



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"

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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, C. Jommi

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



COMMISSION INTERNATIONALE
DES GRANDS BARRAGES
INTERNATIONAL COMMISSION
ON LARGE DAMS

15th ICOLD International Benchmark Workshop on Numerical Analysis of Dams

9th - 12th September 2019
Milano, Italy

Sixth call

Updated information on homepage:
www.eko.polimi.it/index.php/icold-bw2019

Organized by



**POLITECNICO
MILANO 1863**

DIPARTIMENTO DI
INGEGNERIA CIVILE E AMBIENTALE



CONSIGLIO NAZIONALE
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General

Numerical modelling has become the indispensable and powerful tool for design and safety assessment of dams. The development of computer hardware and software over the last decades 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.

Benchmark topics

Theme A:

Seismic analysis of Pine Flat concrete dam.

Formulators: USBR and University of Colorado 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.*

Handouts prepared by the Formulators of the benchmark can be downloaded any time from the ICOLD-BW website. Data related to each Theme are located in specific sections. Formulators can be contacted to request additional information and clarifications (e-mails are available on the website).

Technical Program and Social Events

Venue: Politecnico di Milano, Italy

Monday, 9th September 2019

Registration

Themes presentations and discussion

Welcome reception

Tuesday, 10th September 2019

Themes presentations and discussion

Workshop dinner

Wednesday, 11th September 2019

Technical visits to dams and hydro infrastructures

Thursday, 12th September 2019

Short Course: *Modern Methods for Nonlinear Earthquake Response History Analysis of Concrete Dams* held by Professor **A. K. Chopra** (University of California, Berkeley) with his research associates **N. S. Kwong** and **A. Løkke**.

Registration fees

Registration can be made on-line.

It is also possible to register directly in Milan at the beginning of the workshop.

Information are available on the BW website:

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

Prices (euros)	Regular
Participants (presenter)	350
Participants /Attendees	450
Students	250
Technical tour	80
Short course	150
Accompanying person	120

Registration fees include lunches, coffee breaks, welcome reception, closing dinner, documentation. The technical tour fee includes transportation by buses, coffee breaks, lunch.

Workshop, Technical tour, and Short Course registrations can also be done independently.

Call for participating/attending the Benchmark Workshop, the technical visits and the Short Course

People interested in one or more of the following events: submitting a contribution to any of the Benchmark topics, attending the Workshop, participating to the Technical Visit and/or attending the Short Course are kindly invited to proceed with the registration.

Even if the registration can be done anytime before the start of the event, for a better organization the participants/attendees are kindly asked to register as soon as possible.

Input data about the Themes proposed for the Benchmark and detailed information about the event are available on the website.

Important dates

July 15th 2019

*Deadline for **submission of Results** for Themes A, B and C (for special needs please contact the Formulator of the Theme).*

Please make strictly reference to the templates provided by each Formulator for the results.

July 30th 2019

*Deadline for **submission of Papers** for Themes A, B, C and **Open Themes**.*

NOTE. Details about the presentation of the papers (i.e. oral speech, poster, etc.) will be defined on the basis of the contributions actually received.



The Isola Serafini weir crossing the Po River (left) and the Molato concrete buttress dam (right)