

**EAGE**

EUROPEAN  
ASSOCIATION OF  
GEOLOGISTS &  
ENGINEERS



Bundesverband  
**Geothermie**

**FKPE**



# EAGE/BVG/FKPE Joint Workshop on Borehole Geophysics and Geothermal Energy

**BRIDGING THE GAP - WHAT IS NEEDED?**

22 NOVEMBER 2019 • MUNICH, GERMANY

- **Workshop Brochure | Programme**

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## TECHNICAL COMMITTEE

Christian Buecker	Wintershall Dea GmbH
Horst Rueter	HarbourDom GmbH

## ABOUT THIS WORKSHOP

The hydrocarbon industry has dominated and led the development of downhole measurements and subsurface data collection. Throughout the continuous development of borehole geophysical methods and technologies, many of the sophisticated techniques developed have been focused on the evaluation of hydrocarbon bearing formations. However, there is a lack of focus on the rapidly growing need for techniques applicable to geothermal energy development. Many questions still need to be satisfied in adapting these measurements to the special needs of the geothermal industry. What is really needed for the geothermal energy development? What is absolutely essential to know about the subsurface? What are desirable downhole measurements?

Between the needs for geothermal and hydrocarbon exploration there is a great overlap. Responsible people in the geothermal energy sector should be aware of everything new in the oil/gas-sector. The workshop will cover those new methods, and as such enable geothermal projects to gain a better estimation of important parameters like permeability or a fracture inventory. In particular, the knowledge of porosity and permeability are key elements for an economic development of each geothermal project. This knowledge will finally contribute to in improved productivity of geothermal doublets.

## AIMS OF THIS WORKSHOP

The workshop will bring together experts from the oil and gas sector with experts in the geothermal sector responsible for exploration and especially borehole-geophysical methods. The special needs of geothermal energy on downhole measurements are the main theme of this workshop. An intense exchange of knowledge about methods and applications as well as new ideas for further development will create a win-win situation for both sides. At the end, there should be a better understanding of which borehole measurements are really needed for the extraction of geothermal energy.

The workshop will address a mixed target audience of professionals in both the hydrocarbon and geothermal sectors. There will also be an appeal to innovative service providers focused on the demand of new and reliable information from these expensive deep holes. Many opportunities will also be provided for cross-over discussions and networking.

## IMPORTANT DATES

### Registration is open!

Early Registration Deadline	30 August 2019
Late Registration Deadline	30 September 2019
Workshop on Borehole Geophysics and Geothermal Energy	22 November 2019

## TECHNICAL PROGRAMME

### Oral Presentations | Friday 22 November 2019

ROOM D0.00	
08:00	Registrations and Welcome Coffee
08:30	Opening
<b>Session 1</b> C. Buecker (Wintershall Dea GmbH), H. Rueter (HarbourDom GmbH)	
08:40	<b>Geothermal Reservoir Technologies - Challenges and Solutions</b> - E. Huenges <sup>1*</sup> <sup>1</sup> GFZ German Research Centre for Geosciences Potsdam
09:00	<b>Seismic Methods for Geothermal Reservoir Characterization and Monitoring Using Fiber Optic Distributed Acoustic and Temperature Sensor</b> - A. Chalar <sup>1*</sup> , M. Mondanos <sup>1</sup> , T. Coleman <sup>1</sup> , M. Farhadiroushan <sup>1</sup> <sup>1</sup> Silixa Ltd.
09:20	<b>Seismic Approach Characterizing Geothermal Reservoirs Using DAS and FWI</b> - J. Kasahara <sup>1*</sup> <sup>1</sup> ENAA
09:40	<b>Shallow Geothermal Energy System in Fractured Basalt; A Case Study From Kollafjørður, Faroe Islands, NE-Atlantic Ocean</b> - O. Eidesgaard <sup>1*</sup> <sup>1</sup> Faroese Geological Survey
10:00	Coffee Break
<b>Session 2</b> C. Buecker (Wintershall Dea GmbH), H. Rueter (HarbourDom GmbH)	
10:30	<b>Vertical Seismic Profiling with Distributed Acoustic Sensing at the Groß Schönebeck Geothermal Research Site, NE-German Basin</b> - J. Henniges <sup>1*</sup> , E. Martuganova <sup>1</sup> , M. Stiller <sup>1</sup> , B. Norden <sup>1</sup> , K. Bauer, C. Krawczyk <sup>1,2</sup> , E. Huenges <sup>1,2</sup> <sup>1</sup> GFZ German Research Centre for Geosciences; <sup>2</sup> Technical University of Berlin
10:50	<b>Surface-Borehole Electromagnetic Method - A Review on the Technology Development and Potential for Geothermal Applications</b> - N. Cuevas <sup>1*</sup> <sup>1</sup> Schlumberger Geosolutions
11:10	<b>New Developments in LWD and their Use in Oil, Gas and Geothermal Energy</b> - S. Wessling <sup>1*</sup> , L. David <sup>1</sup> , N. Ritzmann <sup>1</sup> <sup>1</sup> Baker Hughes
11:30	<b>Quality Assurance and Quality Monitoring of Geothermal Probe Systems by Distributed Fibre Optical Sensing Technology</b> - S. Grosswig <sup>1*</sup> <sup>1</sup> GESO Jena
11:50	Lunch Break
<b>Session 3</b> C. Buecker (Wintershall Dea GmbH), H. Rueter (HarbourDom GmbH)	
12:40	<b>Borehole Measurements in Geothermal Wells: Why One Should Measure and Know Certain Parameters</b> - W. Bauer <sup>1*</sup> <sup>1</sup> FAU GeoZentrum Nordbayern
13:00	<b>NMR Measurements and Permeability Estimation for Geothermal Purposes</b> - J. Strobel <sup>1*</sup> <sup>1</sup> Wintershall Dea GmbH
13:20	<b>Utilization of Well Logs for Geothermal Prospect Evaluation on Reservoir and Regional Scale</b> - H. Von Hartmann <sup>1*</sup> , C. Kunkel <sup>1</sup> , H. Buness <sup>1</sup> , S. Wadas <sup>1</sup> , T. Schintgen <sup>1</sup> , V. Shipilin <sup>1</sup> , M. Fadel <sup>1</sup> , J. Bauer <sup>1</sup> <sup>1</sup> Leibniz Institute for Applied Geophysics (LIAG)
13:40	Coffee Break

