationships in Southern California
	Sarah R. Eberhart and Brian P. Bledsoe Department of Civil and Environmental Engineering, Colorado State University
11:30	One-dimensional Solute Transport Models: Parameter Uncertainty Implications for Quantifying Biogeochemical Cycling in Stream Networks
	Erika Smull, Adam Wlostowski and Michael Gooseff Department of Civil and Environmental Engineering, Colorado State University
11:45	Investigation of the effects of whitewater parks on aquatic resources in Colorado
	Tim Stephens, Brian Fox, Nell Kolden, and Brian Bledsoe Department of Civil and Environmental Engineering, Colorado State University
12:00	Lunch - North Ball Room - Lory Student Center
1:00	Borland Lecture in Hydrology - North Ball Room - Lory Student Center
	Role of the Environment in Shaping Malaria Transmission in Africa
	Professor Elfatih A.B. Eltahir Department of Civil and Environmental Engineering, MIT
2:00	Stochastic Approaches - Climate
	Chair: Professor Balaji Rajagopalan Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder
	Cherokee Park Room - Lory Student Center
2:00	Implications of subjectivity in hydrologic model choice and parameter identification on the portrayal of climate change impact
	Pablo A. Mendoza, Martyn P. Clark, Balaji Rajagopalan, Naoki Mizukami, Ethan Gutmann, Andy Newman, Michael Barlage, Levi Brekke and Jeffrey Arnold Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder
2:15	A Markov track model for simulating Typhoon Tracks in North-Western Pacific Ocean
	Byunghyun Song, Balaji Rajagopalan, Gyu-Ho Lim Cooperative Institute for Research in Environmental Sciences, Boulder, CO
2:30	Coupled Stochastic Weather Generation Using Spatial and Generalized Linear Models
	Andrew Verdin, Balaji Rajagopalan, William Kleiber and Richard W. Katz Department of Civil, Environmental, and Architectural Engineering, University of Colorado, Boulder
2:45	A Nonlinear Dynamical Systems based Model for Stochastic Simulation of Streamflow
	Solomon Erkyihun, Balaji Rajagopalan and Edith Zagona Department of Civil, Environmental, and Architectural Engineering, University of Colorado, Boulder
3:00	Understanding and Modeling Climate Variability in Ciliwung Watershed, Jakarta, Indonesia
	Mas Yanto, Balaji Rajagopalan, and Edith Zagona Department of Civil, Environmental, and Architectural Engineering, University of Colorado, Boulder

3:15	Variability of Summer Hydroclimate Extremes in Southwestern United States
	Srijita Jana, Balaji Rajagopalan, Andrea J. Ray Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder
3:30	21st century U.S. Climate in CMIP5 Experiments and its impacts on water yield
	Vinod Mahat, Jorge A. Ramirez and Thomas C. Brown Department of Civil and Environmental Engineering, Colorado State University
3:45	Mid-afternoon break
4:00	Watershed Modeling - ET - Irrigation
	Chair: Professor Jorge A Ramirez Department of Civil and Environmental Engineering, CSU
	Cherokee Park Room - Lory Student Center
4:00	Improving the Statistical Representation of a Modeler's Prior Knowledge to Speed the Evaluation of Model Uncertainty
	Youngjai Jung and Jeffrey D. Niemann Department of Civil and Environmental Engineering, Colorado State University
4:15	An Evaluation Procedure of Parameter Sampling Techniques in Watershed Modeling
	Haw Yen, Jaehak Jeong, Wen-Hsiao Tseng, Rosemary M. Records, Min-Kyeong Kim, Mazdak Arabi Blackland Research & Extension Center, Texas A&M Agrilife Research, Temple, Texas
4:30	Hydrologic modeling of a small ungauged basin in the Sahel: calibration and results
	Mikell P. Warms and Jorge A. Ramirez Department of Civil and Environmental Engineering, Colorado State University
4:45	Green-Ampt vs. Curve Number: How different physiographic characteristics of the watersheds call for different approaches in modeling
	Ali Tasdighi and Mazdak Arabi Department of Civil and Environmental Engineering, Colorado State University
5:00	Measuring water use and crop coefficients for full and deficit irrigated crops
	Thomas Trout Water Management Research Unit, USDA- Agricultural Research Service
5:15	Assessing Corn Water Stress Using Spectral Reflectance
	Brenna S. Mefford and Jose L. Chavez Department of Civil and Environmental Engineering, Colorado State University
5:30	Using ReSET Model to Estimate the Evapotranspiration of the Irrigated Crops in the South Platte River Basin, Colorado
	Ahmed A. Eldeiry, Reagan M. Waskom, and Ayman Elhaddad Department of Civil and Environmental Engineering, Colorado State University
5:45	Estimating ET on Fine Spatial Scales in Urban Wetlands
	Catherine Kuhn School of Forestry & Environmental Studies, Yale University
6:00	Adjourn
7:00	The Emerald Mile
	Kevin Fedarko
	Lory Student Center Theater
7:00	The Emerald Mile
	Kevin Fedarko

