



# 27<sup>th</sup> ICOLD Congress on Large Dams Marseille, France June 4-11, 2021



## Call for Papers

USSD members are invited to submit abstracts of papers responsive to the ICOLD Congress Questions. USSD is allowed to submit 26 papers to ICOLD, with a maximum of 9 per Question. The USSD Committee on ICOLD Congress Papers will select the U.S. abstracts. Authors of selected abstracts will prepare a draft paper for review by the Committee, followed by preparation of a final paper that USSD will submit to ICOLD. ICOLD will not accept any submissions directly from authors.

Papers must be prepared in accordance with ICOLD guidelines (attached below). Please note that USSD will provide the required French translations of captions and the Summary, at no charge, if requested by the author.

Authors will be required to pay a page charge of 48 Euros per page (about US \$52), as assessed by ICOLD. USSD will send invoices to authors following the Congress.

Authors are expected to attend the 27<sup>th</sup> Congress to discuss their paper, answer questions, and in some cases, make an oral summary of the paper (as determined by ICOLD). For more information about the Congress, visit <http://cigb-icold2021.fr>.

## Submission of Abstracts

Please submit your abstract in **Adobe PDF** format. Include the following information at the top:

- Title of proposed paper (maximum 100 characters)
- Primary author's name, affiliation, city, state, and email
- Coauthor's name(s) and affiliations (if applicable)
- ICOLD Congress Question number (see next page)

Abstract text – do not exceed 400 words

Format text as 12 point, left aligned

All submissions should be emailed to [info@ussdams.org](mailto:info@ussdams.org) by May 25, 2020

## Important Dates

<b>ABSTRACT SUBMISSION DEADLINE:</b>	<b>May 25, 2020</b>
<b>Notify Authors of Acceptance</b>	June 8, 2020
<b>Draft Papers Due</b>	August 3, 2020
<b>Review Comments to Authors</b>	August 24, 2020
<b>Final Papers Due to USSD</b>	September 14, 2020
<b>USSD Submits Final Paper to ICOLD</b>	October 5, 2020

**ICOLD Questions  
and Sub-Topics**



# 27th Congress Questions and Sub-topics:

## Q 104

### **CONCRETE DAM DESIGN INNOVATION AND PERFORMANCE**

- a. Innovations for arch dam analysis, design and construction; including RCC arch and arch-gravity dams.
- b. Innovations for design, construction materials and placement methods, flood management during construction and performance of concrete dams, including RCC and cemented material dams.
- c. Innovations for raising existing concrete dams.
- d. Innovations for extremely high concrete dams.
- e. Operational performance of concrete dams during the life cycle, including under extreme conditions.

## Q 105

### **INCIDENTS AND ACCIDENTS CONCERNING DAMS**

- a. Recent lessons from incidents and accidents concerning dams during the life cycle, including during construction.
- b. Evaluation of the flows and flood, estimation and quantification of the consequences, including social, economic and environmental aspects, in case of failure or incidents
- c. Emergency planning: regulation, organization, information of the population and examples of implementation.
- d. Governance of the safety: definition of the responsibilities, periodic reviews, implementation tests, organization of lessons learned implementation.

## Q 106

### **SURVEILLANCE, INSTRUMENTATION, MONITORING AND DATA ACQUISITION**

- a. Long term performance of existing surveillance systems including reliability and accuracy; importance of visual inspections.
- b. New technologies in dam and foundation instrumentation and monitoring.
- c. Data acquisition and processing to evaluate the behavior of dams, predict and identify incidents.
- d. Understanding and handling of large quantity of data, including artificial intelligence approach.

## Q 107

### **DAMS AND CLIMATE CHANGE**

- a. Impacts of climatic change on existing dams and reservoirs and remedies; case studies and costs.
- b. Impacts of climatic change on needs and designs of dams, reservoirs and levees (water storage, floods mitigation, oceans raising...).
- c. Favourable impacts of dams on climatic change, including greenhouse gases reduction by optimisation of hydroelectric production. Needs, potential and cost of energy pumped storage.
- d. Unfavourable impacts of dams and reservoirs on climatic change: evaluation of greenhouse gases emissions by reservoirs and dam construction.

