

**EGU General Assembly 2011**  
**Programme Group Programme**  
**ERE – Energy, Resources and the Environment**

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## Monday, 04 April

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### ERE1.1 – Energy, Resources & the Environment – Orals

Convener: Michael Kühn | Co-Conveners: Hermann Held

**Room: 3**

Chairperson: Michael Kühn

10:30–11:00 EGU2011-13948

**Hermann Held**

Climate Targets, Costs of Mitigation and the Role of CCS in the Concert of Mitigation Options

11:00–11:30 EGU2011-13457

**Gregor Giebel**, Anna Maria Sempreviva, and Somnath Baidya Roy

Wind Power Meteorology - An Overview

11:30–12:00 EGU2011-13898

**Frank R. Schilling**

The Future lies Underground: Georesources & Geotechnique

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### ERE1.1 – Energy, Resources & the Environment – Posters

Convener: Michael Kühn | Co-Conveners: Hermann Held

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Michael Kühn / Hermann Held

XL263 EGU2011-12431

**Niel Bowerman**, David Frame, Chris Huntingford, Jason Lowe, and Myles Allen

Comparing the impacts of greenhouse gases on peak global warming and the rate of warming

XL264 EGU2011-10373

**Marco Cony**, Luis Martín, Ruth Marchante, Jesús Polo, Luis Zarzalejo, and Ana Navarro

Global horizontal irradiance and direct normal irradiance from HRV images of Meteosat Second Generation

XL265 EGU2011-4239

**Angel Rincón**, Oriol Jorba, Jose María Baldasano, and Luca Delle Monache

Short-term irradiance forecasting based on post-processing tools applied on WRF meteorological simulations

XL266 EGU2011-12535

**Robert J. Nicholls**, Abiy S. Kebede, Richard Beaven, and Romain Chancerel

Potential Implications of Climate Change and Sea-Level Rise on Coastal Waste Sites

XL267 EGU2011-5166

**Benedito Silva**, Pâmella Duarte, Adriana Corrêa, and Afonso Santos

Selection of hydropower plants based on socio-environmental assessment and the use of fuzzy logic

XL268 EGU2011-5514

**Nyeon Keon Kang**, Dong-Geun Yoo, Bo Yeon Yi, and Byong-Jae Ryu

3D Seismic Analysis of Geometry and Spatial Distribution of Seismic Chimney in the Ulleung Basin, East sea of Korea

XL269 EGU2011-4749

**David Bertermann**, Klug Hermann, and Roßner Reinhold

ThermoMap - Spatially explicit mapping of superficial geothermal resources

XL270 EGU2011-6593

**Raquel García González**, Anne Verhoef, Pier Luigi Vidale, Bruce Main, Guohui Gan, and Yupeng Wu

Interactions between the soil environment and a horizontal ground coupled heat pump for a domestic installation in the UK

XL271 EGU2011-6800

Ulrich Berner and **Matthias Heldt**

An organic-geochemical characterization of Barremian and Aptian sediments in NW Germany

XL272 EGU2011-6839

**Ulrich Berner** and Matthias Heldt

An organic-geochemical comparison of possible Lower Cretaceous oil and gas shale targets in NW Germany

XL273 EGU2011-9225

Ralph Schlüter and **Nora Schlüter**

Geotopics in the press - gaining more importance

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### ERE1.2 – Wind Power Meteorology – Orals

Convener: Gregor Giebel | Co-Conveners: Anna Maria Sempreviva, Somnath Baidya Roy

**Room: 3**

Chairperson: n.n.

- 13:30–13:45 EGU2011-5349  
**Stuart Bradley** and Ken Underwood  
 Scanning bistatic sodar: a new technology for wind energy assessment
- 13:45–14:00 EGU2011-8707  
**Ameya Sathe**, Jakob Mann, Julia Gottschall, and Mike Courtney  
 Can wind lidars measure turbulence?
- 14:00–14:15 EGU2011-11676  
**Beatriz Cañadillas**, David Schlipf, Thomas Neumann, and Dennis Kuehnel  
 Validation of Taylor's Hypothesis under offshore conditions. An experimental study using a nacelle-based 'two-beam' Lidar.
- 14:15–14:30 EGU2011-13216  
**Hálfðán Ágústsson**, Haraldur Ólafsson, Marius Jonassen, Joachim Reuder, Dubravka Rasol, and Ólafur Rögnvaldsson  
 Improving high-resolution atmospheric simulations of local weather using in-situ realtime observations from small unmanned aircraft
- 14:30–14:45 EGU2011-9373  
**Leonardo Chamorro**, Xiaolei Yang, Seokkoo Kang, Roger Arndt, and Fotis Sotiropoulos  
 Experimental and computational investigation of the turbulent interaction between the atmospheric boundary layer and large wind farms
- 14:45–15:00 EGU2011-8688  
**Amy Stidworthy**, David Carruthers, and Julian Hunt  
 A new approach to modelling mean flow and turbulence in wind turbine wakes and wind farm environments
- Chairperson: Anna Maria Sempreviva
- 15:30–15:45 EGU2011-9676  
**Robert Conzemius** and Joseph Eastman  
 A large onshore wind farm: impact of modest topography versus turbine wakes
- 15:45–16:00 EGU2011-12722  
 Catherine Meissner, **Carolin Schmitt**, and Bernd Goretzki  
 Non-neutral wind conditions in complex terrain
- 16:00–16:15 EGU2011-12528  
**Fernando Porté-Agel**, Yu-Ting Wu, and Hao Lu  
 Large-eddy simulation of atmospheric boundary layer flow through wind farms
- 16:15–16:30 EGU2011-10735  
**Kristian Horvath**, Alica Baji?, and Stjepan Ivatek-Šahdan  
 Dynamical downscaling of wind speed in complex terrain of Croatia
- 16:30–16:45 EGU2011-7570  
**Ivonne Anders** and Burkhardt Rockel  
 Regime-dependent validation of simulated surface wind speed
- 16:45–17:00 EGU2011-11220  
**Marc Calaf**, Charles Meneveau, and Marc Parlange  
 Large Eddy Simulation study of fully developed thermal wind-turbine array boundary layers

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**ERE1.2 – Wind Power Meteorology – Posters**

Convener: Gregor Giebel | Co-Conveners: Anna Maria Sempreviva, Somnath Baidya Roy

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Anna Maria Sempreviva

- XL274 EGU2011-2614  
**Hanna Hüging**, Joaquim G. Pinto, Kai Born, Rabea Haas, Ralf Podzun, and Daniela Jacob  
 Possible changes in wind energy potentials over Europe under future climate conditions using an RCM ensemble
- XL275 EGU2011-5942  
**Etor E. Lucio-Eceiza**, J. Fidel González-Rouco, Jorge Navarro, Hugo Beltrami, Pedro A. Jiménez, Elena García-Bustamante, and Ángela Hidalgo  
 Quality Assurance of a wind database for eastern Canada
- XL276 EGU2011-8975  
**Rudy Calif** and François G. Schmitt  
 Spectral analysis of wind velocity and output power from a wind farm.
- XL277 EGU2011-10484  
**Alica Bajic**, Stjepan Ivatek-Sahdan, and Kristian Horvath  
 Bora wind load on turbines

XL278	EGU2011-10759 <b>Kristian Horvath</b> , Darko Kora?in, Ramesh Vellore, Jinhua Jiang, Radian Belu, and Travis McCord Evaluation of sub-kilometer dynamical downscaling with MM5 and WRF mesoscale models
XL279	EGU2011-12590 <b>Yu-Ting Wu</b> , Fernando Porté-Agel, Hao Lu, and Robert Conzemius A large-eddy simulation study of wake effects in an operational wind farm
XL280	EGU2011-12597 <b>Wei Zhang</b> , Corey Markfort, and Fernando Porte-Agel Characterization of the near-wake flow downwind of a horizontal axis wind turbine using PIV
XL281	EGU2011-12628 <b>Suresh Naidu</b> and Fernando Porté-Agel Development of a New Wake Model using Large-Eddy Simulations and Wind Tunnel Data
XL282	EGU2011-12753 Jinhua Jiang, <b>Darko Koracin</b> , Ramesh Vellore, Kristian Horvath, Radian Belu, and Travis McCord Ensemble Forecasting and Uncertainty in Wind and Wind Power Prediction
XL283	EGU2011-3722 <b>David Brayshaw</b> Wind power, weather and climate: understanding the meteorology of peak demand and the affects of low-frequency atmospheric variability
XL284	EGU2011-9023 <b>Jun Wang</b> and Eric Holt Trend of wind energy over the continental United States
XL285	EGU2011-9545 <b>Roger Arndt</b> , Leonardo P. Chamorro, and Fotis Sotiropoulos Reynolds Number dependence of flow characteristics of wind turbine wakes
XL286	EGU2011-9907 <b>Gregor Giebel</b> , Uwe Schmidt Paulsen, Joachim Reuder, Anders la Cour-Harbo, Jens Bange, Carsten Thomsen, and John Mølgaard Autonomous Aerial Sensors for Wind Power Meteorology
XL287	EGU2011-11770 <b>Pierre-Julien Trombe</b> , Pierre Pinson, Sven Creutz Thomsen, and Henrik Madsen Radar@Sea - Towards improving short-term wind (power) forecasts based on a Local Area Weather Radar (LAWR) installed at an offshore wind farm
XL288	EGU2011-12691 <b>Catherine Meissner</b> , Matthieu Boquet, Saskia Bourgeois, and Martin Hölzli Correction of LIDAR measurements with high-resolution CFD simulations
XL289	EGU2011-13500 Jens Tambke, Lueder von Bremen, <b>Michael Schmidt</b> , Gerald Steinfeld, and Jörg-Olaf Wolff Correlations and Variability of Wind Speed Fields and Wind Power in Europe
XL290	EGU2011-8654 <b>Raquel Lorente-Plazas</b> , Juan Pedro Montávez, David Pozo-Vázquez, Juan José Gómez-Navarro, Juan Andrés García-Valero, Pedro Jiménez-Guerrero, Pedro A. Jiménez, Sonia Jerez, and J. Fidel Gonzalez-Rouco EOLMAP: A pseudoreal wind database for small wind turbines for the Iberian Peninsula
XL291	EGU2011-7321 <b>Sebastien Doutreloup</b> Interests of using a regional model to forecast wind power production
XL292	EGU2011-7197 <b>Sebastien Doutreloup</b> , Xavier Fettweis, Bernard Sacre, and Michel Erpicum Evolution of wind behaviour and its potential for wind power production in Belgium during the last 30 years
XL293	EGU2011-7841 <b>Halldór Björnsson</b> , Kristján Jónasson, Teitur Birgisson, Jón Blöndal, Gudrun N Peterssen, and Nikolai Nawri Preliminary Study of the Wind Resource in Iceland
XL294	EGU2011-6907 Bengt Tammelin, <b>Timo Vihma</b> , Evgeny Atlaskin, Jake Badger, Carl Fortelius, Reijo Hyvönen, Juha Kilpinen, Jenni Latikka, Karoliina Ljungberg, Sami Niemelä and the FMI / Risø DTU Team Production of the Finnish Wind atlas
XL295	EGU2011-1339 <b>Charlotte Bay Hasager</b> , Andrea Hahmann, Jake Badger, Ferhat Bingöl, Ioanna Karagali, Alfredo Peña, Niels-Erik Clausen, and Merete Badger Wind atlas mapping in the South Baltic Sea: methods and results
XL296	EGU2011-10493 Birgitte Furevik, <b>Anna Maria Sempreviva</b> , Luigi Cavalieri, Jean-Michel Lefevre, and Claudio Transerici Eight years of Wind Measurements from Scatterometer for Wind Resource Mapping in the Mediterranean Sea

- XL297 EGU2011-1403  
**Charlotte Bay Hasager**, Merete Badger, and Jake Badger  
Offshore wind resources: evaluation of satellite-based results in the North Sea
- XL298 EGU2011-6233  
**Mutlu Y?lmaz** and Rüya Bayar  
Wind power generation potential in Turkey and wind power share electricity production
- XL299 EGU2011-11291  
**Derya Akcan**, S. Sibel Mentes and the SWEPS Team  
Preliminary Results of Short Term Wind Energy Prediction System (SWEPS) for Soma, Manisa in Turkey

## Tuesday, 05 April

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### ERE2.1 – Long-term storage of CO<sub>2</sub> in geological systems: Results from laboratory studies – Orals

Convener: Andreas Busch | Co-Conveners: Alexandra Amann

**Room: 3**

Chairperson: n.n.

08:30–08:45 EGU2011-12081

**Samuel Krevor**, Ronny Pini, Lin Zuo, and Sally Benson

Multiphase flow of CO<sub>2</sub> and water in reservoir rocks at reservoir conditions

08:45–09:00 EGU2011-4010

**Holger Ott**, Steffen Berg, and Sjam Oedai

Displacement and Mass Transfer Between Saturated and Unsaturated CO<sub>2</sub>-Brine Systems in Sandstone

09:00–09:15 EGU2011-12688

Jon Harrington, David Birchall, David Noy, Robert Cuss, and **Caroline Graham**

Consolidation and mass transport properties of the Nordland Shale

09:15–09:30 EGU2011-2893

**Georg Nover**, Nils Gafert-Kalaitzidis, Jutta von der Gönna, Stephanie Heikamp, and Jens Köster

Petrophysical properties of sandstones exposed to supercritical carbon dioxide

09:30–09:45 EGU2011-3440

Anssi Myrtinyinen, **Veith Becker**, Robert van Geldern, and Johannes A.C. Barth

?18O shifts in water in contact with high volumes of CO<sub>2</sub> gas

09:45–10:00 EGU2011-6329

**Elodie Jeandel**, Alain Dimier, Anssi Myrtinyinen, Olaf Ukelis, and Roman Zorn

Presentation of the new ICARE 4 set-up: principle and first results on the reactive-percolation experiments and modelling

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### COFFEE BREAK

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Chairperson: Andreas Busch, Alexandra Amann

10:30–10:45 EGU2011-7701

**Frank Dethlefsen**, Cordula Dörr, and Markus Ebert

The relevance and the determination of mineral dissolution kinetics in high pressure experiments and their use in numerical models

10:45–11:00 EGU2011-4225

**Paul Giesting**, Stephen Guggenheim, Augustus Koster van Groos, and Andreas Busch

Carbon dioxide intercalation in Na- and Ca-exchanged montmorillonite

11:00–11:15 EGU2011-5857

**Herwig Marbler**, Christof Lempp, Kirsten P. Erikson, Michael Schmidt, and Herbert Pöllmann

Geochemical and geomechanical behaviour of reservoir rocks during the injection of CO<sub>2</sub> in deep geological formations: results of the project COORAL

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### ERE2.1 – Long-term storage of CO<sub>2</sub> in geological systems: Results from laboratory studies – Posters

Convener: Andreas Busch | Co-Conveners: Alexandra Amann

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Andreas Busch, Alexandra Amann

XL114 EGU2011-2421

**Ashok Singh**, Wenging Wang, Uwe-Jens Görke, and Olaf Kolditz

Mixed convection instability during carbon dioxide storage into deep saline aquifers

XL115 EGU2011-6357

**Juliane Kummerow**, Erik Spangenberg, and Ronny Giese

The Impact of CO<sub>2</sub>-SO<sub>2</sub> - Brine - Reservoir Rock Interactions on Petrophysical Properties.

