



FIVE DAY WORKSHOP ON INTEGRATED HYDROLOGICAL MODELLING

INTRODUCTION

This 5-days hands-on course, jointly organized by IIT Hyderabad and DHI, gives you an introduction to integrated hydrological modelling, basin management and uncertainty analysis. The objective of this course is to impart knowledge of numerical modelling of the different processes in the hydrological cycle. This course gives an overview of the basic physical concept and numerical modelling of hydrological, hydrodynamics, and hydrogeological processes, calibration and uncertainty analysis.

The course content of the workshop

Day 1-2: Introduction to hydrological processes, various approaches of modelling, need for numerical modelling, hydraulic modelling such as flooding, flood forecasting and flood management, water quality, dam break analysis, structure operations, sediment transport and salinity intrusion in rivers, canals, wetlands.

Day 3-4: fully integrated/ coupled models considering overland flow, unsaturated flow, groundwater flow, and fully dynamic channel flow, including all their complex feedbacks and interactions. It is also planned to model processes such as vegetation-based evapotranspiration, irrigation, and snowmelt and water quality.

Day 5: model output analysis, development of different management scenarios, uncertainty analysis, and decision support system.

TOOLS USED

QGIS, MIKE +River, MIKE+2D,

MIKE SHE and MIKE HYDRO BASIN

TARGET GROUP AND PREREQUISITES

Professionals, students, researchers in water resources planning who wish to obtain a general understanding of hydrological modeling and its application in efficient water resource management.

DATE AND TIME

13 – 17 February 2023

10:00 AM – 5:00 PM

LOCATION AND VENUE

IIT Hyderabad

REGISTRATION

Participation in the workshop is subjected to the confirmation by the organizer

Registration fee:

Students: INR 5000+GST@18%

Professionals/others: INR10000+GST@18%

Discounts:

- 10% for early bird registration on/before 20 January 2023
- Multiple participants (3 or more) from an organization are eligible for specific discounts

For registration [click here](#)

Last date of registration: 31 January 2023

THIS IS INCLUDED

- Training material
- Training Certificate
- Working Lunch and tea
- Detailed Agenda will be shared shortly

NOTE

- Participants are expected to bring their own laptops with required specifications
- Accommodation for participants will be provided on paid basis subject to availability at IIT Hyderabad guest house/hostels

LANGUAGE

Lectures and training material are in English.

SELF PACED COURSES(Links)

- MIKE HYDRO Basin – Getting started with integrated water resources management
[MIKE HYDRO Basin – Gettin .. | THE ACADEMY by DHI](#)
- MIKE SHE – Getting started with integrated hydrological modelling:
[MIKE SHE – Getting starte .. | THE ACADEMY by DHI](#)
- MIKE+ – Getting started with river modelling
[MIKE+ – Getting started w .. | THE ACADEMY by DHI](#)

Note: Participants are requested to complete the above mentioned free online training courses for better understanding of MIKE modelling before the training program.

INSTRUCTORS

Mr. MANISH KUMAR

Primary Trainer Mr. Manish Kumar is a Senior Water Resource Engineer in DHI who is specialized in hydraulic and hydrological modelling, Flood Forecasting, network design for water supply and sanitation, field data collection for river modelling and basin management. He has working experience on MIKE Operation, MIKE + Urban, MIKE+ Flood, MIKE HYDRO River & Basin, ArcGIS etc.

Master of Science (M.Sc.), Water Resources Management, TERI University

Ms. SREYA

Sreya is currently working as MIKE Technical Support Engineer at DHI. She is having knowledge on hydrology and hydraulic engineering aspects. She has been working with MIKE HYDRO River, MIKE+, and MIKE HYDRO Basin, MIKE SHE and FEFLOW. She is part of the team that delivers training, capacity building programs and technical support.

MTech, Environmental Engineering, APJ Abdul Kalam Technological university

Dr.R.MAHESWARAN

Dr. Maheswaran is currently a faculty member at Department of Civil Engineering, IIT Hyderabad. He is an expert in hydrological modelling, stochastic approaches in hydrology and water resources, model calibration and validation methods.

About IIT Hyderabad

Indian Institute of Technology Hyderabad (IITH) is a premier institute of science and technology established in 2008. IITH has been consistently ranked in the top 10 institutes in India for Engineering according to NIRF making it one of the most coveted schools for science and technology in the country. IITH offers undergraduate programs in all the classical engineering disciplines, applied sciences, design, as well as several modern interdisciplinary areas. Students are given a flexibility to explore a broad set of areas, and potentially pursue a minor or double major in a discipline that is not their own. Students who wish to seek a deeper understanding of their own discipline are strongly encouraged to get involved in cutting-edge research with the help of a faculty to mentor them, and earn an Honors in their own field.

About Department of Civil Engineering

Department of Civil Engineering since its inception in 2008 has been at the forefront of teaching, research and consulting with a focus in the broad areas of Geotechnical, Structural, Transportation Systems, Hydraulics and Water Resources and Environmental Engineering. Our alumni have gone on to serve in distinguished capacities in various industries and institutions in India and abroad. Our research focuses on both fundamental and applied research to provide solutions that help drive the future evolution of Civil Engineering. Industry interaction and academic exchanges are an integral characteristic of our department.

About THE ACADEMY BY DHI

DHI India Water & Environment Pvt. Ltd is a wholly owned subsidiary of the DHI Group. Established in India as an independent company in 2001, it represents over 20 years of dedicated research and expertise from the different projects executed all over India. DHI India focuses on water resources, marine and environment consultancy services, software solutions and Academy.

THE ACADEMY offers a palette of courses and capacity building packages designed to fit your needs and challenges. MIKE Powered by DHI courses focus on practical skills, hands-on exercises and teaching you how to get the most out of your software. These courses also enable you to understand the power of the MIKE tools for building decision support systems. Thematic courses allow you to apply concepts, applications and decision support principles to the entire business process within current areas: aquaculture and agriculture, energy, climate change, flooding, coast and marine, surface and groundwater, urban water, industry, environment and ecosystems, product safety and environmental risk, etc.

Our trainers are experienced professionals, many of whom are recognized international experts in their fields. The use of highly skilled trainers guarantees the quality of THE ACADEMY courses.

[Learn more about THE ACADEMY on www.theacademybydhi.com](http://www.theacademybydhi.com)

FOR MORE DETAILS, PLEASE CONTACT

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