**INFO-GEOTHERMAL project & CA18219 Geothermal-DHC project**

**present**

**The international summer school in Thermogeology in Slovenia**

**Advances in developing geothermal resources for heating, cooling and electricity production**

**3rd to 8th July 2023 in Ljubljana, Slovenia**

SCOPE AND LEARNING OUTCOMES

Within this summer school, attendees will use geothermal concepts to investigate and couple available geothermal potential with various technologies, regarding if it is shallow or deep geothermal.

At the end of the course, the participants should:

* Explain geothermal concepts and exploration methods used to characterize geothermal resources.
* Explain various existing technologies for geothermal use, cascade use, and heat or cold production from the ground
* Explain interactions between heat and flow fields in the subsurface and their change during the project lifetime.
* Describe the concept of sustainable exploitation of renewable resources and proper project development.
* Be able to illustratively present the student project prepared during the course.

The course is available for

* PhD and postdoc students interested in geothermal energy use and impacts
* MSc students interested in geothermal
* Professionals who deal with any aspect of geothermal within their work.

TRAINING ORGANIZERS

- EEA Grants supported project INFO-GEOTHERMAL - Supporting efficient cascade use of geothermal energy by unlocking official and public information

- COST action project CA18219 Geothermal-DHC - Research network for including geothermal technologies into decarbonized heating and cooling grids

- Geological Survey of Slovenia (GeoZS)

- Faculty of Natural Sciences and Engineering in Ljubljana (NTF UL)

- Iceland School of Energy (ISE)

6-DAY TRAINING PROGRAMME

Day 1: Geothermal concepts & student conference

Day 2: Field trip to NE Slovenia (a heat pump factory, a well drilling site, a spa with cascade use and a pilot geothermal power plant on a re-worked abandoned oil and gas borehole (project Si-Geo-Electricity))

Day 3: Advanced technologies in using geothermal and project economics

Day 4: New opportunities in direct use and high temperature resources & field work exercises

Day 5: Environmental issues, heat and power grids & preparation of student projects

Day 6: Preparation and presentation of student projects & final exam

PRELIMINARY LIST OF LECTURERS (by alphabetical order)

Jeff **Birkby**, Hot Springs Association, USA

Prof. Mihael **Brenčič**, PhD, Faculty of Natural Sciences and Engineering of University of Ljubljana, Geological Survey of Slovenia, Ljubljana, Slovenia

Assist. prof. Alexandros **Daniilidis**, PhD, Delft University of Technology, Delft, the Netherlands

Hrvoje **Dorotić**, PhD, Energy Institute Hrvoje Požar, Zagreb, Croatia

Assoc. prof. María Sigríður **Guðjónsdóttir**, PhD, Engineering Department, Reykjavik University, Iceland

Juliet **Newson**, PhD, Iceland School of Energy, Reykyavik, Iceland

Bjarni **Palsson**, PhD, Landsvirkjun (National Power Company), Iceland

Assist. prof. Nina **Rman**, PhD, Geological Survey of Slovenia, Ljubljana, Slovenia

Prof. Rao Martand **Singh**, PhD, Norwegian University of Science and Technology, Trondheim, Norway

COSTS & FUNDING OF THE EVENT

Attendance at the summer school is free, including the travel during the 1-day field trip. Trainers and trainees must sign the attendance list each day.

Attendees should provide for their own travel arrangements and accommodation, but they can apply for a grant to cover part of their costs.

**EEA Grants project INFO-GEOTHERMAL** will provide for part of the travel and accommodation costs for 4 trainees from E and SE European countries and 4 trainers. It provides a lump sum of 600 € per scholarship. Project INFO-GEOTHERMAL will also provide coffee breaks and light lunch during the summer school, printing of the student conference abstract book, and costs of the field trip.

**COST Project CA18219 Geothermal-DHC** will provide for part of the travel and accommodation costs for up to 11 trainees and 4 trainers and part of LOS. It may cover up to 300 € of your long-distance travel expenses (based on invoices) and a daily allowance rate of 100 € per day for a maximum duration of 7 days (no proof needed) for trainees and 150 € for trainers. For further terms and conditions as well as instructions please see COST Annotated rules, Annex 1, A1 3.1. Travel reimbursement rules. Cancellation insurance is an eligible expense included in long-distance travel expenses. The Geothermal-DHC Action MC reserves all rights to reduce the daily allowance rate in case of unforeseen circumstances. In this case, applicants will be informed about possible reductions prior to formal invitations via the eCOST system.