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## NEW GUIDELINES FOR THE PREPARATION OF PAPERS (AND COMMUNICATIONS) SUBMITTED TO ICOLD CONGRESSES

October 2016

*These instructions to authors concern manuscript preparation of Papers (and Communications) to be included in the Proceedings of ICOLD Congresses.*

*The presentation in digital form of Congress Papers makes it necessary to accommodate the previous “Guidelines for Preparation of ICOLD Congress Papers (and Communications)”. It is important to adhere strictly to the new Instructions in order to facilitate the final editing by Central Office. Anything less than full compliance may be detrimental to uniform presentation and require complete reformatting.*

*Rather than submitting a partially compliant copy, it is better to type the manuscript as plain text, showing the approximate positions for the illustrations. Central Office will take charge of the final formatting.*

*Papers and Communications should be sent to Central Office by email or on CD Rom or USB Key **accompanied by an** A4 (21 x 29.7cm) paper print-out (one side of the paper only) as control.*

*Please note that National Committees are responsible for the instructions being followed. Manuscripts not completely formatted or not submitted as plain unformatted text will be returned to National Committees.*

Central Office

## INTRODUCTION

All final manuscripts submitted to Congress must be prepared in MS Word, in a form directly suitable for photo-offset printing. These Instructions to Authors are intended to improve the completion of the Proceedings. Final acceptance of papers will be based on the quality of the full paper.

### 1. GENERAL LAY-OUT

Note: the reference to ICOLD and to the Congress in the upper left corner of the first page is always in French.

#### 1.1. LENGTH

The total length of the paper, including title, summary, text, figures, photographs, references and acknowledgements must not exceed 20 pages. The number of words in a printed page without drawings or diagrams is approximately 450.

#### 1.2. FONT

All text must be MS Arial 11-point font size, with line spacing “exactly 14 pt”, and justified (straight left- and right-hand margins).

#### 1.3. PAGE SIZE (A4 size paper: 21 x 29.7 cm) AND MARGINS

Page margins are as follows:

Top	3.1 cm	1.22 inch
Bottom	3.3 cm	1.30 inch
Left	3.5 cm	1.38 inch
Right	3.5 cm	1.38 inch

#### 1.4. TITLE OF PAPER

The title should be MS Arial 11 point, bold. Use only UPPER CASE and center text. The title should be no longer than 100 characters, not counting spaces. It ends with an asterisk, to refer the reader to the footnote with the translation of the title.

There should be one single-spaced (“exactly” 14) line between the paper title and the first author’s name.

## 1.5. AUTHOR NAME(S) AND AFFILIATION

The author's first name or initials followed by his or her surname should be centered using MS Arial 11 point.

Under the author's name: author's affiliation (MS Arial 11 point, italics,) includes job position, organization, and country.

If there is more than one author, leave a blank line between each.

Leave three blank single-spaced ("exactly" 14 pt) lines between the (last) author's name and the heading of the first section of the paper.

## 2. MAIN TEXT

### 2.1. SPACING AND INDENTING

As mentioned, the base font is MS Arial 11 point, with "exactly" 14pt line spacing, justified (straight left- and right-hand margins).

Paragraphs in the main text should be indented 1.0 cm, but tables and figures should not be indented at all.

Leave three blank lines before and two blank lines after primary headings. Leave two blank lines before and after secondary headings, leave two blank lines before and one blank line after tertiary headings.

One line should be left blank before and after equations, figures and tables (including captions) and the main text.

### 2.2. SECTION NUMBERING

Within the paper, number all headings as follows:

1. PRIMARY HEADING (MS Arial 11 point, all capital letters, centered, 1cm tabulation between heading number and heading title).

