



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

DEPARTMENT OF CIVIL ENGINEERING

ONLINE THREE DAY FDP REPORT ON

ENVIRONMENTAL AND WATER RESOURCES MODELING AND MANAGEMENT




Event Type	Online Three-Day FDP Program through Microsoft Teams
Date / Duration	04.6.2021 – 07.06.2021
Resource Persons	1. Prof. Vasan Arunachalam, Associate Dean of Academic, BITS Pilani, Hyderabad Campus. 2. Dr. M. Chandrasekhar, Professor, Department of Civil Engineering, NIT Warangal. 3. Dr. S. Bala Prasad, Professor, Department of Civil Engineering, Andhra University, Visakhapatnam.
Name of the Coordinator	Sri. K. Harish Kumar, Assistant Professor
Target Audience	Faculty members of Civil, Research scholars and Industry personnel working in the concerned/allied areas of Engineering
Total no of Participants	170
Objective of the event	<ul style="list-style-type: none"> To explore the interdisciplinary nature of water resources management by also considering the complex socioeconomic factors and environmental variables. To enable faculty to get to know about various approaches in river water quality modelling Provide fundamental approaches of ambient air quality modeling and Modeling chemical releases for emergency responders
Outcome of event	<ul style="list-style-type: none"> Will be exposed to the basic concepts on mathematical modelling and optimization with references to a real-world planning problem Faculty can take up research in local regions and guide/supervise students for dissertation or project work. Learn the fundamental process of air pollution dispersion modeling process Use of ALOHA model to estimate the chemical concentrations at different receptors
Feedback / Suggestions	<ul style="list-style-type: none"> Realized importance of the subject in present day context Advanced topics covering a practical case and handling with references to a real-world planning problem Know the importance of the estimation of toxic cloud disperse after a chemical release happened in LG Polymers, Visakhapatnam.

Photographs

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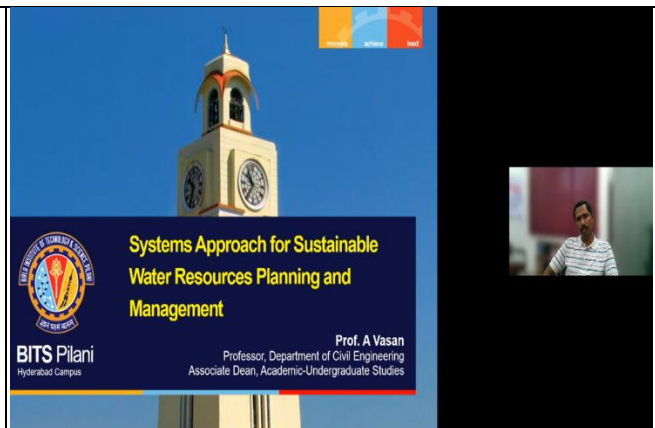
ONLINE THREE-DAY FACULTY DEVELOPMENT PROGRAMME (FDP)
ON

Environmental and Water Resources Modeling and Management
During 04th to 07th June-2021

Name of the resource person/ Profile	Section	Topic	Contents	Outcome
 Prof. Vasu Arunachalam, Associate Dean of Academic, BITS Pilani, Hyderabad Campus Expert in the areas of systems approach to planning and management of complex water resources systems using nature inspired optimization.	04.06.2021 At 2:00pm to 4:00 pm	SYSTEMS APPROACH TO SUSTAINABLE WATER RESOURCES PLANNING AND MANAGEMENT	<ul style="list-style-type: none"> System Approach Mathematical Modelling Nature Inspired Optimization Algorithms Reservoir Optimization 	Will be exposed to the basic concepts on mathematical modelling and optimization with reference to a real-world planning problem
 Dr. M. Chandrasekhar, Professor Department of Civil Engineering, NTT Warrigal, Member for Expert Committee on Environmental Issues in Krishna – Goderisi River Expert in the areas of water & waste treatment and environmental impact assessment	05.06.2021 At 10:00 am to 12:00 pm	RIVER WATER QUALITY MODELING	<ul style="list-style-type: none"> Water quality monitoring Approaches to monitor non-point sources Recent research areas 	Faculty can take up research in local regions & guide/supervise students for dissertations or project work
 Dr. S. Balaprasad, Professor Department of Civil Engineering, Andhra University, Visakhapatnam, Member, State Level Expert committee on Environment, Govt. Of AP Expert in the areas of Water Quality modelling approaches of simulation of solute Transport in streams, development of AD-VPM, ATS-VPM models for simulation of solute transport in streams.	07.06.2021 At 10:00 am to 12:00 pm	MODELING OF AIR POLLUTION FOR CHEMICAL RELEASES	<ul style="list-style-type: none"> Fundamental concepts of ambient air quality modeling Modeling chemical releases for emergency responders and planners Estimation of toxic cloud dispersal after a chemical release for three different scenarios using ALOHA model 	Learn the fundamental process of air pollution dispersion modeling process. Use of ALOHA model to estimate the chemical concentrations at different receptors