Hydrology Days 2014 Program	
Tuesday	
Time	Session
8:00	Registration - Cherokee Park Room - Lory Student Center
10:00	Colorado Floods Chair: Professor Jorge A Ramírez Department of Civil and Environmental Engineering, CSU Cherokee Park Room - Lory Student Center
10:00	A Review of the 2013 Water Year in Colorado N.J. Doesken and W.A. Ryan Department of Atmospheric Science, Colorado State University
10:15	Atmospheric conditions associated with the September 2013 Colorado extreme rainfall and flooding Russ Schumacher Department of Atmospheric Science, Colorado State University
10:30	September 2013 flood and High Park burn in the South Fork Cache la Poudre River near Fort Collins, CO Sandra Ryan, Sara Rathburn, Mark Dixon, and Scott Shahverdian US Forest Service, Rocky Mountain Research Station, Fort Collins, CO
10:45	The 2012 Fires and 2013 Floods: A knockout combination for the main stem of the Poudre River or business as usual? Daniel W. Baker Department of Civil and Environmental Engineering, Colorado State University
11:00	Synchronicity of rainfall runoff peak flows across elevations during the September 2013 Colorado Front Range floods Stephanie K. Kampf Department of Ecosystem Science and Sustainability, Colorado State University
11:15	An examination of rainfall amounts and timing of the Front Range Floods the week of September 9-16, 2013 Zach Schwalbe, Tye Parzybok, Nolan Doesken, Wendy Ryan Colorado Climate Center and Department of Atmospheric Science, Colorado State University
11:30	Taking September 2013 as a Forewarning – Adaptive Co-Management to Better Prepare for the 100-Year Event Margaret T. Herzog, Russell N. Clayshulte, John W. Labadie, and Neil S. Grigg Department of Civil and Environmental Engineering, Colorado State University
11:45	Flood Risk Integration: Lessons from U.S. experience Neil S. Grigg Department of Civil and Environmental Engineering, Colorado State University
12:00	Lunch - North Ball Room - Lory Student Center
1:00	Hydrology Days Award Lecture - North Ball Room - Lory Student Center Optimization of Hydrosystem Management and Operation Professor William W-G Yeh Department of Civil and Environmental Engineering, University of California, Loas Angeles

