



# **The National Institute of Engineering, Mysuru**

## **Department of Civil Engineering**

**Type of Event:** Workshop

**Event Name:** “FLOODPLAIN ANALYSIS AND MAPPING BY DHI TOOLS”

**Academic Year:** 2021-2022

**Date:** 15<sup>th</sup> Sept to 17<sup>th</sup> Sept, 2021

**Duration:** 3Days

**Target Participants:** a) Teaching Faculty from Department of Civil Engineering, NIE b) Teaching Faculty from neighbouring Engineering Colleges/Institutes c) Master Degree students of Hydraulics Program of Department of Civil Engineering, NIE

**Number of Participants:** 29

**Students:** Boys=7, Girls=13, Total = 20

**Faculty:** Internal participants =04, External participants=03, Total=07

**Research Scholar:** Internal participants =01, External participants=01, Total = 02

## ABOUT THE INSTITUTION

The National Institute of Engineering (NIE), one of the oldest private engineering colleges of the country, was started in the year 1946. Run under the grant in aid of the Government of Karnataka, NIE is affiliated to the Vishveswaraiah Technological University (VTU). Since 2007 it is one of the 18 prestigious colleges in Karnataka state that have been recognized and given autonomous status by VTU and also selected under Technical Education Quality Improvement Programme (TEQIP) sponsored by MHRD-World Bank. NIE runs 7 UG, 12 PG and has 15 Centers of Excellence. The student strength is about 4000. Many funded research projects of Central and State Governments, VTU, ISRO and McMaster University are being carried out at NIE.

NIE today stands at 175<sup>th</sup> position among 3800 Engineering Colleges in India as per the National Institutional Ranking Framework (NIRF) announced by MHRD during 2020 and at the 20<sup>th</sup> position among India's top 100 Engineering Colleges that include IITs and NITs and 2<sup>nd</sup> in Karnataka as per the survey conducted by Outlook magazine during 2020. During its fruitful existence for over 74 years, NIE has produced some of the top engineers in the country- its alumni have occupied highly respected positions in every nook and corner of the country and all over the world.

## PATRONS

**Dr. N.V. Raghavendra**  
Principal  
NIE, Mysuru

**Dr. K.C. Manjunath**  
Professor & Head  
Dept. of Civil Engg., NIE, Mysuru

## ORGANIZING COMMITTEE

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**Mr. Avinash R**  
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## STUDENT COORDINATORS

**Ms. Sowjanya SV**  
**Mr. Harshith Y**  
**Ms. Dishani R**



**The National Institute of Engineering**  
(An Autonomous Institute under VTU, Belgavi)  
Mysuru



DEPARTMENT OF CIVIL ENGINEERING

in association with

DANISH HYDRAULIC INSTITUTE

*Presents*

*3-Day Workshop on*

**Floodplain analysis  
and  
Mapping by DHI tools**



**15<sup>th</sup> - 17<sup>th</sup> September 2021**

## M.TECH. IN HYDRAULICS

The Civil Engineering Department of the college has been a forerunner, venturing into new areas of technical education often. The Department started the PG M.E. course in Hydraulics in 1974. Since then the Department has been imparting quality higher education in the field to young engineers and to professional engineers employed in the Government and other reputed organizations. The Department has also involved itself in active research and consultancy in the fields of Hydraulics and Water Resources Engineering. The Department is also recognized as a Centre for Research by the VTU.

## HYDRAULICS TO WATER RESOURCES

This PG course till 80's was oriented mainly towards Hydraulic Engineering. However, with the changing needs in the field, the course content has seen a gradual transition from pure Hydraulics to Water Resources Engineering and Management. The broad based nature of the course now is evident from the present course content. The course is handled by a qualified, experienced and multidisciplinary faculty, with vast practical experience. Since the faculty is actively involved in a number of sponsored research/consultancy projects, the students get adequate exposure to practical aspects of Water Resources Engineering.

The present trend in Engineering being interdisciplinary, the students enjoy further support and involvement from other Centers of Excellence at the institute like Water Resource Center(NIE-WRC) and Centre for Renewable Energy and Sustainable Technologies. The faculty is in constant academic interaction with premier institutions like Indian Institute of Science (IISc), Bangalore, National Institute of Technology Karnataka (NITK), Suratkal, Regional Remote Sensing Service Center (RRSSC), Bangalore, Center for Water Resources Development and Management (CWRDM), Kozikode, Karnataka

Engg. Research Station (KERS), KRS. This helps the students to get to know the current research trends, cutting edge tools and techniques and to access the Faculties/Professors at these premier institutions.

## ABOUT DHI

Water professionals know MIKE Powered by DHI technologies are the gold standard, all over the world. DHI provides software solutions or access to online services, flexible technologies work seamlessly together for the best user experience.

DHI develop unique solutions for specific challenges and make them directly accessible to users. With unparalleled client care from offices in over 30 countries, users never stand alone.