XL116 EGU2011-2715

**Krzysztof Labus**

Effects of CO<sub>2</sub> mineral sequestration in saline aquifers of the Upper Silesian Coal Basin - Experimental and modeling studies

XL117	EGU2011-3333 <b>Pauline Humez</b> , Julie Lions, Philippe Négre, Vincent Lagneau, and Pascal Audigane Assessing the potential consequences of CO2 leakage to freshwater resources: a batch-reaction experiment with isotopic monitoring program (Albian formation, Paris Basin)
XL118	EGU2011-4029 <b>Holger Ott</b> and Kees de Kloet Core-Flood Experiment for Transport of Reactive Fluids in Rocks
XL119	EGU2011-8484 <b>Thomas Millan</b> Carbonation of a Portland cement under geological conditions
XL120	EGU2011-10062 <b>Franziska Wilke</b> , Monica Vásquez Parra, and Jörg Erzinger Interactions between scCO2 and scCO2-SO2, formation fluids and rock forming minerals: an experimental approach under in-situ conditions of potential geological storages
XL121	EGU2011-10868 <b>Marijn Boone</b> , Veerle Cnudde, Mieke Quaghebeur, and Helga Ferket Quantifying chemical and petrophysical alterations in porous materials by CO2 using HRXCT
XL122	EGU2011-11822 <b>Jon Samuelson</b> and Chris Spiers The influence of carbon-dioxide on the strength and stability of CO2-sequestration reservoir fault zones
XL123	EGU2011-7738 <b>Sebastian Fischer</b> , Kornelia Zemke, Axel Liebscher, and Maren Wandrey Mineralogical and petrophysical results of long-term CO2-exposure experiments on reservoir sandstone from the Ketzin pilot site, Germany
XL124	EGU2011-12270 <b>Susanne Stadler</b> , Andreas Riße, Katja Heeschen, Heike Rüters, and Christian Ostertag-Henning Systematic evaluation of experimental parameters and identification of data gaps for geochemical modeling in the context of geological CO2 storage
XL125	EGU2011-12898 Márton Berta, Gerardo Sciarpetti, Csilla Király, György Lévai, <b>György Falus</b> , Edit Székely, and Csaba Szabó Experimental study of CO2 capture and storage possibility on drilling core samples from Hungary
XL126	EGU2011-11143 <b>Thomas Muschalle</b> , Claudia Gniese, Andrea Kassahun, Martin Krüger, and Nils Hoth Autoclave experiments on autotrophic metabolism under elevated pressure and temperature by microbes from a mature German natural gas field
XL127	EGU2011-12762 <b>Alexandra Amann</b> , Pieter Bertier, Jennifer Blume, Andreas Busch, Bernhard M. Krooss, Ines Rick, Margret Waschbüsch Waschbüsch, and Philipp Weniger Transport and sealing properties of clay-rich lithotypes exposed to CO2
XL128	EGU2011-5679 <b>Jennifer Blume</b> , Jörg-Detlef Eckhardt, Heinz-Günter Stosch, Thomas Neumann, Karl Balthasar, Thomas Mutschler, and Theodoros Triantafyllidis The effect of CO2 on the stability of fault zones in cap rocks of interest for CO2 storage

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**ERE2.3/SM3.10 – Geophysical methods applied to geological storage of CO2 (co-organized) – Orals**

Convener: Christopher Juhlin | Co-Conveners: Stefan Buske, Roman Pevzner

**Room: 3**

Chairperson: Chris Juhlin, Roman Pevzner

15:30–15:45	EGU2011-3296 <b>James White</b> , Gareth Williams, and Andy Chadwick Estimating seismic velocity and thickness of a CO2 layer in the Sleipner plume
15:45–16:00	EGU2011-3769 <b>Alexandra Ivanova</b> , Ursula Lengler, Stefan Lueth, and Christopher Juhlin Monitoring of CO2 injected at Ketzin using 3D time-lapse seismic data
16:00–16:15	EGU2011-265 <b>Can Yang</b> , Christopher Juhlin, Alexandra Ivanova, and Wenfang Fan AVO attributes analysis of time-lapse 3D surface seismic data from CO2SINK project site, Ketzin, Germany
16:15–16:30	EGU2011-3835 <b>Matthias Strahser</b> , Said Attia al Hagrey, and Wolfgang Rabbel Seismic and geoelectric monitoring of CCS - parameter studies in simplified and realistic scenarios

16:30–16:45 EGU2011-4939

**Peter Bergmann**, Cornelia Schmidt-Hattenberger, Dana Kiessling, Tim Labitzke, and Carsten Rücker  
Large-scale DC geoelectric measurements at the CO<sub>2</sub> pilot storage Ketzin: Time-lapse inversion and evaluation of imaged volume

16:45–17:00 EGU2011-5609

**Ramon Carbonell**, Juan Alcalde, David Martí, Alcinoe Calahorrano, Immaculada Palomeras, Puy Ayarza, Arantxa Ugalde, Antonio Villaseñor, and Andrés Pérez-Estaún  
Spanish Research Facility for Geological Storage of CO<sub>2</sub>. (Hontomín, Spain)

**ERE2.3/SM3.10 – Geophysical methods applied to geological storage of CO<sub>2</sub> (co-organized) – Posters**

Convener: Christopher Juhlin | Co-Conveners: Stefan Buske, Roman Pevzner

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: n.n.

XL130 EGU2011-3276

**Marcus Moeller**, Cornelia Schmidt-Hattenberger, Stephan Schroeder, and Markus Well  
Development of a measurement concept for monitoring brine migration processes in saline aquifers

XL131 EGU2011-3301

**Gunther Baumann**, Jan Henninges, and Marco De Lucia  
Sensitivity study of pulsed neutron gamma monitoring to evaluate saturation changes for depleted gas field conditions in the context of CO<sub>2</sub> storage

XL132 EGU2011-4066

**Florian Wagner**, Marcus Moeller, Cornelia Schmidt-Hattenberger, Thomas Kempka, and Hansruedi Maurer  
Detection of groundwater salinisation by geoelectric measurements

XL133 EGU2011-4238

**Perla Piña**, Cristina Biete, Juanjo Ledo, Pilar Queralt, Eduard Roca, and Pedro Ibarra  
Exploration and characterization of CO<sub>2</sub> storage sites using electromagnetics methods: results of 2D magnetotelluric study at El Hito (Cuenca), Spain.

XL134 EGU2011-4940

**Xènia Ogaya**, Pilar Queralt, Juanjo Ledo, and Álex Marcuello  
2D magnetotelluric characterization of Hontomín (Spain) CO<sub>2</sub> pilot plant

XL135 EGU2011-6085

**Magdalena Escalas**, Pilar Queralt, Juanjo Ledo, and Alex Marcuello  
Identification of cultural noise sources in magnetotelluric data: estimating polarization attributes in the time-frequency domain using wavelet analysis

XL136 EGU2011-6424

**Juan Alcalde**, David Martí, Alcinoe Calahorrano, Imma Palomeras, Puy Ayarza, Ramon Carbonell, and Andrés Pérez-Estaún  
3D Seismic characterization of the Spanish Research Facility for storage of CO<sub>2</sub> in Hontomín (Burgos, Spain)

XL137 EGU2011-7648

**Alcinoe Calahorrano**, David Martí, Juan Alcalde, Imma Palomeras, Puy Ayarza, Ramón Carbonell, and Andrés Pérez-Estaún  
Technological laboratory for geologic CO<sub>2</sub> storage in Hontomín (Spain): 2D-3C reflection imaging

XL138 EGU2011-7688

Rita Streich, **Michael Becken**, and Oliver Ritter  
Electromagnetic characterization and monitoring of CO<sub>2</sub> sequestration sites: feasibility studies and first field results from Ketzin, Germany

XL139 EGU2011-10512

**Rasmus Rasmussen**, Lone Klinkby, and Claus Andersen  
Feasibility study of time lapse seismic monitoring at planned CO<sub>2</sub> storage site

**ERE2.4 – Modelling of CO<sub>2</sub> storage sites – Orals**

Convener: Thomas Kempka | Co-Conveners: Holger Class, Auli Niemi

**Room: 3**

Chairperson: Kempka, Class, Niemi

12:00–12:15 EGU2011-9240

**Paulo Herrera** and Helge Dahle  
The effect of caprock topography on long-term CO<sub>2</sub> migration

12:15–12:30 EGU2011-11137

**Sergey Oladyshkin**, Holger Class, Rainer Helmig, and Wolfgang Nowak  
Data-driven framework for history matching: application to carbon dioxide storage in geological formations

12:30–12:45 EGU2011-3260

**Pascal Audigane**, Sunsearé Gabalda, and Christophe Chiaberge  
Modeling CO<sub>2</sub> storage into large scale heterogeneous geological media

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**LUNCH BREAK**

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Chairperson: Kempka, Class, Niemi

13:30–13:45 EGU2011-11898

**Andrew Cliffe**, Auli Niemi, Henry Power, Zhibing Yang, Fritjof Fagerlund, and Tian Liang  
Use of Gaussian Process Emulators for Quantifying Uncertainty in CO<sub>2</sub> Spreading Predictions in Heterogeneous Geological Media

13:45–14:00 EGU2011-9734

**Michael Krause**, Samuel Krevor, Ronny Pinni, and Sally Benson  
Verifying the use of Simulations of Core Flooding Experiments to Gain Insight into CO<sub>2</sub>-Brine Multiphase Flow Interactions

14:00–14:15 EGU2011-9899

**Lena Walter**, Holger Class, and Rainer Helmig  
Investigations on the risk of brine displacement during CO<sub>2</sub> injection into saline aquifers

14:15–14:30 EGU2011-12421

**Tim Tambach**, Mariene Gutierrez-Neri, Marielle Koenen, Frank Van Bergen, Henk Kooi, and Bert Van der Meer  
Reactive transport modeling of CO<sub>2</sub> injection into storage reservoirs: application to case-studies in The Netherlands

14:30–14:45 EGU2011-3039

**Frédéric Wertz**, Fabrizio Gherardi, and Antonin Fabbri  
Geochemical Model of CO<sub>2</sub> impact at the Well-Caprock-Reservoir interfaces

14:45–15:00 EGU2011-379

**Hamidreza Salimi**, Karl-Heinz Wolf, and Johannes Bruining  
Non-Isothermal Compositional Flow Simulations of Mixed CO<sub>2</sub>-Water Injection into Geothermal Reservoirs

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**ERE2.4 – Modelling of CO<sub>2</sub> storage sites – Posters**

Convener: Thomas Kempka | Co-Conveners: Holger Class, Auli Niemi

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Kempka, Class, Niemi

XL140 EGU2011-2454

**Mohammed Amro** and Frieder Häfner  
CO<sub>2</sub>-Storage Simulation with regard to Cold Hydro-Fracturing and Vaporization/Condensation

XL141 EGU2011-3283

**Chi-Ping Lin**, Chuen-Fa Ni, and I-Hsien Li  
Numerical Investigations of Geologic Storage of Carbon Dioxide in Sedimentary Rock with Faults

XL142 EGU2011-3320

**Mariëlle Koenen** and Tim Tambach  
Geochemical effects of impurities in CO<sub>2</sub> on long-term storage integrity

XL143 EGU2011-4163

**Yusuke Ishizawa**, Keita Matsumoto, Kazuki Horie, Takahiro Sakaki, Natsuki Koyama, Mitsuyoshi Shoji, Satoshi Kuge, Kozo Sato, Komei Okatsu, and Yuji Miyake  
Accelerating of the reservoir simulation by the GPU

XL144 EGU2011-10427

**Thomas Kempka**, Christoph Jahnke, Egbert Jolie, Inga Moeck, Nicole Schulz, Günter Zimmermann, and Michael Kühn  
Static and dynamic modeling for assessment of freshwater salinisation by CO<sub>2</sub> storage

XL145 EGU2011-11591

**Thomas Kempka**, Holger Class, Uwe-Jens Görke, Olaf Kolditz, Michael Kühn, Ursula Lengler, Inga Moeck, Ben Norden, Lena Walter, Björn Zehner and the CO<sub>2</sub>MAN modelling Team  
Current status of the modelling activities at the Ketzin CO<sub>2</sub> storage site

XL146 EGU2011-9858

**Melanie Darcis**, Holger Class, Bernd Flemisch, and Rainer Helmig  
Multiphysics in time and space for the simulation of CO<sub>2</sub> storage in deep saline aquifers

- XL147 EGU2011-4346  
**I-Hsien Li**, Chi-Ping Lin, and Chuen-Fa Ni  
 Field-scale simulations of CO<sub>2</sub> injection in saline aquifer in north Taiwan
- XL148 EGU2011-5329  
**Junho Oh**, Kue-Young Kim, Taehee Kim, and Jeong-Chan Kim  
 Effect of well configurations on CO<sub>2</sub> geological storage
- XL149 EGU2011-5354  
**Chiawei Kuo** and Sally Benson  
 Simulation Studies of Effect of Gravity, Flow Rate, and Small Scale Heterogeneity on Multiphase Flow of CO<sub>2</sub> and Brine
- XL150 EGU2011-6935  
**Laurent André** and Mohamed Azaroual  
 Petrophysical and capillary properties of the host porous medium on the evaporation process during CO<sub>2</sub> injection in a deep saline aquifer
- XL151 EGU2011-7410  
**Fritjof Fagerlund**, Josefina Ahlkrona, Hanna Holmgren, Kristin Nielsen, Zhibing Yang, Auli Niemi, and Gunilla Kreiss  
 Analysis of boundary conditions in numerical simulations of geological CO<sub>2</sub> storage
- XL152 EGU2011-7924  
**Nawaz Ahmad** and Anders Wörman  
 Numerical-analytical studies of CO<sub>2</sub> leakage through fault with retardation due to matrix diffusion
- XL153 EGU2011-8067  
**Henry Power**, David Stevens, Andrew Cliffe, and Aile Golin  
 Numerical analysis of the Coupling effect between dissolution at the interface and fingering evolution.
- XL154 EGU2011-8241  
**Mauro Buttinelli**, Barbara Cantucci, Giuseppe Vico, Elio Bianchi, Davide Scrocca, and Fedora Quattrocchi  
 3D reconstruction, CO<sub>2</sub> plume flow, reactive transport and reservoir simulations of a potential structure for geological storage of CO<sub>2</sub>
- XL155 EGU2011-8686  
**Kate Thatcher**, Simon Mathias, Jon Gluyas, and Richard Davies  
 Simulating CO<sub>2</sub> storage in fluvial-channel structures of the Triassic Bunter Sandstone, Southern North Sea
- XL156 EGU2011-8802  
**Rebecca Neumann**, Olaf Ippisch, and Peter Bastian  
 Comparison of Different Concepts for Modeling Two-phase Flow with Disappearing Gas Phase
- XL157 EGU2011-9405  
 Bastian Graupner, Katharina Benisch, Dedong Li, and **Sebastian Bauer**  
 Development and application of a coupled ECLIPSE - GeoSys modelling system for simulation of CO<sub>2</sub> storage in saline aquifers
- XL158 EGU2011-11087  
**Rouven Kuenze** and Ivan Lunati  
 An adaptive iterative Multiscale Finite Volume method to simulate density-driven flow instabilities

## Wednesday, 06 April

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### ERE1.3 – Hydrocarbons and coal: Challenges and new frontiers – Orals

Convener: Thomas Kempka | Co-Conveners: Ralph Schlüter, Hans-Martin Schulz, Andreas Busch, Reinhard F. Sachsenhofer , Frank van Bergen, Vladimir Kutcherov, Alexey Chernoutsan, Martin Krüger

**Room: 3**

Chairperson: n.n.