2:00	Groundwater - Contaminant Hydrology
	Chair: Professor Thomas C Sale Department of Civil and Environmental Engineering, CSU
	Cherokee Park Room - Lory Student Center
2:00	Spatial quantification of non-aqueous phase liquid (NAPL) contaminants in frozen soil cores using nuclear magnetic resonance (NMR)
	Saeed Kiaalhosseini, Tom Sale, and Jens Blotevogel Department of Civil and Environmental Engineering, Colorado State University
2:15	Comparison of methods for estimating natural LNAPL loss rates at field sites based on CO₂ flux in soils
	Melissa K. Tracy, Julio A. Zimbrón and Tom C. Sale Department of Civil and Environmental Engineering, Colorado State University
2:30	A Novel, Sustainable Technology to Prevent Hydrocarbon Sheens: the Oleophilic Bio Barrier
	Marc Chalfant, Tom Sale and Julio Zimbrón Department of Civil and Environmental Engineering, Colorado State University
2:45	Use of Soil Heat Fluxes to Evaluate Continuous Natural Loss Rates of Subsurface LNAPL
	Emily Stockwell and Tom Sale Department of Civil and Environmental Engineering, Colorado State University
3:00	Thermally Enhanced Attenuation of Substituted Benzenes
	Zoe Bezold, Tom Sale, and Jens Blotevogel Department of Civil and Environmental Engineering, Colorado State University
3:15	Stochastic Aquifer Inversion with a New Highly Scalable Parallel Solver
	Dongdong Wang, Ye Zhang, He Huang, and Liqiang Wang Department of Geology and Geophysics, University of Wyoming
3:30	Physically based Stochastic Inversion Assessing Aquifer Parameter and Boundary Condition Uncertainty
	Dongdong Wang and Ye Zhang Department of Geology and Geophysics, University of Wyoming
3:45	Mid-afternoon break
4:00	Reactive Transport - Arsenic - Salinity
	Chair: Professor Ryan T Bailey Department of Civil and Environmental Engineering, CSU
	Cherokee Park Room - Lory Student Center
4:00	Exploring BMP Practices for Decreasing Selenium in the Lower Arkansas River Valley
	Erica C. Romero, Ryan T. Bailey, and Timothy K. Gates Department of Civil and Environmental Engineering, Colorado State University
4:15	Using Geospatial Techniques and Remote Sensing to Reduce the Number of Soil Salinity Samples
	Ahmed A. Eldeiry and Luis A. Garcia Department of Civil and Environmental Engineering, Colorado State University
4:30	Arsenic and other Heavy Metals in Utah Lake and its Tributaries
	Jillian Hopkinson, Sterling Roberts, Samuel Nofchissey, Jeremiah McDonald and Steven H. Emerman Department of Earth Science, Utah Valley University, Orem, Utah
4:45	Arsenic and other Heavy Metals in Surface Water in Swaziland, Southern Africa
	Sterling Roberts, Matthew Walker and Steven H. Emerman Department of Earth Science, Utah Valley University, Orem, Utah

5:00	The Effect of Surface Lithology on Arsenic in Surface Water and Groundwater in Mustang Valley, Nepal Himalaya
	Steven H. Emerman, Janae R. Nelson, J. Kade Carlson, Tracy Kemp Anderson, Anusha Sharma, Basanta Raj Adhikari Department of Earth Science, Utah Valley University, Orem, Utah
5:15	Assimilation Capacity of Low-k zones
	Rachael L. McSpadden and Mitchell R. Olson and Thomas C. Sale Department of Civil and Environmental Engineering, Colorado State University
5:30	Comparing the Glover-Balmer method with a calibrated groundwater model to estimate aquifer-stream impacts due to altered field water management
	Cale A. Mages, Ryan T. Bailey, and Timothy K. Gates Department of Civil and Environmental Engineering, Colorado State University

6:00 pm Adjourn

Hydrology Days 2014 Program	
Wednesday	
Time	Session
8:00	Registration - Cherokee Park Room - Lory Student Center
9:30	I-WATER Symposium at Hydrology Days Chair: Professor Jorge A Ramirez Department of Civil and Environmental Engineering, CSU Grey Rock Room - Lory Student Center
9:30	Implications of flood response decision support framework on making room-for-the-river: A case study of the St. Vrain Creek André Dozier, Daniel Brogan, Peter Leipzig-Scott and Ryan Fitzpatrick Department of Civil and Environmental Engineering, Colorado State University
9:45	Dendrochronological techniques to extend discharge records and explore rates of floodplain turnover, Yellowstone River, Montana Derek Schook and Sara L. Rathburn Department of Geosciences, Colorado State University
10:00	Novel riparian systems of the West: the composition of an irrigation system Erick A. Carlson and David J. Cooper Department of Forest & Rangeland Stewardship, Colorado State University
10:15	The marginal water cost of carbon gain: Patterns of emergence in the Ball-Berry slope parameter by plant functional type Grace Lloyd Miner and William L. Bauerle Department of Soil and Crop Sciences, Colorado State University
10:30	Transport of pollutants from eastern Colorado into the Rocky Mountains via upslope winds Aaron J. Piña Department of Atmospheric Science, Colorado State University
10:45	Simulating the 2012 High Plains drought using three single column versions (SCM) of BUGS5 Isaac D. Medina Department of Atmospheric Science, Colorado State University.
11:00	Banking carbon: Riparian carbon storage in headwater streams Nicholas A. Sutfin Department of Geosciences, Colorado State University
11:15	A prioritization framework for multi-objective fire management: A case study of the High Park Fire and the City of Fort Collins' water supply Codie R. Wilson, Dylan Harrison-Atlas, David M. Martin and David Kamin Department of Geosciences, Colorado State University
11:30	Groundwater Governance for Oil and Gas Development in Colorado: The case of rule 609 Karie Boone Department of Geosciences, Colorado State University
11:45	Urban and Industrialized Watersheds Have Elevated Water Risk and Limited Opportunities to Mitigate Risk through Water Trading Alexander Maas Department of Agricultural and Resource Economics, Colorado State University