## Session 4

C. Buecker (Wintershall Dea GmbH),  
H. Rueter (HarbourDom GmbH)

14:10	<b>Well Monitoring of Seismicity and Deformation Within the INSIDE Project (Greater Munich Area)</b> - E. Gaucher <sup>1*</sup> <sup>1</sup> Karlsruhe Institute of Technology (KIT)
14:30	<b>Drilling Induced Borehole Breakouts - New Insights From LWD Data Analysis</b> - K.R. Stricker <sup>1*</sup> , S. Schimschal <sup>2</sup> , T. Kohl <sup>1</sup> , J. Meixner <sup>1</sup> , B. Müller <sup>1</sup> , S. Wessling <sup>2</sup> <sup>1</sup> Karlsruhe Institute of Technology; <sup>2</sup> Baker Hughes, a GE company
14:50	<b>Possibilities and Limits for the Determination of Petrophysical Parameters Using Borehole Data in the Malm Reservoir</b> - D. Pfrang <sup>1*</sup> , D. Bohnsack <sup>1</sup> , R. Seithel <sup>2</sup> , P. Wolpert <sup>3</sup> , K. Zosseder <sup>1</sup> <sup>1</sup> Technische Universität München; <sup>2</sup> Karlsruher Institut für Technologie; <sup>3</sup> Universität Tübingen
15:10	<b>Extended Logging Program at the Geothermal Drilling Site Schäftlarnstrasse in Munich</b> - K. Thiemann <sup>1*</sup> , F. Böhm <sup>1</sup> , A. Savvatis <sup>1</sup> , K. Beichel <sup>1</sup> , S. Dirner <sup>2</sup> , K. Zoßeder <sup>3</sup> , D. Pfrang <sup>3</sup> <sup>1</sup> ERDWERK GmbH; <sup>2</sup> SWM Services GmbH; <sup>3</sup> Technical University of Munich, Chair of Hydrogeology
15:30	<b>Discussion and Conclusions</b>
16:00	<b>End of Workshop</b>

## REGISTRATION FEES

REGISTERED AND PAID	UNTIL 30/08/2019	FROM 31/08/2019 - 30/09/2019	FROM 01/10/2019 UNTIL ON-SITE
<b>Workshop Fees</b>	<b>Early</b>	<b>Late</b>	<b>On-site</b>
EAGE/BVG/FKPE Members	€ 195	€ 215	€ 235
EAGE/BVG/FKPE Student Members	€ 90	€ 100	€ 120
Non-Member	€ 260	€ 280	€ 305
Student Non-Member	€ 120	€ 130	€ 150
EAGE Green Member	€ 210	€ 230	€ 255
EAGE Student Green Member	€ 95	€ 105	€ 125

1. Members please note: To qualify for the member registration fee, your EAGE membership dues for 2019 must have been paid and confirmed. The processing time for membership applications or renewals is 10 working days.
  2. To qualify for the reduced student registration fee:
    - Students must be enrolled in a full-time study programme at a recognized university or institute.
    - The registration must be accompanied by a copy of a student ID card and/or official proof of enrolment.
  3. The non-member fee includes EAGE membership for the remainder of 2019.
  4. Student Non-Members cannot be older than 34 years of age (when registering).
- EAGE reserves the right to cancel the events due to low participation. In this case, payment will be refunded in full.

## SPONSORING

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Visit the event website for more details!







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