A NATIONAL CONFERENCE ON

WATER RESOURCES AND FLOOD MANAGEMENT

with special reference to

FLOOD MODELLING

WRFM 2016

OCT. 14-15, 2016

Organised By

CENTRE OF EXCELLENCE ON
"WATER RESOURCES AND FLOOD MANAGEMENT"

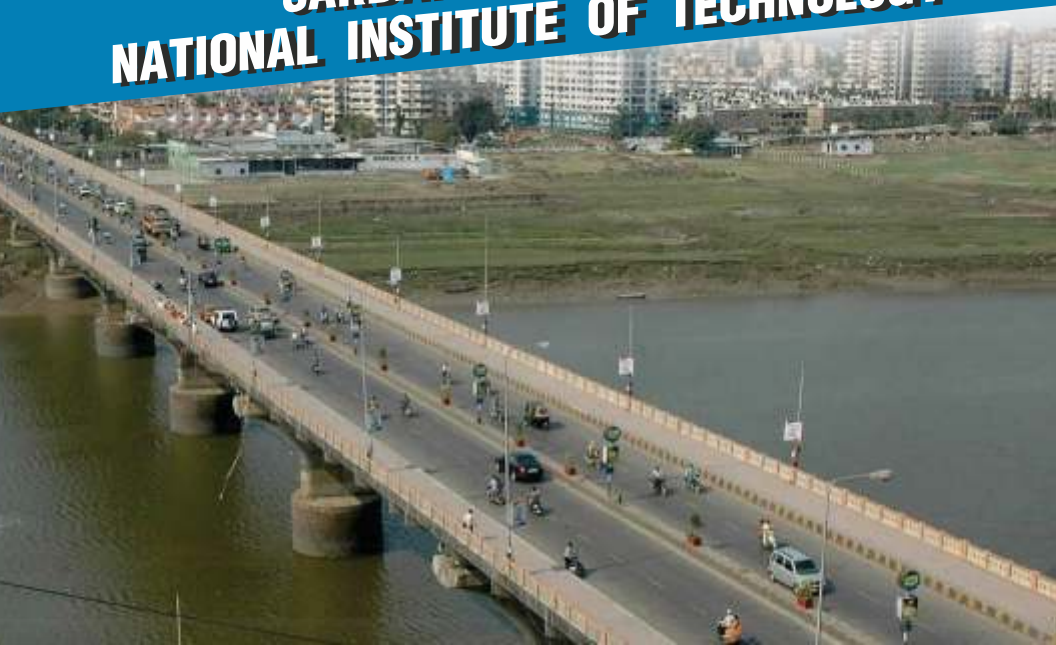
DEPARTMENT OF CIVIL ENGINEERING
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY (SVNIT-SURAT)
SURAT - 395007, GUJARAT

Under the aegis of

INDIAN SOCIETY FOR HYDRAULICS (ISH) PUNE

SVNIT

SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY



ABOUT THE CONFERENCE

The Centre of Excellence (CoE) on 'Water Resources and Flood Management' in Department of Civil Engineering at Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat is organizing a National conference on **Water Resources and Flood Management with special reference to Flood Modelling**. The conference aims at providing a forum for academicians, scientists, researchers, practitioners, field engineers and consultants for intellectual discussion and dissemination of information derived from their research contributions in the fields on hydraulics, hydrology, water resources and river engineering in context of flood modelling.

ABOUT THE INSTITUTE

The Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat is one of the pioneering National Institutes of Technology in India set up with the objectives to provide high quality Technical Education to meet the needs of the Nation and global standards. The institute campus is spread over 250 hectares of land on the Surat-Dumas Road and located at a distance of about 10 km from Surat Railway station and 5 km from Surat Airport. The Department of Civil Engineering of the institute is a dynamic department, offering one undergraduate program in Civil Engineering and four postgraduate programmes in Water Resources Engineering, Environmental Engineering, Transportation Engineering & Planning and Urban Planning. The department has been awarded Centre of Excellence (CoE) on 'Water Resources and Flood Management' from World Bank Fund through TEQIP-II.