2:00	I-WATER Symposium at Hydrology Days
	Chair: Professor Jorge A Ramirez Department of Civil and Environmental Engineering, CSU
	Grey Rock Room - Lory Student Center
2:00	Modeling stakeholder decisions with fuzzy set theory for environmental flows management
	David M. Martin and N. LeRoy Poff Department of Biology, Graduate Degree Program in Ecology, Colorado State University
2:15	Ensemble-Based Analysis of a Colorado Rain and Hailstorm: Forecast Uncertainty and Understanding of Weather Information by Front Range Decision-Makers
	Vanessa Vincente Department of Atmospheric Science, Colorado State University
2:30	Quantifying ecosystem services: science for decision makers
	Dylan Harrison-Atlas Department of Fish, Wildlife, and Conservation Biology, Graduate Degree Program in Ecology, Colorado State University.
2:45	Cottonwood Mortality and Hydrologic Manipulation: A study of gradients and thresholds in regulated and natural flow regimes in northwest Colorado
	Derek Schook, Joel Sholtes, Erick Carlson and David Cooper I-WATER Ph.D. Fellows
3:00	Stakeholder vulnerability to water stress in the South Platte River Basin
	Amber N. Childress Department of Ecosystem Sciences and Sustainability, Graduate Degree Program in Ecology, Colorado State University
3:15	Sediment Transport Magnitude-Frequency Metrics for Process-Based Channel Design
	Joel Sholtes Department of Civil and Environmental Engineering, Colorado State University
3:30	Litter-induced priming in the Arctic: Does plant litter chemistry mediate decomposition of old soil organic matter?
	Laurel Lynch Graduate Degree Program in Ecology & Ecosystem Science and Sustainability, Colorado State University
3:45	Mid-afternoon break
4:00	I-WATER Symposium
	Chair: Professor Jorge A Ramirez Department of Civil and Environmental Engineering, CSU
	Grey Rock Room - Lory Student Center
4 - 6:00	Internal I-WATER Program Assessment
	All I-WATER Fellows, I-WATER PI's, I-WATER Faculty Mentors

