



EGW 2015

EUROPEAN GEOTHERMAL WORKSHOP
STRASBOURG / October 19-20, 2015

PROGRAM OF THE WORKSHOP

OCTOBER 19

- 8:15 REGISTRATION AND COFFEE
- 9:00 WELCOME MESSAGE • **J. Schmittbuhl**
- RESERVOIR EXPLORATION** • Chairman : T.Kohl
- 9:15 KEYNOTE :
Geothermal exploration in Martinique based on magneto-telluric and controlled-source EM survey • **J-F. Girard, N.Coppo, P.Wawrzyniak, F.Bretauudeau, A.Gadalia**
- 10:00 *Geophysical characterization and numerical modelling of the summit hydrothermal system of Stromboli volcano, Aeolian Islands, Italy* • **C. Mezon, Y.Fargier, V.Mourzenko, R.Antoine, A.Finizola, J.F. Thoverf, T.Ricci, C.Fauchard, P.M. Adler**
- 10:20 *Reactivity of Chilean Reservoir Rocks and the Use of Geochemical Tools for Reservoir Characterization* • **F. Nitschke, S.Held, N.Mundhenk, I.Villalon, T.Kohl, T.Neumann**
- 10:40 COFFEE BREAK
- 11:10 *Using remote sensing data for a structural and geomorphological analysis of the Paleozoic basement of the Southern Schwarzwald* • **J.Meixner, J.C.Grimmer, E.Schill, A.Becker**
- 11:30 *New stratigraphic interpretation of the twenty-eight year old GPK1 geothermal well of Soultz-sous-Forêts (Upper Rhine Graben, France)* • **C.Aichholzer, Ph.Duringer, S.Orciani, A.Genter**
- 11:50 *Towards targeting geothermal reservoir : guide from survey design to processing through seismic acquisition in urban context in Alsace* • **A.Richard, C.Baujard, V.Maurer, E.Dalmaïs, F.Horvath, F.Hanot**
- 12:10 *How to deal with a public inquiry? Views from residents and deep geothermal energy projects stakeholders in Alsace* • **P.Chavoû, A.Masseran, Y.Serrano**
- 12:30 LUNCH BREAK + POSTER SESSION
- RESERVOIR MONITORING** • Chairman : U.Achauer
- 14:00 KEYNOTE :
The new geothermal energy and geofluids group at ETH Zurich and an update on the progress in the Deep Underground Geothermal Lab in Switzerland • **M. Saar**
- 14:45 *Surface displacement around the geothermal power plant of Landau (Germany) during the 2013-2014 event* • **C. Heimlich, F.Masson**
- 15:05 *On-going progress on the hybrid gravimetric monitoring of the Soultz-sous-Forêts and Rittershoffen geothermal sites* • **J.Hinderer, M.Calvo, Y.Abdelfettah, G.Ferhat, U.Riccardi, B.Hector, J-D.Bernard, F.Littell**
- 15:25 COFFEE BREAK
- 15:55 *Modeling earthquake location errors at a reservoir scales : a case study in the Upper Rhine Graben* • **X.Kinnaert, E.Gaucher, T.Kohl, U.Achauer**
- 16:15 *Seismicity related to the hydraulic stimulation of GRT1, Rittershoffen, Alsace, France* • **O.Lengliné, M.Boubacar, J.Schmittbuhl**
- 16:40 POSTER SESSION : ORAL PRESENTATION OF POSTERS
- 18:30 END OF THE 1ST WORKSHOP DAY
- 19:30 WORKSHOP DINNER
AT 14 JUILLET • 1B ROUTE DE L'HOPITAL MILITAIRE, 67000 STRASBOURG

OCTOBER 20

- RESERVOIR MODELLING** • Chairman : B.Fritz
- 9:15 KEYNOTE :
Application of a fully 3D Hydro-geomechanical discrete fracture network simulator to EGS design and characterization • **M. McClure**
- 10:00 *New Insights into the THM modeling of Three-dimensional Fractured Media* • **V. Magnenet, C.Fond, J.Schmittbuhl**
- 10:20 *Modeling of Thermo-Hydro-Mechanical coupled processes for faulted geothermal reservoirs* • **A.Jacquey, M.Cacace, G.Blöcher, M.Scheck-Wenderoth**
- 10:40 COFFEE BREAK
- 11:10 *The effect of fluvial architecture in Hot Sedimentary Aquifers on the connectivity and life time of a geothermal doublet* • **C.Willems, R.Croijmans, H.Nick, D.Bruhn**
- 11:30 *The application of THC Code TOUGHREACT-Pitzer on Failure Conditions of Geothermal project GeneSys* • **F.Nitschke, S.Held, T.Himmelsbach, T.Kohl**
- 11:50 *Transport properties of interfacial Si-rich layers formed on silicate minerals during weathering : Implications for geothermal purposes* • **D.Daval, S.Bernard, L.Rémusat, B.Wild, F.Guyot, A.Fernandez-Martinez**
- 12:10 *Modeling the properties of geothermal two-phase multi-component fluids* • **Y.Nusiaputra, A.Dimier, D.Kuhn, E.Schröder, H.Francke, S.Herfurth, T.Kohl**
- 12:30 LUNCH BREAK + POSTER SESSION
- 14:00 *Modeling of inelastic failure leading to borehole breakout* • **D.Sahara, T.Kohl**
- 14:20 *Fracture pinning and b-value of micro-seismicity* • **J. Schmittbuhl, A.Stormo, O.Lengliné, C.Jestin, A.Hansen**
- RESERVOIR ENGINEERING AND OPERATION** • Chairman : J-F.Girard
- 14:40 KEYNOTE :
Multi-stage and cyclic hydraulic stimulation scenarios to develop Enhanced Geothermal Systems - Feasibility and mitigation strategies to reduce seismic risk • **G. Zimmerman, H.Hofmann, J.S.Yoon, A.Zang, F.Deon, S.Regenspurg, G.Blöcher, E.Huenges**
- 15:25 COFFEE BREAK
- 15:55 *Effect of the crystal structure anisotropy on k-feldspar dissolution kinetics in hydrothermal conditions* • **M.Pollet-Villard, D.Daval, P.Ackerer, G.D.Saldi, K.G.Knauss, B.Wild, B.Fritz**
- 16:15 *Geothermal implications for fracture-filling hydrothermal precipitation* • **L.Griffiths, M.Heap, F.Wang, D.Daval, H.Gilg, P.Baud, J.Schmittbuhl, A.Genter**
- 16:35 *Aperture alteration pattern in silicate and carbonate reservoirs during cold water injection and heat extraction* • **A.Chaudhuri, S.N. Pandey**
- 16:55 *Why cooling and geothermal go together - Practical and advanced examples of concepts* • **B.Holbein, J.Isele, L.Spatafora, V.Hagenmeyer**
- 17:15 CONCLUSION OF THE WORKSHOP

