EGC 2013
GEOTHERMAL ENERGY TOWARDS A NEW HORIZON
COME AND JOIN US IN PISA!
The European Geothermal Congress EGC 2013 will provide a stage to present and discuss new developments in the science, technology, industry, and policy of geothermal energy on our continent. The congress aims, simply and boldly, to bring the entire sector together.

The scientific element of the congress differentiates the event from market driven conferences and trade shows, whilst at the same time we have made sure that industry is integrated with the academic with our exhibition. High level speakers will come from a policy making background, informing attendees about the latest developments and seeing first-hand the needs of the industry.

After a highly successful call for papers, we released the preliminary agenda, which can be viewed both online and in this brochure, on the 15th of March. We are pleased to be able to offer a rich variety of topics, and look forward to the discussions they will stimulate. As well as the oral presentations we draw your attention to the poster presentations which will be available throughout the congress.

Whilst the congress runs for three days, we invite you to take part in several side events, for example the ISS short courses, the ThermoMap, Groundmed and GeoElec conferences, and the fieldtrip to Larderello.

Of course there will be time to socialise with the geothermal community during our welcome cocktail and congress banquet.

We look forward to seeing you in Pisa.

Dr Miklos Antics (Chairman of the scientific committee) and Dr Burkhard Sanner (EGEC President)
Registration
Register now to secure your place at the congress and book your accommodation at http://www.geothermalcongress2013.eu/register/
Standard registration includes:
a) an electronic copy of the Proceedings. You will receive a copy of all the presentations and papers on a complimentary USB stick;
b) admission to all technical sessions;
c) daily coffee-breaks and luncheons;
d) welcome cocktail;
e) congress banquet at the delightful Charter House of Calci

You can also register online for any of the extra activities, including:
- ISS short courses
- Field trip to Larderello
- Groundmed, ThermoMap and GeoElec conferences

Fees

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<tr>
<th></th>
<th>Standard</th>
<th>Reduced fee for Members</th>
<th>Special fee for Students</th>
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<tr>
<td></td>
<td>€550,00</td>
<td>€400,00 (until 30/04/2013)</td>
<td>€180,00</td>
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<tr>
<td>One day only</td>
<td>€200,00</td>
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<tr>
<td>Congress Banquet extra ticket (for accompanying persons)</td>
<td>€70,00</td>
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<tr>
<td>Larderello Excursion</td>
<td>€50,00</td>
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Agenda Overview

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<th>Poster Presentations</th>
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<th>Day 3 05/06/2013</th>
<th>Day 4 06/06/2013</th>
<th>Day 5 07/06/2013</th>
<th>Day 6 08/06/2013</th>
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<tr>
<td>Main Congress morning</td>
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<td>Plenary opening</td>
<td>Plenary, parallel sessions</td>
<td>Plenary, parallel sessions</td>
<td>Excursion to Larderello</td>
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<tr>
<td>Main Congress afternon</td>
<td></td>
<td>Parallel sessions</td>
<td>Parallel sessions</td>
<td>Plenary closing</td>
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<tr>
<td>Main Congress evening</td>
<td>Icebreaker</td>
<td>Congress closing</td>
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<tr>
<td>ISS Short Courses</td>
<td>International Course on Drilling, completion and testing of geothermal wells</td>
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<tr>
<td>EU Project Conferences</td>
<td>Groundmed</td>
<td>Geoelec</td>
<td>Thermomap / Geoelec</td>
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<tr>
<td>Other Side Events</td>
<td>UGI AGM</td>
<td>EGEC AGM</td>
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</table>
The IGA European Regional Branch – International Summer School on Geothermal Energy (ISS) in cooperation with European Geothermal Energy Council and Unione Geotermica Italiana will be running two short courses alongside the congress.

### Short Courses

The European Regional Branch – International Summer School on Geothermal Energy (ISS) in cooperation with European Geothermal Energy Council and Unione Geotermica Italiana will be running two short courses alongside the congress.