Hydrology Days 2014 Program	
Wednesday	
Time	Session
8:00	Registration - Cherokee Park Room - Lory Student Center
8:00	Poster Session
	Chair: Professor Pierre Y Julien Department of Civil and Environmental Engineering, CSU
	North Ball Room - Lory Student Center
1	Modeling Sediment Yield and Deposition Using Swat Model: A Case Study of Cubuk I and Cubuk II Reservoirs, Turkey
	Umit Duru, Ellen Wohl, Mazdak Arabi, Sara Rathburn, Mehdi Ahmadi, and Rosemary Records Geosciences, Colorado State University
2	Numerical Analysis for Bed Changes Considering Discharge Variation at the River Confluence Section
	Eunkyung Jang and Un Ji River and Coastal Research Division, Water Resources and Environment Research Department, Korea Institute of Construction Technology, Goyang-Si, Korea
3	Stable Channel Evaluation with Design Constraints in Cheongmi Stream, South Korea
	Un Ji and Eunkyung Jang River and Coastal Research Division, Water Resources and Environment Research Department, Korea Institute of Construction Technology, Goyang-Si, Korea
4	Spatial Precipitation Trends and Effects of Climate Change on the Hawai'ian Hualalai Aquifer
	Alyssa Hendricks and Steven R. Fassnacht ESS-Watershed Science, Colorado State University
5	Comparison of point and gridded data sources for use in hydroclimatic modeling of the Khangai Mountain region, Mongolia
	N. B. H. Venable, S. R. Fassnacht and G. Adyabadam Watershed Science Program, Colorado State University
6	Using water infrastructure to manage ecohydrologic impacts of climate change in the upper Green River basin
	Ryan R. McShane and N. LeRoy Poff Graduate Degree Program in Ecology, Department of Biology, Colorado State University
7	High-resolution Radar-based QPE and Flash Flood Forecasting for Dallas-Fort Worth Metroplex
	Haonan Chen, V. Chandrasekar, Dong-Jun Seo, and Arezoo Rafieei Nasab Department of Electrical and Computer Engineering, Colorado State University
8	Implications for riparian vegetation of potential climate-induced changes to flow regime in a Western stream
	Rosemary M. Records, Mazdak Arabi, Steven R. Fassnacht, Walter Duffy, Mehdi Ahmadi, and Katherine C. Hegewisch Department of Geosciences and Department of Civil and Environmental Engineering, Colorado State University
9	Comparing Roughness Metrics with Geometric-based Roughness Lengths for a Snowpack Surface
	Iuliana Oprea, Steven R. Fassnacht, George Borleske, and David Kamin Department of Mathematics
10	Extreme low flow characteristics of Colorado River: A diagnostic study for an application to water resources management
	Maryam Pournasiri P. and Indrani Pal College of Engineering and Applied Science, University of Colorado Denver

11	Selected Hydrological Tools for Instream Flow Analysis
	Robert T Milhous Hydrologist, Fort Collins, CO
12	Assessing Water Stress Risk in a Variable Climate in the American Southwest
	Spencer Stump and Indrani Pal College of Engineering and Applied Science, University of Colorado, Denver
13	The other side: Non-Engineering aspects of engineering projects in developing countries
	Ryan W. Webb Department of Civil and Environmental Engineering, Colorado State University
14	CSU's Water MOOC: What Happens when 13 Professors and 500 Students Participate in a Tuition-Free, Credit-Free Online Course?
	Glenn G. Patterson, Julie Kallenberger, and Reagan Waskom Department of Geosciences, Colorado State University
15	Hydropower Energy Simulation Using Mike 11 Model: A Case Study in South Germany's Small Run-Of-River Hydropower Plants
	Frezer Seid Awol and Silvia Matz Stuttgart University/SMEC International, Tanzania
9:45	Mid-morning break
10:00	Erosion and Sedimentation
	Chair: Professor Pierre Y Julien Department of Civil and Environmental Engineering, CSU
	Cherokee Park Room - Lory Student Center
10:00	An Improved Method for Calculating the Manning Roughness Coefficient for Estimation of Stream Discharge through Slot Canyons in Southern Utah
	Jeff Selck, Holly A. Ivie, Steven H. Emerman, Dylan B. Dastrup, Andrew W. Simister, Devin R. Howard and Andrew W. Fletcher Department of Earth Science, Utah Valley University
10:15	Erosion mapping and sediment yield of the Kabul river basin, Afghanistan
	Shukran Sahaar and Pierre Y. Julien Department of Civil and Environmental Engineering, Colorado State University
10:30	Review of Sediment Plug Factors - Middle Rio Grande, NM
	Jonathan S. Rainwater and Pierre Y. Julien Department of Civil and Environmental Engineering, Colorado State University,
10:45	Post-Fire Erosion Response and Recovery, High Park Fire, Colorado
	Sarah R. Schmeer, Stephanie K. Kampf, Lee H. MacDonald Department of Ecosystem Science and Sustainability, Colorado State University
11:00	Analysis of variations in channel width and sediment supply on riffle pool dynamics, before and after dam removal
	Andrew K. Brew , Jacob A. Morgan, and Peter A. Nelson Department of Civil and Environmental Engineering, Colorado State University
11:15	Road sediment production and delivery: Effects of road decommissioning
	Gabriel Sosa-Perez and Lee H. MacDonald Department of Geosciences, Colorado State University
11:30	Effects of land use/cover changes on erosion and sediment yield for the N'djili River Basin, Democratic Republic of Congo
	Patrick Ndolo Goy and Pierre Y. Julien Department of Civil and Environmental Engineering, Colorado State University