APPLICATION PROCEDURE

The applications are open until Wednesday 26th of April 2023.

**The application should be done following several steps:**

**1. Create/update your profile on eCOST (https://e-services.cost.eu/)**

**2. Submit your application documents to** **geothermal@ntf.uni-lj.si as unsigned Word documents named LAST NAME first name file type** (e.g. RMAN Nina application, RMAN Nina CV).

**(1) application form**

**2) CV with list of publications.**

3. Carefully read the COST Annotated rules, Annex 1, A1 3.1. (https://www.cost.eu/funding/documents-guidelines/)

*4. Opional (in case of interest): Create or update your profile on the Yellow Pages of Geothermal-DHC (https://www.geothermal-dhc.eu/Identity/Account/Login)*

For any questions on eCOST system, please contact CA18219@geosphere.at.

For questions regarding the application or school arrangements, please contact geothermal@ntf.uni-lj.si.

SELECTION PROCEDURE

The selection results will be delivered to the applicants by the 20th of May 2023 latest.

We will select trainees trying to reach the following goals:

- up to 30 trainees

- quality of proposed contributions by the trainee & the student conference

- background from at least 3 different thematic groups (e.g. geologists, machine engineers, environmental specialists, social or economy sciences...)

- country balance (at least 3 countries represented)

- at least 4 trainees from ITC countries

- institutional balance (more than one trainee from the same faculty/institution will be selected in exceptional and well justified cases only)

- an average share of at least 40% of each gender, if possible

- priority will be given to trainees who will attend such summer school for the first time.

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APPLICATION FORM

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APPLICANT’S DETAILS

Name and surname: Write text

Your e-mail: Write text

Gender (Select): Female / Male / Divers

Place of birth (city, country): Write text

Date of birth (dd.mm.yyyy): Write text

Affiliation address: Write text

Affiliation country: Write text

Are you located in an ITC country[[1]](#footnote-1) (Select): yes / no

COST Inclusiveness Target Countries (ITCs): Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Hungary, Lithuania, Latvia, Luxembourg, Malta, The Republic of Moldova, Montenegro, Republic of North Macedonia, Poland, Portugal, Romania, Serbia, Slovenia, Slovakia, Turkey, Ukraine.

Person to be contacted in case of emergency (name, address, phone, e-mail):

Write text

STUDY AND CAREER DETAILS

Professional background (also for students; select):

geosciences / geology / energy engineering / mechanical engineering / environmental sciences / mining / economics / social sciences / project development / other

Career level (select):

* PhD student
* Postdoc/Junior researcher (below the age of 40)
* Professional (employed by a legal entity which has a clear association with performing research)
* MSc student
* Other

Comment: General eligibility rules (also on institutions) are published in COST Annotated rules.

Educational background (current for students and most recent for employees):

Faculty’s name: Write text

Faculty’s address (also city and country): Write text

Study direction: Write text

Employment background, if already employed (most recent):

Company’s name: Write text

Company’s address (also city and country): Write text

APPLICANT’S MOTIVATION

**How is your work connected to the topics and scope of the Geothermal Summer School 2023? (mandatory,** **max. 150 words)**

Write text

**How will your work be supported by attending the Geothermal summer School 2023? (mandatory, max. 150 words)**

Write text

STUDENT CONFERENCE CONTRIBUTION

All successful applicants (scholarship or in person attendance without scholarship) are expected to present their work in the framework of short poster presentations (5 minutes e-poster supported flash presentations). Abstracts will be published in the guidebook to the Summer School 2023. You will be invited to provide the abstract if you are selected to attend the summer school.

**Title of your presentation at the student’s conference (mandatory):**

(if you are not active in geothermal yet, you can e.g. present what is the geothermal situation in your country or what would be useful new knowledge for you)

Write text

Title of proposed content of a student project (voluntary, maximum 150 words):

During the summer school you will work in groups on a real life case geothermal projects. Should you know a possible/potential interesting site or content for this, please let us know here.

Write text

Do you need the certificate for 3 ECTS granted for a Thermogeology course at the MSc programme level at NTF, University of Ljubljana (Select): yes / no

Will you have a personal laptop available during the course (select): yes / no

REQUEST FOR A GRANT

Reimbursement of travel costs and daily allowance for accommodation and meals will be available to cover part of your costs to/in Slovenia. Two type of support grants are available, from projects INFO-GEOTHERMAL and Geothermal-DHC. We plan to provide grants for up to 15 trainees altogether.

Are you applying for a grant to attend the event (select): yes / no

1. [↑](#footnote-ref-1)