<table>
<thead>
<tr>
<th>International Course on Drilling, completion and testing of geothermal wells</th>
<th>General program</th>
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</thead>
</table>
| Monday 3rd June 2013, Palazzo dei Congressi, Pisa | • Overview on deep seated geothermal environments
• The future of EGS technologies
• Introduction to geothermal well drilling practices
- Well design
- Directional drilling (drilling fluids; cementing; drilling service contracts and risk analysis)
• Miscellaneous, drilling/completion related issues
• Geothermal well logging
• Geothermal well testing and analysis
• FAQ/Questionnaire-Evaluation |

**Lecturers**

- Dr. Miklos Antics – IGA EBF chairman, GPC IP, France
- Dr. Pierre Ungemach – GPC IP, France

<table>
<thead>
<tr>
<th>International Course on Ground Source Heat Pumps</th>
<th>General program</th>
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</table>
| Saturday 8th June 2013, University of Pisa | • How a heat pump works
- Fundamentals
- Borehole heat exchangers design and completion
- Types of heat pumps
- Evaluation of performances and optimal operation of ground source heat pump heating and cooling systems
- Internal and external sources
• GHP geological aspects and practical guidelines
• Case Studies in Italy: Milano and others (tbd)
• GHP state of the art and perspectives in Europe |

**Lecturers**

- Dr. Burkhard Sanner – IGA EBF, vice-chair, EGEC president
- Prof. Walter Grassi, prof. Della Vedova, prof. Carlo Piemonte – Unione Geotermica Italiana, Board members
- Dr. Del Mastro (president of GEO-HP consortium), Dr. Ferraresi (TBC) - the Ferrara District Heating Company

### Fees

| ISS Short Courses: Deep Geothermal Energy | €160,00 |
| ISS Short Courses: Deep Geothermal Energy - Student fee | €90,00 |
| ISS Short Courses: Geothermal Heat Pumps | €160,00 |
| ISS Short Courses: Geothermal Heat Pumps - Student fee | €90,00 |

### Excursion

On Friday, 7th June attendees will have the opportunity to visit the Larderello power plant site which celebrates its centenary in 2013, trek across the area’s geothermal fields, and visit the Valle Secolo Plant- the biggest geothermal powerplant in Italy! Space is limited to 200 participants so reserve your space now to avoid disappointment.

**Excursion agenda**

Light refreshments and lunch will be provided. Please note the execution includes a trek so appropriate footwear should be worn!

**7:00 Departure** - Busses will depart from Palazzo dei Congressi

**9:00 Group 1: Trek**

After arriving in Sasso Piano and visiting the geothermal fields, we will walk over a hill to “Le Biancane” geothermal area, with a lot of boiling mud pond, fumaroles, altered rocks, and steaming ground. The trek will last approximately two hours, depending on the speed of the group. A bus will then transfer us to the Valle Secolo Plant, where we will visit the biggest Italian geothermal power plant with an installed capacity of 120MW.

**13:30-14:30 Lunch at Enel Canteen**

**14:30-18:30 Group 1: Larderello Visit / Group 2: Trek**

**20:00 Return to Pisa**

**Group 2: Larderello visit**

Two groups of 50 will visit the Geothermal Museum, the ruins of Larderello I (Commissioned 100 years ago!), Larderello III, the opening of a geothermal well and finally Valle secolo.

**Excursion Fee**

€50,00
Preliminary agenda

Monday, 3 June 2013

13:30 Karytsas Welcome

13:45 Sanner Setting the stage: What are the benefits of geothermal heat pumps, where are the current markets, and what can GHP contribute in the Mediterranean region?

14:00 Mendrinos The GroundMed project

14:20 Palm The geothermal side: Heat Transfer at the BHE

14:40 Witte The geothermal side: BHE optimization

15:00 Benassi The heart of the system: HP design optimization for Ground source applications

15:20 del Col Efficient operation: Fixed, staged and variable capacity control

16:00 Coffee Break

16:30 Lagré Summary overview of GroundMed project demo sites

16:50 Montagud Analysis of the energy performance measurements of GroundMed demo site in Valencia

17:10 Auzenet Analysis of the energy performance measurements of GroundMed demo site in Septemes-les-Vallons

17:30 Salmistraro Analysis of the energy performance measurements of GroundMed demo site in Tribano

17:50 Roundtable: Main results of GroundMed - what was achieved, what further steps can be done towards increasing performance and efficiency

