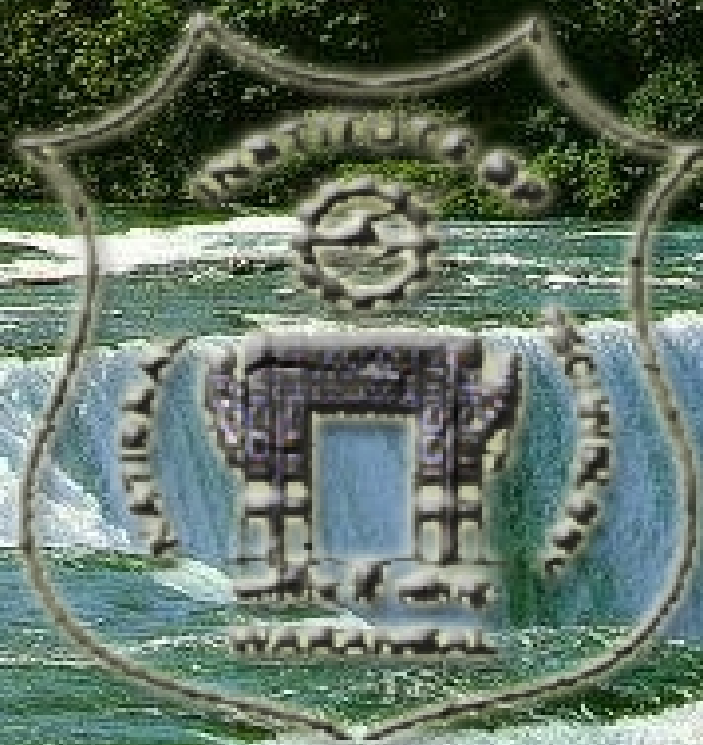


International Conference  
on

**ADVANCED MODELING TECHNIQUES  
FOR  
SUSTAINABLE MANAGEMENT OF WATER RESOURCES**

January 28 - 30, 2004



Organized by

**WATER & ENVIRONMENT DIVISION  
DEPARTMENT OF CIVIL ENGINEERING  
NATIONAL INSTITUTE OF TECHNOLOGY  
WARANGAL - 506 004  
ANDHRA PRADESH, INDIA**

## Introduction

Rapid economic and social changes that are taking place throughout the world during the last few decades have resulted in increased and diversified demand for water. Growing pressures in many regions of the world, especially developing countries with arid and semi arid climates, featuring dynamic population growth, the advent of water scarcity has been heralded. On the other extreme, flood losses have been soaring worldwide. Further, pollution of surface and groundwater sources taking place in many regions renders these resources unfit for sustaining ecosystems or for direct use. Adverse consequences of erosion and sedimentation range from soil loss through nutrient transport causing water pollution problem, to reduction in effective storage volumes of reservoirs. It is necessary to deal with all these aspects in an integrated way. An integrated approach requires the joint consideration of groundwater and surface water, and of water quantity and quality. Every change in land use and every manipulation of soil, vegetation, and ground surface induces a change in the hydrological systems and affects the local water balance.

Thus at the dawn of 21<sup>st</sup> Century, we find ourselves facing a formidable challenge of managing our water resources in a sustainable manner, satisfying the long term and short term demands of water without degrading the environment. Many modeling tools and techniques such as Systems Analysis and Simulation, Geographical Information Systems (GIS), Artificial Neural Networks, Fuzzy Logic, Decision Support Systems and Expert Systems have been used by researchers and experts, the world over, for planning, development and management of water resources systems. The continuing evolution of computer science and information technology has helped in developing more sophisticated modeling tools for tackling problems of water resources.

Realizing the importance of sustainable and integrated management of water resources and to provide a forum for sharing the experiences gained world-wide in applying the various modeling tools for management of water resources, the Water & Environment Division, Department of Civil Engineering, National Institute of Technology (formerly Regional Engineering College), Warangal is organizing an International Conference on **Advanced Modeling Techniques for Sustainable Management of Water Resources** during 28-30 January, 2004.

The conference would focus on the application of various modeling tools for sustainable management of water resources. It would address the relevant concepts and issues of modeling techniques, and is expected to improve the communication between the heterogeneous groups involved in water resources decision making.

## Conference Topics

The major themes to be covered but not limited to, include:

1. Hydrologic Analysis
  - Rainfall – Runoff Modeling
  - Streamflow and Flood Forecasting
  - Hydrology of Ungauged Catchments

2. Management of Surface Water Resources
  - Reservoir Operation
  - River Basin Management
  - Watershed Management
  - Control and Management of Hydrologic Extremes
  - Irrigation Management
3. Management of Subsurface Water Resources
  - Groundwater Management
  - Conjunctive Use
4. Water Quality Management
  - Modeling Diffuse Pollution
  - Pollution Control in Natural Water Bodies
  - Pollution through Porous Media
5. Urban Water Management
  - Urban Drainage and Sewerage Systems
  - Stormwater Management
  - Water Supply and Distribution Systems
6. GIS Applications for Sustainable Water Resources Management

### **Call for Papers**

The conference would include both oral and poster presentations. Participants intending to present a paper are requested to send an abstract with not more than 500 words, as early as possible, but before the last date indicated. The abstract should contain information on title, author(s), affiliation, keywords and a summary of work, methodology, results and conclusions or major findings. Postal and e-mail addresses and fax numbers of the corresponding author should also be included. Authors should submit the full paper if their abstracts are accepted.