The foundation of MIKE Powered by DHI encapsulates years of knowledge and experience. For more than 25 years, MIKE software has been the preferred choice for water professionals worldwide. The total coverage and truly integrated modelling possibilities of product range is unmatched by any similar software family. DHI offer everything from off-the-shelf software to highly customizable, cost-effective and sustainable IT solutions, developed specifically for any project. The knowledge and expertise - right at your fingertips - makes the user the expert in water environments.

## DETAILS ABOUT THE WORKSHOP

The urban inundation maps produced on MIKE+ platform is ideal for visualizing and understanding historical flood events. MIKE+ can be applied to identify the most efficient and cost-effective ways for reducing the stress from flooding.

The object of the training is to make the user familiar with the MIKE+ user interface and user should be to configure and run MIKE+ simulation.

Analysis complex flooding issues is made by coupling 2D Overland module with the MIKE1D PipeFlow module.

Used together, these modules can help you decide what to do with issues like:

- Flooding due to cloudbursts, extreme rainfall, and climate change
- Insufficient capacity in storm inlets
- Insufficient pipe conveyance capacity and volume
- System failures

## ABOUT THE TRAINER

**Mr. Mani Goyal**, works as an Urban Engineer and has been a part of DHI INDIA for the past 8 years. He is specialized in hydraulic and hydrological modelling, network design for water distribution and collection system, field data collection for river modelling and basin management. He has working experience on MIKE Operation, MIKE Workbench, MIKE Hydro River, MIKE FLOOD, MIKE+ ArcGIS, Web based GIS system etc.

## SCHEDULE

**15<sup>th</sup> to 17<sup>th</sup> September 2021**  
**10 am to 5 pm**















- Day 1** Introduction to MIKE+ and its modules. Data to be used in the model.
- Day 2** Hands-on practice (Creating a network including all its required elements).
- Day 3** Hands-on practice and discussion on Integrated urban flood model.

## Registration Link

<https://forms.gle/Cko2eSEfhnfb7k56>

## REGISTRATION FORM

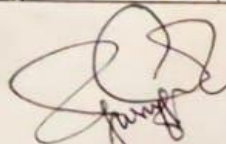
WORKSHOP ON “*FLOODPLAIN ANALYSIS AND MAPPING BY DHI TOOLS*”  
FROM 15<sup>TH</sup> TO 17<sup>TH</sup> SEPTEMBER, 2021

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28	Vedaprada R					
29	Vinutha S					
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32	Dr. Jany Javeed	Professor	NIE Mysore	jjaveed@nie.ac.in	9986062198	Jany Javeed

**ATTENDANCE LIST**  
**WORKSHOP ON "FLOODPLAIN ANALYSIS AND MAPPING BY DHI TOOLS"**  
**FROM 15<sup>TH</sup> TO 17<sup>TH</sup> SEPTEMBER, 2021**

SL. NO.	NAME	DAY-1		DAY-2		DAY-3	
		F/N Session	A/N Session	F/N Session	A/N Session	F/N Session	A/N Session
1	Dr. Akshaya B J						
2	Avinash R	At	At	At	At	At	At
3	Dishani R	Dishani R	Dishani R	Dishani R	Dishani R	Dishani R	Dishani R
4	Divyashree B	Divyashree B	Divyashree B	Divyashree B	Divyashree B	Divyashree B	Divyashree B
5	Dr. Abhishek A Pathak	Abhishek A Pathak	Abhishek A Pathak	Abhishek A Pathak	Abhishek A Pathak	Abhishek A Pathak	Abhishek A Pathak
6	Dr. B G Mahendra	B G Mahendra	B G Mahendra	B G Mahendra	B G Mahendra	B G Mahendra	B G Mahendra
7	Geethalakshmi S	Geetha S	Geetha S	Geetha S	Geetha S	Geetha S	Geetha S
8	Gireesh A Binjawadagi	Gireesh A Binjawadagi	Gireesh A Binjawadagi	Gireesh A Binjawadagi	Gireesh A Binjawadagi	Gireesh A Binjawadagi	Gireesh A Binjawadagi
9	Gunashree S	Gunashree S	Gunashree S	Gunashree S	Gunashree S	Gunashree S	Gunashree S
10	Harshith Y	Harshith Y	Harshith Y	Harshith Y	Harshith Y	Harshith Y	Harshith Y
11	Karthik C V	Karthik C V	Karthik C V	Karthik C V	Karthik C V	Karthik C V	Karthik C V
12	Manjunatha RN	Manjunatha RN	Manjunatha RN	Manjunatha RN	Manjunatha RN	Manjunatha RN	Manjunatha RN
13	Namratha K M	Namratha K M	Namratha K M	Namratha K M	Namratha K M	Namratha K M	Namratha K M
14	Namratha N	Namratha N	Namratha N	Namratha N	Namratha N	Namratha N	Namratha N