- 13:30–13:45 EGU2011-6561  
**Anton Kolesnikov** and Vladimir Kutcherov  
 Evidences for natural gas formation from inorganic materials under Earth's upper mantle conditions
- 13:45–14:00 EGU2011-8291  
**Kirill Ivanov**, Yuri Fyodorov, Vladimir Pisetski, and Olga Pogromskaya  
 Regarding oil deep origin and some consequences for oil and gas geology
- 14:00–14:15 EGU2011-13789  
**Valiya Hamza**  
 Structure of upper crust off the Southeast coast of Brazil: Indications for mantle origin of a giant hydrocarbon field
- 14:15–14:30 EGU2011-7863  
**Renat Muslimov** and **Irina Plotnikova**  
 Geological and Geochemical Aspects of Abiotic Origin of Oil and Designing of a Special Well Drilling for Monitoring of Endogenous Processes
- 14:30–14:45 EGU2011-1738  
**Jop Klaver**, Guillaume Desbois, and Janos Urai  
 2D porosity mapping and distribution in an organic rich shale from the Middle East: preliminary results using a broad ion beam - scanning electron microscopy (BIB-SEM) approach
- 14:45–15:00 EGU2011-11835  
**Maya Kobchenko**, Hamed Panahi, Francois Renard, Dag K. Dysthe, Anders Malthe-Sorensen, Adriano Mazzini, Julien Scheibert, Bjorn Jamtveit, and Paul Meakin  
 Invasion-percolation fracturing controlled primary migration of hydrocarbons during heating of organic-rich shales
- Chairperson: n.n.
- 15:30–15:45 EGU2011-7793  
**Frank van Bergen**, Mart Zijp, and Susanne Nelskamp  
 Evaluation of the potential of shale gas in the Netherlands
- 15:45–16:00 EGU2011-2062  
**Hartwig Gielisch**  
 Why coal fire "Hot spots" cannot be located using Remote Sensing or Infrared Mapping - Experiences from fieldwork in India and China
- 16:00–16:15 EGU2011-5116  
**Stefan Klebingat**, Rafiq Azzam, Thomas Kempka, Ralph Schlüter, Marc Schulten, Peter Quicker, Christoph Neukum, and Tomas Fernandez-Steger  
 Modelling tar pollutant production and solubility in the frame of UCG with combined CO<sub>2</sub> storage
- 16:15–16:30 EGU2011-1277  
**Hong Tian**, Thomas Kempka, Martin Feinendegen, and Martin Ziegler  
 Study on ground subsidence development during and after underground coal gasification
- 16:30–16:45 EGU2011-6627  
**Yves Gensterblum**, Bernd Krooss, and Paul Massarotto  
 Results of mechanical, sorption and transport experiments on a German high volatile bituminous coal
- 16:45–17:00 EGU2011-2056  
**Sander Hol** and Christopher J. Spiers  
 Volumetric response of coal to CO<sub>2</sub> at pressures up to 100 MPa

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### ERE1.3 – Hydrocarbons and coal: Challenges and new frontiers – Posters

Convener: Thomas Kempka | Co-Conveners: Ralph Schlüter, Hans-Martin Schulz, Andreas Busch, Reinhard F. Sachsenhofer , Frank van Bergen, Vladimir Kutcherov, Alexey Chernoutsan, Martin Krüger

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: n.n.

XL158	EGU2011-428 <b>Natalie Nakaten</b> , Thomas Kempka, Ralph Schlüter, Jörg Hamann, and Rafiq Azzam Self-sustaining Carbamide production using the UCG-CC-Urea process
XL159	EGU2011-13625 Oleksandr Ivakhnenko, Kaiyrgeldi Shayakhmet, <b>Djamilya Ismailova</b> , and Gauhar Bisseyen A new approach for coalbed methane production in Karaganda coal basin
XL160	EGU2011-9176 <b>Ralph Schlüter</b> CBM and Shale Gas - An Option for Germany?
XL161	EGU2011-13646 <b>Thomas Kempka</b> , Tomás Fernández-Steeger, Dong-Yong Li, Marc Schulten, Ralph Schlüter, and Bernhard M. Krooss CO <sub>2</sub> sorption on gasified coals
XL162	EGU2011-10094 Yves Gensterblum and <b>Andreas Busch</b> Gas and water sorption on coal for CBM and CO <sub>2</sub> -ECBM
XL163	EGU2011-6672 <b>Yves Gensterblum</b> , Andreas Busch, Berndhard M. Krooss, Guy de Weireld, Pierre Billemont, Patrick van Hemert, Karl-Heinz Wolf, and Delphine Charriere Results of a European interlaboratory comparison on CO <sub>2</sub> sorption on coals and activated carbon
XL164	EGU2011-6239 Fengshuang Han, Fangxin Tang, Andreas Busch, Bernhard M. Krooss, Zhenyu Liu, and <b>Jianli Yang</b> Comparison study of gas permeability of coal plug in self- and triaxial-confining flow cell
XL165	EGU2011-5366 Yi-Chen Lin and <b>Jing-Yi Lin</b> 3-D wide-angle seismic tomography offshore southwestern Taiwan area
XL166	EGU2011-6631 Rimma Gottikh, Bogdan Pisotskiy, and <b>Irina Plotnikova</b> Reduced Fluids in the Crystalline Basement and the Sedimentary Basin
XL167	EGU2011-6757 <b>Ulrich Berner</b> Basin sediments of the Wealden, an unconventional hydrocarbon play in NW Germany
XL168	EGU2011-8224 Vladimir Pisetski, <b>Kirill Ivanov</b> , and Alexandr Sudilin Conception of oil and gas bearing and lithosphere fluidodynamics of the Eastern part of the Khanty-Mansiysk region (West Siberia)
XL169	EGU2011-10499 <b>Ravil Ibatullin</b> , Rais Khisamov, Venera Taipova, Marat Amerkhanov, and Valentina Slesareva Deep energy and oil inflow testing for reservoir's resource supporting
XL170	EGU2011-13520 Oleksandr Ivakhnenko, <b>Saniya Kanafina</b> , Valeriy Korobkin, and Zaure Bekmukhametova Potential of gas and oil shale resources in Kazakhstan: Geological, geophysical and petrophysical aspects

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**ERE1.7 – Geothermal Energy – Orals**

Convener: Jan-Diederik van Wees | Co-Conveners: Philipp Blum, Guido Blöcher, Peter Bayer, Philippe Calcagno, Christoph Clauser

**Room: 11**

Chairperson: n.n.

08:30–08:45	EGU2011-11024 <b>Sierd Cloetingh</b> , Jan-Diederik van Wees, and Fred Beekman Lithosphere Tectonics and Enhanced Geothermal Systems Exploration in Europe
08:45–09:00	EGU2011-13054 <b>Damien Bonté</b> , Jan Diederik Van Wees, Laurent Guillou-Frottier, Vincent Bouchot, and Olivier Serrano New temperatures for the Paris Basin — results from tectonic-Heat Flow modelling
09:00–09:15	EGU2011-10079 <b>Valiya Hamza</b> and Carlos Alexandrino Improved assessment of Deep Crustal Thermal Field based on Joint Inversion of Heat Flow, Elevation, Geoid Anomaly data sets
09:15–09:30	EGU2011-8557 <b>Luca Guglielmetti</b> , Giuseppe Mandrone, Eva Schill, Adele Manzella, Serena Botteghi, Carlo Ungarelli, Yassine Abdelfettah, and Cesare Comina Passive geophysical methods for geothermal exploration in the External Crystalline Argentera Massif of the Western Italian Alps: Gravity and Magnetotelluric

- 09:30–09:45 EGU2011-6758  
**Javid Safarov**, Martin Stephan, Esmira Mammadova, Hannes Schmidt, Jürgen Nocke, Astan Shahverdiyev, and Egon Hassel  
Thermophysical Properties of Geothermal Energy Resources of Germany and Azerbaijan
- 09:45–10:00 EGU2011-8684  
**Dariusz Mottaghy**, Renate Pechnig, Renate Taugs, Jens Kröger, Claudia Thomsen, Fabian Hese, and Thomas Liebsch-Dörschner  
Geothermal 3-D modeling Hamburg and surrounding areas: Temperature prediction and reservoir simulation

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**COFFEE BREAK**

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Chairperson: n.n.

- 10:30–10:45 EGU2011-999  
**Sebastian Homuth**, Annette E. Götz, and Ingo Sass  
Outcrop analogue studies for reservoir characterization and prediction of deep geothermal systems in the Molasse Basin, Germany
- 10:45–11:00 EGU2011-5759  
Carlino Stefano, Somma Renato, **De Natale Giuseppe**, and Troise Claudia  
The geothermal potential of Campanian volcanoes: evaluation and opportunities.
- 11:00–11:15 EGU2011-3661  
**Philippe Calcagno**, Vincent Bouchot, Isabelle Thinon, and Bernard Bourgine  
The Bouillante 3D Structural Model (French West Indies): a Tool for Geothermal Exploration Combining Onshore and Offshore Geological Knowledge
- 11:15–11:30 EGU2011-9291  
**Sakalima Sikaneta**, Benoît Valley, and Keith Evans  
Stress heterogeneity in fractured crystalline rock masses at the EGS sites of Soultz and Basel
- 11:30–11:45 EGU2011-13905  
**Mauro Cacace**, Guido Blöcher, Björn Lewerenz, Magdalena Scheck-Wenderoth, and Ernst Huenges  
3D modeling of fractured geological system - technique and numerical results
- 11:45–12:00 EGU2011-2514  
**Yvonne Cherubini**, Mauro Cacace, and Magdalena Scheck-Wenderoth  
Assessment of the impact of faults on the coupled fluid and heat transport in a geothermal site (Groß Schönebeck, NE-German Basin): First results from 3D finite element simulations

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**LUNCH BREAK**

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Chairperson: n.n.

- 13:30–13:45 EGU2011-2511  
**Günter Zimmermann**, Andreas Reinicke, Guido Blöcher, Inga Moeck, Grzegorz Kwiatek, Wulf Brandt, Ali Saadat, and Ernst Huenges  
Concepts for Rock Specific Hydraulic Fracturing and Matrix Acidizing to Enhance a Geothermal System
- 13:45–14:00 EGU2011-7823  
**Arnold Blaisonneau**, Mariane Peter, and Sylvie Gentier  
Experimental study of the fracture permeability evolution due to brine/rock interactions
- 14:00–14:15 EGU2011-11608  
**J. Ole Kaven**, Stephen H. Hickman, and Nicholas C. Davatzes  
Micro-seismicity and hydrologic compartmentalization in the Coso geothermal reservoir, Inyo County, California
- 14:15–14:30 EGU2011-5268  
**Daisuke Oka**, Yasuhiro Fujimitsu, Jun Nishijima, Yoichi Fukuda, and Makoto Taniguchi  
Geothermal Reservoir Monitoring by the Repeat Gravity Measurement at the Takigami Geothermal Field, Japan -Application of Hybrid Gravity Measurement using Absolute and Relative Gravimeters-
- 14:30–14:45 EGU2011-8142  
**Eva Schill**, Philip Klingler, and Karl-Heinz Schädle  
Increase of productivity in the Riehen geothermal system (Switzerland): Tracer test and reservoir model
- 14:45–15:00 EGU2011-490  
**Samuel Scott**, Ingvi Gunnarsson, Andri Stefánsson, and Stefn Arnórsson  
Geochemical Investigations of the Hellisheiði Geothermal Field, SW-Iceland

Chairperson: n.n.

- 15:30–15:45 EGU2011-5752  
**Giordano Montegrossi**  
 Investigation of Calcite precipitation in geothermal reservoir
- 15:45–16:00 EGU2011-8407  
**Fiorenza Deon**, Simona Regenspurg, and Günter Zimmermann  
 Interaction of ceramic proppants with geothermal brine: an experimental study of their reactivity
- 16:00–16:15 EGU2011-12612  
 Mashal Alawi, Stephanie Lerm, Markus Wolfgramm, Andrea Seibt, and **Hilke Wuerdemann**  
 Diversity of sulfate-reducing bacteria in a plant using deep geothermal energy
- 16:15–16:30 EGU2011-9541  
**Mikael Philippe**, Michel Bernier, Dominique Marchio, and Hervé Lesueur  
 Experimental validation of a serpentine horizontal ground heat exchanger model
- 16:30–16:45 EGU2011-5409  
**Byoung Ohan Shim** and Hyoung Chan Kim  
 Evaluation of the ground thermal conductivity and the borehole thermal resistance from thermal response tests in Korea
- 16:45–17:00 EGU2011-12750  
**Grant Ferguson**  
 Assessing Risk in Open-Loop Heat Pump Systems

**ERE1.7 – Geothermal Energy – Posters**

Convener: Jan-Diederik van Wees | Co-Conveners: Philipp Blum, Guido Blöcher, Peter Bayer, Philippe Calcagno, Christoph Clauser

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL171 EGU2011-776  
**Thomas Reinsch**, Jan Henninges, and Ragnar Ásmundsson  
 Distributed temperature sensing behind casing within a hot geothermal well - Results from a flow test in well HE-53, SW Iceland
- XL172 EGU2011-1041  
**Kun Sang Lee**  
 Thermohydraulic Modeling on the Continuous Operation of Standing Column Wells under Regional Groundwater Flow
- XL173 EGU2011-1190  
 Kristian Bär, Marita Felder, **Annette E. Götz**, Nicolaas Molenaar, and Ingo Sass  
 The Rotliegend Reservoir System of the northern Upper Rhine Graben (Germany): From Pores to Production
- XL174 EGU2011-1395  
**Christian Vogt**, Gabriele Marquart, Katja Iwanowski-Strahser, Juliane Arnold, Daniel Gnjezda, Darius Mottaghy, Renate Pechnig, and Christoph Clasuer  
 An Integrated Assessment of Geothermal Reservoir Simulation - A Case Study
- XL175 EGU2011-1865  
 Fabien Magri, **Johannes Birner**, Toygar Akar, Ünsal Gemici, and Asaf Pekdeger  
 Geothermal springs associated with buoyant-driven fluid flow in the faults of the Seferihisar-Balçova system, Western Anatolia, Turkey - results from 3D simulations.
- XL176 EGU2011-2173  
**Jozsef Hecht-Méndez**, Nelson Molina-Giraldo, Lorena Bello-Rujana, Peter Bayer, and Philipp Blum  
 Comparison of numerical and analytical modelling concepts for simulation of shallow open geothermal systems
- XL177 EGU2011-2446  
**Nina S. C. Simon**, Magnus Loberg, Yuri Y. Podladchikov, and Ritske S. Huismans  
 Is enhanced heat and tracer transfer by intermittent porous flow an important process in deep geothermal systems?
- XL178 EGU2011-2487  
**Sonja L. Philipp**, Steven Parchwitz, and Annette E. Götz  
 Geothermal Potential of the Upper Muschelkalk in Northeastern Germany
- XL179 EGU2011-3083  
**Björn Onno Kaiser**, Mauro Cacace, Magdalena Scheck-Wenderoth, and Björn Lewerenz  
 The role of different heat drivers within the Northeast German Basin - Results from 3D numerical modelling of the coupled fluid and heat transfer
- XL180 EGU2011-3307  
**Laura Wasch** and Tim Tambach  
 Geochemical modeling of reactions occurring during geothermal heat exploitation using PHREEQC

