



# **XX TECHNICAL DAM CONTROL INTERNATIONAL CONFERENCE**

**SAFETY OF HYDRAULIC STRUCTURES**

## **AGENDA**

**SEPTEMBER 12-15, 2023**

**HOTEL DIAMENT ARSENAL PALACE, CHORZÓW  
POLAND**

## **ORGANIZERS**

WARSAW UNIVERSITY OF TECHNOLOGY, FACULTY OF BUILDING SERVICES,  
HYDRO AND ENVIRONMENTAL ENGINEERING, DIVISION OF HYDRO-ENGINEERING AND  
HYDRAULICS

SILESIAIAN WATERWORKS COMPANY

DAM MONITORING CENTRE - INSTITUTE OF METEOROLOGY AND WATER  
MANAGEMENT - NATIONAL RESEARCH INSTITUTE

INSTITUTE FOR APPLIED RESEARCH, WARSAW UNIVERSITY OF TECHNOLOGY LTD.

POLISH COMMITTEE ON LARGE DAMS

HYDROTECHNICAL STRUCTURES DIVISION OF COMMITTEE ON CIVIL ENGINEERING  
AND HYDROENGINEERING OF POLISH ACADEMY OF SCIENCES

## **PATRONAGE**

GENERAL INSPECTOR OF CONSTRUCTION SUPERVISION

PRESIDENT OF POLISH CHAMBER OF CIVIL ENGINEERS

MARSHAL OF SILESIAIAN VOIVODSHIP

CHAIRMAN OF SILESIAIAN WATERWORKS

DEAN OF FACULTY OF BUILDING SERVICES, HYDRO AND ENVIRONMENTAL  
ENGINEERING OF WARSAW UNIVERSITY OF TECHNOLOGY

# SCIENTIFIC COMMITTEE

## OF THE XX TECHNICAL DAM CONTROL

### INTERNATIONAL CONFERENCE

#### CHAIRMEN:

**PROF. ZBIGNIEW KLEDYŃSKI, PHD DSC ENG**  
Warsaw University of Technology, Poland

**PROF. JAN WINTER, PHD DSC ENG**  
Warsaw University of Technology, Poland

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Senior Manager Technology & Dam Safety at Ontario Power, Canada

**PROF. JAN ŻELAZO, PHD DSC ENG**  
Warsaw University of Life Sciences, Poland

## CONFERENCE SCHEDULE

Date Time *	12 <sup>th</sup> Sept. Tuesday	13 <sup>th</sup> Sept. Wednesday	14 <sup>th</sup> Sept. Thursday	15 <sup>th</sup> Sept. Friday
7:00 - 7:30		Breakfast	Breakfast	Breakfast
7:30 - 8:00				
8:00 - 8:30				
8:30 - 9:00		Technical session II	Technical trip	Departure
9:00 - 10:00				
10:00 - 10:30				
10:30 - 11:00		Coffee break		
11:00 - 12:00		Technical session	Lunch	
12:00 - 13:00	Registration			
13:00 - 13:30	Lunch	Lunch	Trip to brewery TYSKIE	
13:30 - 14:00				
14:00 - 14:30				
14:30 - 15:00	Opening of the Confer-	Technical session IV		
15:00 - 16:00				
16:00 - 16:30	Coffee break			
16:30 - 17:00	Technical session I	Coffee break		
17:00 - 17:30				
17:30 - 18:00			General discus- sion and conclu-	
18:00 - 18:30				
18:30 - 19:00	Closing ceremony			
19:00 - 19:30	Banquet		Barbecue	
19:30 - 20:00		Dinner		
20:00 - 20:30				
20:30 - 21:00				
21:00 - 22:00				
22:00 - 23:00				

\* Universal Time Coordinated

UTC + 2

## Tuesday, September 12<sup>th</sup>, 2023

since 12:00	Registration of the participants
13:00 – 14:30	Lunch
14:30 – 16:00	Opening of the Conference: Prof. Jan WINTER

