



The Politecnico di Milano

Venue

The 15th ICOLD Benchmark Workshop on Numerical Analysis of Dams will be held at the Politecnico di Milano, the largest technical University in Italy with more than 44,000 enrolled students at present. The Benchmark Workshop will be hosted in the historical Milano Leonardo Campus.

Politecnico di Milano offers undergraduate, graduate and higher education courses in engineering, architecture, and design. It is ranked 1st in Italy and 9th in the World in the Civil and Structural Engineering field (QS World University Rankings 2018).

Milano is the main Italian financial city but it also represents an attraction point for designers, artists, photographers. Milano has an ancient city center with highly interesting buildings and a vivid cultural and social life, which makes it the Italian city of glamour.

The Milano skyline



The Duomo di Milano and the Galleria Vittorio Emanuele II

General Organizer

ICOLD Technical Committee A on "Computational Aspects of Analysis and Design of Dams"

Chairman

MAZZA', G. Italy

Vice - Chairman

ZENZ, G. Austria

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PERCELL, P.	United States
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FANELLI, M. (HONORARY MEMBER)	Italy

Local organizing committee (LOC)

Politecnico di Milano
Department of Civil and Environmental Engineering
G. Bolzon, D. Sterpi

ITCOLD – Italian Committee on Large Dams
G. Ruggeri, G. Mazzà, R. Caruana, C. Cioccarì
Ricerca sul Sistema Energetico – RSE S.p.A.
M. de Nigris, A. Frigerio, G. Faggiani, M. Meghella

Information and Registration

icold-bw2019@polimi.it



ICOLD
International
Commission on
Large Dams

15th International Benchmark Workshop on Numerical Analysis of Dams

9th - 11th September 2019
Milano, Italy

First call
Preliminary information

Updated information on homepage:

www.eko.polimi.it/index.php/icold-bw2019



**POLITECNICO
MILANO 1863**

DIPARTIMENTO DI
INGEGNERIA CIVILE E AMBIENTALE



General

Numerical modelling has become the indispensable and powerful tool for design and safety assessment of dams. The tremendous development of computer hardware and software over the last decades has made it possible the extraordinary development of computer-based methods. The Benchmark Workshops organized by the ICOLD Committee "Computational Aspects of Analysis and Design of Dams" since 1991 provide an excellent opportunity for engineers, researchers and operators to present and exchange their experiences and the latest developments related to the design, performance and monitoring of dams.

Preliminary Program

Venue: Politecnico di Milano, Italy

Monday, 9th September 2019

Registration

Theme presentations and discussion

Welcome reception

Tuesday, 10th September 2019

Theme presentations and discussion

Workshop dinner

Wednesday, 11th September 2019

Technical visits to dams and hydro infrastructures



The Sforza's castle of Milano

Topics

Theme A: **Seismic analysis of Pine Flat concrete dam.** *Formulators: USBR; University of Boulder (USA). KTH (Sweden). RSE (Italy)*

Theme B: **Seismic analyses of Menta Embankment dam.** *Formulators: Cassino and Southern Lazio University; Perugia University; So.Ri.Cal. SpA (Italy)*

Theme C: **Coupled hydromechanical analysis of the pre-failure and the failure behaviour of a levee on soft subsoil.** *Formulators: Politecnico di Milano (Italy). Delft University of Technology; STOWA (The Netherlands)*

Open Theme: Papers related to numerical modelling of dams and/or appurtenant structures

Short course held by Prof. A.K. Chopra

On 12th and 13th September 2019, a short course on **Modern Methods for Nonlinear Earthquake Response History Analysis of Concrete Dams** will be given by **Professor Anil K. Chopra** (University of California, Berkeley) in collaboration with his research associates.



Leonardo da Vinci and the drawing of the «Vitruvian man»

Call for Contributions

This invitation is intended to announce the upcoming International 15th Benchmark Workshop on Numerical Analyses of Dams to be held in Milano (Italy) on 9th-11th September 2019 and its selected themes.

Participants intending to attend the Workshop or to present a contribution to any of the Benchmark topics are invited to express their interest within December 2018 replying to the email containing this brochure.

Detailed information and input data of the topics proposed for the Benchmark will be made available to participants by January 2019.

Participants interested in attending the short course are kindly requested to communicate their intention replying to the email containing this brochure.

Important dates

December 2018:

Theme proposals and detailed information about the organization of the workshop will be available on the homepage

January 15th 2019:

Handout of input data for the Benchmark Themes

February 15st 2019:

Deadline for participants to announce their participation in Themes A, B, C and Open Theme

May 31st 2019:

Deadline for submission of Contributions