



## Characterization of deep geothermal systems

Collège Doctoral Européen, Strasbourg (46 Boulevard de la Victoire)

### Scientific Program

#### Thursday 24/10/13 "doctoral school day"

**08.45 - 09.00 :** Welcome

**09.00 - 09.15 :** Introduction by **J. Schmittbuhl (EOST)** and **T. Kohl (KIT)**

**09.15 - 10.15 :** **Speaker : J. Schmittbuhl (EOST)** "Seismic and aseismic slip in EGS reservoir: an experimental approach"

**10.15 - 11.15 :** **Speaker : B. Valley (ETHZ)** "Fracturing and stress characterization of deep geothermal system"

*Coffee break 30'*

**11.45 - 12.45 :** **Speaker : T. Kohl (KIT)** "Towards modeling of massive flow injection in fractured rock for geothermal reservoirs"

**12.45 - 14.30 :** *Lunch (Jardin intérieur du CDE)*

**14.30 - 17.30 :** **Speaker : F. Cornet (IPGS)** "Origin of the stress field in the Rhine Graben"

**Speaker : D. Bruel (Ecole des Mines)** "Revisiting some pioneer HDR projects to discuss THM interactions and micro-seismic activity using a discontinuum-based numerical modeling technique"

**Speaker : B. Sanjuan (BRGM)** "Main on-site geochemical and tracing operations carried out at Soultz-sous-Forêts (France) between 2005 and 2013"

**17.30 - 19.30 :** **Poster session**

**SAHARA David :** "Importance of active fracture on borehole breakout development"

**KINNAERT Xavier :** "Towards S-wave picking of seismicity induced by GPK2 stimulation at Soultz-sous-Forêt"

**POLLET-VILLARD Marion :** "Modification of the reactive surface area of silicate minerals during hydrothermal alteration: an experimental and modeling approach"

**JAHN Markus :** "Towards a 4D database management system for geothermal projects: an example of the hydraulic data of Soultz" (**discussion at 18.30pm**)

**STORMO Arne :** "Mechanical origin of b-value changes: Competition between elasticity and disorder"

**STOBER Ingrid :** "Geothermal fluid and reservoir properties in the Upper Rhine Graben, Europe"

**ROLKER Julian :** "Geochemical analysis and thermo-hydraulic modeling of a thermal spring system in the southern Black Forest"

**MAURER Vincent :** "Micro-seismic monitoring of the Rittershoffen project"

**NUSIAPUTRA Yodha :** "Geothermal thermo-hydraulic wellbores model for use in power-plant simulation"

**20.00 :** Dinner at « L'Ancienne Douane », Strasbourg

## Friday 25/10/2013 “state of research day”

**09.00 - 09.15 :** Welcome by **T. Kohl (KIT)** and **J. Schmittbuhl (EOST)**

**09.15 - 10.15 :** Session Exploration (short oral presentations : 15') *chairman : A. Genter*

**SCHILL Eva :** “3D geological modelling of the Northern Swiss Permo-Carboniferous basin using gravity forward modeling”

**LEHUJEUR Maximilien :** “Imaging of a deep geothermal reservoir using ambient noise correlation”

**MEIXNER Jörg :** “Slip- and dilation tendency analysis : Implications for geothermal exploration in the Upper Rhine Graben”

*Coffee break 30'*

**10.45 - 12.30 :** Session Drilling, Logging and Reservoir characterization (short oral presentations : 15') *chairman : C. Baujard*

**SEITHEL Robin :** “Characterization of Tectonic Stress of Geothermal Wells in the southern Molasse Basin (Germany)”

**MELLER Carola :** “The Application of a Neural Network to Identify Identification Clay Bearing Fractures from Well Logs - Implications for Rock Mechanics”

**VIDAL Jeanne :** “Evidence of permeable fractures in the Triassic sediments of Northern Alsace”

**MAGNET Vincent :** “Two-dimensional THM modelling of the large scale hydrothermal circulation at Soultz-sous-Forêts”

**12.30 - 13.30 :** Lunch (*Jardin intérieur du CDE*)

**13.30 - 14.50 :** Session Stimulation and Induced seismicity (short oral presentations : 15') *chairman : E. Gaucher*

**HEAP Mike :** “Shock cooling in granite : A pilot study”

**LENGLINE Olivier :** “Repeating earthquake sequences help quantifying aseismic deformations of the Soultz-sous-Forêts geothermal reservoir during the 2010 circulation test”

**SCHOENBALL Martin :** “Change of stress during reservoir stimulation”

**SAILHAC Pascal :** “Testing geothermal monitoring using MT and SP at Rittershoffen”

*Coffee break 30'*

**15.20 - 16.40 :** Session Exploitation and Monitoring (short oral presentations : 15') *chairman : B. Fritz*

**MUNDHENCK Niklas :** “Electrochemical study on corrosion of different metals exposed to deaerated geothermal brines containing CO<sub>2</sub>”

**HEIMLICH Christine :** “Geodetic monitoring strategy at the geothermal sites of Soultz-sous-Forêts and Rittershoffen (Upper Rhine Graben, France)”

**HINDERER Jacques :** “Preliminary results of the monitoring of the Soultz-sous-Forêts geothermal reservoir by hybrid gravimetry”

**GAUCHER Emmanuel :** “Towards a dense passive seismic network over Rittershoffen geothermal field”

