

**REPORT ON THE NATIONAL WORKSHOP AND TRAINING COURSE  
IN ROMANIA**

<b><i>Organizer</i></b>	<b>Romanian Geoexchange Society</b>
<b><i>Date</i></b>	March, 4 <sup>th</sup> 2019
<b><i>Venue</i></b>	Romania, University Bucharest, Faculty of Geology and Geophysics
<b><i>Participants</i></b>	46 persons – specialists
<b><i>Stakeholders categories</i></b>	<ul style="list-style-type: none"> <li>▪ Senior drilling and Hydrogeology experts and company owners most of them members of the Romanian Association of Hydro-geologists;</li> <li>▪ Teaching staff from the Faculty of Geology and Geophysics Bucharest;</li> <li>▪ Senior HVAC&amp;R experts, company owners - members of the Romanian Geoexchange Society;</li> <li>▪ Senior experts from the Romanian Geological Survey;</li> <li>▪ Junior HVAC&amp;R specialists - coordinators of the EfDeN organization participant in the Solar Decathlon competition.</li> </ul>
<b><i>Course promotion</i></b>	<ul style="list-style-type: none"> <li>▪ Website of the Cheap-GSHPs Project <a href="https://cheap-gshp.eu/workshop-and-training-course-for-specialists-in-romania/">https://cheap-gshp.eu/workshop-and-training-course-for-specialists-in-romania/</a></li> <li>▪ Website of the Romanian Geoexchange Society <a href="https://geoexchange.ro/workshop-si-curs-de-pregtire-pentru-specialisti-4-martie/">https://geoexchange.ro/workshop-si-curs-de-pregtire-pentru-specialisti-4-martie/</a></li> <li>▪ Email messages addressed to: members of the Romanian Geoexchange Society, members of the Romanian Association of Hydro-geologists, members of EfDeN Association, members of the Faculty of Geology and Geophysics, members of the Faculty for Building Services Engineering</li> <li>▪ Messages on social media: Facebook, Twitter</li> </ul>
<b><i>Budget aspects</i></b>	<ul style="list-style-type: none"> <li>▪ Access to the course room (amphitheater for around 100 persons) was granted free of charge by the Faculty of Geology and Geophysics Bucharest</li> <li>▪ Costs for the coffee break and for printed training materials were covered by the Romanian Geoexchange Society from “Other direct cost” chapter</li> </ul>
<b><i>Training materials</i></b>	<ul style="list-style-type: none"> <li>▪ Course agenda, initial project’s brochure (English), project’s leaflets (English), Technical brochures (Romanian), Feedback questionnaires (English)</li> </ul>



*Conclusions  
on the course*

- There was a vivid debate on the drilling technologies presented during the course.
- The organizers collected 38 feedback questionnaires from 46 participants.
- 12 questionnaires contain explicit written remarks with regard to the training event;
- The main conclusions extracted from the questionnaires were:
  - Participants scores were higher for “content”, “novelty” and “quality of presentation”, but lower for “duration” and “received didactic material”;
  - High volume of information provided in a limited time;
  - Efficiency of such systems should be proven for the specific Romanian climate and underground conditions, considering the costs of the equipment and technologies;
  - Geologists and drillers require more information for drilling, and consider the training event as actual marketing for the helix and the co-axial GHE rather than targeting lowering the costs for geothermal systems;
  - Impact on the underground water was not sufficiently presented;
  - Participants are waiting for the presentations in electronic format;
- The course organizers received the consent of the participants to use their email addresses for further information exchange with regard to access the training manual and to be informed about the project results.
- The possibility of accessing the DSS and the Design Tool was highly appreciated, and later on also put into practice by some of the participants.

*Annexes*

- Course Agenda
- Pictures
- List of participants, with contact data and signatures

**National Workshop and Training Course for Specialists in Romania**

**COURSE AGENDA**

**Place:** *Bucharest*

**Venue:** *Faculty of Geology and Geophysics – University Bucharest  
6 Traian Vuia Street, Bucharest*

**Project partners involved:** *Romanian Geoexchange Society, in cooperation with the  
Romanian Association of Hydro-geologists and the  
Faculty of Geology and Geophysics Bucharest*

**Date:** *March 4<sup>th</sup>, 2019*

**Lecturers' names:** *Prof. Robert Gavriiliuc, Ph.D.  
Prof. Adrian Iurkiewicz, Ph.D.  
Doina Cucueteanu, M.Sc.*

<b>Time</b>	<b>Topic</b>
<b>14:00 – 14:20</b>	Welcome and introduction by Prof. Robert Gavriiliuc and by Prof. Daniel Scradeanu, Head of the Doctoral School from Faculty of Geology and Geophysics – host of the event
<b>14:20 – 14:25</b>	Animation movie about the Cheap-GSHPs Project
<b>14:25 – 14:55</b>	Geology - Geological mapping, climatic data and energy requirements
<b>14:55 – 15:25</b>	Drilling - Helicoidal GSHE and drilling machine developments Coaxial GSHE and installation machine development
<b>15:25 – 15:50</b>	Ground Source Heat Pump Systems
<b>15:50 – 16:05</b>	Coffee break
<b>16:05 – 16:30</b>	Design - Software and modelling tools for low enthalpy geothermal systems and heat pump developments
<b>16:30 – 17:00</b>	Decision Support System development
<b>17:00 – 17:30</b>	Regulations and market
<b>17:30 – 17:40</b>	Final movie about the Cheap-GSHPs Project
<b>17:40 – 18:00</b>	General conclusions Handover of the filled-in questionnaires & of the attendance certificates

Event Pictures





Cheap-GSHPs - Training Course on the research results



Cheap-GSHPs – National Workshop and Training Course for Specialists in Romania

LIST OF PARTICIPANTS

Category of addressed stakeholders: Specialists in geothermal applications / geology / GHE

Course country / place / date: ROMANIA – Bucharest – 2019 March 4th

Cheap-GSHPs partner organizer: Romanian Geoechange Society

Lecturer(s) name(s): Prof. Robert GAVRILIU – RGS President

Doina CUCUȚEANU – RGS Manager

No.	Participant name and surname / Phone number / Email address	Signature
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Cheap-GSHPs - Training Course on the research results



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Cheap-GSHPs - Training Course on the research results



Cheap-GSHPs - Training Course on the research results



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


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