12:00	Lunch - North Ball Room - Lory Student Center
1:00	Borland Lecture in Hydraulics - North Ball Room - Lory Student Center Lagrangian and Eulerian approaches to sediment transport, biogeochemistry, and environmental law Professor Martin Doyle Nicholas Institute for Environmental Policy Solutions, Duke University
2:00	Urban Hydrology - Flood Routing - Water Quality Chair: Professor Lee MacDonald Department of Ecosystem Science and Sustainability, CSU Cherokee Park Room - Lory Student Center
2:00	An urban hydrologic and hydraulic model for planning reductions in combined sewer overflows to the Missouri River Perrin Niemann, Emily Holtzclaw and James E. Theiler CH2M HILL
2:15	Expedient Simulation of Flood Extent over Large Land Areas using Digital Elevation Data and Flow Estimates Michael L. Follum Department of Civil and Environmental Engineering, Colorado State University
2:30	Impacts of disaggregation on modeled hydrologic responses Andrew Augustine, Chris Olson, Jeff Niemann, and Jorge Gironás Department of Civil and Environmental Engineering, Colorado State University
2:45	Smart Water Grids and Network Vulnerability Olga A. Martyusheva and Pierre Y. Julien Department of Civil and Environmental Engineering, Colorado State University
3:00	Occurrence of Cyclic Volatile Methylsiloxanes in Surface Waters Yu Zhang and Pinar Omur-Ozbek Department of Civil and Environmental Engineering, Colorado State University
3:15	The effects of wildfire retardants on surface water quality Brent Morgensen and Pinar Omur-Ozbek Department of Civil and Environmental Engineering Department, Colorado State University
3:30	An Economic Inquisition of When Water Quality Trading Works Marzieh Motallebi, Dana L. Hoag, Mazdak Arabi and Ali Tasdighi Agricultural and Resource Economics Department, Colorado State University
3:45	A Water Quality Model Comparison of Potential Impacts from Bioenergy Crop Land Conversions: Switchgrass versus Hardwood Zachariah Seiden and John Schwartz Civil and Environmental Engineering Department, University of Tennessee, Knoxville
4:00	Mid-afternoon break
4:15 pm	Global Hydrologic Issues Chair: Professor Lee MacDonald Department of Ecosystem Science and Sustainability, CSU Cherokee Park Room - Lory Student Center
4:15	Rainwater Catchment Analysis to Assess Existing and Potential Water Supply for Micronesian Atoll Islands Corey D. Wallace and Ryan T. Bailey Department of Civil and Environmental Engineering, Colorado State University
4:30	Recovery of Atoll Aquifers from Marine Overwash Events: Federated States of Micronesia

	Ryan T. Bailey Department of Civil and Environmental Engineering, Colorado State University
4:45	Water Resources Management in South Korea
	Hwayoung Kim and Pierre Y. Julien Department of Civil and Environmental Engineering, Colorado State University
5:00	Large-scale Climatic Patterns and Precipitation in South Korea
	Jai-Hong Lee and Pierre Y. Julien Department of Civil and Environmental Engineering, Colorado State University
5:15	Heterogeneity of Synoptic Hydro-Meteorological Conditions Linked With Flooding Disasters in the Hindu Kush-Himalaya (HKH) Region
	Shada Elalem, Maryam Pournasiri Poshtiri and Indrani Pal Department of Civil and Environmental Engineering, University of Colorado, Denver
5:30 pm	Hydrology Days 2014 ends