The major activities of the CoE includes:

- National and International collaborations in the area of Water Resources and Hydraulics.
- Development of computational and experimental Hydraulics laboratory and early warning system for flooding in the Surat city.

ABOUT INDIAN SOCIETY FOR HYDRAULICS (ISH)

The Indian Society for Hydraulics (ISH) was established in 1992 as a technical, non- profit national organization which provide a forum for Engineers, Scientists and other technical personnel engaged in various activities related to Hydraulics and Water Resources Engineering. Its objectives includes:

- To disseminate information in the field of Hydraulics through seminars and symposia.
- To publish papers related to research / review / design and investigation in

the ISH Journal of Hydraulic Engineering together with a News Letter at frequencies as considered necessary.
- To liaise with various International Societies working in the field of hydraulics such as the International Association for Hydraulic Research (IAHR) etc.
- To accord recognition to outstanding workers in Hydraulics through suitable awards.

DATES AND VENUE

The conference will be held on October 14-15, 2016 at Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology, Surat – 395007, Gujarat. The detailed program will be made available on institute website (www.svnit.ac.in) by October 05, 2016.

SUB-THEMES

Papers on the following sub-themes are invited from Academicians, Practicing Engineers, Researchers, Consultants, and others associated with Hydraulics and Water Resources Engineering.

Hydrological Modelling and Management of Water Resources

- Catchment hydrology
- Climate change impacts on water resources.
- Reservoir operation and optimization
- Irrigation planning and management
- Reservoir sedimentation
- Environmental flows in natural rivers

Morphodynamics of Alluvial Rivers

- Flow characteristics in mobile boundary channels
- Bed load and suspended load transports
- Evolution of river bed due to natural and manmade changes
- Morphological changes in rivers: Assessment using GIS and remote sensing techniques

Flood Modelling and Management

- Urban, Riverine and Coastal flooding
- Flood forecasting: Early waring system
- Flood hazard and risk assesment
- Assessment of climate change on floods
- Management of flood disasters

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CALL FOR PAPERS

You are invited to submit abstracts on the mentioned sub-themes through email at **coewrfm@gmail.com** electronically by **June 30, 2016.** Mention your affiliation, mailing address, phone number and e-mail address. The abstract format shall be referred from the detailed guidelines of paper format. Upon acceptance of abstract, you are requested to submit full length paper of the same (with allotted paper ID) by **August 30, 2016**.

KEY DATES

Abstract submission:	**June 30, 2016**
Abstract acceptance:	**July 15, 2016**
Full length paper submission:	**August 30, 2016**
Registration deadline:	**September 20, 2016**
Presentation submission:	**September 30, 2016**

REGISTRATION

Delegates from Academic Institutes:

ISH Members	**Rs. 1500 /-**
Non-ISH Members	**Rs. 2000 /-**

Delegates from Industry/ Field:

ISH Members	**Rs. 2000 /-**
Non-ISH Members	**Rs. 2500 /-**
PhD/PG/UG Students:	**Rs. 500 /-**

Prospective participants desirous of attending the conference are requested to submit the registration form through speed post along with registration fee through Demand Draft in favour of "**Director, SVNIT Surat**" payable at Surat **before September 20, 2016** at the below mentioned contact address**.**

The registration fee is non-refundable and non-transferable. At least one of the authors from the submitted paper must register themselves for the conference, for their paper to be published in the conference proceedings with ISBN .

