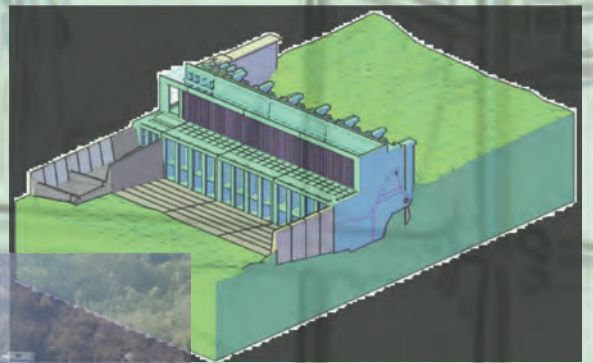


# HYDROPOWER MAINTENANCE AND MODERNIZATION



Belgrade, 2019

# **Hydropower Maintenance and Modernization HMM**

Editor: Prof. dr Aleksandar GAJIC

Belgrade, 2019

## **PROCEEDINGS**

International Seminar – **Hydropower Maintenance and Modernization**  
April, 24-26, 2019., Belgrade, Serbia

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# CONFERENCE PROGRAM 2019

**WEDNESDAY, APRIL 24TH, 2019**

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5<sup>TH</sup> INTERNATIONAL BIOGAS SERBIA CONFERENCE

2<sup>ND</sup> ENERGY MANAGERS SERBIA CONFERENCE

6<sup>TH</sup> INTERNATIONAL HYDROPOWER CONFERENCE WESTERN BALKANS

4<sup>TH</sup> SOLID WASTE MANAGEMENT CONFERENCE – WASTE REUSE & WASTE TO ENERGY

INTERNATIONAL SMALL HYDROPOWER ROUND TABLE

WATER UTILITIES WORKSHOP – WHAT HOMEWORK IS REQUIRED FOR SUCCESSFUL EU FUNDING APPLICATION?

INVESTORS BUSINESS LOUNGE

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**THURSDAY, APRIL 25TH, 2019**

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ENERGY, WASTE & WATER BROKERAGE EVENT RENEXPO®

4<sup>TH</sup> SUSTAINABLE WATER MANAGEMENT CONFERENCE – WATER SUPPLY AND WASTE WATER MANAGEMENT

6<sup>TH</sup> INTERNATIONAL BIOENERGY CONFERENCE WESTERN BALKANS

6<sup>TH</sup> WIND ENERGY SERBIA ROUND TABLE

**MAINTENANCE AND MODERNIZATION HYDROPOWER SEMINAR**

3<sup>RD</sup> PHOTOVOLTAIC FUTURE MARKET CONFERENCE

3<sup>RD</sup> SUSTAINABLE TRANSPORTATION CONFERENCE

INVESTORS BUSINESS LOUNGE

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# MAINTENANCE AND MODERNIZATION – HYDROPOWER SEMINAR


THURSDAY, 25TH APRIL 2019, 9:00 AM – 15:00 PM

## REGISTRATION

200.00 EUR – Regular

100.00 EUR – Sponsors and National participants

50.00 EUR – Students

<b>Target groups:</b>	Hydropower plant operators, manufacturers, project developer, component suppliers, designers
<b>Content and aim of the event:</b>	<p>The attendees should learn from experts of leading universities and manufacturer companies about their newest developments and innovative technical approaches for risk reduction, operating and maintaining of hydropower plants. This may help operators in decision making and in finding O&amp;M strategy solutions in their company.</p> <p>Innovative approaches to the design, operations and maintenance (O&amp;M) of hydropower facilities are needed to ensure optimal performance. Poor operations and maintenance, through a lack of investment, inadequate training or outdated approaches, can cause high outage rates, performance losses and increased operating costs. This can lead to lost energy production, reduced revenues and in some cases result in safety and environmental concerns.</p> <p>The expert workshop will provide a comprehensive overview of maintaining hydropower assets and aims at transferring knowledge in order to benefit from innovative and newly developed approaches.</p>
<b>Moderator and Sci. Organiser:</b>	 <p>Prof. dr Aleksandar Gajić, Academy of Engineering Sciences of Serbia (AESS)</p>

