

# SCCER-SoE/NRP70 PhD School 2016

## Understanding the transition needed to reach the Energy Strategy 2050



Leukerbad (Valais)  
18 - 21 October 2016

The Swiss Competence Center on Supply of Electricity (SCCER-SoE), with support of the National Research Programme „Energy Turnaround“ (NRP 70), is organizing the second PhD School focusing on hydropower and geo-energies.

Join the PhD School in the middle of the Alps, in Leukerbad, to experience three days full of interdisciplinary discussions, presentations, group work, and excursions.

It is the goal of the PhD School to present you a profound big picture of the transition needed to reach the Swiss Energy Strategy 2050 and the latest developments, future prospects, and regional aspects of hydropower and geo-energies in Switzerland.

## Tuesday, 18 October 2016

### **Icebreaker**

Beginning at 18:30

Organized by the PhDs Asmae Dahrabou, Maria Kakurina (UNINE), and Elena Vagnoni (EPFL)

## Wednesday, 19 October 2016

### **Introduction to the big picture of the energy transition**

Modelling climate change

Reduction of CO<sub>2</sub>

The winter deficit of electricity

Energy storage

Socio-economics, political measures, and social acceptance

Challenges for hydropower and geo-energies

Sensibilisation on entrepreneurship

## Thursday, 20 October 2016

### **Regional case studies**

The panoramic view from Gemmipass: seeing key elements of the geology of Switzerland and related geothermal resources with your own eyes

Storage hydropower in the Alps – the Feren-Steg hydropower scheme – potential for increased flexibility

## Friday, 21 October 2016

### **Dedicated lectures and group work on hydropower and geo-energies**

Key findings of ongoing research on hydropower usage, infrastructure, and innovative technologies

Exploring for deep geo-energy resources in Switzerland

How to design, prepare, and execute a medium-scale hydraulic stimulation experiment: the Grimsel example

Understanding volcanic high-enthalpy geothermal systems in Iceland, New Zealand and elsewhere

Hydraulic stimulation physics for geothermal and other applications

Numerical modelling in geothermal – from simulating fundamental physics to supplying information for economic and risk assessment

Closure at 15:30

## Who can participate?

The SCCER-SoE/NRP70 PhD School addresses PhD students and postdocs of ETH institutions, Swiss universities, and senior engineers of universities of applied sciences who are working in the field of hydropower and geo-energy.

The number of participants is limited to 65.

## How to register

The registration deadline ended on 30 September 2016.

## Credits

PhDs will obtain 1 ECTS for the SCCER-SoE/NRP70 PhD School. The knowledge acquisition will be evaluated based on a personal student report and a test.

## Costs

Thanks to generous sponsors, only the travel costs have to be borne by the participants.

No-shows have to pay CHF 200.

## Organization

The SCCER-SoE is organizing the PhD School with support of the NRP 70 and in cooperation with Leukerbad Tourismus.

## Academic Research Partners

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[www.swisstopo.ch](http://www.swisstopo.ch)



## Location

Hotel Le Bristol

Rathausstrasse 51

3954 Leukerbad

[www.lebristol.ch/en/](http://www.lebristol.ch/en/)



## Contact

Ueli Wieland

[uwieland@ethz.ch](mailto:uwieland@ethz.ch)

Anton Schleiss

[anton.schleiss@epfl.ch](mailto:anton.schleiss@epfl.ch)

Thomas Driesner

[thomas.driesner@erdw.ethz.ch](mailto:thomas.driesner@erdw.ethz.ch)

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