Co-ordinator: K. Harish Kumar, Asst. Professor, LBRCE Convener: Dr. V. Ramakrishna, HOD & Professor, LBRCE

Organized by: DEPARTMENT OF CIVIL ENGINEERING




Systems Approach for Sustainable Water Resources Planning and Management

Prof. A. Vasan
Professor, Department of Civil Engineering
Associate Dean, Academic-Undergraduate Studies

FDP Brochure

APPROACHES FOR MODELLING

- Direct Approaches
 - UALs (sampling small, homogeneous land use watersheds).
 - Land use – runoff simulation models
 - sensitive to hydrologic, soil, and land use characteristics.
 - Require large amount of data



Resource Person Prof. Vasu Arunachalam

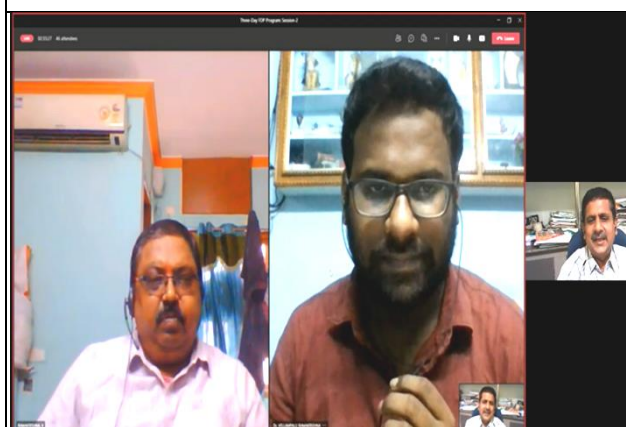
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THREE DAY ONLINE FDP ON
ENVIRONMENTAL AND WATER RESOURCES MODELING AND MANAGEMENT
7th June, 2021 at 10:00am


Resource Person:
Dr. S. Balaprasad

Resource Person:
M.E. (Environmental Engineering), Ph.D. (Water Quality modelling) IIT Roorkee
Member, State Level Expert committee on Environment, Govt. Of AP
Professor of Environmental Engineering
Director, Centre for Environment, Sustainable Development and Climate Change, Andhra University, Visakhapatnam
Member, Consent for Establishment (CFE), A.P. Pollution control Board.

Presentation by Resource Person Dr. M. Chandrasekhar



Resource Person Dr. S. Bala Prasad

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Certificate of Participation
This is to certify that

Dr.V.Rama Krishna
Professor, LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

has participated in the Faculty Development Programme on "Environmental and Water Resources Modeling and Management" organized by Department of Civil Engineering, Lakireddy Bali Reddy College of Engineering (Autonomous) during 04.06.2021 to 07.06.2021.


K. Harish Kumar
(Coordinator)


Dr.V.Rama Krishna
(Convener & HOD-CIVIL)


Dr.K. Appa Rao
(Principal)

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Q&A Session with Resource Person Dr. M. Chandrasekhar

Copy of Participation certificate

REPORT

The Department of Civil Engineering, Lakireddy Bali Reddy College of Engineering (A), Mylavaram, organized a three day online Faculty Development Program during 4-7 June 2021 on “ENVIRONMENTAL AND WATER RESOURCES MODELING AND MANAGEMENT” through Microsoft Teams . The FDP was inaugurated on 04th June 2021 by the Principal Dr Appa Rao garu. More than 150 participants from different engineering colleges participated in faculty development program.

Resource persons:

- Prof. Vasan Arunachalam, Associate Dean of Academics, BITS Pilani, Hyderabad Campus
- Dr. M. Chandrasekhar, Professor, Department of Civil Engineering, NIT Warangal
- Dr. S. Bala Prasad, Professor, Department of Civil Engineering, Andhra University, Visakhapatnam

The content discussed during this program is as follows:

- Systems Approach: Mathematical Modelling; Nature Inspired Optimization Algorithms: Reservoir Optimization by Dr A. Vasan
- Water quality monitoring, approaches to monitor non-point sources, recent research areas by Dr M. Chandrasekhar
- Ambient Air Quality Modelling: Chemical Releases by Dr S. Bala Prasad

In the current world scenario, Modeling and Analysis of Environmental and Water Resources Systems play an important role. It can be a water resource facility development and management or water quality modeling for prevention and decision making, or air quality modeling for ambient or accidental releases, or a solid waste management system for comprehensive handling, the modeling and analysis provides useful input for decision makers to take appropriate and timely decisions.

The present FDP dealt with modeling and analysis of water resources systems planning, river water quality modeling, and air quality modeling for accidental releases. The contents covered the basics of modeling in respective domains, different types of modeling options, followed by specific cases of discussion. The sessions are more informative, nicely illustrated, and interactive. The topics discussed will help participants to explore in their respective subject domains for improved research outcomes. Participants are very much satisfied with the coverage and clarifications given by the resource persons. It is requested to have more sessions in similar domains in near future.