## INTRODUCTION

**Welcome by the organiser – REECO**

Johann-Georg Röhm, Dipl.Ing., Manager REECO Austria GmbH

**Introduction by Moderator and Sci. Organiser**

Prof. Dr. Aleksandar Gajić – Academy of Engineering Sciences of Serbia

**Sponsors and Guests**

## BLOCK I – COURSES

**EU-funded Horizon 2020 project Hydropower–Europe (tbc.)**

Dr. Hendrik Multhaupt, **VGB PowerTech e.V.**

**The Rules to Hydraulic Transient Design Analysis**

Prof. Dr. Aleksandar Gajić – Academy of Engineering Sciences of Serbia

**Maintenance, operational performance and reconstruction of Low head HPP – HPP Zvornik**

Gojko Bajić, Dipl.Ing – leading HPP Zvornik revitalisation

**Maintenance, operational performance and revitalization of High head HPP Bajina Bašta**

Mijodrag Čitaković, dipl.ing. Ex-manager of Drinsko-limske HPP

**Contemporary approach in dam management safety procedures in Serbia and the region**

Prof. Dr. Dejan Divac, Nikola Milivojeić, Dušan Mikavica, Vladimir Milivojević – Jaroslav Černi

Institute for the Development of Water Resources

**Condition monitoring systems, SCADA (tbc.)**

Prof. Dr Nikola Rajakovic dipl. el. Ing.



**Condition monitoring and governing systems (tbc.)**

Dr Nebojsa Panjevac, Institute Mihajlo Pupin

**Digitalization Barometer Tool for Hydropower Operators – First Results**

Dr. Hendrik Multhaupt, **VGB PowerTech e.V.**

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<b>Scientific Co-organiser:</b>	Academy of Engineering Sciences of Serbia	
<b>Language:</b>	English	
<b>Organizer:</b>	REECO	





## PREFACE

**Seminar Hydropower Maintenance and Modernization** is organized in cooperation of REECO GmbH, Austria and Academy of Engineering Sciences of Serbia, as a part of 6<sup>th</sup> Trade Fair and **International Conferences Water, Waste and Energy**.

**Academy of Engineering Sciences of Serbia** has in just 20 years become respectful scientific and engineering institution which gathers together outstanding engineers and scientists with an aim of developing technical and technological sciences and applying their results in industry and economy and solving socially and technology related challenges.

The attendees should learn from experts of leading universities, institutes and manufacturer companies about their newest developments and innovative technical approaches for risk reduction, operating and maintaining of hydropower plants. This may help operators in decision making and in finding O&M strategy solutions in their company.

Innovative approaches to the design, operations and maintenance (O&M) of hydropower facilities are needed to ensure optimal performance. Poor operations and maintenance, through a lack of investment, inadequate training or out-dated approaches, can cause high outage rates, performance losses and increased operating costs. This can lead to lost energy production, reduced revenues and in some cases result in safety and environmental concerns.

The expert workshop will provide a comprehensive overview of maintaining hydropower assets and aims at transferring knowledge in order to benefit from innovative and newly developed approaches. It will mainly highlight the following topics:

**Optimisation of design of Fluid dynamic systems**  
**Technical products for facilitating maintenance**  
**Innovative software tools**  
**Maintenance approaches for status detection**  
**Condition monitoring**

Prof. dr Aleksandar GAJIĆ  
Full member of the AESS  
Seminar Organizer and Editor





## CONTENT

EU-FUNDED HORIZON 2020 PROJECT HYDROPOWER EUROPE .....	1
<b>Dr Hendrik Multhaupt, Dr Mario Bachhiesl</b>	
MAINTENANCE, OPERATIONAL PERFORMANCE AND RECONSTRUCTION OF LOW HEAD HPP – HPP ZVORNIK.....	5
<b>Mr Gojko Bajić</b>	
REVITALIZATION OD HYDRO POWER PLANT „BAJINA BAŠTA“ 368 MW .....	17
<b>Mr Mijodrag Čitaković</b>	
THE RULES FOR HYDRAULIC TRANSIENT DESIGN ANALYSIS .....	23
<b>Dr Aleksandar Gajić, Dr Stan Pejović</b>	
MODERN HYDROPOWERPLANTS CONTROL SYSTEMS .....	43
<b>Mr Nebojša Panjevac, Ms Ivana Bačvanski – Janjatović, Mr Milan Bjedov</b>	
FUNKCIJE PRAĆENJA STANJA U HIDROELEKTRANAMA U KONTEKSTU PRIMENE TEHNOLOGIJA PAMETNIH MREŽA (Condition Monitoring Systems in HPP with Smart Grid Technology).....	53
<b>Dr Nikola Rajaković, Dr Saša D. Milić</b>	
CONTEMPORARY APPROACH IN DAM MANAGEMENT SAFETY PROCEDURES IN SERBIA AND REGION .....	61
<b>Dr Dejan Divac, Dr Nikola Milivojević, Mr Slobodan Radovanović, Ms Maja Pavić</b>	
DIGITALIZATION BAROMETER TOOL FOR HYDROPOWER OPERATORS .....	69
<b>Dr Hendrik Multhaupt, Dr Mario Bachhiesl</b>	