

**AWRA 2018 Spring Specialty Conference – GIS & Water Resources X:
Spatial Analysis of Watersheds: Ecological, Hydrological, and Societal Responses**

Topics and Subtopics

Data Acquisition/Mgmt.

Innovative Data Acquisition
Mobile Data Collection
Efficient Data Processing
Secure Data Sharing
Handling Data Uncertainty
Authoritative Data Portals
Web Services
Data Curation
Processing Big Data
Ontologies and Semantics
Advances in Remote Sensing
New Data Models and Structures

Process Modeling

Managing Workflows
Geoprocessing
Modeling with Uncertainties
Integrated Hydrologic/
Hydraulic Modeling
Integrated Groundwater/
Surface Water Modeling
Citizen Science
Community Communication
Sea Level Rise Adaptation
and Climate Change
Spatial Algorithms
Decision Modeling
Geospatial Visualization
Cloud Computing
High Performance Computing
Parallel Computing
Open Source Tools and
Libraries
Scientific Computing

Implementation

Water Supply Optimization
Land Cover/Land Use Change
Weather Forecasting
Snowmelt Estimation
Effective Decision System
Drought Risk, Planning & Mgmt.
Ecosystem Modeling and Monitoring
Integrated Watershed Mgmt.
Water and Energy Decisions
Stormwater Mgmt. Innovations
International Approaches and
Collaboration
Balancing Costs and Environmental
Policies
River Hydraulics
Urban Watershed Management
Managing Water Resources Under
Extreme Weather Cycles
Regional and National Systems
Groundwater Management
Flood Risk Mitigation Planning
Water Quality Improvements
Hazard Modeling (e.g. Landslides,
Floods, Fires, Erosion)
Emergency Management:
Operations and Planning
Coastal Processes
Sediment Management
Water Distribution and Drought
Resilience
Ocean Modeling
Hydrologic Modeling
Watershed Conservation and
Restoration