18:30 End of GroundMed Final Conference

19:00 Icebreaker Reception – informal beginning

20:00 Icebreaker Reception – official welcome

21:00 End of the day
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>10:00</td>
<td>Plenary: Opening Session</td>
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<tr>
<td>12:50</td>
<td>Lunch</td>
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<tr>
<td>14:00</td>
<td>Dumas</td>
<td>Manzella</td>
<td>Geothermal development in southern Italy and the contribution of VIGOR Project</td>
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<tr>
<td>14:20</td>
<td>Grassi</td>
<td>Scali</td>
<td>Geological studies aimed at constructing 3D geological modelling of geothermal sites in the Argentera Massif (southern Alps - Italy)</td>
</tr>
<tr>
<td>14:40</td>
<td>Boissavy</td>
<td>McPerson-Grant</td>
<td>Main achievements from the multi-well EGS Soultz project during geothermal exploitation</td>
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<tr>
<td>15:00</td>
<td>Bruhn (tbc)</td>
<td>Sverrisson</td>
<td>Ground source heat pump technology development within the EU funded project Ground-Med</td>
</tr>
<tr>
<td>15:20</td>
<td>Landolina</td>
<td>Bottarelli</td>
<td>The Larderello – Travale and Amiata Geothermal fields: history cases of engineered geothermal systems since early 90's</td>
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<tr>
<td>15:40</td>
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<tr>
<td>16:10</td>
<td>Buonasorte</td>
<td>Aretz</td>
<td>Policies for the promotion of geothermal energy in Italy: Objectives or 2020, regulations and incentives</td>
</tr>
<tr>
<td>16:30</td>
<td>Lako</td>
<td>Marquart</td>
<td>Characterization of the geothermal reservoir potential of the Permocarboniferous in the northern Upper Rhine Graben,Germany</td>
</tr>
<tr>
<td>16:50</td>
<td>Büscher</td>
<td>Arvanitis</td>
<td>Geothermal low grade heat reclamation. A reservoir engineering approach</td>
</tr>
<tr>
<td>17:10</td>
<td>Nador</td>
<td>Tut Haklidir</td>
<td>Development of new ground loop sizing tools for domestic GSHP installations in the UK</td>
</tr>
<tr>
<td>17:30</td>
<td>Mertoglu</td>
<td>Nunes (tbc)</td>
<td>Proposal of a Novel Design Procedure for Ground Source Heat Pump Systems</td>
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<td>17:50</td>
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End of the day
Wednesday, 5 June 2013

Welcome to day 2

Plenary Keynote Presentations

Antics
Laloui
Advances in thermo-active foundations and underground structures

Summary of Country Update Reports Europe

Poster Session

Parallel 1 (deep/other)
Geothermal Markets and Regulations [MA]

Parallel 2 (deep)
Resource Assessment [HS1]

Parallel 3 (deep)
Geothermal Power plants [HS3]

Parallel 4 (shallow)
GSHP case studies [SG2]

Coffee Break

11:10 Angelino
The EU legal framework for geothermal energy

Dumas
The Geoelec project

Parri
Geothermal power plants in Italy: increasing the technological performance

Piemonte
Palazzo Lombardia: Geothermal Heat Pump capacity world record for a single building

11:30 Preuter
A comprehensive overview on the existing regulatory and financial barriers on geothermal energy utilization in Austria, Hungary, Slovakia

Kaya
An Overview on Geothermal Drilling and Projects in Turkey in 2012

Bombarda
Comparison of different plant schemes for geothermal power generation

Grimm
Berufskolleg Duisburg - largest project of shallow geothermal use in Germany

11:50 Ueltzen
Comparison of regulatory framework Germany / Italy

Andritsos
Assessment of electricity generation using medium-temperature geothermal resources in Greece

Fuchs
Interplay between the plant operation conditions with the process and the plant efficiencies of a binary geothermal power plant

Magon (Itc)
Geothermal Heat Pump for District Heating Service in Milan (Italy)

12:10 Falcone
Classification and Reporting Requirements for Geothermal Resources

Rman
Current and future trends in geothermal energy utilization in the western part of the Pannonian basin

Heberle
Thermoeconomic comparison of designs for geothermal combined heat and power generation

Manda
Optimisation of industrial size cold production from a ground source heat pump plant using borehole heat exchangers

12:30 Trumpy
The web-oriented framework of the world geothermal production database: a business intelligence platform for wide data distribution and analysis.