POST CONFERENCE TOUR

The event organizers are planning to organize one day field tour to "**Sardar Sarovar Dam**" on Narmada River near Kevadiya colony in Narmada district of Gujarat. The field tour includes visit at the following places:

- Statue of Unity construction site
- Sardar Sarovar Main Dam
- Power house
- Narmada Main Canal

The proposed field tour is planned on **October 16, 2016 (Sunday)**. The tour is not included in conference registration fee. The participants interested in the tour shall specify in advance and confirm their availability by payment of additional **Rs. 1000/- per person** for the said tour. The tour includes transportation as well as breakfast, lunch and evening snacks. Maximum limit for the field tour is 30 participants on first come first basis.

AWARD/PRIZE

The best paper **presented by student** in each sub-theme of the conference, will be awarded first and second prize of Rs. 4000/- and Rs. 2000/- respectively and a certificate.

CONTACT DETAILS

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Student Coordinator
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Guidelines for Preparation of Final Manuscript for WRFM-2016

1. **Use MS-Word (.docx format)** for typing the manuscript in A4 size paper

2. **Margins** - Left, top, bottom and right - 25mm

3. **Spacing** - Single line spacing

4. **Font Type - Times New Roman**

5. **Font Size**

- 14 for the Title (**Bold All CAPS**)
- 12 for the Author's Name/Authors' Names (**Bold, Title case**)
- 11 for Designation and the affiliation (*Italics*)
- 11 for the caption of Figures and Tables (**Bold, Sentence case**)
- 11 for Table contents
- 12 for the text and headings
- Main headings: **Bold, All CAPS**
- Subheadings : **Bold, Title case**
- Lower level headings : *Italics with first letter cap*
- 12 for Abstract heading (**Bold All caps**) and 11 for abstract text
- 10 for References/Acknowledgement/Notations text
- 11 for Keywords (around 4 -5) (***Bold Italics, Title case***)

6. **Rules for Title Page**

Title :

All Caps, bold and centered. Make sure the title is not more than 70 characters in length, including spaces between words.

Author :

- Leave one line blank between the title of the paper and the Author's name / Authors' names and affiliations.
- Leave one line blank between the author(s) affiliation(s) and abstract.

Affiliation should consist of the designation and name of the organization(s), city, zip/ postal code, state/province, email address.

- Authors' names and affiliations should be centered.

Abstract :

- Abstract should be between 150 and 250 words.
- After abstract leave one line blank.
- The abstract should present a concise statement of the scope, and principal findings of the paper.
- The text of the abstract should have font size 11.
- Please include 4 – 5 keywords that describe your study.

7. Headings and Text

- Left justified bold.
- The main and subheadings should be numbered in roman numerals 1, 2, 3,… and 1.1, 1.2,…. likewise. Leave one line blank before and after heading.
- Each paragraph should be separated by one blank line without any indentation.
- All text should be left and right (full) justified typed in single column on one side of paper.
- Emphasized text (if any) should be written in italics. Acknowledgments (if any) should be written after the conclusions. No underlines or footnotes.

8. Equations

- Typed and numbered in sequence like (1), (2),... Use equation toolbar in MS Word.
- Equation number in brackets, right justified

9. Figures and Tables

- Centered and numbered in sequence.
- The caption of the Table should be placed above and centered. The caption of the Figure should be placed below and centered. Leave one line blank before and after Table/Figure.
- The caption of the Figures and Tables should be in **Sentence Case**.

- Figures and Tables can be prepared using any Graphics software.
- Figures and Tables should be cited properly in the main text.

10. References

- Each reference should be cited in the text by the last name(s) of the author(s) and the year of publication of the reference.
- All references should be listed at the end of the text in alphabetical order, according to the last name of the first named author.
- Reference should include year of publication, full title, name of source, volume and page numbers.
- Fonts and punctuation are given in the enclosed specimen copy of the paper.
- References should be separated by one blank line.

11. Page numbers

Page numbers should be numbered in Arabic numerals at the center bottom of the page.

12. Maximum length

Maximum 10 pages (A4 size) including figures, tables and photos.

13. Forwarding

Please send the soft copy (in MS WORD, preferably .docx) of the abstract with key words and author affiliations as mentioned in the sample format to coewrfm@gmail.com before June 30, 2016.