- XL181 EGU2011-3553  
**Haffen Sébastien**, Geraud Yves, Diraison Marc, and Dezayes Chrystel  
 Petrophysical characteristics of sandstones dating from the Buntsandstein in the Upper Rhine Graben: case of the borehole EPS1 (Soulz-Sous-Forêts, France)
- XL182 EGU2011-5097  
**Sana`a Al-Zyoud**, Wolfram Rühaak, and Ingo Sass  
 Utilization of a basaltic aquifer for cooling purposes in Harrat Al-Shaam, Jordan - a feasibility study
- XL183 EGU2011-5839  
**Renate Pechnig**, Juliane Arnold, and Darius Mottaghy  
 Methods to derive statistically proved input parameter for geothermal models: Examples from sedimentary basins and crystalline basement rocks.
- XL184 EGU2011-6230  
**Dorothea Reyer**, Johanna F. Bauer, and Sonja L. Philipp  
 Influence of fault zones on fracture systems in sedimentary geothermal reservoir rocks in the North German Basin
- XL185 EGU2011-6361  
**Johanna F. Bauer** and Sonja L. Philipp  
 How structural geology can contribute to geothermal exploration: a case study from Germany
- XL186 EGU2011-6405  
 Norihiro Watanabe, Wenqing Wang, **Haibing Shao**, Joshua Taron, and Olaf Kolditz  
 Application of an extended finite element method for modeling fully coupled hydromechanical processes in discrete fracture-rock matrix systems
- XL187 EGU2011-7088  
**Hannah Pomella**, Hugo Ortner, Marcel Schulz, Michael Zerlauth, and Bernhard Fügenschuh  
 Deep geothermal potential in an orogenic wedge: examples from western Austria
- XL188 EGU2011-7585  
**Stephanie Lerm**, Mashal Alawi, Rona Miethling-Graff, Andrea Seibt, Markus Wolfgramm, Kerstin Rauppach, and Hilke Würdemann  
 Microbiological monitoring on two geothermally used aquifers in the North German Basin
- XL189 EGU2011-8147  
**Roman Zorn**, Hagen Steger, Anja Grunert, Oliver Mielenz, Thomas Köbel, and Lena Eggeling  
 A vertical cylindrical collector system for the indirect energetic use of groundwater
- XL190 EGU2011-8587  
**Luca Guglielmetti**, Cesare Comina, and Giuseppe Mandrone  
 Experimental modelling of thermal flow in saturated and unsaturated conditions and geophysical controls.
- XL191 EGU2011-8597  
**Luca Guglielmetti**, Cesare Comina, and Giuseppe Mandrone  
 ULTRASONIC Ultrasonic test in geothermal heat exchangers (bhe) to monitor grout integrity against migration of contaminants into ground water system.TEST IN GEOTHERMAL HEAT EXCHANGERS (BHE) TO MONITOR GROUT INTEGRITY AGAINST MIGRATION OF CONTAMINANTS INTO
- XL192 EGU2011-8709  
**Volker Wittig** and Rolf Bracke  
 Innovative Hydraulic DTH Drilling Technology based on Coiled Tubing for deep, hard rock Geothermal Drilling
- XL193 EGU2011-8838  
**Gabriele Marquart**, Christian Vogt, Volker Rath, and Christian Kosack  
 Permeability Estimation from Tracer Circulation Tests using the Ensemble Kalman Filter - the Soulz-sous-Forêts case
- XL194 EGU2011-8904  
**Alan G. Jones**, Mark Muller, Stephen Daly, Alistair Allen, Roisin Goodman, Taly Hunter-Williams, Monica Lee, and Derek Reay  
 IREtherm: A New Project to Develop a Strategic and Holistic Understanding of Ireland's Geothermal Energy Potential
- XL195 EGU2011-9754  
**Markus Proell**  
 Method for layer dependent evaluation of the ground heat conductivity
- XL196 EGU2011-9795  
**Anke Westphal**, Stephanie Lerm, Mashal Alawi, Andrea Seibt, Markus Wolfgramm, and Hilke Würdemann  
 Microbial induced mineral precipitation and corrosion in geothermal plants
- XL197 EGU2011-10054  
**Barbara Hahne**, Rüdiger Thomas and the gebo Geosystem Team  
 Combined geoscientific investigations of geothermal reservoir characteristics in Lower Saxony, Germany
- XL198 EGU2011-10308  
**Anton Reshetnikov**, Makky Jaya, Stefan Buske, Joern Kummerow, and Serge Shapiro  
 Characterisation of a geothermal reservoir using microseismic data

XL199	EGU2011-10400 <b>Makky Jaya</b> , Harald Milsch, David Bruhn, Serge Shapiro, and Liney Kristinsdóttir Compressional wave velocities and attenuation of saturated geothermal rocks during a liquid-steam phase transition
XL200	EGU2011-10717 <b>Eva Wegerer</b> , Lorenz Scheucher, Godfrid Wessely, Gregor Götzl, and Rudolf Ramberger Analyses of the thermal parameters of Calcareous basement rocks of the Vienna Basin for a hydrothermal reservoir assessment
XL201	EGU2011-10790 <b>Ingrid Stober</b> and Kurt Bucher Depth- and Pressure dependent Permeability in the Upper Continental Crust - Data from the Urach 3 Geothermal Well
XL202	EGU2011-11035 <b>Katja Iwanowski-Strahser</b> , Juliane Arnold, Christian Vogt, Eva Szalaiová, and Wolfgang Rabbel Seismic assessment of the geothermal potential of North German Basin sediments - From seismic to a geothermal model
XL203	EGU2011-11037 <b>Eva Szalaiová</b> , Gabriele Marquart, Christian Kosack, Renate Pechnig, Katja Iwanowski-Strahser, Christoph Clauer, and Wolfgang Rabbel From seismic to a geothermal model. Seismic assessment of geothermal potential of the Continental Deep Drillhole (KTB) site, Germany
XL204	EGU2011-11128 <b>Davide Maritan</b> and Alessandro Trevisan Layout selection in shallow geothermal systems; some case studies in Italy
XL205	EGU2011-11244 <b>Christian Kosack</b> , Volker Rath, and Darius Mottaghy Parameter Estimation of the Geothermal Reservoir at Soultz-sous-Forêts
XL206	EGU2011-11288 <b>Yves Géraud</b> , Joachim place, Edouard Le Garzic, Marc Diraison, and Martin Stanek Petrophysical properties of fault zones in granite body, implication for deep geothermal reservoir behaviour.
XL207	EGU2011-11537 <b>Henning Francke</b> Model of two-phase flow in the brine circuit of a geothermal power plant
XL208	EGU2011-11672 <b>Peter Bayer</b> , Dominik Saner, Philipp Blum, and Ronnie Jurasko Environmental impacts from geothermal heat pump systems: A cradle-to-grave analysis
XL209	EGU2011-11783 Amélie Neuville, Renaud Toussaint, and Jean Schmittbuhl Anisotropy and scaling of the hydro-thermal behavior in a rough fracture
XL210	EGU2011-11831 Ke Zhu, <b>Peter Bayer</b> , Klaus-Dieter Balke, Steffen Rehner, Grant Ferguson, and Philipp Blum Urban heat islands in the subsurface
XL211	EGU2011-11919 <b>Christoforos G. Koutitas</b> and Stamatia K. Arvanitidou A computational tool for a first-cut engineering analysis in coastal aquifers management
XL212	EGU2011-13007 <b>Annarita Mangiacapra</b> , Monica Piochi, Angela Mormone, Maria Giulia Di Giuseppe, Claudia Troise, and Giuseppe De Natale New physical, textural and mineralogical data on rock samples cored in 1981-1985 geothermal deep wells at Campi Flegrei caldera
XL213	EGU2011-13288 <b>Jan-Diederik van Wees</b> , Damien Bonte, hanneke Verweij, and Leslie Kramers High resolution tectonic temperature models for EGS and direct heat in sedimentary basins: a case study of the Netherlands
XL214	EGU2011-13324 <b>Jan-Diederik Van Wees</b> , Leslie Kramers, Alexander Kronimus, Maarten Pluymakers, and Harmen Mijnlieff ThermoGIS: An Integrated Web-Based Information System for Geothermal Exploration and Governmental Decision Support for Mature Oil and Gas Basins
XL215	EGU2011-13347 <b>Jan-Diederik van Wees</b> , Martha Faneca-sanchez, Leslie Kramers, and Alexander Kronimus Subsurface spatial planning for aquifer production under subsurface uncertainty: using best practices from oil and gas industry
XL216	EGU2011-13773 <b>Giovanni Ruggieri</b> , Adele Manzella, Giordano Montegrossi, and Luigi Dallai Relation between resistivity variations and mineralogical composition of the lithological units in the Travale geothermal area (Southern Tuscany, Italy)

**ERE5.3 – Sustainability of traditional construction materials in modern society – Orals**

Convener: Richard Prikryl | Co-Conveners: Miguel Gomez-Heras, Ákos Török

**Room: 3**

Chairperson: Richard Prikryl

08:30–08:45 EGU2011-211

**Dolores Pereira** and Barry J. Cooper

Building stone as a part of a World Heritage site: "Piedra Pajarilla" Granite and the city of Salamanca, Spain

08:45–09:00 EGU2011-3773

**brian marker** and barry cooper

Extraction and use of building and roofing stone - some sustainability issues

09:00–09:15 EGU2011-5360

**Yuan Hu**, Jinhua Wang, Feng Gao, and Xiao Zhou

The Deterioration Mechanism study for sandstone of Avalokitesvara Sculptures on the Dazu Rock Carvings

09:15–09:30 EGU2011-6614

**Miguel Gomez-Heras** and Jorge Sanjurjo Sánchez

Establishing maximum temperatures attained during building fires with thermoluminescence

09:30–09:45 EGU2011-8753

**Zuzana Kompaníková**, Miguel Gomez-Heras, Patricia Vázquez, and Jan VI?ko

Evolution of petrophysical properties of Spanish building granites at high temperatures

09:45–10:00 EGU2011-8990

**Luis Albornoz-Parra**, Paul Everett, Emily Tracey, and Martin Gillespie

Identifying replacement stones for use in building repairs: an integrated system for improved stone matching

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**COFFEE BREAK**

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Chairperson: Miguel Gomez-Heras

10:30–10:45 EGU2011-9358

**Björn Schouenborg** and David Burton

Sustainable use of natural stone as paving material

10:45–11:00 EGU2011-9870

**Feng Gao**

Mechanism of Corrosion and Color Inconsistency on Gold Foil Surface of Avalokitesvara in Dazu Rock Carvings

11:00–11:15 EGU2011-13215

**Aurélie Turmel**, Gilles Fronteau, Céline Thomachot-Schneider, Xavier Morvan, and Vincent Barbin

GIS-based variability of building materials toward the Ile-de-France cuesta (Paris Basin, France): inventory, distribution, uses and relationship with environment

11:15–11:30 EGU2011-4053

**Anna Frangipane**

From spolia to recycling. The reuse of traditional construction material facing sustainability: a review

11:30–11:45 EGU2011-8806

**Johannes Weber** and the ROCARE Consortium Team

The EU project ROCARE: 19th century Roman cements - historic binders with properties of interest for purposes of restoration and healthy construction

11:45–12:00 EGU2011-13379

**Anja Diekamp**, Jürgen Konzett, and Peter W. Mirwald

Dolomitic lime mortar - burning, slaking and setting

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**ERE5.3 – Sustainability of traditional construction materials in modern society – Posters**

Convener: Richard Prikryl | Co-Conveners: Miguel Gomez-Heras, Ákos Török

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Ákos Török

XL217 EGU2011-659

**Katerina Kovarova**

The Influence of Prague Winter Climatic Conditions on Sandstone Weathering

- XL218 EGU2011-2943  
**Aneta Stastna** and Richard Prikryl  
Lithotheque of Czech historical carbonate stones: the present state of investigation
- XL219 EGU2011-2962  
**Zuzana Seidlova**, Richard Prikryl, and Sarka Sachlova  
Alkali-silica reactivity of volcanic rocks as documented by combination of mortar-bar and gel-pat tests
- XL220 EGU2011-3002  
Katerina Krutilova and **Richard Prikryl**  
Relationship between mechanical and technologic properties of volcanic rocks used for aggregates
- XL221 EGU2011-4756  
Anna Arizzi and **Giuseppe Cultrone**  
Properties of calcitic and dolomitic lime mortars used for rendering purposes
- XL222 EGU2011-4517  
Krzysztof Labus and **Ma?gorzata Labus**  
Quader sandstones - porosity, durability and deterioration
- XL223 EGU2011-5337  
**xiao zhou**  
Advance in the study of the weathering profile of sandstone on China Yungang Grottoes Based on Hyperspectral Imaging
- XL224 EGU2011-5640  
tian xingling, **gao feng**, zhou xiao, hu yuan, and zhou kechao  
Analysis of the stones of Thousand Hand Buddhism by the combination of on-site and laboratory techniques
- XL225 EGU2011-12990  
**Ákos Török**, Balázs Szemerey-Kiss, and Siegfried Siegesmund  
Comparative analyses of the physical properties of repair mortar used in Hungarian limestone monuments
- XL226 EGU2011-10265  
**Tatiana D'Arpino**, Luca Aldega, Ciriaco Giampaolo, Sergio Lo Mastro, Gianluigi Romani, and Maurizio Mariottini  
Mineralogical, petrographical and mechanical characterization of second century blocks from a Roman latomia: a building stone of the ancient Rome.
- XL227 EGU2011-5689  
**Hua zhou**, Feng Gao, Miao Yang, Yuan Hu, Kechao Zhou, and Changsui Wang  
Application of Portable X-ray Radiography instrument to assess the weathering condition of the Avalokitesvara Sculpture in Dazu Rock Cavings, China
- XL228 EGU2011-5873  
**Domenico Calcaterra**, Piergiulio Cappelletti, Abner Colella, Alessio Langella, Vincenzo Morra, Francesco Allocca, Anna Claudia Angrisani, Gabriella Calicchio, Marco D'Amore, and Maurizio de Gennaro  
Historical dimension stones from the carbonate Apennines of Campania region (Italy)
- XL229 EGU2011-6579  
**Miguel Gomez-Heras**, Mikel Sanz, Monica Alvarez de Buergo, Mohamed Oujja, Rafael Fort, Mariela Speranza, Asuncion De los Rios, Carmen Ascaso, Sergio Perez-Ortega, and Marta Castillejo  
Assessing thermal interactions during laser cleaning by means of infrared thermal imaging
- XL230 EGU2011-7217  
**Elisabetta Zendri**, Manuela Sgobbi, Anna Remotto, Marta Melchiorre Di Crescenzo, Eleonora Balliana, and Guido Biscontin  
Chemical Characterization of Finish Treatments on Bricks in the North of Italy: Historic Knowledge to Restore Using Traditional Materials and Methods
- XL231 EGU2011-7424  
**George Triantafyllou**, Richard P?ikryl, and Theodoros Markopoulos  
Reactivity of hydraulic lime binders: A proposed laboratory testing technique
- XL232 EGU2011-7745  
Manuela Mattone, **Lucia Toniolo**, and Elena Bignamini  
Conservation Strategies for Earthen Constructions
- XL233 EGU2011-7710  
**Taha Ashour** and Wei Wu  
Using of wheat straw as natural reinforcement of earth plaster for straw bale buildings
- XL234 EGU2011-7469  
**Victoria Shushakova**, Edwin R. Fuller, and Siegfried Siegesmund  
Thermoelastic responses of calcitic and dolomitic marbles: influence of shape fabric and crystal texture.
- XL235 EGU2011-7617  
**Taha Ashour**, Markus Raucheker, and Wei Wu  
The influence of cement, gypsum and lime on the compressive strength of un-fired earth bricks
- XL236 EGU2011-8614  
**Anna Arizzi** and Giuseppe Cultrone  
Testing the hardened properties of mortars prepared according to the Wet Packing Method: is this model truly successful?