Teklemariam
Overview of geothermal resource exploration and development in the East African rift system

Sacchetti
The 26 MW Cove Fort Geothermal Power Plant

Kriel
Ground-Med Demo Project No.4 – Benedikt, Slovenia

12:50 Lunch

14:00 Sabatelli
Geothermal power plant repowering by means of biomass combustion

Dumas
The Geothermal DH project

McClure
The Effect of Stimulation Mechanism in Enhanced Geothermal Systems

Sanner
More than 15 years of mobile Thermal Response Test – a summary of experiences and prospects

14:20 Cataldi
Possible development of power generation in Italy by harnessing unconventional geothermal systems in the next decades

Nazar
Matching geothermal potential and heat demand of Europe: the web-map tool of the GeoDH project to promote geothermal district heating

Temas
DEM Study of Hydraulic Fracturing in Enhanced Geothermal Systems

Mersuri
Probabilistic approach to TRT analysis: evaluation of groundwater flow effects and machine - borehole interaction

14:40 Vassallo
A thermoeconomic approach to the analysis of geothermal plants

Bolissi
New geothermal targets in Paris basin

Scheidler
Flow anisotropy in shared fractures with self-affine surfaces

Rolando
Numerical evaluation of the Ground Response to a Thermal Response Test Experiment

15:00 Retzius
Grid integration of geothermal electricity

Bonté
New temperatures for the Paris Basin - Results from tectonic - Heat Flow modelling

Rijkers
Geological risk and modelling shear fractures for EG5 in Lower Carboniferous limestone

Di Spio
Thermal conductivity of rocks and regional mapping

15:20 Borsa
Thermochemical impact of cooled brine injection

Goetzl
Future hydrogeothermal utilisation potentials and conflicts in the Vienna Basin based on 3D modelling results of TRANSENERG project

Benato
Computational Investigation of THMC Effects on Transmissivity Evolution During Selected Injection Phases at the Desert Peak EGS Project, NV.

Bertemann
ThermoMap - An Open-Source Web Mapping Application for illustrating the very Shallow Geothermal Potential in Europe and selected Case Study Areas

15:40 Coffee Break

16:10 Filla
Status and perspectives of the district heating and cooling infrastructures in Italy

Manzella
Shallow geothermal exploration using SkyTEM data: the VIGOR experiment

Schuler
Hydrothermal Splugation Drilling as a Possible Alternative Drilling Method for Deep Geothermal Energy Harvesting

Bourne-Webb
Overview of observed thermal and thermo-mechanical response of piled energy foundations

16:30 Tita
First Geothermal Energy Utilization System Based on Medium Enthalpy Reservoir in Hungary

Ungarelli
MT as a tool for geothermal exploration: a case study from Southern Tuscany

Stathopoulos
Design of a hydrothermal spuguation drilling tool – Flame impingement experiments

Burton
Bearing capacity of thermo-active piles

16:50 Halas
New geothermal district heating systems in Slovakia

Munoz
Characterising Fracture Properties in Geothermal Reservoirs using Electrical Resistivity Measurements with Inductive Fluid Injection

Kocis
PLASMABIT – Innovative drilling and casing system

Di Donato
THM processes affecting the geotechnical performance of energy pile foundation

17:10 Buda
Possible simultaneous heat extraction from geothermal reservoirs at various depths in East Hungary, a case study of Létavértes

Aleardi
Evidence of fractures on seismic data for geothermal exploration

Schreiber
Application of an Scaling Inhibitor System at the Geothermal Power Plant in Soultz-sous-Forêts - Laboratory and on site Studies

Suryaprasad
Numerical analysis of thermo-active piles under thermal-cyclic solicitation

17:30 Kujbas
Modernization concepts of the operating geothermal systems in Hungary

Spichak
Advances in electromagnetic geothermal exploration based on using of an Indirect electromagnetic geothermometer

Cuonto
Evolution of the natural radioactivity within the Soultz geothermal installation

de Groot Viana
Heating and cooling an energy pile under working load in Valenciennes

End of the session

17:50 Banquet at La Certosa di Calci

During banquet:

Rybach
Geothermal Energy - what has been achieved and what needs to be done
# Thursday, 6 June 2013

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<tr>
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<td>Welcome to day 3</td>
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<tr>
<td><strong>09:10</strong></td>
<td>Poster Session</td>
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<tr>
<td><strong>10:40</strong></td>
<td>Coffee Break</td>
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<tr>
<td><strong>11:10</strong></td>
<td>Plenary / Parallel 1 (deep/other)</td>
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<tr>
<td><strong>11:30</strong></td>
<td>Plenary / Parallel 2 (deep)</td>
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<td><strong>11:50</strong></td>
<td>Plenary / Parallel 3 (deep)</td>
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<td><strong>12:10</strong></td>
<td>Plenary / Parallel 4 (shallow)</td>
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<tr>
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<td>Lunch</td>
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<tr>
<td><strong>15:40</strong></td>
<td>Coffee Break</td>
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## Plenary / Parallel 1 (deep/other)

- **11:10** Pizzi
dia
  - Urban and environmental planning for the protection and valorization of low temperature geothermal resources

## Plenary / Parallel 2 (deep)

- **11:10** Vaccaro
  - Numerical simulation of geothermal resources: a critical overlook

## Plenary / Parallel 3 (deep)

- **11:10** Kohl
  - A priori detection capability of a microseismic monitoring network

## Plenary / Parallel 4 (shallow)

- **11:10** Bjørn
  - Borehole Thermal Energy Storage in combination with District Heating

## Side Event: Geoelec Final Conference [GE]

- **11:10 – 15:40** Thermomap Final Conference [TM]
- **11:10 – 15:40** Program to be published later

## Communication and Acceptance (CO)

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<th>Time</th>
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<tr>
<td><strong>14:00</strong></td>
<td>The International Energy Agency - Geothermal Implementing Agreement, 3rd Term Achievements and 4th Term Aspirations</td>
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<tr>
<td><strong>14:20</strong></td>
<td>The GIA Trend Report, a new annual survey report on geothermal applications and developments</td>
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<tr>
<td><strong>14:40</strong></td>
<td>An Icelandic Geothermal Cluster: Is Cross-Border Engagement in Emerging Markets Feasible?</td>
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</table>

## Wells and production (HS3)

- **14:00** Cei
  - Evaluation of heat exchange in a geothermal well

## Geothermal Applications - other (HS4)

- **14:00** Tomaszewska
  - Geothermal water desalination as the possible solution for the decentralization of the fresh water production

## Market and regulations - shallow (SG6)

- **14:00** Paksoy
  - Shallow Geothermal Applications in Turkey

## Side Event: Geoelec Final Conference [GE]

- **14:00** Cuesva
  - REGOCITIES, a European initiative for the overcoming of the regulatory barriers for SGE

## Side Event: Thermomap Final Conference [TM]

- **14:00** Vienken
  - Strategies towards a sustainable thermal use of the shallow subsurface

## Coffee Break

- **15:40**
  - Assessment of heating and cooling demand of buildings as part of a regional analysis of shallow geothermal potential

## Plenary Closing Session

- **16:10** Fridleifsson
  - Geothermal Energy Education and the Millennium Development Goals

## End of the day

- **17:50** Closing from organisers:
International Course on Ground Source Heat Pumps

General program
• How a heat pump works
  - Fundamentals
  - Borehole heat exchangers design and completion
  - Types of heat pumps
  - Evaluation of performances and optimal operation of ground source heat pump heating and cooling systems
  - Internal and external sources
• GHP geological aspects and practical guidelines
• Case Studies in Italy: Milano and others (tbd)
• GHP state of the art and perspectives in Europe

Lecturers
• Dr. Burkhard Sanner – IGA EBF, vice-chair, EGEC president
• Prof. Walter Grassi, prof. Della Vedova, prof. Carlo Piemonte – Unione Geotermica Italiana, Board members
• Dr. Del Mastro (president of GEO-HP consortium), Dr. Ferraresi (TBC) - the Ferrara District Heating Company
**Resource Assessment [HS1]**

De Natale Innovative geothermal projects in Campania Region (Southern Italy)

Sowizral The latest results of geothermal projects in Poland

Inversi 3D geological modelling of a fractured carbonate reservoir for the study of methane entrapment in the Southern Apennines (Campania Region, Italy)