Please send the soft copy (in MS WORD, preferably .docx) of the full length paper as per the guidelines and sample format to coewrfm@gmail.com August 30, 2016.

Note :

The completed manuscript must be carefully checked so that there are no spellings or grammatical mistakes and the author(s) are requested to follow the guidelines to maintain consistency and uniformity of the Proceedings.

DEVELOPMENT OF A RESERVOIR OPTIMIZATION MODEL FOR FLOOD CONTROL

A. B. Author[1] and C. D. Author[2]
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[2]*Professor, Indian Institute of Technology Bombay, Mumbai – 400076;* Email: xyz@xyz.ac.in

ABSTRACT

The present study focusses on development of an optimization model for Ukai multipurpose reservoir for flood control purpose. The optimization model adopts Genetic Programming technique.....

Keywords: Reservoir operation, Genetic Programming,…

1. INTRODUCTION

Reservoir is a man-made storage structure employed for storing water during monsoon for the lean future periods ....

2. REVIEW OF RESERVOIR OPERATION MODELS

There have been many developments in the past for optimization of multipurpose reservoir right from simple mathematical optimization to complex data driven modelling techniques. …

3. MODEL DEVELOPMENT

The monthly time stepped model developed for the Ukai reservoir incorporates inflow forecasts coupled with ……

3.1 Objective Function

The objective function adopted in the present study is the same as described in the literature (Vedula and Mujumdar, 2005)…….

$$B_{kilt} = Minimize \sum_{t=1}^{12} [(R_t - TR_t)^2 + (S_t - TS_t)^2] \qquad \cdots (1)$$

Table 1 shows the transition probability matrix for inflows for....

Table 1: Transition probability matrix for inflow states

i \ *j*	1	2	3
1	0.333	0.417	0.250
2	0.167	0.417	0.417
3	0.546	0.091	0.364

3.1.1 Constraints

The following constraints govern the optimization model …… and the storage probabilities are shown in Figure 1.

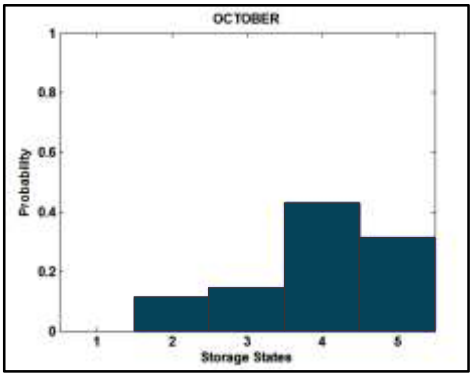

Figure 1: Storage probability distribution for October month

4. RESULTS AND DISCUSSIONS

The detailed analysis of the reservoir inflow and storage data shows that the floods of higher magnitude in the infilling season…….

5. CONCLUSIONS

The following conclusions are derived from the present study:

(i) The magnitude of flood storage in the reservoir…..

(ii) The optimization model proposes to lower the rule curve during monsoon…..

ACKNOWLEDGMENT

Acknowledgment towards the funding agency, if any.

REFERENCES

Quinlan, J.R. (1992). Learning with continuous classes. *Proc. 5th Australian Joint Conf. on Artificial Intelligence*, A. Adams and L. Sterling, eds., World Scientific, Singapore, 343–348.

Vedula, S., and Mujumdar, P. P. (2005). *Water Resources Systems, Modelling Techniques and Analysis*. Tata McGraw-Hill Education, New Delhi, India.

Yeh, W. W. G. (1985). "Reservoir management and operations models: A state-of-the-art review." *Water Reso. Res.*, 21(12), 1797-1818.

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The affairs of the Society are managed by the Executive Council elected from amongst the members.

The Council shall consist of a President, two Vice Presidents, a Secretary, a Treasurer, an Editor and Eleven members.

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