XL237	EGU2011-9012 Andreas Chandrinos, Ioannis Baziotis, and <b>George Leontakianakos</b> Evaluating the role of tin (SnO <sub>2</sub> ) as a natural mineralizer-oxide on the cement properties
XL238	EGU2011-9296 Gilles Froneau, <b>Aurélie Turmel</b> , Céline Thomachot-Schneider, and Jean-Paul Deroïn Building material supply strategy in "Chalky Champagne" area (France): combined use of local raw materials and importations from surrounding regions.
XL239	EGU2011-9935 <b>Martin Bednarik</b> , Rudolf Holzer, Marek Laho, Martin Dun?ko, and Ivana Šimková Dimension stone of historic monuments of the UNESCO site Banská Štiavnica and its significant resources
XL240	EGU2011-11547 <b>Heidrun Stück</b> , Jörg Rüdrich, and Siegfried Siegesmund Drei Gleichen Area (Germany/Thuringia): Petrology, petrophysics and weathering phenomena of dimension stones
XL241	EGU2011-11717 <b>Wanja Wedekind</b> , Bernhard Middendorf, and Siegfried Siegesmund Dry slaked mortars and hot lime mortars for the restoration of historical monuments and stone
XL242	EGU2011-12626 <b>Michael Unterwurzacher</b> and Ulrich Obojes Experimental frost/thaw studies on marbles
XL243	EGU2011-12801 Andrzej Domonik and <b>Joanna Pini?ska</b> Historical rock mining. Geosites and their geological engineering assessment
XL244	EGU2011-12832 Maria Sileo, <b>Gianni Leucci</b> , Angela Calia, and Loredana Matera Petro-physic and mechanical properties to study compact (thick) and soft calcareous rocks employed in historical apulian heritage (Southern Italy)
XL245	EGU2011-3007 <b>Richard Prikryl</b> , Petr Kozlovcev, and Aneta Stastna Re-evaluation of Bohemian Lower Palaeozoic limestones for the production of alternative hydraulic binders
XL246	EGU2011-8909 <b>Ákos Török</b> , Szabolcs Csányi, and Ágnes Krupa Deterioration and preservation of limestone and ceramics used in the construction of the building of the Hungarian Academy
XL247	EGU2011-14199 <b>Wolfgang P. Weinhold</b> , Feng Gao, Yang Wang, and Winfried Weinhold Mobile optical surface and material documentation and analysis of historical documents and textiles

**HS8.2.9 – Sedimentary basins as active fluid circulation systems (co-listed) – Orals**

Convener: David Hindle | Co-Conveners: Sabine Attinger, Piotr Krzywiec

**Room: 34**

Chairperson: David Hindle

15:30–15:45	EGU2011-3005 <b>Jonas Kley</b> and the INFLUINS Team INFLUINS: Investigating fluid flow between surface and deep levels of sedimentary basins: The Thuringian Basin as a geolaboratory
15:45–16:00	EGU2011-4310 <b>David Hindle</b> and Heidrun Kopp Coupled fluid flow and deformation in sedimentary basins over geological timescales: A numerical modelling approach for accretionary prisms.
16:00–16:15	EGU2011-6279 <b>Sophie Violette</b> , Julio Gonçalvès, Anne Jost, Raffaella Vivona, Camille Contoux and the 3D-PBM Team 3D-Paris basin Modelling: How past geological history explains its present day hydrodynamics
16:15–16:30	EGU2011-6504 <b>Elco Luijendijk</b> , Paul Andriessen, Mark Person, Ronald van Balen, and Marlies ter Voorde Tracing a fossil hydrothermal system using thermochronology and numerical modeling
16:30–16:45	EGU2011-11966 <b>Denis Bureau</b> , Joe Cartwright, and Regis Mourguès Exploitation of mechanical weaknesses by sandstone intrusions
16:45–17:00	EGU2011-1408 <b>Klaus Hebig</b> , Narimitsu Ito, Traugott Scheytt, and Atsunao Marui Parameter determination in a deep coastal sedimentary basin by single-well ("push-pull") tests

**HS8.2.9 – Sedimentary basins as active fluid circulation systems (co-listed) – Posters**

Convener: David Hindle | Co-Conveners: Sabine Attinger, Piotr Krzywiec

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- A362 EGU2011-5070  
**Alraune Zech**, Bjoern Zehner, Thomas Fischer, Olaf Kolditz, and Sabine Attinger  
 Modelling of thermohaline circulation in sedimentary basins
- A363 EGU2011-7151  
**Ronny Stoltz**, Andreas Chwala, Viatscheslav Zakosarenko, Marco Schulz, Matthias Schmelz, Sven Linzen, Hans-Georg Meyer, Matthias Meyer, and Nikolai Bondarenko  
 SQUID based instrument for investigation of magnetic structures
- A364 EGU2011-9392  
**Arkadiusz K. Wieczorek** and Kai U. Totsche  
 Atomic Force Microscopy as a tool to characterize groundwater colloids
- A365 EGU2011-10283  
 Pierre Durst, **Eline Malcuit**, Philippe Negrel, and Emmanuelle Petelet-Giraud  
 Impact of sedimentologic and structural evolution of the Aquitaine Basin on actual water quality. Eocene sand aquifer, south western France.
- A366 EGU2011-12819  
 Norbert Kasch, Jens Köster, Robert van Geldern, Markus Wehrer, and **Jonas Kley**  
 Burial, exhumation and fluid flow in a Buntsandstein aquifer, central Germany
- A367 EGU2011-12853  
 Alexander Malz, **Stephan Donndorf**, and Jonas Kley  
 Late Cretaceous inversion tectonics in the Thuringian Basin (Germany) - The Finne Fault Zone as an example of a differentially inverted graben system
- A368 EGU2011-13383  
 Maria Brey, Juraj Majzlan, and **Michael Abratis**  
 Mineralizing fluids related to barite-fluorite fissure mineralizations at the southern edge of the Thuringian Basin, Germany
- A369 EGU2011-13743  
**Bjoern Zehner**  
 Extending Gocad to improve the modelling - simulation - visualization workflow.
- A370 EGU2011-13819  
**Daniel Beyer**, Cindy Kunkel, Ulrike Hilse, Michaela Aehnelt, Dieter Pudlo, Thomas Voigt, and Reinhard Gaupp  
 Reservoir properties and fluid circulation in Buntsandstein aquifer sandstones of the Thuringian Basin in Central Germany
- A371 EGU2011-13821  
**Ulrike Hilse**, Dieter Pudlo, and Reinhard Gaupp  
 Element mobilization and mineral (re-)precipitation in sedimentary rocks from Central Germany on a microscopic scale
- A372 EGU2011-13839  
**Thomas Fischer**, Björn Zehner, Alraune Zech, Sabine Attinger, and Olaf Kolditz  
 A vertically integrated 2D groundwater model of the Thuringian basin.

## Thursday, 07 April

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### ERE2.5 – Site Characterization for CO<sub>2</sub> Geological Storage Sites – Orals

Convener: Auli Niemi | Co-Conveners: Marco Dentz, Martin Sauter, Jesús Carrera, Michael Kühn, Bert van der Meer

**Room: 3**

Chairperson: Auli Niemi, Martin Sauter

08:30–08:45 EGU2011-8097

**Sonja Martens**, Thomas Kempka, Axel Liebscher, Stefan Lüth, Fabian Möller, Michael Kühn, and Ketzin Group

The Ketzin Project - Progress of Europe's longest-operating on-shore CO<sub>2</sub> Storage Site

08:45–09:00 EGU2011-6028

**Jacob Bensabat**, Auli Niemi, Thomas Fierz, Martin Sauter, and Gabriele Wiegand

Experimental program and technical implementation of CO<sub>2</sub> injection experiment in a deep geological formation at Heletz, Israel ‘

09:00–09:15 EGU2011-9963

**Philippe Pezard**, Nataliya Denchik, Johanna Lofi, Hervé Perroud, Omar Jaafar, Denis Neyens, and Simon Barry

SIMEX at Maguelone (Languedoc coastline, France): a shallow injection experimental site to test CO<sub>2</sub> storage monitoring techniques from a multi-method approach.

09:15–09:30 EGU2011-10490

**Jesús Carrera**, Orlando Silva, Andrés Pérez-Estaún, José L. Fuentes, Félix Mateos, and Modesto Montoto

Characterization and Injection Tests Planned at the Hontomin CO<sub>2</sub> Injection Site

09:30–09:45 EGU2011-3832

**Bernhard Mayer**, Gareth Johnson, Maurice Shevalier, Michael Nightingale, and Ian Hutcheon

Accounting for Injected CO<sub>2</sub> at the Pembina Cardium CO<sub>2</sub> Monitoring Project, Alberta, Canada

09:45–10:00 EGU2011-5282

**Tissa Illangasekare**, Luca Trevisan, Derrick Rodriguez, Abdullah Cihan, Jens Birkholzer, and Quanlin Zhou

A fundamental study of migration and entrapment of supercritical CO<sub>2</sub> in heterogeneous deep geologic formations: intermediate scale testing and modeling

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### COFFEE BREAK

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Chairperson: Marco Dentz, Jesus Carrera

10:30–10:45 EGU2011-7291

**Fritjof Fagerlund**, Auli Niemi, Jacob Bensabat, and Vladimir Shtivelman

Evaluation of design options for a field experiment of CO<sub>2</sub> injection to a deep layered aquifer at the Heletz site using numerical modelling

10:45–11:00 EGU2011-7918

**Jacob Covault**, William Craddock, and Madalyn Blondes

CO<sub>2</sub> column height influenced by geothermal gradient in sedimentary basins of the USA

11:00–11:15 EGU2011-8103

**Victor Vilarrasa**, Sebastia Olivella, and Jesus Carrera

Hydromechanical Characterization Test for CO<sub>2</sub> Sequestration in Deep Saline Aquifers

11:15–11:30 EGU2011-11630

**Khaled Jemai**, Bjørn Kvamme, Ashok Chejara, and Mohammad Taghi Vafaei

Simulation of geomechanical effects of CO<sub>2</sub> injection in fractured reservoir

11:30–11:45 EGU2011-7667

**Frank Dethlefsen**, Christoph Haase, and Markus Ebert

Uncertainties in geochemical modeling using different software programs and thermodynamic datasets

11:45–12:00 EGU2011-8316

**Jerker Jarsjö**, Andrew Frampton, Vladimir Cvetkovic, and Georgia Destouni

Scenario analysis of CO<sub>2</sub> injection into a multilayered saline aquifer system of Scania, Sweden

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### LUNCH BREAK

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Chairperson: Michael Kuhn, Auli Niemi

- 13:30–13:45 EGU2011-7760  
**Florence Delprat-Jannaud**, Olivier Vincké, Maxine Akhurst, Suzanne Brunsting, Peter Frykman, Ane Lothe, Marcin Mazurowski, Filip Neele, Samuela Vercelli, and Valentina Volpi  
SiteChar - Characterization of European CO<sub>2</sub> storage
- 13:45–14:00 EGU2011-3668  
**Marc Fleury**, Serge Gautier, Pierre Boulin, Nicolas Gland, Ben Norden, and Cornelia Schmidt-Hattenberger  
Petrophysical measurements for CO<sub>2</sub> storage: application to the Ketzin site.
- 14:00–14:15 EGU2011-8693  
**Detlef Lazik**, Sebastian Ebert, and Hans-Joerg Vogel  
New sensor approach for separating CO<sub>2</sub> - sources in subsurface monitoring
- 14:15–14:30 EGU2011-9687  
**Nicoleta Enescu**, Calin Cosma, Christopher Juhlin, and Fengjiao Zhang  
Seismic Methodology for Characterization of Deep Saline Aquifers for CO<sub>2</sub> Storage
- 14:30–14:45 EGU2011-5801  
**Khaled Mahmud Shams** and Christof Lempp  
Modelling of In-situ Stress Regime in Cap Rocks in Parts of the North German Basin
- 14:45–15:00 EGU2011-11020  
**Gesa Kuhlmann**, Sascha Gast, and Holger Wirth  
Characteristics of Lower Triassic and Jurassic reservoir and seal formations as depicted from borehole evidence in the eastern part of the North German Basin with regard to CO<sub>2</sub> storage

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**ERE2.5 – Site Characterization for CO<sub>2</sub> Geological Storage Sites – Posters**

Convener: Auli Niemi | Co-Conveners: Marco Dentz, Martin Sauter, Jesús Carrera, Michael Kühn, Bert van der Meer  
Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Auli Niemi, Marco Dentz, Martin Sauter, Jesus Carrera, Michael Kuhn, Bert van der Meer

- XL119 EGU2011-8340  
**Gregor Goetzl**, Isabelle Czernichowski-Lauriol, Rowena Stead, and Vit Hladík  
CGS Europe - A pan-European coordination action on CO<sub>2</sub> Geological Storage
- XL120 EGU2011-13955  
**Michael Kühn**, Mario Wipki, Sevket Durucan, Jean-Pierre Deflandre, Alexander Kronimus, Andy Chadwick, and Sergio Persoglia  
CO2CARE - CO<sub>2</sub> Site Closure Assessment Research
- XL121 EGU2011-9743  
**Mikael Erlström**, Auli Niemi, and Fritjof Fagerlund  
The MUSTANG site characterisation programme
- XL122 EGU2011-1307  
**Vladimir Shtivelman**, Michael Gandler, and Igor Goldberg  
3D geological model of potential CO<sub>2</sub> reservoir for the Heletz test site
- XL123 EGU2011-2227  
**Daniel Scradeanu** and Mihaela Pagnejer  
3D parametric model of a potential trap for carbon dioxide storage. Case study: oil structure Valcele, Romania.
- XL124 EGU2011-2442  
**Christian Sperber** and Manfred Wuttke  
Horstberg, NW Germany: a unique test site for CO<sub>2</sub>-sequestration in saline aquifers
- XL125 EGU2011-9755  
**Kristina Rasmusson**, Auli Niemi, and Mikael Erlström  
Subsurface characterisation and modeling of a CO<sub>2</sub> test site in south Scania, Sweden, with special emphasis on the treatment of hydrogeological heterogeneity
- XL126 EGU2011-6891  
**Manuel Marquez Carrillo** and Maria Jose Jurado Rodriguez  
Petrophysical Characterization of a CO<sub>2</sub> storage reservoir using well logs
- XL127 EGU2011-11016  
**Ana Isabel López Barrera**  
Geological characterization of potential reservoirs and seal formations for CO<sub>2</sub> storage in the basins of Iberian Peninsula based on Well Logging
- XL128 EGU2011-2632  
**Christina Flechsig**, Claudia Schütze, Robert Bussert, and Horst Kämpf  
An Integrative Geoelectric, Sedimentologic and Soil Gas Investigation of a Magmatic CO<sub>2</sub> Degassing Structure in the Cheb Basin/Czech Republic: A Natural Analogue Study to Understand Transport Processes in the Near Surface

- XL129 EGU2011-11802  
**Prabhakar Sharma**, Auli Niemi, Chin-Fu Tsang, Jacob Bensabat, and Philippe Pezard  
Flowing Fluid Electric Conductivity Logging Method as a Tool to Characterize the Hydraulic Conductivity Strucure of a Target Layer for CO<sub>2</sub> Injection
- XL130 EGU2011-2823  
**Martin Sauter**, Julia Ghergut, Horst Behrens, Tobias Licha, and Michael Kühn  
Brine-phase spiking during CO<sub>2</sub> injection at the Ketzin site, Germany
- XL131 EGU2011-2836  
**Julia Ghergut**, Horst Behrens, Friedrich Maier, Tobias Licha, and Martin Sauter  
Dual-tracer, single-well push-pull method for determining fluid-rock interface densities in geo-reservoirs
- XL132 EGU2011-8754  
**Martin Nottebohm** and Tobias Licha  
Investigation of thermosensitive tracers for the investigation of the thermal regime in CO<sub>2</sub> sequestration reservoirs
- XL133 EGU2011-5243  
**Martin Sauter**, Julia Ghergut, Christian Sperber, Manfred Wuttke, and Manuela Lodemann  
Tracer-assisted characterization of Horstberg site in the N-German Sedimentary Basin: bad news, or good news for georeservoir use?
- XL134 EGU2011-4818  
**Tobias Roetting**, Jesus Carrera, and Orlando Silva  
Hydrogeochemical characterization and monitoring at the Hontomin site (Spain) for geological storage of CO<sub>2</sub>
- XL135 EGU2011-9629  
**Julia Ghergut**, Jac Bensabat, Horst Behrens, Tobias Licha, Friedrich Maier, Mario Schaffer, and Martin Sauter  
Single-well and inter-well tracer test design for characterizing the Heletz site (Israel) with a view at CCS
- XL136 EGU2011-11011  
**Barbara Nisi**, Javier de Elío, Orlando Vaselli, Franco Tassi, Fidel Grandia, and Luis Felipe Mazadiego  
Geochemical monitoring in the Hontomín (Burgos, Spain) injection site: preliminary results and perspectives.
- XL137 EGU2011-11814  
Fritjof Fagerlund, **Fuguo Tong**, Auli Niemi, Tobias Licha, and Martin Sauter  
Modelling of novel tracers in a two-phase flow system for characterization of geologically stored CO<sub>2</sub> in deep saline formations
- XL138 EGU2011-12078  
**Juan J. Hidalgo**, Caroline de Dieuleveult, Pierre Agrinier, and Vincent Lagneau  
A reactive transport model of CO<sub>2</sub> injection in basaltic rocks
- XL139 EGU2011-4139  
**Marco Dentz**, Philippe Gouze, and Jesus Carrera  
Mass Transfer Limitations and Non-Locality for Large Scale Reactive Transport
- XL140 EGU2011-7512  
**Francesca De Gaspari**, Jesús Carrera, Maarten Saaltink, and Orlando Silva  
Investigation of geochemical processes during CO<sub>2</sub> injection using “push-pull”
- XL141 EGU2011-6799  
**Maria Rasmussen**, Kristina Rasmussen, Fritjof Fagerlund, Auli Niemi, Jacob Bensabat, and Vladimir Shtivelman  
Modeling of single-well CO<sub>2</sub> injection-withdrawal experiment to be carried out at the Heletz site
- XL142 EGU2011-7107  
**Halidi Abdoulghafour**, Linda Luquot, and Philippe Gouze  
Hydro-thermo-chemical study of CO<sub>2</sub> rich-brine percolation through fracturated cement
- XL143 EGU2011-10565  
**Claudia Schuetze**, Peter Dietrich, Karin Braeuer, Gerhard Strauch, Eckhard Faber, Ingolf Dumke, Stefan Schloemer, Horst Kaempf, Christina Flechsig, and Tomas Fischer  
The Cheb Basin (Czech Republic) as a potential natural analogue site for geological carbon sequestration - past, current and planned activities
- XL144 EGU2011-4979  
**Katriona Edlmann**, Christopher McDermott, and Stuart Haszeldine  
Experimental investigation of coupled processes affecting caprock seal integrity for CO<sub>2</sub> sequestration
- XL145 EGU2011-6101  
Jacob Bensabat, **Myra Kitron-Belinkov**, Kristina Rasmussen, Maria Rasmussen, Auli Niemi, and Jacob Bear  
Model for the dependence of conditions at the injection well head and the reservoir during CO<sub>2</sub> injection
- XL146 EGU2011-11096  
**Christian Kosack** and Andrei Zschocke  
Thermodynamic behaviour of CO<sub>2</sub> during the injection into low pressure reservoirs