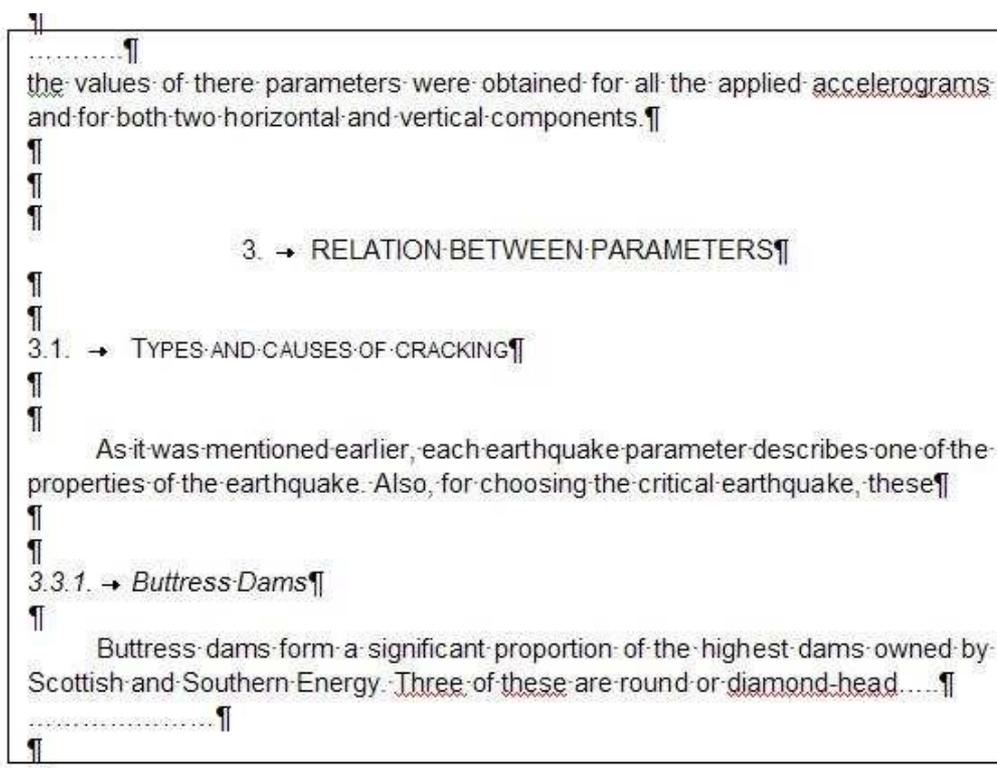
1.1. SECONDARY HEADING (MS Arial 11 point, small caps, justified, 1.5cm tabulation between number and title).

1.1.1. *Tertiary Heading* (MS Arial 11 point, italics, justified, 1.5cm tabulation between number and title).

Example for title, authors, primary heading and 1st section

COMMISSION INTERNATIONALE DES GRANDS BARRAGES ----- VINGT-TROISIÈME CONGRÈS DES GRANDS BARRAGES <i>Brasilia, juin 2009</i> -----	α
¶ ¶ ¶ ¶ ¶	
<p style="text-align: center;"><b>LOW-RISK AND COST SOLUTION FOR CARUACHI SPILLWAY<sup>(*)</sup></b></p> <p style="text-align: center;">¶</p> <p style="text-align: center;">Celso CASTRO GOMEZ¶</p> <p style="text-align: center;"><i>Head of Hydraulic Department, CVG EDELCA¶</i></p> <p style="text-align: center;">¶</p> <p style="text-align: center;">VENEZUELA¶</p>	
¶ ¶ ¶	
<p style="text-align: center;">1. → INTRODUCTION¶</p>	
¶ ¶ <p>The Caruachi Project (2196 MW, in operation, Fig. 1) is the third of the Lower Caroní Hydroelectric Development located south-east Venezuela, upstream of the confluence with the Orinoco river. With Guri (9715 MW in operation) 59 km upstream of Caruachi, Macagua (2968 MW in operation) 22 km downstream of Caruachi and Tocoma (2160 MW under construction) 16 km downstream of Guri, comprise the total capacity of 17 039 MW (Fig. 2).¶</p>	
¶ <p>For the construction of the Caruachi main works, the Caroní river was diverted of their natural course in two stages. In the first stage, the river was diverted toward to the left bank, by means of 3000 m of cofferdams to allow the construction in the dry area of the main structures: spillway and bottom sluices,</p>	
<div style="border: 1px solid black; width: 200px; height: 15px; margin-bottom: 5px;"></div> <p>(*) <i>Solution à faible risque et au coût modéré pour l'évacuateur du barrage de Caruachi.</i>¶</p>	

*Example for primary, secondary and tertiary headings*



## 2.3. FIGURES AND PHOTOGRAPHS

The illustrations are to be presented in the form of scanned photographs or drawings, under JPG format, with a resolution not smaller than 300ppm.