Limberger European temperature models in the framework of Geolink: temperature and flow data sets to lithospheric models

Pasquali Geothermal Resource Assessment of Irish Sedimentary Basins

Manzella Petro-structural Interferometry (PSI) to detect surface deformation in the Travale geothermal area (Tuscany, Italy)

Manzella Geothermal development in southern Italy and the contribution of the ATLANTE GERMICO Project

Inversi Integrated geo-mathematical modeling of the TRANSENERGY project area

Staikl POSTER Transboundary geothermal system at the Latunayon-Zebra area of ATREE project

Matthiesen Assessment of geothermal aquifer parameters in Denmark with focus on transmissivity

Vedova Reservoir characterization of the fractured geothermal district heating system in Grado (NE Italy)

Dezayes (tbc) Relative chronology of deep circular depressions within the fracture network of the Upper Rhine Graben

Pauselli Integrated Multidisciplinary Approach for the Study of the Geothermal Potential of Umbria (Central Italy)

Nedjo Geothermal potentiality of the north-east part of republica srpska – bosnia and herzegovina

Vuataz Aquifers in the canton of Neuchâtel, with western Switzerland

Rajver Experience in diverse direct use systems applied in northeastern Slovenia

Gaspar Complex Hydraulic and Geothermal Model of the Komarno-Szűrő Pilot Area of the TRANSENERGY project

Polletto Multisift VIP for the integrated geophysical characterization of the Grado (NE Italy) carbonate reservoir

Alessandro Preliminary insights from the Acquasanta area (Marche, Italy)

Lockett North Sea Geothermal Power Project

Gola Deep-seated Geothermal Resource Assessment of the WIG Project Region, Italy

De Natale The geothermal exploration of Campania Region (Southern Italy) and the ‘Sischia’ Project

Giordano Caldera-related geothermal resources: implementation of the volcanic models and implications for exploitation at Colli Albani caldera and the Central Italy geothermal province

Jirakova Legal and Technical Criteria for Definition of Geothermal Energy Resource - Agenda in the Czech Republic

Demic Geothermal exploration in the northern Serbia using Interpretation of Hydrocarbon well and seismic data

**Poster Presentations, 4-6 June 2013**

**Svasta**

Integrating Geological and Hydraulic Models of the Danubie Basin - TRANSENERGY project cross-border pilot area

**Bär**

Investigation of the deep geothermal potentials of Hesse (Germany)

**Lehjuérez**

Imaging of a geothermal reservoir using ambient noise cross correlation

**Soma**

Lithothemal potential of a test site through Structural and geological and geophysical data

**Zuffiano**

Geothermal resources in a foreland setting: the Cesara Valley Termohydrogeological springs (Southern Italy)

**Licour**

The geothermal reservoir of Hainaut: multi-disciplinary exploration of carbonate and sulphate karstic aquifers

**Buttinelli**

Geothermal potential areas in Southern Italy: new exploration and exploitation perspectives.

**Olivarius**

How cations affect the reservoir properties of the Smøla Sandstone in Norway

**Eristrom**

Structural outline, depositional setting and assessment of Mesozoic and Cenozoic geothermal aquifers in the main eastern parts, of the Danish Basin

**Procesi**

Spatial overlay analysis as first decision making tool for geothermal resources exploration in the Tuscany case study (Italy)

**Andritsos**

Mapping of the shallow geothermal resource and potential direct uses for the northern province of Rome (Central Italy). The Fuzzy Logic is a useful analysis tool.

**Gegenhuber**

Recent Geothermal Development in Greece

**Cerutti**

Hydrogeological Features and Sustainable Use of Geothermal Resources: Selected Case Studies in Italy

**Schäffer**

Qualitative Potential Identification of Hydrothermal Systems in the Guadarrama System (Madrid, Spain)

**Grobe**

Outcrop Analogue Studies in Geothermal Exploration aus – AU Projekt

**Weibl**

Effects of sandstone mineralogy and diagenesis on thermal conductivity

**Caldeira**

Geothermal and Short-Period Rayleigh Wave Dispersion Measurements on the Teguise Geothermal field (Lanzarote, Spain)

