



## Workshop on Hydrologic Modeling with SWAT and Groundwater Modeling with MODFLOW (26-27 December 2014)

### International Conference on Modeling Tools for Sustainable Water Resources Management (28-29 December 2014)

Organized by Department of Civil Engineering, Indian Institute of Technology Hyderabad

#### About IIT Hyderabad

Inventions and innovations are the drivers for the vision of IIT Hyderabad. IIT H started functioning from August 2008, and currently has 12 departments, 121 faculty, and 1465 students. Faculty of the institute are involved with 75 sponsored R&D projects with a funding of worth 540 Million Rupees. During 2013-14, faculty has published 120+ Journal articles and presented at 80+ Conferences of international repute.

#### Civil Engineering @ IIT H

Civil Engineering Department offers Bachelors in CE, Masters and PhD in Structures, Geotechnical, Water Resources, and Environmental divisions. The department has 13 Faculty & 130 students. During 2013-14, faculty of the department has published 20+ Journal articles, and involved with R&D projects of worth about 50 Million Rupees.

#### About the Conference

The present human and climate induced system is rapidly changing the dynamics of water resources. Existing modeling tools may need to be improved in providing sustainable solutions to water resources problems. This conference is mainly focused to bring the scientific community to discuss, share &

disseminate knowledge on various applications and developments in modeling tools to have sustainable solutions related water resources.

#### Conference Themes

*Abstracts of original research, of less than 500 words and related to one of the following themes are invited for the conference*

##### • Surface water and Groundwater Modeling

*Modeling tools to understand the complex surface and groundwater phases of hydrology, and their interaction*

##### • Stochastic Hydrology

*Probabilistic approaches; Quantification, propagation, and modeling of uncertainty in hydrological processes*

##### • Climate change Impacts on Water Resources

*Downscaling techniques of climate models; regional impacts of climate changes on water quantity/quality*

##### • Remote Sensing and GIS in Hydrology

*RS and GIS tools for hydrologic data analysis, pre / post processing, and hydrologic modeling*

##### • Water Resources Management

*Water resources assessment, development, conservation and control strategies; Socio hydrology*

##### • Contaminant Hydrology

*Fate and Transport of contaminants in surface and groundwater systems; Eco hydrology*

#### About the Workshop

A pre conference workshop will be organized to provide hands on experience with open-source hydrologic modeling tools SWAT and MODFLOW (for beginners). At the end of the workshop, the candidate is expected to develop the model framework, and simulate hydrological processes using SWAT and MODFLOW. Candidates from TEQIP sponsored institutions are encouraged to apply for the workshop.

#### Workshop Topics

*A 2-day pre-conference workshop (TEQIP sponsored) on the following topics will be organized by subject experts*

##### 1) Introductory SWAT (W1)

*Hydrologic modeling and ArcSWAT; Watershed and HRU delineation; Weather and management inputs; Visualization and interpretation of SWAT outputs*

##### 2) Advanced SWAT (W2)

Sensitivity and uncertainty analysis; Introduction to SWAT-CUP; Calibration and Validation; Discussion on individual SWAT projects

##### 3) Groundwater Modeling with MODFLOW (W3)

Basic groundwater flow equations; data requirement and representation in MODFLOW; model dependent, independent, and solver packages; flow simulation; Introduction to transport simulation

#### Conference Speakers

##### Prof. Raghavan Srinivasan

Texas A&M University, USA

*Topic: Global application of SWAT model for water management*

##### Prof. Upmanu Lall

Columbia University, USA

##### Prof. A.K. Gosain

IIT Delhi, India

*Topic: Modeling surface water-groundwater interactions in the Ganga Basin*

##### Prof. D. Nagesh Kumar

IISc Bangalore, India

*Topic: Water Resources Assessment in a river basin using Remote Sensing, GIS and DEM*

##### Prof. Bellie Sivakumar

University of New South-wales, Australia

*Topic: Large Dams, Socio-economic Development, and Environmental Sustainability in Developing Nations*

