

INTERNATIONAL SYMPOSIUM

QUALIFICATION OF DYNAMIC ANALYSES OF DAMS AND THEIR EQUIPMENTS AND OF PROBABILISTIC ASSESSMENT OF SEISMIC HAZARD IN EUROPE

31th August - 2nd September 2016
Saint-Malo / FRANCE

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ORGANIZING COMMITTEES

French Committee on Dams and Reservoirs
Japanese Commission on Large Dams



MEETING VENUE

This international symposium is the first annual meeting of the ICOLD European Club Working Group "Dams and Earthquakes".

A lot of seismic methods are available and a lot of analyses are required by new stringent regulations in Europe.

The points are : "How to define the seismic hazard? How the seismic hazard assessment and dynamic analyses are validated? What are the evidences of flaws or accuracy that you have experimented?"

CFBR invites JCOLD experts to present and discuss qualification of seismic analyses.

The deliverables of the symposium will be fundamental packages of qualification of seismic analyses : case studies of validation with measured data (including accelerograms at foundation and crest) compared to predicted results of seismic analyses.



The meeting will be held in "Palais des Congrès Le Grand Large", in the heart of Saint-Malo City (1, quai Duguay Trouin, 35407 Saint-Malo, +33 2 99 20 60 20).

SUGGESTED ACCOMODATIONS

Be careful and book quickly:
hotels are full in summer
www.saint-malo-tourisme.com

TRAVEL INSTRUCTIONS

<http://www.pgl-congres.com/informations-pratiques/aces/>

Tours are organized for accompanying persons.

Credit photo : Yannick LE GAL

PRELIMINARY SYMPOSIUM PROGRAMME

WEDNESDAY AUGUST 31TH

Session 1 Qualification of seismic hazard assessment D. Loudiere A Duttine

- 07.30 Registration
08.00 Welcome by CFBR and JCOLD
08.15 Discussing the SHARE PSHA results for France: controlling factors and associated uncertainties, *Myriam BELVAUX*
08.40 Probabilistic seismic hazard assessment, *Christophe DUROUCHOUX, Nicolas HUMBERT*
09.05 Amplification and aggravation factors for site and basin effects, *Kyriasis PITILAKIS, Evi RIGA*
09.30 Discussion
09.45 Break

Session 2 CFRD & AFRD Narita and Kolmayer

- 10.05 Performance and analysis of CFRD and AFRD during 2008-2011 earthquakes, *Norihisa MATSUMOTO*
10.35 Evaluation of Earthquake Resistance on asphalt facing, *Yoshio NAKAMURA*

Session 3 Soils properties and simplified analysis Tanaka & Frossard

- 11.05 Stress-strain behavior of compacted soils related to dam stability, *Prof. Fumio TATSUOKA*
12.00 Lunch at your own expense
14.15 Soils properties assessment at Fujinuma dam, *Prof. Fumio TATSUOKA, Tadatsugu TANAKA*
14.45 Simplified analysis taking into account degradation of soil properties, *Antoine DUTTINE*
15.15 Revisiting Sarma's simplified method for the seismic response of embankments, *Capucine DURAND*
15.45 Break
16.05 Simplified analytical relationships for seismically induced slope displacements, *K. PITILAKIS, Stavroula FOTOPOULOU*
16.35 A simplified method for estimating displacements of homogeneous dams, *Li-Hua LUU & Guillaume VEYLON*
17.05 The validation of the CFBR JCOLD simplified analysis for embankment dams, *Antoine des GARETS, Moez JELLOULI*
17.35 Discussion on simplified seismic analyses
17.55 End of the daily sessions

Welcome Reception

18.30 up to 19.30 Visit and aperitif (included in the fees)

THURSDAY SEPTEMBER 1ST

Session 4 Seismic analysis of embankment dams F. Tatsuoka & M. Lino

- 08.00 Elasto-plastic dynamic response of dams: total & effective stress analyses, *Prof. Tadatsugu TANAKA*
08.35 Effects of future strong earthquakes and other aftershocks on rockfill large dams, *Bachir TOUILLEB*
09.00 Effect of long term fluctuation of vibration & different scales of earthquakes, *Zengyan CAO*
09.25 Analysis of the effect of occluded air and pore fluid compressibility, *Luc BOUTONNIER*
09.50 Break
10.10 The reproduction analysis of Aratozawa dam during the 2008 earthquake, *Nario YASUDA*
10.40 Coupled elasto plastic dynamic response of dams, *Fernando-LOPEZ CABALLERO*
11.10 Application of non linear constitutive models to 3D simulation of dams, *Shoichi TSUKUNI*
11.40 Discussion on seismic analyses of embankment dams
12.00 Lunch at your own expense

Session 5 Seismic analyses of concrete dams

B. Tardieu M. Kashiwayanagi

- 14.00 3D reproduction analysis of Kasyo dam, *SASAKI*
14.25 Concrete dams: dynamic modeling, experimental and in-situ results. Calibration and justification, *Eric BOURDAROT*
14.50 Monticello dam: a comparison between seismic measured & numerical results, *Giorgia FAGGIANI*
15.15 Overestimated response of concrete dam by conventional approaches, *Emmanuel ROBBE*
15.40 Break
16.00 Characteristics of predominant frequency of existing arch dam, *Masayuki KASHIWAYANAGI*
16.25 Characterization of the dynamic behavior of an arch dam – The Baixo Sabor case study, *Jose LEMOS*
16.50 Characterization of the dynamic behavior of an arch dam & a gravity dam, *Emmanuel ROBBE*
17.15 Spatial variability of the seismic ground motion in the dam-foundation rock interface, *Eleni KOUFOUDI*
17.40 Discussion on seismic analyses
18.00 End of the daily sessions

Banquet

19.30 Banquet at Palais des Congrès (included in the fees)

FRIDAY SEPTEMBER 2ND (morning)

Session 6 Simplified seismic analyses of dams N. Matsumoto & A. Yziquel

- 08.00 Main assumptions for simplified seismic analysis of gravity dams, *Bernard TARDIEU*
08.25 Dynamic studies of concrete gravity dams: example of application, *Patrick LIGNIER*
08.50 Simplified dynamic analysis of two dams, *Sadri MEVEL*
09.15 Effects of radiative boundary conditions on seismic analysis of gravity dams, *Frederic ANDRIAN*
09.40 Discussion on simplified analyses for gravity dams
10.00 Break

Session 7 Qualification of equipment

M. Kashiwayanagi & B. Reverchon

- 10.30 Comparison of design criteria of gates between Japan and France, *Pierre-Guilhem BOUQUIER*
10.55 FEM coupled with CFD Analysis of frequencies of gates, in air and in water compared to on-field measurements, *David GRAVELEINE*
11.30 Discussion

Session 8 Conclusions of the 1st ICOLD

European Club Working Group

N. Matsumoto & J-J Fry

- 11.45 Lessons & future prospects
12.00 Closure of the symposium

Credit photo : Thomas JOUANNEAU (SIGNATURES)