### Official presentations:

**Dorota CABAŃSKA** - General Inspector of Construction Supervision

**Mariusz DOBRZENIECKI** - President of Polish Chamber of Civil Engineers

**Jakub CHEŁSTOWSKI** - Marshal of Silesian Voivodship

**Henryk DROB** - Chairman of Silesian Waterworks

**Paweł POPIELSKI** – Dean of Faculty of Building Services, Hydro and Environmental Engineering at Warsaw University of Technology

**Maciej SIEŃSKI** - Dam Monitoring Centre - Institute of Meteorology and Water Management - National Research Institute

**Piotr ŚLIWIŃSKI** - Polish Committee on Large Dams

**Zbigniew KLEDYŃSKI** - President of Hydrotechnical Structures Division of Committee on Civil Engineering and Hydroengineering of Polish Academy of Sciences

**Apoloniusz KODURA** – Head of Division of Hydro-Engineering and Hydraulics, Faculty of Building Services, Hydro and Environmental Engineering, Warsaw University of Technology

16:00 – 16:30	Coffee break
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## Tuesday, September 12<sup>th</sup>, 2023

16:30 – 18:00

**Technical session I:  
140 years of Silesian Waterworks Company**

*Chairpersons:*

*Prof. Emilia BEDNAROVA,  
Prof. Andrej KRYŽANOWSKI,  
Prof. Paweł POPIELSKI*

**Arkadiusz TARASIŃSKI, Henryk DROB**  
140 years of waterworks in Silesia – the history of  
Silesian Waterworks

**Andrzej SIUDY, Zbigniew FARUGA**  
Water management on the Goczałkowice water  
reservoir according to the applicable water  
management instructions

**Henryk DROB, Andrzej SIUDY**  
Operation of large dam reservoirs administered by  
commercial law companies in terms of maintenance  
costs

**Jean-Jacques FRY, Luc DEROO, Stéphane  
BONELLI**  
New guidance in France on managing erosion risks  
associated with dams and levees

**Martin WIELAND**  
A comparison of the vulnerability of concrete face  
rockfill dams with earth core rockfill dams

**ArcelorMittal Sheet Piling**  
SPONSOR PRESENTATION

19:00 – 23:00

**Banquet**

## Wednesday, September 13<sup>th</sup>, 2023

**07:00 – 08:30**      **Breakfast**

**08:30 – 10:30**      **Technical session II:  
Surveying, operation, and maintenance  
of hydraulic structures – part 1**

Chairpersons:

*Prof. Alla DEMIANIUK,*

*Prof. Jean-Jacques FRY,*

*Prof. Agnieszka MACHOWSKA*

**Stanislav KOTAŠKA, Jaromír ŘÍHA, Tomáš JULÍNEK**

Concept of dam reservoirs to deal with climate change impacts

**Vasyl KORBUTIAK, Dmytro STEFANYSHYN, Yaroslav KHODNEVYCH**

Scenario approach to managing flood risks: challenges and perspectives

**Emília BEDNÁROVÁ, Juraj ŠKVARKA, Marián MIŠČÍK, Ľubomír UHORŠČÁK, Peter MACKOVJAK**

The function of the Veľká Domaša reservoir in the context of observed climate changes

**Eun Chul SHIN, Jeong Ku KANG**

Evaluation Method of Engineering Condition for Small Agriculture Dams

**Mateusz NERKOWSKI, Apoloniusz KODURA**

Analysis of potential causes of fatigue loads in pressure pipelines

**Raimondas ŠADZEVIČIUS, Dainius RAMUKEVIČIUS, Egidijus KASIULIS, Linas JUREVIČIUS, Vygandas NARKUS, Andrzej GŁUCHOWSKI, Wojciech SAS**

The Comparison of Possibilities for Demolition or Rehabilitation of Hydraulic Structures

**Askar ZHUSSUPBEKOV, Aliya ALDUNGAROVA, Askar YESSENTAYEV**

Numerical modeling of the interaction between the dam model and soil base in undermined areas of Kazakhstan