 17 Sep 2021

15	Nischitha M	Nisch	Nisch	Nisch	Nisch	Nisch	Nisch
16	Niveeditha B	NB	NB	NB	NB	NB	NB
17	Prajwal B B	P	P	P	P	P	P
18	Rashmika M P	R	R	R	R	R	R
19	Resmy K	Resmy	Resmy	Resmy	Resmy	Resmy	Resmy
20	Roopa.N	R	R	R	R	R	R
21	Santhosh Kumar T N	Santhosh T.N	Santhosh T.N	Santhosh T.N	Santhosh T.N	Santhosh T.N	Santhosh T.N
22	Shashank T	Shashank T	Shashank T	Shashank T	Shashank T	Shashank T	Shashank T
23	Smita Bellubbi	Bellubbi	Bellubbi	Bellubbi	Bellubbi	Bellubbi	Bellubbi
24	Smita Patil	Patil	Patil	Patil	Patil	Patil	Patil
25	Sowjanya S V	S V	S V	S V	S V	S V	S V
26	SriRashmi S	SriRashmi S	SriRashmi S	SriRashmi S	SriRashmi S	SriRashmi S	SriRashmi S
27	Vachana R	Vachana R	Vachana R	Vachana R	Vachana R	Vachana R	Vachana R
28	Vedaprada R						
29	Vinutha S						
30	Zeeshan Haider Ansari	Zhaider	Zhaider	Zhaider	Zhaider	Zhaider	Zhaider
31	Bhramarambha S	Bhram	Bhram	Bhram	Bhram	Bhram	Bhram
32	Dr. Yamy Jameed	Yamy	Yamy	Yamy	Yamy	Yamy	Yamy

X 8

Yamy 17 Sep 2021



Department of Civil Engineering  
**The National Institute of Engineering**  
(An Autonomous Institute under VTU, Belgavi)  
Manandavadi Road, Mysuru - 570008



## *Certificate*

This is to certify that

Dr. / Mr. / Ms. \_\_\_\_\_

has participated in

**Three-Day Workshop on**

**Floodplain analysis and Mapping by DHI tools**

held on 15<sup>th</sup> to 17<sup>th</sup> September 2021

organized by

**DEPARTMENT OF CIVIL ENGINEERING** in association with **DHI**

**Mr. Abhilash Ajaykumar**  
Managing Director, DHI INDIA

**Dr. K.C. Manjunath**  
Prof. & Head, Dept. of Civil Engg.

**Dr. N.V. Raghavendra**  
Principal, NIE







A: Inauguration Function



B: Inauguration Function



C: Students in the training



D: Lunch time



E: Certificates

# Report

## Introduction

DHI is an international water software development and engineering consultancy firm with headquarters in Denmark known for the gold standard tools and technologies. DHI offer everything from off- the-shelf software to highly customizable, cost- effective and sustainable IT solutions, developed specifically for any project. The knowledge and expertise - right at users' fingertips - makes the user the expert in water environments.

The National Institute of Engineering has “**Agreement of Cooperation**” with DHI, India. 3 Day workshop was organised to give a hands on experience of MIKE + software, one of the modelling software used for flood modelling, developed by DHI. The details about the workshop are given below.

## Objective

The objective of the training is to make the user familiar with the MIKE+ software tool from DHI which is used to analyse complex flooding phenomenon and to develop flood maps for a target participants consisting of teaching Faculty and Master Degree students.

## About Resource Person

Mr. Mani Goyal works as an Urban Engineer and has been a part of DHIINDIA for the past 8 years. He is specialized in hydraulic and hydrological modelling, network design for water distribution and collection system, field data collection for river modelling and basin management. He has working experience on MIKE Operation, MIKE Workbench, MIKE Hydro River, MIKE FLOOD, MIKE+ ArcGIS, Web based GIS system etc.



## About the Program

Climate change has made extreme rainfall events with torrential rains battering several parts of the state and the country, triggering massive flooding and landslides. During high and intense discharge, the rivers swell and inundate low lying neighboring lands and towns causing massive flooding. As a consequence, loss of human life, damage to property, destruction of crops, loss of livestock occurs. These losses and damages can be prevented and reduced by providing reliable information to the public/researchers about the flood risk through flood inundation maps. These Flood inundation maps are very essential for municipal planning, emergency action plans, flood insurance rates, and ecological studies. Keeping this in mind, the Department of Civil Engineering, The National Institution of Engineering (NIE) had organised a Three-day workshop/training on “Floodplain Analysis and Mapping by DHI Tools” in association with DHI, India.

Workshop was organised with the objective to give the hands-on experience of MIKE+ software to the participants. Target audience included both students and teaching faculty; training on the state of art technology will bridge the gap between academics and industry.

## Outcome

Outcome of the workshop was achieved, as the participants were given practical training to use the software for flood modelling. This will open new horizon to students to take

up their research work. The licence of the software was provided for 15 days by DHI and this has helped the students to practice with new data sets. DHI has also agreed to provide the software licence complimentary for master's student for a year under student research agreement. This will enable the student to work with the state of art technology.