

Hydrological Modelling Using SWAT Model

Overview

Hydrological modelling is becoming increasingly complex due to climate change. The available tools for the modelling need improvements for the sustainability of water resources. Developments in computer technology have revolutionized the study of hydrologic systems and water resources management. Several computer-based hydrologic/water quality models have been developed for applications in hydrologic modelling and water resources studies. Distributed parameter models, necessary for basin-scale studies, have large input data requirements. One such model available for the water resources professional is the Soil and Water Assessment Tool (SWAT), a distributed parameter model developed by the United States Department of Agriculture. SWAT was developed to predict the impact of land management practices on water, sediment and agricultural chemical yields in large complex watersheds with varying soils, land use and management conditions over long period of time. SWAT is a small watershed to river basin-scale model to simulate the quality and quantity of surface and ground water and predict the environmental impact of land use, land management practices, and climate change. SWAT is widely used in assessing soil erosion prevention and control, non-point source pollution control and regional management in watersheds. Soil and Water Assessment Tool (SWAT) model (Arnold et al., 1998; Arnold and Fohrer, 2005) has proven to be an effective tool for assessing water resource and nonpoint-source pollution problems for a wide range of scales and environmental conditions across the globe. The course will help in enhancing the expertise of research community in hydrological modelling through lectures, practice sessions and various case studies.

Modules	A: Introductory SWAT : Dec 14 – Dec 18, 2015 B: Advance SWAT Modeling : Dec 19 - Dec 23,2015 Number of participants for the course will be limited to fifty.
You Should Attend If...	<ul style="list-style-type: none"> ▪ You are executives, engineers and researchers from water resources, Environmental sciences and public health, service and government organizations including R&D laboratories. ▪ Student or faculty from academic institution interested in learning how to do hydrological modeling and its interactions with climate change and land use changes.
Fees	<p>The participation fees for taking the course is as follows:</p> <p>Participants from abroad : US \$500 Industry/ Research Organizations: 30000 Academic Institutions Faculty/Staff: 12000 Research scholar/student: 5000</p> <p>The above fee include all instructional materials, tutorials, and Internet facility during class hours. The participants will be provided with single bedded accommodation on payment basis based on the availability of hostel facilities.</p>

The Faculty



Prof.R.Srinivasan is Professor and Director of Spatial Sciences Laboratory at Texas A&M University. His research interests include GIS, Remote sensing and their applications, hydrology and water quality assessment of large scale watersheds, Climate and landuse change impacts on water resource planning and assessment.



Dr. Shashidhar is an Assistant Professor of Indian Institute of Technology, Hyderabad. His research interest is Environmental and Water Resources Engineering.

Course Co-ordinator

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