



The Abdus Salam  
International Centre for Theoretical Physics

# School on 'Geothermics'

October 26 - November 7, 2009  
ICTP-Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) and the International Center for Science and High Technology (ICS/UNIDO) are jointly organizing a *School on Geothermics*, to be held from October 26 - November 7, 2009 in Trieste, Italy.

More than half of the population in the developing countries (DC) live in rural areas and have no access to modern forms of energy. In such areas transmission and distribution of energy generated from conventional sources can be difficult and expensive.

Harnessing geothermal energy locally can offer a viable resource for socio-economic development of DC. Interest in "geothermal" has increased recently due to the environmental problems associated with conventional energy sources and a decline in the cost of "geothermal" technologies and improved efficiency and reliability of such technologies.

Under the current debate on Climate change and greenhouse gases emissions, this course is very relevant to many developing as well as industrialized countries.

More than 70% of the total geothermal sources are located in Asian, Central and South American, African and east European countries. In fact, electric power plants driven by geothermal energy provide over 44,000 million-kilowatt hours of electricity worldwide per year, and world capacity is growing at greater than 9% per year. With advancement of binary technology and with vast low temperature resources available in DC geothermal will become a suitable, cost-effective and sustainable energy source in the future in such countries. Collaboration with Industrialized countries is essential in this respect.

## Primary Goals:

- To provide basic knowledge on the geothermal energy resources exploration and its application for power generation and direct use;
- To provide advanced technical knowledge, methods and implementation tools for the application of geothermal energy for power generation and direct use through lectures and tutorials and case studies/histories;
- To provide knowledge on the economic and environmental aspects of geothermal energy.

## Topics to be covered:

- *Geothermal Energy Resources, World Status, comparison with other sources of energy.*
- *Exploration strategies for geothermal resources*
  - *Geological and tectonic characteristics of world geothermal systems*
  - *Geochemical exploration methods;*
  - *Geophysical exploration methods.*
- *World overview - Power generation & technologies;*
- *World overview - direct use;*
- *Development of business strategy for geothermal energy for power and direct use.*

The School is based on **lectures by distinguished experts** and includes *panel discussions, poster presentations. Field visits are envisaged to geothermal areas in Italy.*

## PARTICIPATION

The event is open to scientists, post-graduate fellows, decision-makers, independent power producers and mid-career professionals and technologists from the public and private sectors, organizations involved in exploitation of renewable energy resources from all member countries of the United Nations, UNESCO, IAEA and UNIDO. The main purpose of both the Abdus Salam ICTP and the ICS/UNIDO is to help researchers from developing countries through a program based on international co-operation. Limited travel funds are available primarily for applicants from, and working in, developing countries. The activity will be conducted in English. **Registration is free-of-charge.**

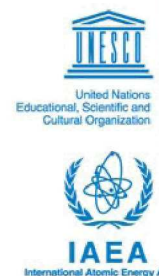
## APPLICATION

The "On-line Application" form can be accessed at:  
**web page address:** <http://www.ictp.it/~smr2021>  
& **ICTP agenda page:**

[http://cdsagenda5.ictp.trieste.it/full\\_display.php?smr=0&ida=a08213](http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a08213)

(Please save and upload file attachments in either: **RTF format, .doc or .pdf**)

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## Co-sponsors:



**ENEL, Italy**



**International  
Geothermal  
Association**



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## LOCAL ORGANIZER

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**On-line Application  
Deadline**

**July 15, 2009**