PROGRAM OF THE POSTER SESSION

RESERVOIR EXPLORATION Chairman : T.Kohl

1. Evolution of concepts for the geothermal projects in the Upper Rhine Graben • **J.Vidal, A.Genter, J.Schmittbuhl, H.Whitechurch, C.Baujard, E.Dalmais**
2. Optimizing the design of vertical seismic profiling (VSP) surveys for imaging of geothermal reservoirs • **F.Reiser, C.Schmelzbach, S.Greenhalgh, H.Maurer**
3. Ambient seismic noise tomography of the Outre-Forêt region (Alsace, France) from the EstOF dense temporary seismic array • **A. Le Chenadec, J.Vergne, M.Lehujeur, EstOf group**
4. Fluid injection monitoring of Rittershoffen geothermal project, northern Alsace, using magnetotelluric • **Y. Abdelfettah, P.Sailhac, H.Larnier, E.Schill**
5. Hydrothermal alteration of Soultz-sous-Forêts granite near the granite-sediment interface in geothermal context • **V.Girard-Berthet, J.Vidal, H.Whitechurch, M.Ulrich, A.Genter, J.Schmittbuhl**
6. Permeability assessment based on drilling data in EGS projects • **E.Dalmais, A.Genter, J.Vidal, C.Baujard, F-D.Vuataz**
7. Combining numerical modeling with geostatistical analysis for an improved basin analysis • **W. Rühaak, K.Bär, I.Sass**
8. Fractured continental crust: permeability and fluid-flow • **I.Stober**
9. GEOTREF: a multidisciplinary innovation and demonstration platform for the exploration and development of high geothermal energy in fractured reservoirs • **V. Navelot, J.Mercier de Lépinay, Y.Géraud, M.Munsch, M.Diraison**
10. Heat-Flow calculation of Iranian plateau • **M. Namvaran**

RESERVOIR MONITORING Chairman : U.Achauer

11. Vertical surface deformation monitoring during 2014 and 2015 using precise leveling around Soultz-sous-Forêts and Rittershoffen geothermal exploitation sites, Rhine Graben, France • **G. Ferhat, M.L.Barraza, E.Clédat**
12. First test to locate the microseismicity induced at Rittershoffen geothermal field (France) using a migration-based technique • **E. Gaucher, A.Maggi, N.Cuenot, V.Maurer**
13. Monitoring deep geothermal reservoirs using ambient noise and coda wave interferometry; a feasibility study at Rittershoffen • **M.Lehujeur, J.Vergne, J.Schmittbuhl, A.Maggi**
14. Local V_p/V_s variations as an indicator of the fluid presence in the focal area of the earthquakes • **M. Bachura, T.Fischer**

RESERVOIR MODELLING Chairman : B.Fritz

15. Modeling of heat transport through Fractures with emphasis to roughness and aperture variability • **B.Nigon, A.Englert, C.Pascal**
16. Particle retention on granite as a function of residence time and particle size using a synthetic fracture flow cell • **M.Stoll, F.Huber, G.K.Darbha, E.Schill, T.Schäfer**
17. A coupled Thermo-Hydro-Mechanical modeling of aperture closing and opening during heat extraction from fractured geothermal reservoir • **S.N. Pandey, A. Chaudhuri**
18. Modeling the evolution of mineralogy in the EGS geothermal system of Soultz - sous - Forêts • **V.Ngo, Y.Lucas, A.Clément, B.Fritz**
19. Alteration of primary minerals from geothermal reservoirs in the Upper Rhine graben • **R.Schmidt, N.Mundhenk, K.Bucher, I.Stober**
20. Residual strain analysis by neutron diffraction on granites from the drilling EPS1 of the geothermal site in Soultz-sous-Forêts, France • **C.Meller, B.I.R.Müller, F.R.Schilling, Ch.Scheffzük**

RESERVOIR ENGINEERING AND OPERATION Chairman : J-F.Girard

21. Adaptable long-term sustainable development strategies by using reservoir simulators • **C.Bromley, G.Axelsson**
22. CDGP : a data center for deep geothermal data • **M.Schaming, M.Grunberg, M.Jahn, J.Schmittbuhl, N.Cuenot, A.Genter, E.Dalmais**
23. Soultz-sous-Forêts: GPK2 production well integrity after more than 15 years of operation • **J. Scheiber, G.Villadangos, N.Cuenot**
24. Advanced Composite Materials for Coiled Tubing Deep Geothermal Applications and Offshore Production Riser Systems • **S. Jamali, V.Wittig, R.Bracke**