**Poulsen**

The role of thermal conduction from confining beds in the thermal regime of low enthalpy geothermal fields

**Branca**

Potential of Geothermal Mount Etna, region, eastern Sicily. POSTER: Utilization potentials of the low-enthalphy geothermal aquifer of the Bad Radkersburg – Hodoš pilot area – based on 3D modelling results of the TRANSENERGY project

**Beka**

Correlating Magnetotelluric Sound With Borehole Data for Geothermal Parameter Characterisation in Southjutland Area, Denmark

**Accessing the reservoir [HS2]**

**Firnbach**

Experimental heat flow propagation within porous medium using electrical resistivity tomography (ERT)

**Process Engineering [HS3]**

**Wlaren**

Optimum configuration of plate-type heat exchangers for the use in OREs for low-temperature geothermal energy sources

**Gharibi (tbc)**

A numerical analysis of a U-tube heat exchanger for acquisition of geothermal energy from abandoned oil wells

**Kubjas**

Review of geothermal power plant opportunities in the Pannonian Basin

**Perrin**

Technical progress on geothermal piping systems over the last 40 years

**Sideri (tbc)**

Larderello Geothermal Power Plants: repair and upgrading of the L-60 and L-70 turbine

**Cheng**

A novel multi-tube heat exchanger applicable for geothermal power plant

**Geothermal Applications [HS4]**

**Moneynon**

Geothermal demonstrator project in the Lusatian layer in the Paris Basin

**Degering**

Radioactivity in deep geothermal heat and power plants of Germany

**Raman**

Analysis of thermal water abstraction from low enthalpy geothermal systems in the Mur-Žalta sedimentary basin, NE Slovenia

**Piccinini**

Passive Seismological Inspection of a Geothermal Field: Theывает Field, Switzerland

**Yilmaz**

Observation Studies of Geothermal Wells in Sorgun Geothermal Field (Yozgat-Turkey)

**Halaj**

Rio geothermaal development and therapy centers in Poland.

**Spa мн нато**

Infrared remote sensing techniques applied to the “Salinelle” geothermal system at Larderello (Pistoia, Italy)

**Janka**

Energy assessment of operation of two swimming pools in thermal district heating system in Grado (NE Italy)

**Bädder**

Corrosion Resistance of High-Alloyed Materials in Artificial Geothermal Systems

**Induced Seismicity [IS]**

**Աջատցունի**

Induced seismicity in the Heilig geothermal area, southwest Iceland

**Schmittbuhl (tbc)**

Seismic tomography in EGS reservoir: an experimental approach

**Sue**

3D passive seismic tomography using induced seismic data in geothermal field.

**Geothermal Markets and Regulations [MA]**

**Mendronis**

Global Geothermal Power Market

**Popovska-Vasilievska**

Annual utilization factor - prerequisite for feasibility of direct geothermal energy use

**Cesari (tbc)**

Will geothermal systems be based on geological knowledge? - A Third density scenario

**EGS general [PS1]**

Rappeil Seismic Assessment of Geothermal Potential of Crystalline Crust

**Mehl**

The mapping of clay bearing fractures from well logs with a neural network and their implications for rock mechanics

**Marakchi**

Flow channel network in reservoir: from fracture aperture variability to large scale deformation

**Pechnig**

A Conductive Geothermal Model in the EU project "Geothermal near-Earth Rhine Gorge (GEOR)"

**Rohak**

Applied Thermo-Hydro-Mechanical coupled modelling of geothermal prospection in the northern Oberhaeeringraben. Gravity constrained by seismic and petrophysical correlations

**AbdelFettah**

Experimental EGS, accessing the reservoir [PS2]

**Riceo**

Understanding and predicting coupled hydro-mechanical fracture propagation

**Willbrand**

Laboratory experiments, acoustic emission monitoring and simulation to improve the understanding of EGS fracture formation

**Jirakova**

Application of stimulation techniques on rock samples

**Maffuci**

Reconstruction of a “Discrete Fracture Network” in the geothermal reservoir of Rosario de La Frontera (La Candelaria, Salt de Pila, province, NW Argentina)

**EGS Drilling and operation [PS3]**

Heilmich Geosteering at the geothermal sites of Soultz-sous-Forêts and Rittershoffen (Upper Rhine Graben – Pfronsean area, Germany)