All figures and photographs may be embedded in the Word manuscript or sent as a separate file (in which case, their positions should be indicated in the main text). Number all illustrations (whether drawings or photographs) consecutively in the order of appearance and refer to them as "Fig.1", "Fig. 2 to 5", etc. They should appear in the manuscript as soon as possible after they are first mentioned in the text or at the end of the chapter. All illustrations should be centered.

Captions in both languages (MS Arial 11 point, centered) should be placed immediately below the illustration. One single spaced-line ("exactly" 14 pt) should be left between the figure (including caption) and the surrounding texts. The key in both languages - 2 columns - (MS Arial 11 point), Figures will appear as shown in Fig. 1.



*Example for Tables*

Table 2 Xxxxx Table Heading xxxxx		
No.	Frequency (Hz)	Damping (%)
1	1.46	1.32
2	2.27	1.21
3	2.44	1.12

(\*)  
xxxxxxx

**2.5. EQUATIONS**

Equations are numbered in sequence between square brackets against the right-hand margin: [1], [2], etc. References to them in the text appear as “Eq.[1],” etc. Leave a blank line (“exactly” 14 pt) before and after the equation. For example:

$$I = I_{\max} - \prod_i^n (I_{\max} - I_i) (I_{\max} - I_{\min})^{n-1} \quad [1]$$

Make sure the base font for the equation is 10 pt. MS Word “Equation Editor” tool should be used for writing all equations.

**2.6. FOOTNOTES**

Footnotes should be in MS Arial 10 pt, italics.

**2.7. HEADERS AND FOOTERS**

There should be no headers. Do not number pages (this will be done in the final formatting).

**2.8. UNITS**

Units of measurement and abbreviations should conform to the International System (S.I.). Full stop (Anglo-Saxon usage) or comma (European usage) must be used as decimal signs only. Units of the country of origin may be added in brackets. Any special abbreviation should be accompanied by its extended form the first time it appears in the text. Use Arabic or Latin numbers.

## 2.9. ACKNOWLEDGEMENTS

Authors can include an acknowledgment section if they wish to acknowledge any help they may have received for their study in their paper. The section heading is in same font and line spacing of the 1st level heading, but is centered and has no section number.

## 2.10. REFERENCES

References are identified in the text by numbers between square brackets. The list of references, showing author's name and title and date of publication should be placed at the end of the paper in the order they are mentioned in the main text. The heading of this section should use the same font, font size and spacing as primary level headings but centered on the page and not numbered. If several works by the same author are listed, they should be arranged in chronological order. MS Arial 11 pt should be used, with "exactly" 14 pt line spacing. Names of Journals, Proceedings and books should be in italics. All works cited should be numbered in the order they are mentioned in the text (see example below).

### *Example for References*

REFERENCES	
[1]	IVASHCHENKO I.N., KIRDODA P.A. Assessment and selection of variants of hydraulic structures on multicriterial basis. <i>Gidrotekhnicheskoye Stroitelstvo</i> , 1991, № 10.
[2]	KINI R.L., RAIFA X. Decision making at numerous criteria of preference and substitution. <i>Radio and svjaz</i> , 1981.

## 2.11. SUMMARY AND KEY-WORDS

The Summary should be in both official languages (English and French), starting with the language used in the paper, followed by its translation. It forms the last section of the paper.

The font size of the Summary should be MS Arial 11 point, justified, line spacing "exactly" 14 pt; the heading (SUMMARY) should be all capital letters, and centered.

The Summary should be concise and complete in itself without reference to the text of the paper. It should state the general problem and objectives, summarize the results and main conclusions, and state general implications. The total extension of the Summary should be one or not than two printed pages long lives.

The Congress Proceedings will be published as a CD ROM that contains full manuscripts of papers and a printed volume that contains only the title and authors,

and the Summary of each paper. Therefore, the main ideas, research methodology and the main results of the paper should appear in the Summary. No figures, equations or reference numbers should be used in Summary.

Keywords must be taken from the keywords list (see Circular Letter 1694) and typed on a separate page. There is no point in using words not appearing in the list. Names of dams referred to in the paper should be included.

### **3. CLEARANCES AND COPYRIGHT**

The author(s) is (are) responsible for obtaining written permission to profile the project or subject matter in their papers from any and all clients, owners or others who commissioned the work. ICOLD assumes proper permission has been obtained by author(s) and accepts no liability for the author(s) failing to do so.

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