Accepted papers will be included in the proceedings of the conference which will be pre-published. The proceedings will be made available to all the delegates at the time of registration and will also be widely distributed after the conference.

## **Exhibition Facility**

There will be exhibition space available for organizations wishing to exhibit products, hardware, software and other services related to the conference theme. Details of these facilities are available upon request.

## **Important Dates**

Last date for submission of abstracts:	31 May, 2003
Intimation to the authors of selected abstracts:	15 July, 2003
Last date for submission of full length papers:	31 October, 2003

## **Registration**

The registration fees cover attendance of all sessions, copy of proceedings, refreshments during sessions, daily lunch and one special conference dinner.

Registration fee for delegates from India:	Rs 4000/-
Registration fee for delegates from other countries:	USD 250/-

## **National Institute of Technology, Warangal**

National Institute of Technology (formerly known as Regional Engineering College), Warangal (NITW) is the first among 17 Regional Engineering Colleges (upgraded now as National Institutes of Technology) set up as joint venture of the Government of India and the State Governments. Over the years, the college has established itself as a premier institution imparting technical education of a very high standard leading to the degree of B.Tech in various branches of engineering and M.Tech and Ph.D degree programmes in various specializations.

The Department of Civil Engineering has been one of the pioneering academic departments of the National Institute of Technology, Warangal since the inception of the college in 1959. The Department offers B.Tech in Civil Engineering at the undergraduate level and M.Tech in Engineering Structures, Geotechnical Engineering, Transportation Engineering, Water Resources Engineering and Remote Sensing and GIS Applications at the graduate level.

The Water & Environment Division of the Department of Civil Engineering has been very active in the areas related to studies on water resources, environmental engineering, irrigation management, watershed management, water quality studies, urban stormwater management and environmental impact assessment. The division has a group of young and well motivated faculty members with expertise in varied fields of water resources and environmental engineering. Utilizing the facilities, capabilities and expertise available in the Division, many research and development and consultancy projects have been carried out by the faculty members. The Division also organized several short term courses as part of continuing education program. The Water & Environment Division had the privilege of organising the **V International Course on Urban Drainage in Developing Countries, during February, 5 – 24, 1996**. The course was convened and sponsored by the German National committee for the International Hydrological Programme (IHP) of the UNESCO

and the Operational Hydrology Programme (OHP) of the WMO and the Indian National Committee on Hydrology.

### **Facilities Available**

A number of seminar halls for holding parallel sessions with state of art audio-visual facilities, an excellent library, and well furnished guest house and visitors' block, all set up in serene environment will provide the ambience for holding the international conference at the institute. Well furnished decent hotels are also available very close to the institute. E-mail facilities will also be made available to the delegates during the conference period.

### **Warangal**

Warangal is about 140 km east of Hyderabad, the capital city of the state of Andhra Pradesh. Warangal is a historical city and was the capital of Kakatiya dynasty which ruled during 11<sup>th</sup> and 12<sup>th</sup> century AD. The city is well connected by rail and road with the rest of the country. NITW is 2 km away from Kazipet Railway Junction and 12 km from Warangal Railway Junction. The nearest international airport is at Hyderabad. The local weather during the course duration will be pleasantly warm, with the average day temperatures around 30° C and the night temperatures around 18° C.

### **Local Organizing Committee**

Patron	Prof. V. Vasudeva Rao, I/C Director, NIT, Warangal
Chairman	Prof. N.V. Rama Murthy, Head, Department of Civil Engineering
Co-chairman	Dr. P. Anand Raj, Head, Water & Environment Division
Organising Secretary	Dr. N.V. Umamahesh
Treasurer	Dr. M. Chandra Sekhar
Joint Secretary	Mr. J. Ravi Sankar, Mr. E. Venkata Rathnam

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Mr. V.N. Kameswara Rao  
Mr. A.V.S. Murali Mohan  
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Dr. P.C. Swain  
Mr. M.N. Dandigi  
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Mr. G.V.K.S.V. Prasad  
Mrs. Jyothi Prasad  
Mr. D.G. Regulwar  
Mr. K. Thirupathi Rao

### **Technical Advisory Committee**

<b>Chairperson</b>	Prof. K.V. Jayakumar, NIT, Warangal, India
<b>Co-Chairperson</b>	Mr. V.N. Kameswara Rao, NIT, Warangal, India

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Mr. E. Venkata Rathnam, India  
Dr. Mohd. Yaqub, India

### **For further details:**

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