**Toth**

Suitability of geothermal power plant using water from boreholes, in an old building

**GSHP case studies [SG2]**

Sanner Results and lessons learned from geothermal monitoring of eight nonresidential buildings with heat and cold production in Germany

**Aives**

An attempt to increase the performance of a climatizing system using water from boreholes, in an old building

**Ground Thermal Parameters [SG3]**

Montero Ground temperature profile while thermal response testing

**Drefke**

Changes of thermophysical and hydrophysical properties in unconfined aquifer sandstone (Poster)

**Steger**

Efficiency of buried cables depending on hydrogeological and geothermal properties of trench fill materials

**Sauer**

Evaluating temperature test data by using superposition of line source approximation

**Bording**

Laboratory measurements of rock thermal properties

**Thermoeactive Structures [SG4]**

McCarney Applications of Geothermal Heat Exchange in Civil Engineering Infrastructure

**Zulaoga**

Design and Construction of a Thermo-Active Piled Raft Foundation for Industrial Building in Spain

**UTES [SG5]**

On the relative impact of subsurface warming and Underground Thermal Energy Storage (UTES) on subsurface temperatures

**Driver (tbc)**

Estimating the performance of high temperature aquifer thermal energy storage (HT-ATES)

**Driver (tbc)**

Solt-Borehole Thermal Energy Storage Systems for District Heating

**Market and regulations - shallow [SG6]**

**Sitzenfrei**

Designing shallow geothermal systems with the state-of-the-art: Why are our systems working nevertheless?

**Menberg**

Elevated temperature beneath caves: An enhanced geothermal resource

**Destro**

GIS-mapping model of low enthalpy geothermal potential in Italy (VIGOR PROJECT)

**Khan (tbc)**

A Critical Review of Geothermal Heat Pump Market in the UK

**Mascale**

Exploitation of low enthalpy geothermal resource: case study of a coastal area affected by seawater intrusion

**Lewis**

The open loop ground source heat pump screening tool for England and Wales

**Petitclerc**

Overview and perspectives on shallow geothermal energy in Belgium

**Grinn**

Erdenerwandler – the shallow geothermal Bundesliga

**Veerkade-Peters**

Sustainable industry – a national shallow geothermal research project
Palazzo dei Congressi
The EGC 2013 is taking place in the Palazzo dei Congressi in Pisa. This fantastic facility offers all the necessary amenities for large plenary sessions, parallel sessions, an exhibition, networking, breaks.

Transport
The Congress Palace has a good connection to Pisa Central Station (1.4 km away, it can be reached on foot in 15 minutes, or by taking the bus line LAM BLU, Matteotti stop) and to the Pisa International Airport (it can be reached by bus, train or taxi). The Palace is well connected to the nearby city center both by car and by public transport.

Address: Via Matteotti, 1 - 56124, Pisa, Italy

The city of Pisa
Pisa is located in the plains of river Arno, near the Mediterranean Sea. The university, schools, and research facilities strongly influence the character of the city. Pisa is easily accessible by road (A11, A12), by train (from Genova, Firenze or Livorno) and by plane (airports in Pisa and in Firenze).

You can find more information about Pisa [here](http://www.geothermalcongress2013.eu/). Being in Pisa in June (Giugno) will give attendees the wonderful opportunity to be a part of the Giugno Pisano celebrations. Every year the city of Pisa celebrates its history with the entire month of June dedicated to traditional events, plays, concerts and exhibitions.

During “Giugno Pisano”, Pisa celebrates some important historical events, mainly in conjunction with the patron saint’s day. The main events are:

- the Luminara of S. Ranieri on 16th June
- the Festa of S.Ranieri on 17th June
- the Historical Regatta of S. Ranieri on 17th June (afternoon)
- the Gioco del Ponte on 29th June

Every 4 years, the Historical Regatta delle Antiche Repubbliche Marinare is coming to Pisa. 2013 will be such a year with the 2nd June set as a preliminary date.

Please consider extending your stay and enjoy the Pisa medieval atmosphere. Our partners DGMP are offering tours of Pisa, Lucca, Florence, Volterra and S. Gimignano. See more details [here](http://www.geothermalcongress2013.eu/).