

Utah State University Graduate Student Research Assistantships Hydroinformatics and Hydrologic Modeling Systems

Up to three PhD student assistantships are available starting Fall 2013 for graduate students to help develop Cyberinfrastructure (CI) to support hydrology and water resources modeling and data sharing. Successful candidates will assist our research team in researching and developing advanced computer systems to more seamlessly create and share hydrologic data and models. The following opportunities are available:

Doctoral Research Assistantship: Hydrologic Modeling of Coupled Human Natural Systems

PhD-level graduate research assistant to develop technical approaches for coupling hydrologic models in support of developing holistic models of natural and human mediated hydrology of western water systems. This opportunity is part of a multi-year, NSF funded study aimed at understanding water resources sustainability in the urbanizing Wasatch Range Metropolitan Area. For more information see <http://www.iutahepscor.org>.

Doctoral Research Assistantship: Hydroinformatics

PhD-level graduate research assistant in the general area of hydroinformatics. Hydroinformatics is the study, design, development, and deployment of hardware and software systems for hydrologic data collection, distribution, interpretation, and analysis to aid in the understanding and management of water in the natural and built environment. Specific areas of study for this position may include:

- Development of CI in support of sensors and sensor networks
- Automated quality control and management of streaming sensor data
- Analysis and visualization of large datasets created by aquatic and terrestrial sensors
- New methods for sharing hydrologic data and models
- Enhanced information and data models for hydrologic and environmental data

Doctoral Research Assistantship: HydroShare

PhD-level graduate research assistant working on the HydroShare – a web-based collaboration environment being developed for better access to data and models in the hydrologic sciences. HydroShare will provide the sustainable technology infrastructure needed to address critical issues related to water quantity, quality, accessibility, and management. Specific areas of study for this position may include:

- Development of CI in support of collaborative data sharing
- Enhanced information and data models for hydrologic and environmental data
- Social media capabilities focused on hydrologic data and models
- Ontologies, vocabularies, and semantics of hydrologic data and models

Assistantships include a monthly stipend and tuition support and will be awarded through the Department of Civil and Environmental Engineering at USU under the supervision of Dr. Jeffery Horsburgh. **Applicants must apply for admission through the USU graduate school**

<http://www.usu.edu/graduateschool/>. Prospective students should have a background in engineering, hydrology, computer science, or a closely related field. Priority will be given to candidates with experience or strong interest in computer programming, hydrologic modeling, and/or CI development. For more information on the application process, contact Dr. Jeff Horsburgh at

jeff.horsburgh@usu.edu. **In addition to the graduate school application procedure, interested students should email a current curriculum vitae and one page statement of research interests to jeff.horsburgh@usu.edu prior to May 15, 2013.** Utah State University is an Affirmative Action, Equal Opportunity Employer and strongly encourages applicants from all backgrounds to apply.