XL147	EGU2011-7087 <b>Julie Lions</b> , Ian Gale, Erik Nygaard, Heike Rüters, Franz May, Wolfram Kloppmann, Stanley Beaubien, Mehran Sohrabi, Dimitrios G. Hatzignatiou, Ludmilla Basava-Reddi and the CO2GeoNet Members involved in the present study Team Potential impacts on groundwater resources of deep CO2 storage
XL148	EGU2011-12297 <b>Peter Pilz</b> , Martin Zimmer, and Jörg Erzinger Long-Term Surface CO2-Flux Monitoring at the Ketzin CO2 Storage Test Site
XL149	EGU2011-13190 <b>Oleksandr Ivakhnenko</b> , Kalamkas Seitova, and Laura Utemisova CO2 and sour gas recycling model in carbonate gas condensate reservoir: Dynamic storage, upstream pollution reduction and enhancement of hydrocarbon recovery
XL150	EGU2011-4398 Cédric Laveuf, Corinne Loisy, Grégory Cohen, <b>Adrian Cerepi</b> , Michel Franceschi, François Larroque, Olivier Le Roux, Philippe Delaplace, Caroline Magnier, Virgile Rouchon and the Bruno Garcia (2) Team The CO2-Vadose Project: Geophysical and geochemical monitoring of CO2 migration in a carbonate reservoir in the vadose zone. Experimental design and the baselines
XL151	EGU2011-14002 <b>Rachel Berkowitz</b> and Andrew W Woods Experimental Models of CO2 Leakage from Subsurface Aquifers
XL152	EGU2011-3431 <b>Hsueh-yu Lu</b> A Semi-quantitative Estimation of CO2 Mineral Sequestration in Miocene Basalt in Northwestern Taiwan
XL153	EGU2011-1240 <b>Dieter Pudlo</b> , Daniel Albrecht, Leonhard Ganzer, Reinhard Gaupp, Ulrike Hilse, Bernd Kohlhepp, Viktor Reitenbach, and Joachim Wienand The impact of diagenetic fluid-rock reactions on the alteration of central German Rotliegend sandstones - a baseline evaluation on potential CO2 reservoir rocks
XL154	EGU2011-2955 <b>Jih-hao Hung</b> and Jong-chang Wu In-Situ Stress and Fault Reactivation Associate with LNG Injection in the Tienchanshan Gas Field, Fold-Thrust Belt of Western Taiwan

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**ERE2.6 – Biogeochemical and microbiological aspects of Geologic Carbon Capture and Storage – Orals**

Convener: Hilke Würdemann | Co-Conveners: Oleg Pokrovsky

**Room: 3**

Chairperson: Hilke Würdemann

15:30–15:45	EGU2011-14145 <b>Judith A. McKenzie</b> and Crisogono Vasconcelos Microbial Induced Mineral Formation in the Deep-Subsurface Biosphere
15:45–16:00	EGU2011-9534 <b>Karim Benzerara</b> , Estelle Couradeau, Emmanuelle Gérard, David Moreira, and Purificación López-García Study of Mg-carbonate precipitation by laboratory cultivated microbialites
16:00–16:15	EGU2011-1598 <b>Vasileios Mavromatis</b> , Liudmila Shirokova, Irina Bundeleva, Oleg Pokrovsky, Pascale Bénézeth, Eric Oelkers, and Emmanuelle Gerard Biomineralization of hydrous Mg carbonates in the Salda Lake, SW Turkey: New insights from stable Mg isotopes.
16:15–16:30	EGU2011-13354 <b>Patrick Meister</b> A natural CO2 reservoir in the Peru Margin: what can we learn for CO2 storage?
16:30–16:45	EGU2011-5080 <b>Anne Gunn Rike</b> , Marion Børresen, Othilde Elise Hovelsrud, Thomas H.A. Haverkamp, Tom Kristensen, and Kjetill S. Jacobsen Microbial characterization of seabed sediments overlaying the proposed CO2 storage site Johansen formation
16:45–17:00	EGU2011-10596 <b>Andrea Kassahun</b> , Thomas Muschalle, Claudia Gniese, and Nils Hoth Analysis of biomolecules and microbial transformation products in gas field formation waters and in laboratory experiments simulating geological storage of carbon dioxide

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**ERE2.6 – Biogeochemical and microbiological aspects of Geologic Carbon Capture and Storage – Posters**

Convener: Hilke Würdemann | Co-Conveners: Oleg Pokrovsky

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Hilke Würdemann

XL155 EGU2011-3726

**Liudmila Shirokova**, Jordan Guntram, Oleg Pokrovsky, and Pascale Benezeth

Interaction of heterotrophic bacteria extracted from CO<sub>2</sub> injection pilot site with diopside surfaces: A combined macroscopic kinetic and AFM approach

XL156 EGU2011-14030

**Dagmar Kock**, Daria Morozova1, Janin Frerichs, Hilke Würdemann, and Martin Krüger

Distribution and activities of microorganisms in the reservoir and around gas wells in a long-term used gas field in the Altmark, Germany

XL157 EGU2011-12243

**Daria Morozova**, Mashal Alawi, Dagmar Kock, Martin Krüger, and Hilke Würdemann

Baseline characterization of the deep microbial life for the Enhanced Gas Recovery in the Altmark natural gas reservoir

XL158 EGU2011-13910

**Hilke Würdemann**, Daria Morozova, Maren Wandrey, and Michael Zettlitzer

Geochemical and microbial monitoring during CO<sub>2</sub> storage in deep subsurface saline aquifers in Ketzin pilot site, Germany

XL159 EGU2011-12166

**Daria Morozova**, Daniela Lett, Michael Zettlitzer, and Hilke Würdemann

Insights into microbial community composition and its response to the CO<sub>2</sub> injection and storage in the saline aquifer, Ketzin, Germany

XL160 EGU2011-12310

**Daniela Lett**, Daria Morozova, and Hilke Würdemann

Fluorescence in situ Hybridisation - a useful tool for analysing the microbial community from a saline aquifer during CO<sub>2</sub> storage in Ketzin

XL161 EGU2011-12546

**Linda Pellizzari**, Maren Wandrey, Mashal Alawi, Dieter Voigt, and Hilke Wuerdemann

Controlling drill mud contamination - Laboratory experiments

XL162 EGU2011-14089

**Monika Kasina**, Patrick Meister, Maren Wandrey, and Hilke Würdemann

Microbial induced changes of mineral composition in a CO<sub>2</sub> storage site, Ketzin , Germany

XL163 EGU2011-13345

**Monika Kasina**, Anne Kleyböcker, Daria Morozova, Marietta Liebrich, Maren Wandrey, and Hilke Würdemann

Microbial influence on mineral creation in carbon capture and storage (CCS) procedures

XL164 EGU2011-12658

Julia West, Ian McKinley, **Caroline Graham**, Barbara Palumbo-Roe, and Christopher Rochelle

Potential impact of CO<sub>2</sub> storage on subsurface microbial ecosystems and implications for groundwater quality

XL165 EGU2011-13499

**Burt Thomas**, Yousif Kharaka, and Robert Rosenbauer

Methanogenic growth at high partial pressures of CO<sub>2</sub>: Implications for the injection of CO<sub>2</sub> into biogenic gas reservoirs

XL166 EGU2011-13904

**Oleg Pokrovsky**, Liudmila Shirokova, Gabrielle Stockman, Svetlana Zabelina, Pascale Bénézeth,

Emmanuelle Gerard, Benedicte Menez, and Harald Alfredsson

Quantifying the role of microorganisms in silicate mineral dissolution at the conditions of CO<sub>2</sub> storage in basalts

XL167 EGU2011-14028

**Evgeniya Yu. Li**, Patrick Meister, and Timothy G. Ferdelman

pH effect of Fe oxidation during abiotic and microbially mediated silicate weathering: Implications for CO<sub>2</sub> sequestration in subsurface storage sites

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**EOS06/BG1.14/CL5.1/ERE5.4 – Modern Climate Science Education and Communications (co-organized) – Orals**

Convener: Klaus Grosfeld | Co-Conveners: Annette Ladstaetter-Weissenmayer, Eva-Maria Pfeiffer, Oliver Dilly

**Room: 29**

Chairperson: n.n.

08:30–08:45 EGU2011-8969

**Christina Klose** and Dierk Hebbeln

The Bremen International Graduate School for Marine Sciences - GLOMAR

- 08:45–09:00 EGU2011-13164  
**Eva-Maria Pfeiffer, Detlef Stammer, Oliver Dilly, and Hermann Held**  
 Interdisciplinary MSc and Doctoral Education in Climate System Science at the University of Hamburg
- 09:00–09:15 EGU2011-11972  
**Marianela Fader, Andreas Hilboll, Florian Rauser, and Sebastian Sonntag**  
 Presenting Young Earth System Scientists (YESS) - a new network for new scientists
- 09:15–09:30 EGU2011-7511  
**Heike Huebener**  
 Regional environmental agencies as facilitators for communicating climate change information
- 09:30–09:45 EGU2011-5766  
**Kirsti Jylhä** and Reija Ruuhela  
 Visualization of climate change information - feedback from web page visitors
- 09:45–10:00 EGU2011-9511  
**Jennifer Lenhardt**, Richard W. Müller, Uwe Pfeifroth, and the EURO4M team  
 The EURO4M project: Improving climate data products and services by interacting with climate data users

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**EOS06/BG1.14/CL5.1/ERE5.4 – Modern Climate Science Education and Communications (co-organized) – Posters**

Convener: Klaus Grosfeld | Co-Conveners: Annette Ladstaetter-Weißenmayer, Eva-Maria Pfeiffer, Oliver Dilly

**Hall Z | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Klaus Grosfeld

- Z1 EGU2011-10213  
**Lorenz Martin, Christoph Raible, and Martin Grosjean**  
 The Graduate School of Climate Sciences, University of Bern
- Z2 EGU2011-9833  
**Klaus Grosfeld**, Gerrit Lohmann, Annette Ladstätter-Weißenmayer, John Burrows, Claudia Sprengel, Claudia Hanfland, Jelle Bijma and the joint ESSReS-PEP-POLMAR Team  
 ESSReS-PEP-POLMAR, an international and interdisciplinary postgraduate education concept on Earth and Environmental Sciences
- Z3 EGU2011-6623  
**Avan Antia**, Kerstin Hoffmann, and Angelika Hoffmann  
 Education for
- Z4 EGU2011-13047  
**Antje Weitz** and Bjorn Stevens  
 Structured supervision of doctoral studies in the IMPRS-ESM
- Z5 EGU2011-12028  
**Enrica Caporali**, Elena Palmisano, and Juna Valdiserri  
 Enhancing Environment Education in Eastern Europe
- Z6 EGU2011-8395  
**Susanne Pfeifer**, Hinnerk Ries, and Daniela Jacob  
 From regional climate models to climate change impact assessment: data support and demand
- Z7 EGU2011-11195  
 Peter Lemke, **Klaus Grosfeld**, Marietta Weigelt, Renate Treffeisen and the REKLIM Speakers Team  
 Climate Initiative Regional Climate Change (REKLIM), from climate simulation to climate advice
- Z8 EGU2011-12369  
**Hinnerk Ries**, Daniela Jacob, and Richard Schmitt  
 Perceived temperature as an indicator for extreme events
- Z9 EGU2011-12901  
**hossien sharifan**, Mona Saffar, A.Ahmad Dehghani, and Mohsen Tahmasebi  
 Investigation of Water temperature effects on Evaporation from of Salt Water Surfaces
- Z10 EGU2011-12779  
**hossien sharifan**, Mehry Abdi, and Afsaneh Asady  
 Forecasting of annual precipitation in Different Regions

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**ESSI8 – Uncertainty in Environmental Data and Models (co-listed) – Orals**

Convener: Dan Cornford | Co-Conveners: Stefano Nativi, Edzer Pebesma, Gerard Heuvelink

**Room: 19**

Chairperson: n.n.

- 13:30–13:45 EGU2011-13514  
**Sarah Cornell**  
 Social perspectives on environmental risk and uncertainty

13:45–14:00	EGU2011-11580 <b>Jon Olav Skøien</b> , Grégoire Dubois, Phuong Truong, Dan Cornford, and Michael Shulz Uncertainty propagation in assessing ecosystems similarities - an example application using eHabitat
14:00–14:15	EGU2011-5932 <b>Kristin Vogel</b> , Carsten Riggelsen, and Frank Scherbaum Learning Ground Motion Models from Data using Bayesian Networks
14:15–14:30	EGU2011-7767 <b>Johan deHaan</b> , Maarten Sneep, and Pepijn Veefkind Retrieval algorithms for TROPOMI - improving error estimates of retrieved quantities by using Optimal Estimation with explicit a priori data
14:30–14:45	EGU2011-1880 <b>Lindsay Collins</b> , Ken Carslaw, Graham Mann, Kirsty Pringle, and Dominick Spracklen A systematic approach to computer model evaluation, using a global aerosol model
14:45–15:00	EGU2011-11001 <b>Wouter Dorigo</b> , Robert Parinussa, Klaus Scipal, Yi Liu, Richard de Jeu, and Wolfgang Wagner Error characterisation of global active and passive microwave soil moisture data sets
Chairperson: n.n.	
15:30–15:45	EGU2011-9677 <b>Heiko Mueller</b> , Qing Liu, Quan Bai, Corne Kloppers, and Andrew Terhorst Enabling Assessment and Propagation of Information Quality in the South Esk Hydrological Sensor Web
15:45–16:00	EGU2011-5384 <b>Lucy Bastin</b> , Matthew Williams, John Paul Gosling, Phuong Truong, Dan Cornford, Gerard Heuvelink, and Frederic Achard Web Based Expert Elicitation of Uncertainties in Environmental Model Inputs
16:00–16:15	EGU2011-8339 <b>Judith Versteegen</b> , Floor van der Hilst, Derek Karssenberg, and André Faaij Communicating Uncertainty in Spatial Decision Support Systems - a Case Study of Bioenergy-Crop Potentials in Mozambique
16:15–16:30	EGU2011-3230 <b>Didier G. Leibovici</b> , Amir Pourabdollah, and Mike Jackson Meta-propagation of Uncertainties for Scientific Workflow Quality Management in Interoperable Spatial Data Infrastructures
16:30–16:45	EGU2011-10149 <b>Siegbert Kunz</b> and Kym Watson A Spatial Information Infrastructure for linking environmental and health data: the approach to information fusion including uncertainty handling in the EO2HEAVEN project
16:45–17:00	EGU2011-5554 <b>Lydia E. Gerharz</b> , Benjamin Proß, Christoph Stasch, and Edzer Pebesma A Web-based Uncertainty-enabled Information System for Urban Air Quality Assessment

**ESSI8 – Uncertainty in Environmental Data and Models (co-listed) – Posters**

Convener: Dan Cornford | Co-Conveners: Stefano Nativi, Edzer Pebesma, Gerard Heuvelink