**Q&A Session**

Also concerning the papers not presented during the session

**10:30 – 11:00**      **Coffee break**

## Wednesday, September 13<sup>th</sup>, 2023

11:00 – 13:00

### **Technical session III: Surveying, operation, and maintenance of hydraulic structures – part 2**

#### *Chairpersons:*

*Prof. Apoloniusz KODURA,*

*Prof. Jaromír ŘÍHA,*

*Prof. Donatella STERPI*

**Assel TULEBEKOVA, Askar ZHUSSUPBEKOV, Aizhan ZHANKINA, Aliya ALDUNGAROVA, Gulnaz MAMYRBEKOVA**

Features of surveys of hydrological characteristics of the construction area of roads in difficult soil conditions

**Alla DEMIANIUK, Dmytro STEFANYSHYN**

Challenges in the interpretation of the automated dam monitoring data and the ways to overcome them

**Henryk WOLFF, Tomasz WRÓBLEWSKI, Janusz ANGER  
Paweł OPALIŃSKI, Katarzyna TUCHOLSKA**

Tests and measurements conducted during the design, construction and operation of the Roztoki dry flood protection reservoir

**Andrej KRYŽANOWSKI, Nina HUMAR**

The role of hydropower in meeting the targets for renewable energy production in Slovenia

**Janina ZACZEK-PEPLINSKA, Lech SALONI**

Modernizing the control network for determining displacements in hydraulic structures using reflectorless automatic measurement techniques

**Krzysztof RADZICKI, Remy TOURMENT, Janusz ZALESKI**

The application of certain modern methods for upgrading levees

**Maksymilian POŁOMSKI, Mirosław WIATKOWSKI**

Evaluation of the functionality of seepage prevention structures of dam bodies after a long period of operation - a case study of Otmuchów and Nysa reservoirs

#### **Q&A Session**

**Also concerning the papers not presented during the session**

13:00 – 15:00

**Lunch**



## Wednesday, September 13<sup>th</sup>, 2023

15:00 – 17:00

### **Technical session IV: Surveying, operation, and maintenance of hydraulic structures – part 3**

Chairpersons:

*Prof. Agnieszka DĄBSKA,*

*Prof. Zbigniew LECHOWICZ,*

*Prof. Askar ZHUSSUPBEKOV*

**Chiara ROSSIGNOLI, Marco CARUSO, Cristina JOMMI,  
Donatella STERPI**

Preliminary experimental investigation on the use of recycled fibers from textile wastes for embankments reparation

**Bohan WANG, Yoshiyuki MOHRI, Hidekazu  
TAGASHIRA, Akira IZUMI, Tadatsugu TANAKA**

Centrifugal shaking experiments and FEM analytical investigation on masonry block reinforcement of small earth dams

**Katarzyna SYNOWIEC, Artur GOLDA, Michał TAŁAJ,  
Marcin SAFERNA**

Concreting of hydraulic structures as part of modernization works on the lock on the Januszkowice barrage

**Lavdim OSMANAJ, Sulejman XHELEPI**

Seepage at the base of the Koman (Albania) hydropower dam where under the display block lies the grout curtain and the base consolidation structure

**Michał WIERZBICKI, Anna ANDRZEJAK, Dorota  
PINIARSKA, Bartłomiej SOBCZYK, Bogumił NOWAK**

Functioning of the Regional Water Management Authority in Poznań retention reservoirs in the context of climate change and water needs – challenges and operational issues based on the example of selected facilities

**Janusz SOBOLEWSKI**

Synthetic concrete mats for reinforcement of hydraulic engineering structures, with particular regard to those installed underwater at the bottom and the banks of rivers and canals

### **Q&A Session**

Also concerning the papers not presented during the session

17:00 – 17:30

**Coffee break**

17:30 – 18:30

**General discussion and conclusions**

18:30 – 19:00

**Closing ceremony**

Chairpersons:

*Prof. Zbigniew KLEDYŃSKI;*

*Prof. Jan WINTER*

19:30 – 20:30

**Dinner**

## Thursday, September 14<sup>th</sup>, 2023

07:00 – 08:30	Breakfast
08:30 – 12:00	Technical trip to the Goczałkowice Reservoir
12:00 – 13:00	Lunch
13:00 – 16:30	Trip to Brewery Tyskie
19:00– 22:00	Barbecue

## Friday, September 15<sup>th</sup>, 2023

07:00 – 09:00	Breakfast
09:00 – 12:00	Departure of the participants

## IMPORTANT INFORMATION

CONFERENCE is going to be held in:

### Hotel Diament Arsenal Palace

Paderewskiego St., 35

41-500 Chorzów, Poland

Phone: +48 32 606 84 84



<https://www.hotelediament.pl/hotele/hotel-diament-arsenal-palace/>

## Goczałkowice Reservoir

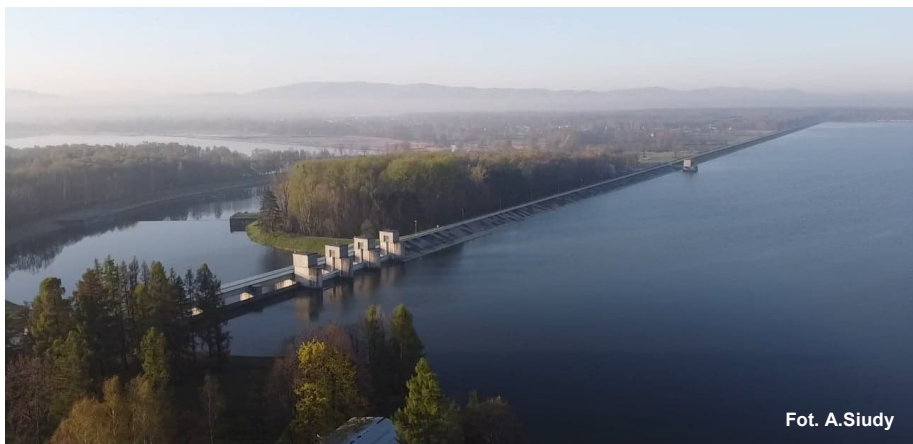
The Goczałkowice Reservoir was built due to the construction of an earth dam on the Mała Wisła River in 1956. The main tasks of the reservoir are to supply water to the Silesian Agglomeration, to provide anti-flood protection and to compensate flows in times of drought.

### Main parameters of the reservoir and earth dam:

Maximum capacity:	161.25 hm <sup>3</sup>
Maximum surface area:	30.97 km <sup>2</sup>
Length of the dam:	2980 m
Height of the dam:	16 m



Fot. A.Siudy



Fot. A.Siudy

# XX TECHNICAL DAM CONTROL INTERNATIONAL CONFERENCE SAFETY OF HYDRAULIC STRUCTURES

## ORGANIZERS

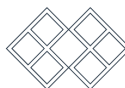


**Wydział Instalacji  
Budowlanych, Hydrotechniki  
i Inżynierii Środowiska**

POLITECHNIKA WARSZAWSKA



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PRZEDSIĘBIORSTWO  
WODOCIĄGÓW  
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**Instytut Badań  
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POLSKA AKADEMIA NAUK



XX TECHNICAL DAM CONTROL  
INTERNATIONAL CONFERENCE  
SAFETY OF HYDRAULIC STRUCTURES

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# XX TECHNICAL DAM CONTROL INTERNATIONAL CONFERENCE SAFETY OF HYDRAULIC STRUCTURES

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*Project co-funded by the state budget, granted by  
the Polish Minister of Education and Science under the program  
"Excellent Science II - Support for scientific conferences"*



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**XX TECHNICAL DAM CONTROL  
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## ORGANIZING COMMITTEE

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Deputy - President of Organizing Committee:

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Andrzej Siudy, MSc Eng

Piotr Śliwiński, MSc Eng

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Agnieszka Dąbska, PhD DSc Eng

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**Agenda  
ONLINE**