

# GIS and Remote Sensing Techniques for Water Resources Assessment *Using Open Source Tools*

Jan.31 – Feb. 5, 2011

IIT Madras

## REGISTRATION FORM

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Email: \_\_\_\_\_

Educational Qualification: \_\_\_\_\_

Experience: \_\_\_\_\_

Mobile: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of applicant: \_\_\_\_\_

(For additional copies, please photocopy  
this form)

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## SPONSORSHIP CERTIFICATE

Certified that Dr./Shri/Smt. \_\_\_\_\_ is a  
faculty of our institute and is being  
sponsored hereby for attending the QIP  
short term course on “GIS and Remote  
Sensing Techniques for Water  
Resources Assessment – Using Open  
Source Tools” to be conducted at IIT  
Madras from Jan.31 – Feb. 5, 2011.

Signature of Sponsoring Authority  
(with date and seal)

Email/Fax the registration form to:

**Dr. Balaji Narasimhan**

Assistant Professor  
Department of Civil Engineering  
Indian Institute of Technology-Madras  
Chennai - 600 036.  
Tel.: 044-2257 4293 / 4288;  
Fax: 044-2257 4252  
Email : nbalaji@iitm.ac.in; sudheer@iitm.ac.in

**Application Deadline: Dec. 20, 2010**

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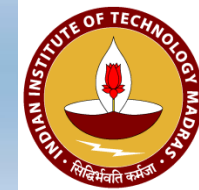
Jan.31 – Feb. 5, 2011

AICTE sponsored Short-Term  
Training Program



Soil & Water  
Assessment Tool | **SWAT**

Organized by:



Coordinators

**Dr. Balaji Narasimhan**

**Dr. K. P. Sudheer**

**DEPARTMENT OF CIVIL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY  
MADRAS  
CHENNAI - 600036, INDIA**



## Course Objectives

Geographical Information System (GIS) and Remote Sensing techniques are widely used with hydrologic models for comprehensive water resources assessment of river basins. The primary objective of this short term training program is to provide college teachers and professional engineers with a comprehensive understanding of GIS and remote sensing techniques relevant for studies related to water resources assessment. The participants will gain in-depth knowledge of working with open source GIS and image analysis software such as MapWindow, ILWIS and the watershed model Soil and Water Assessment Tool (SWAT) through several hands-on sessions following theoretical overview.

## Course Contents

- Introduction to GIS
- Applications in water resources engineering
- Overview of Open source GIS and image analysis platforms
- Geo-referencing and digitizing
- Spatial Interpolation techniques of weather data
- Digital elevation model and Watershed Delineation
- Creation of a soil map and database; pedo-transfer functions
- Principles of remote sensing
- Image interpretation and landcover classification
- Soil and Water Assessment Tool (SWAT) model

- Model calibration and validation techniques

## Faculty

Faculty members of IIT Madras and guest faculty members from other premier Institutions / Organization will deliver lectures.

## Course Materials

To fully realize the objectives of the course, the lecture notes will be made available to the participants at the time of registration at IIT Madras.

## Eligibility

Teachers from AICTE recognized Engineering Colleges, practising engineers from private and government organizations, scientists / engineers from R&D establishments are eligible to apply. Due to a ceiling on the number of participants, applications received will be pre-screened. Provisionally selected participants will be duly notified.

## Registration Fee

### (a) Participants from AICTE recognized colleges

No registration fee will be charged from the teachers of AICTE recognized Engineering Colleges. However, a refundable caution fee of Rs. 500/- is to be paid along with the application form.

### (b) Participants from other organizations

Participants from Industry, Government departments and R&D establishments have to pay Rs.7,500/- per candidate as registration fee. This amount is to be sent along with the application form. Boarding and lodging charges are included in the registration fee.

## Mode of Payment

All payments should be made through crossed Demand Draft in favour of "Registrar, IIT Madras" payable at Chennai.

## Travel and Accommodation

Boarding and lodging facilities will be arranged for all the participants in the Taramani Guest House at IIT Madras on twin sharing basis. The participants from AICTE recognized colleges will be paid TA; they will be paid to and fro 3-Tier AC train fare by the shortest route. Other participants will have to meet their own travel expenses.

## Important Dates

Submission of application form with Sponsorship Certificate

- Dec 20, 2010

Payment of course fee / caution deposit

- Dec 20, 2010

Intimation to selected candidates

- Dec 27, 2010