**Hall XL | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Dan Cornford

XL199	EGU2011-769 <b>Euan Macrae</b> , Clare Bond, and Zoe Shipton Quantification of uncertainty in geoscience interpretation: a statistical analysis of the factors that affect interpretational ability
XL200	EGU2011-2965 <b>Antonia K. Runge</b> , Frank Scherbaum, and Carsten Riggelsen Quantification of expert knowledge for PSHA using graphical tools
XL201	EGU2011-2642 <b>Christopher Moseley</b> , Claus Döring, Bernd Ahrends, and Oleg Panferov Uncertainties in regional climate scenarios data and their effect on results of impact models in forestry
XL202	EGU2011-3372 <b>Rachel Lowe</b> , David Stephenson, Trevor Bailey, Tim Jupp, Richard Graham, and Adrian Tompkins Communicating probabilistic climate-sensitive disease risk forecasts
XL203	EGU2011-13186 <b>Dan Cornford</b> , Richard Jones, Alexis Boukouvalas, and Remi Barillec Statistical Issues of Managing Uncertainties in Environmental Models

XL204	EGU2011-13126 <b>Dan Cornford</b> , Edzer Pebesma, Stefano Nativi, Matthew Williams, Christoph Stasch, Richard Jones, and Lydia Gerharz Realising the Uncertainty Enabled Model Web
XL205	EGU2011-4077 <b>Kerry Gallagher</b> , Thomas Bodin, Malcolm Cambridge, Dominik Weiss, Malin Kylander, and David Large Inference of abrupt changes in noisy data records using Bayesian transdimensional changepoint models
XL206	EGU2011-5057 <b>Matthias Vanmaercke</b> , Jean Poesen, Faruk Ocakoglu, Mahmood Arabkhedri, and Maria Radoane How long should we measure to obtain reliable average catchment sediment yields?
XL207	EGU2011-11108 Mohamar Ouedraogo, <b>Aurore Degré</b> , Eléonore Beckers, and Charles Debouche A methodology to assess the exactness of Stream Network modeling process on agricultural watersheds
XL208	EGU2011-10893 <b>Philipp Weihs</b> and the actinicflux Team The influence of the spatial resolution of topographic input data on the accuracy of 3-D UV actinic flux and irradiance calculations
XL209	EGU2011-7018 <b>Nadine Goris</b> and Hendrik Elbern Singular vector based uncertainties of initial values and emissions for the ZEPTER-2 campaign
XL210	EGU2011-2566 <b>Maurice Cox</b> , Alistair Forbes, Nigel Fox, Peter Harris, Graham Machin, and Michael de Podesta Metrological issues in producing gridded temperature data sets
XL211	EGU2011-9630 <b>Greg Timms</b> , Ben Howell, Paulo de Souza, Claire D'Este, Daniel Smith, Ross Atkins, and Chris Sharman Automated Assessment and Visualisation of Measurement Uncertainties in a Low-Cost Marine Sensor Network
XL212	EGU2011-7137 <b>Richard Wartenburger</b> , Alexander Stickler, and Stefan Brönnimann Quality Control of Selected Historical Radiosonde Observations from 1948-1966
XL213	EGU2011-8871 <b>David Huard</b> and Diane Chaumont Bayesian uncertainty analysis of climatological changes in IDF curves
XL214	EGU2011-7428 <b>Nikos Gianniotis</b> , Carsten Riggelsen, and Frank Scherbaum Ensembles of Ground Motion Models
XL215	EGU2011-9504 <b>Anja Vre?ko</b> and Tomaž Podobnikar Error Assessment of DEM generated from Contours

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**OS4.6 – Ocean Science in Support of Marine Renewable Energy (co-listed) – Posters**

Convener: Daniel Conley | Co-Conveners: Phil Hosegood

**Halls X/Y | Display Time 08:00–19:30**

Author in Attendance: 15:30–17:00

Chairperson: Daniel Conley; Merrick Haller

XY648	EGU2011-2832 <b>Mark Hemer</b> and David Griffin The wave energy resource along Australia's southern margin
XY649	EGU2011-4304 <b>Gianmaria Sannino</b> , Andrea Bargagli, Adriana Carillo, Luca Liberti, Vittorio Ruggiero, and Piero Lanucara Assessment of the present and near future wave potential along the Mediterranean coasts: a high resolution numerical modeling study.
XY650	EGU2011-6802 <b>Jean-François Dorville</b> , Raphael Cécé, Juvenal Dufaur, Sandrine Samot, Sony Broussillon, Maïna André, and Ruddy Blonbou Determination of the marine potential energy in the French West Indies for the building of energy converter pilot
XY651	EGU2011-9445 <b>Merrick Haller</b> , Pukha Lenee-Bluhm, David Newborn, Tuba Ozkan-Haller, Ken Rhinefrank, David Hill, David Honegger, and Aaron Porter Experiments on the near-field and far-field wave effects of WEC arrays

- XY652 EGU2011-9622  
**Fotis Sotiropoulos**, Leonardo P. Chamorro, Seokkoo Kang, and Roger Arndt  
On the structure of turbulence around hydrokinetic turbines in an open channel: Experiments and numerical simulations
- XY653 EGU2011-11944  
**Francisco J. Ocampo-Torres** and Pedro Osuna  
Energy resources evaluation from wave records and historical simulation in the coastal region of the Baja California Peninsula
- XY654 EGU2011-11950  
**George Kallos**, George Galanis, Christina Mitsakou, Panos Athanasiadis, Christos Spyrou, Sarantis Sofianos, and Christina Kalogerri  
Energy resource mapping at the framework of MARINA PLATFORM project
- XY655 EGU2011-12472  
Roberto Mínguez, **Antonio Espejo**, Antonio Tomás, Melisa Menéndez, Fernando J. Méndez, and Inigo J. Losada  
Directional Calibrated Wind and Wave Reanalysis Databases using Instrumental Data for Optimal Design of Off-Shore Wind Farms
- XY656 EGU2011-13546  
**Rosa María Prol-Ledesma**, Carlos Lechuga Deveze, Manel Fernández Ortiga, Antonio Correia, Evgueni Shumilin, Carles Canet, Dayán Rodríguez, and Viridiana Vázquez  
High heat flow and gas discharge in a nascent spreading center in the northern Gulf of California
- XY657 EGU2011-13863  
**Daniel Conley** and Martin Austin  
The Use of HF Radar for Resource Assessment

## Friday, 08 April

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### ERE3.2/GD1.3/GMPV53 – Mineral systems: from geological, geochemical and geophysical data to metallogenetic systems simulation (co-organized) – Orals

Convener: Christopher Juhlin | Co-Conveners: Gilles Bellefleur, Klaus Gessner, Mark Jessel, Robert P. Moritz, Peter Sorjonen-Ward, Olivier Vanderhaeghe, Pär Weiher

**Room: 3**

Chairperson: Chris Juhlin, Gilles Bellefleur

08:30–08:45 EGU2011-71

**Alireza Malehmir** and Gilles Bellefleur

Reflection seismic studies of mineral deposits and their host-rock structures: two case studies from Sweden and Canada

08:45–09:00 EGU2011-4578

**Kreshimir N. Malitch** and Rais M. Latypov

New insights on the origin of ultramafic-mafic intrusions and associated PGE-Cu-Ni sulphide deposits of the Talnakh ore junction (Noril'sk province, Russia): geophysical and geochronological evidence

09:00–09:15 EGU2011-4854

**Ernst Schetselaar**, Don White, Doreen Ames, Eric de Kemp, Eric Grunsky, Sally Pehrsson, Christine Devine, Michal Malinowski, Jennie Byron, and Harold Gibson

A Framework for 3D Multiparameter Mapping of VMS Ore Systems illustrated with a Case Study from the Flin Flon Mining District, Trans-Hudson Orogen, Canada

09:15–09:30 EGU2011-2197

**Michał Malinowski**, Don White, and Ernst Schetselaar

3-D seismic modelling in the Flin Flon mining camp, Canada

09:30–09:45 EGU2011-8521

**Colin Farquharson**, Peter Lelièvre, and Charles Hurich

Unified geophysical and geological 3-D Earth models

09:45–10:00 EGU2011-9869

**Pietari Skyttä**, Tobias Hermansson, Jenny Andersson, and Pär Weiher

Age constraints on mineralization and deformation processes in the Palaeoproterozoic Skellefte District, Sweden

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### COFFEE BREAK

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Chairperson: Olivier Vanderhaeghe, Peter Sorjonen-Ward

10:30–10:45 EGU2011-10123

**Justine Jaguin**, Marc Poujol, Denis Gapais, Philippe Boulvais, and Jean-François Moyen

DEFORMATION/MINERALIZATION (Sb) COUPLING WITHIN THE MURCHISON GREENSTONE BELT, SOUTH AFRICA

10:45–11:00 EGU2011-2422

**Romain Tartès**, Philippe Boulvais, Marc Poujol, and Eric Gloaguen

The late Carboniferous Variscan evolution of the Armorican Massif (France): magmatism, hydrothermalism and metallogenetic consequences

11:00–11:15 EGU2011-4319

**Alison Ord**, Bruce Hobbs, and Dan Lester

The Development of Redox-pH-fronts in Hydrothermal Systems

11:15–11:30 EGU2011-4101

**Olivier Vanderhaeghe**, Fabre Cécile, Moyen Jean-François, André-Mayer Anne-Sylvie, Barbey Pierre, and Cuney Michel

Cratons radioactivity, crustal growth, paleogeotherms and metallogenetic provinces

11:30–11:45 EGU2011-7616

**John Grocott**, Armelle Kloppenburg, and David Hutchinson

Quantitative Structural Modelling to Determine a Valid Kinematic Framework for the Cu-Au-Mo Porphyry Mineralisation System at Bingham Canyon, Utah, USA

11:45–12:00 EGU2011-2966

**Mark Lindsay**, Stéphane Perrouty, Mark Jessell, Laurent Aillères, Eric deKemp, and Peter Betts

Model space exploration of the Ashanti Greenstone Belt, southwestern Ghana

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### ERE3.2/GD1.3/GMPV53 – Mineral systems: from geological, geochemical and geophysical data to metallogenetic

**systems simulation (co-organized) – Posters**

Convener: Christopher Juhlin | Co-Conveners: Gilles Bellefleur, Klaus Gessner, Mark Jessel, Robert P. Moritz, Peter Sorjonen-Ward, Olivier Vanderhaeghe, Pär Weiher

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 15:30–17:00

Chairperson: Pär Weiher, Olivier Vanderhaeghe, Chris Juhlin

- XL138 EGU2011-35  
**Alexander Rodnikov**, Natalia Sergeyeva, and Ludmila Zabarinskaya  
 Geodynamic and Metallogeny in the Pacific Mobil Belt
- XL139 EGU2011-223  
**Mahdieh Dehghannejad**, Tobias Bauer, Alireza Malehmir, Christopher Juhlin, Rodney Allen, and Pär Weiher  
 Reflection seismic imaging to construct a 3D/4D geological model of the Skellefte Ore District, northern Sweden
- XL140 EGU2011-689  
**María de los Ángeles García Juanatey**, Peter Hedin, Juliane Hübner, Ari Tryggvason, and Christopher Juhlin  
 MT and seismic reflection data in northwestern Skellefte Ore District, northern Sweden.
- XL141 EGU2011-5999  
**Changryol Kim** and Ho-Sung Yoon  
 Integrated Geophysical Investigations of the Uranium Deposit in the Okcheon Metamorphic Belt in Korea
- XL142 EGU2011-6130  
**Jeongsul Son**, Jungho Klm, and Samgyu Park  
 Complex resistivity survey for mineral exploration using L1 norm inversion
- XL143 EGU2011-6544  
**Samgyu Park**, Jeong-Sul Son, Seong-Jun Cho, Jung-Ho Kim, and Changryol Kim  
 Application of Electrical Resistivity Survey for Detecting the Skarn Ore Body
- XL144 EGU2011-7934  
 Inna Yu. Badanina and **Kreshimir N. Malitch**  
 Origin of platinum-group mineral (PGM) nuggets from the Bor-Uryakh massif (Maimecha-Kotui Province, Russia): evidence from mineral composition
- XL145 EGU2011-9436  
**Anikina Elena** and Gamyanin Gennady N.  
 Features of formation of silver-polymetallic deposits of Kolyma-Verkhoyansk fold belt (Russia)
- XL146 EGU2011-9573  
**Klaus Gessner**, Vanessa Markwitz, and Alok Porwal  
 Structural controls on hydrothermal mineralization in the Menderes Massif, western Turkey
- XL147 EGU2011-11785  
**Elena Amplieva**, Viktor Ivanov, Viktor Beltenev, and Irina Dobretsova  
 Semenov submarine hydrothermal massive sulfide cluster (13°31'N, Mid-Atlantic Ridge)
- XL148 EGU2011-13150  
**Lena V. S. Monteiro**, Carolina P. N. Moreto, André L. S. Pestilho, Caetano Juliani, Roberto P. Xavier, and Anthony E. Fallick  
 Evolution of iron oxide-copper-gold deposits from the Southern Copper Belt, Carajás Mineral Province, Brazil
- XL149 EGU2011-13595  
**Luis Alva-Valdivia**  
 The Peña Colorada iron oxide-ores, México: Petrological characterization
- XL150 EGU2011-2755  
**Gilles Bellefleur**, Eric de Kemp, Jean Goutier, and Michel Allard  
 Seismic Imaging of the Geological Framework and Structures Related to Volcanogenic Massive Sulfide Deposits in the Archean Rouyn-Noranda District, Québec, Canada
- XL151 EGU2011-7534  
**Pietari Skyttä**, Tobias Bauer, Saman Tavakoli, Pär Weiher, Rodney Allen, Mahdieh Dehghannejad, María García Juanatey, and Juliane Hübner  
 Multiscale 3/4D-modelling of mineral belts - examples from the Skellefte Mining District, Sweden
- XL152 EGU2011-11434  
**Eevaliisa Laine**, Jouni Luukas, Aimo Ruotsalainen, Ilkka Suppala, Jukka Kousa, and Raimo Lahtinen  
 3D modeling of the bedrock surrounding the Lampinsaari and Kuuhkamo Zn-Cu deposits in the Vihanti area, Finland
- XL153 EGU2011-1183  
**Tola Mirza**  
 Genesis of white acidic intrusion in Mawat Ophiolite Complex, Kurdistan Region, NE Iraq
- XL154 EGU2011-5355  
**Weronika Gorczyk**, Bruce Hobbs, Guizhi Zhu, Klaus Gessner, and Alison Ord  
 INTRA-CRATONIC Lithosphe HETEROGENEITIES, FAULTing and Rayleigh-Taylor Instabilities - insight from 3D numerical modelling

- XL155 EGU2011-29  
**mohamadali rajabzadeh and soqra rasti**  
Mineralization study on Iron deposits from Dehbid area, Fars province, South Iran: Geochemical and mineralogical data
- XL156 EGU2011-236  
**susan ebrahimi**  
Geology, mineralogy and fluid characteristics of the Masjed Daghi epithermal gold deposit, NW Iran
- XL157 EGU2011-318  
**Seyedeh Zahra Afshooni**, Dariush Esmaeily, and Hooshang Asadi Haroni  
The study of mineralogy in Kahang exploration area (NE Isfahan)
- XL158 EGU2011-1222  
**Dicle Bal Akkoca** and Sevcan Kürüm  
Regional Variations in Clay Mineralogy and Geochemistry of Mn-Rich Marine Clays from Maden-Hazar Basin in the Neotethys, (Eastern Turkey)
- XL159 EGU2011-4100  
**Julie Machault**, Luc Barbanson, Thierry Augé, Laurent Bailly, and Alexandre Felicio  
Traceability of concentrate: characterization of microfacies and consideration of mineral processing
- XL160 EGU2011-3799  
**Benoit Rivard**, Derek Rogge, Jilu Feng, Brian Grant, and Jamie Pardie  
Hyperspectral sensing in support of mineral exploration in the arctic: example from the Cape Smith Nickel belt, Canada
- XL161 EGU2011-5412  
**Arnaud Pecher**, Nicholas Arndt, Arthur Bauville, Clément Ganino, Mei-fu Zhou, Iacono Marziano Giada, Gaillard Fabrice, and Charlotte Arthurion  
Pumping Iron from a Metamorphic Aureole into an Steeply Inclined Dyke-like Intrusion; a New Model for the Formation of the Panzhihua Fe-Ti-V Deposit
- XL162 EGU2011-11958  
**Nicola Mondillo**, Maria Boni, and Giuseppina Balassone  
Supergene Zn-dolomite: an old-new actor on the nonsulphide ore scene