##### Prof. Maria Louriero

Universidade de Santiago de Compostela, Spain

##### Prof. Tirupati Bolisetty

University of Windsor, Canada

##### Prof. Subhashisha Datta

IIT Guwahati, India

*Topic: Coupled hydro-fluvial system of Brahmaputra river: Advanced measurement techniques and physical modeling*

##### Prof. Tomochika Tokunaga

University of Tokyo, Japan

*Topic: Groundwater management after the cessation of land subsidence in the coastal mega cities –lessons learnt from the Tokyo Metropolitan Areas*



#### Who Should Attend ?

- \* Graduate students, Research scholars, Post-docs, Project associates, Faculty, Employees of government and R&D institutions, People from private and NGO organizations, who are working (or, worked) in water resources and its related areas are invited
- \* For attending the conference, submission and acceptance of the abstract is compulsory
- \* For attending the workshop, there is no restriction

#### Why Should Attend ?

- ⇒ Discounted prices to promote student participation
- ⇒ The conference provides a platform to interact with eminent researchers, professors, industrialists, recruiters, and government officials working in water resources related areas across the globe
- ⇒ Prizes and participation certificates through student presentation competition
- ⇒ Interested and eligible participants will be allowed to moderate the technical sessions
- ⇒ Students' individual research problems will be discussed through group/one-to-one meetings

#### Mark your Calendar

- ♦ Abstract Submission Deadline: CLOSED
- ♦ Intimation of Accepted Abstracts: 01 Oct 2014
- ♦ Conference / Workshop Registration Deadline: 31 Oct 2014 (Early Bird) & 01 Dec 2014 (with Late Fee)

#### Registration Charges

| Early Bird            | Regular                 | TEQUIP Sponsored | Student                |
|-----------------------|-------------------------|------------------|------------------------|
| Conference only       | Rs. 8,000 ( US\$ 300)   | Rs. 8,000        | Rs. 4,000 ( US \$ 150) |
| Workshop only         | Rs. 8,000 ( US \$ 300)  | No Fee           | Rs. 4,000 ( US \$ 150) |
| Conference & Workshop | Rs. 12,000 ( US \$ 450) | Rs. 8,000        | Rs. 6,000 ( US \$ 225) |

- Numbers in parenthesis are for international delegates
- A late registration (of 150 % of early bird registration) is applicable to all categories, paying after 01 October 2014
- Registration fee includes breakfast, lunch, tea, snacks, book of abstracts and/or workshop material
- List of Eligible TEQIP Institutions is available at : <http://civil.iith.ac.in/mtswrm/linked/teqipinstitutions.pdf>

#### How to Apply

- Eligible candidates can download registration form at: <http://civil.iith.ac.in/mtswrm/linked/registrationform.pdf>
- Duly filled application along with DD should reach the below address (registered / speed post) on or before 01 Oct 2014 (you are encouraged to e-mail us upon the postage of your application)
- Number of participants to each workshop session is limited to 30. Seats will be filled based on first come, first serve.
- If your chosen workshop session is already full, you will get full money (DD) back before 15 Nov 2014

#### Accommodation and Travel

- All the participants will be accommodated either inside or outside the campus depending on their requirement and budget
- Organizers will provide free transport to all the participants (accommodated by IITH)
- Participants who do not need accommodation (by IITH), can

avail the transport facility (to the venue) on payment.

#### Weather in Hyderabad

- Hyderabad is situated on the banks of Musi River in the central part of Telangana State. Average elevation of the city is 542 m above MSL
- Weather in Hyderabad during December ranges from 14.1 °C to 27.8 °C, with almost no rain.

#### Conference/Workshop Tours

- Local city tours will be organized (in consultation with travel agents) to the participants (and their accompany) on the days of conference/workshop

#### Contact Us

Convener, MTSWRM

Department of Civil Engineering,  
Indian Institute of Technology Hyderabad  
ODF Campus, Yeddumailaram—502205,  
Medak District, Telangana, India  
Phone: 040 2301 6107 / 6117 / 7094  
E-Mail: [mtswrm@iith.ac.in](mailto:mtswrm@iith.ac.in)