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**ERE4.1 – Landscape functionality and conservation management – Orals**

Convener: Antonio Leone | Co-Conveners: Veerle Van Eetvelde, Federica Gobattoni, Raffaele Pelorosso

**Room: 3**

Chairperson: Antonio Leone

- 13:30–13:45 EGU2011-4332  
**Danica Zupanski** and Ratko Ristic  
Impact of floating debris from the Drina River and mitigation measures
- 13:45–14:00 EGU2011-7815  
**Paul Passy**, Josette Garnier, Gilles Billen, Corinne Fesneau, and Julien Tournebize  
Landscape management and nutrient transfers through a watershed. How to decrease nitric pollution in the intensive agricultural basin of the Seine (France)?
- 14:00–14:15 EGU2011-13881  
**Laura Melelli** and Mario Floris  
A new Geodiversity Index as a quantitative indicator of abiotic parameters to improve landscape conservation: an Italian case study.
- 14:15–14:30 EGU2011-4030  
**Raffaele Pelorosso**, Stefano Della Chiesa, Ulrike Tappeiner, Antonio Leone, and Duccio Rocchini  
Conservation strategies definition for large abandoned landscape of Mediterranean basin
- 14:30–14:45 EGU2011-4023  
**Federica Gobattoni**, Raffaele Pelorosso, Giuliana Lauro, Antonio Leone, and Roberto Monaco  
PANDORA: Procedure for mAthematical aNalysis of lanDscape evOlution and equilibRium scenarios Assessment
- 14:45–15:00 EGU2011-9971  
**Filiberto Lembo**  
Semi-underground houses and their role in the building of sustainable urban landscape

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**ERE4.1 – Landscape functionality and conservation management – Posters**

Convener: Antonio Leone | Co-Conveners: Veerle Van Eetvelde, Federica Gobattoni, Raffaele Pelorosso

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 15:30–17:00

Chairperson: Raffaele Pelorosso

- XL163 EGU2011-49  
**Irina Averkieva** and Irina Priputina  
 Impact of landscape factors an anthropogenic emission on reactive nitrogen accumulation in forests of Central Russia
- XL164 EGU2011-4028  
**Raffaele Pelorosso**, Federica Gobattoni, Antonio Leone, and Arnoud Temme  
 A dynamic landscape evolution model for P export estimation from crops through sediment volume assessment: the case of the lake Bolsena watershed, Italy.
- XL165 EGU2011-5753  
**Fabio Recanatesi**, Maria Nicolina Ripa, and Antonio Leone  
 Remote sensing change detection of vegetation: a case study from Palestinian West Bank using GIS and Landsat TM data
- XL166 EGU2011-8030  
**Catrin Promper**, Margreth Keiler, and Thomas Glade  
 Anthropogenic influenced landscape - a multi-temporal analysis of high alpine catchments
- XL167 EGU2011-12476  
 Antonella Guida, **Antonello Pagliuca**, and Gianluca Rospi  
 Microclimatic performance of a restored hypogea: the case of "Locanda di San Martino
- XL168 EGU2011-13453  
**Giulia Curatola**, Boris Thies, Hanna Meyer, and Joerg Bendix  
 Landscape Dynamics in Southern Ecuador's Tropical Mountain Forest Ecosystem Using Remote Sensing Techniques
- XL169 EGU2011-13397  
**Ingrid Jacquemin**, Corentin M. Fontaine, Rik De Vreese, Louis François, Allyson Marek, Ann Van Herzele, Guénaël Devillet, and Nicolas Dendoncker  
 Participatory valuation and modelling of ecosystem services under land use change
- XL170 EGU2011-7981  
**Francesco Fava**, Claudio Zucca, and Pier Paolo Roggero  
 Vegetation condition assessment and monitoring in Mediterranean agropastoral regions
- XL171 EGU2011-11867  
**Giuseppe Pulighe**, Francesco Fava, Claudio Zucca, Salvatore Madrau, Massimo D'Angelo, and Roberto Scotti  
 Mapping land cover changes associated with restoration actions to combat desertification in a Mediterranean sylvopastoral landscape
- XL172 EGU2011-12918  
**Janine Kettering**, Bora Lee, Steve Lindner, Ralf Kiese, Yakov Kuzyakov, and John Tenhunen  
 N budget in intensive agriculture under monsoon climate: an extensive balance approach for nitrogen fluxes on landscape scale
- XL173 EGU2011-12392  
**Pedro Dinis**, João Almeida, Alexandre Tavares, and Marina Cabral Pinto  
 Relations between lithology and soil use in a wine production region (Bairrada region, Portugal)
- XL174 EGU2011-367  
**Nunzia Casale**, Filiberto Lembo, and Francesco Paolo R. Marino  
 Principles and case studies of bioclimatic semi-underground architecture
- XL175 EGU2011-538  
**Catiana Calcagno**, Filiberto Lembo, and Francesco Paolo R. Marino  
 New semi-underground house models, high density-low rise
- XL176 EGU2011-10007  
**Francesco Paolo R. Marino**  
 Criticality of the isolation choices of the underground building to the ground
- XL177 EGU2011-12936  
**Antonio Michele Zamina**  
 Multi-family settlement in the northern side of Potenza Italy
- XL178 EGU2011-1872  
**Juan Antonio Pascual-Aguilar**, Vicente Andreu, Pablo Vázquez, and Yolanda Picó  
 Detection of illicit drugs on surface waters of interconnected urban, agricultural and natural wetlands water networks

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**ERE5.1/GMPV32/HS12.1/SSS2.9 – Coupled reactive transport: Codes, applications and trends (co-organized) – Orals**  
 Convener: Georg Kosakowski | Co-Conveners: Josep M. Soler, Peter Alt-Epping

**Room: 3**

Chairperson: Peter Alt-Epping

- 15:30–15:45 EGU2011-716  
**Maria Gabriela Davila Ordoñez**, Maria Garcia Rios, Josep M. Soler, and Jordi Cama  
 Modeling the dissolution of calcite coupled to gypsum precipitation in acid brines
- 15:45–16:00 EGU2011-2202  
 Yaniv Edery, Harvey Scher, and **Brian Berkowitz**  
 Modeling Dissolution and Precipitation Dynamics During Dedolomitization
- 16:00–16:15 EGU2011-4128  
**Jennifer Palguta**, Colin F. Williams, Steven E. Ingebritsen, Stephen H. Hickman, and Eric Sonnenthal  
 An approach for modeling geothermal reservoir behavior using the reactive transport simulator  
 TOUGHREACT
- 16:15–16:30 EGU2011-11479  
**Caroline de Dieuleveult**, Vincent Lagneau, and Juan Hidalgo  
 Development of an isotopic fractionation and filiation module in the reactive transport code HYTEC
- 16:30–16:45 EGU2011-721  
**Andrey Afanasyev**  
 Simulation of multiphase flows of binary mixtures under sub- and supercritical conditions
- 16:45–17:00 EGU2011-12020  
**Marco De Lucia**, Susanne Stadler, Matthias Rateitzak, and Michael Kühn  
 Evaluating uncertainties in geochemical modelling for CO<sub>2</sub> storage: multivariate sensitivity analysis of database entries

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**ERE5.1/GMPV32/HS12.1/SSS2.9 – Coupled reactive transport: Codes, applications and trends (co-organized) –**

## Posters

Convener: Georg Kosakowski | Co-Conveners: Josep M. Soler, Peter Alt-Epping

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 13:30–15:00

Chairperson: n.n.

- XL179 EGU2011-11527  
**Blaise Delmotte**, Carole Delenne, Vincent Guinot, and Elena Gomez  
 Calibration and sensitivity analysis of a one-dimensional model of pollutant transport and degradation in maturation ponds.
- XL180 EGU2011-12919  
**Thomas Gimmi**, Olivier X. Leupin, Jost Eikenberg, Martin A. Glaus, Luc R. Van Loon, H. Niklaus Waber, Josep M. Soler, Acacia Naves, Javier Samper, Sarah Dewonck and the rest of the DR Team  
 Results and modelling of the 4-year diffusion and retention (DR) experiment in Opalinus Clay in the Mont Terri URL
- XL181 EGU2011-4004  
**Josep M. Soler**, Marja Vuorio, and Aimo Hautojärvi  
 Reactive transport modeling of the interaction between water and a cementitious grout in a fracture
- XL182 EGU2011-10034  
**Alexandre Boisson**, Luc Aquilina, and Olivier Bour  
 Influence of flow velocity on denitrification in a pore-scale lab experiment
- XL183 EGU2011-2044  
**Georg Kosakowski** and Urs Berner  
 Influence of a concrete liner on the evolution of the near field of a HLW repository
- XL184 EGU2011-10789  
**Peter Alt-Epping** and Larryn W. Diamond  
 Implications of rock composition, brine composition and pressure/temperature conditions for CO<sub>2</sub> mineral trapping in deep saline aquifers
- XL185 EGU2011-10010  
**Christoph Egbers** and Nicoleta Scurtu  
 Challenges in the Numerical Modelling of the CO<sub>2</sub>-Transport in Pipelines
- XL186 EGU2011-5581  
**Haibing Shao**, Christina M. Haberer, Peter Grathwohl, and Olaf Kolditz  
 Modeling the oxygen mass transfer across the capillary fringe using a multiphase reactive transport code - numerical model construction and comparison with experimental data
- XL187 EGU2011-13903  
**Mingliang Xie**, Olaf Kolditz, and Helge Moog  
 A geochemical model for highly saline solutions
- XL189 EGU2011-7457  
**Dedong Li**, Christof Beyer, and Sebastian Bauer  
 Simulation of fluid-mineral kinetic reactions during CO<sub>2</sub> storage using ChemApp and SUPCRT92 coupled to OpenGeoSys

XL190	EGU2011-7625 <b>Luis Manuel de Vries</b> , Albert Nardi, Luit Jan Slooten, and Jesus Carrera Random Walk Particle Tracking for reactive transport modelling
XL191	EGU2011-11295 Sarah Jane Fowler, <b>Ferdinand Hingerl</b> , Thomas Driesner, Georg Kosakowski, Dmitrii Kulik, and Thomas Wagner Reactive transport simulation by combining a multiphase-capable transport code for unstructured meshes with Gibbs energy minimization and multi-electrolyte solution models
XL192	EGU2011-13635 <b>Hamidreza M. Nick</b> , Pierre Regnier, Martin Thullner, Stephan Matthai, and Florian Centler A reactive transport model for complex geological media
XL193	EGU2011-14156 <b>Rajandrea Sethi</b> and Tiziana Tosco E-MNM1D: A model for the simulation of shear thinning suspensions of zerovalent iron micro and nanoparticles in porous media
XL194	EGU2011-2696 <b>Minh Tan Vu</b> and Pierre M Adler Deposition and/or dissolution in Porous Media
XL195	EGU2011-3229 <b>Mohamed Hayek</b> , Georg Kosakowski, and Sergey Churakov Analytical solutions for diffusive transport with heterogeneous reactions and porosity changes
XL196	EGU2011-6773 <b>alain dimier</b> and elodie jeandel A phreeqC-Elmer coupling algorithm for T-H-M-C modeling applications

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**GMPV8 – Pollution and Geochemistry (co-listed) – Orals**

Convener: Brunella Raco | Co-Conveners: Elissavet Dotsika, Luigi Marini

**Room: 20**

Chairperson: Elissavet Dotsika

15:30–15:45	EGU2011-2251 <b>Stefanie H. Boltersdorf</b> Assessing the quality and quantity of N deposition by total N content and the stable isotope signatures in lichen tissue
15:45–16:00	EGU2011-8055 <b>Gabriele Curci</b> , Paolo Tuccella, Giovanni Cinque, and Guido Visconti Impact of a renewable biomass energy power plant in urban landscape with complex terrain in Central Italy: modelling assessment and suggestions for monitoring site
16:00–16:15	EGU2011-1360 <b>Franco Tassi</b> , Caterina Liccioli, and Orlando Vaselli VOC composition in air: multi-component sources in a polluted sub-urban area of Florence (Italy).
16:15–16:30	EGU2011-11564 <b>Caroline Gauchotte</b> , Laura McGregor, Phil Richards, Stephanie Kerr, Helen Gray, Paddy Daly, Russell Thomas, and Robert M. Kalin Ultra-Resolution Chemical Fingerprinting of Dense Non-Aqueous Phase Liquids from Former Manufactured Gas Plants Sites.
16:30–16:45	EGU2011-11677 <b>Mine Terzi</b> , Beyhan Pekey, and Halim Aytekin Ergül PCB Concentrations in Bottom Sediment Samples From Izmit Bay
16:45–17:00	EGU2011-7569 Zygmunt Strzyszcz and <b>Marzena Rachwa?</b> Formation of technogenic magnetic anomalies in forest soils depending on an amount of industrial dust deposition and the time factor

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**GMPV8 – Pollution and Geochemistry (co-listed) – Posters**

Convener: Brunella Raco | Co-Conveners: Elissavet Dotsika, Luigi Marini

**Hall A | Display Time 08:00–17:00**

Author in Attendance: 13:30–15:00

Chairperson: Brunella Raco

A154	EGU2011-12435 <b>Marina Cabral Pinto</b> , Eduardo A. Ferreira da Silva, Maria MGV Silva, Paulo Melo-Gonçalves, Maria M. Inácio, and Amélia P. Reis Maps of multi-elemental enrichment indices in soils and stream sediments from Santiago Island, Cape Verde
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- A155 EGU2011-1072  
**Ibrahim Mohialdeen**  
Inorganic Geochemistry of the Upper Jurassic Chia-Gara Formation, a potential source rock in Iraqi Kurdistan Region
- A156 EGU2011-2723  
Pablo Vazquez-Roig, Cristina Blasco, **Vicente Andreu**, and Yolanda Pico  
Emerging contamination in coastal marsh waters of the eastern Spain
- A157 EGU2011-3151  
**Nicolae Calin**, Aurora-Maruta Iancu, Maria Angela Anason, Delia-Georgeta Dumitras, Stefan Marincea, and Constantina Porumbescu  
Geochemistry of phosphogypsum from Turnu Magurele, Romania
- A158 EGU2011-3752  
**Siou-Ying Tai** and Hsueh-yu Lu  
The study of water-rock interaction in Choshui River watershed, Taiwan.
- A159 EGU2011-3903  
**Anne Schucknecht** and Jörg Matschullat  
Geochemical soil baseline values in north-eastern Brazil - vital requirement for pollution studies
- A160 EGU2011-6796  
**Jeong-Won Lim**, Eunhee Lee, Hee Sun Moon, and Kang-Kun Lee  
Characterizing saltwater contamination of subsurface water around the underground storage cavern with hydrochemical analysis
- A161 EGU2011-7080  
**Ian Fielding**  
Ensuring risk-based remedial activities are sustainable: A case study at a former petroleum products terminal in Madeira
- A162 EGU2011-8398  
**Nicola Hardy**, Rebecca Bartlett, and Ian Fielding  
Biodegradation of light-end aliphatic hydrocarbons: Suitable rates for gasoline-type releases
- A163 EGU2011-9461  
**Ioannis Hatzianestis**  
Marine organic geochemistry of the Eastern Mediterranean: Polycyclic aromatic hydrocarbons in Aegean and Ionian Sea surface sediments
- A164 EGU2011-10827  
**Chun-Mei Hsu** and Chien-Yen Chen  
Antibiotic Sorption Using the Clay from Wushanding Mud Volcano, Taiwan
- A165 EGU2011-11283  
**Luminita Marmureanu**, Camelia Talianu, Jeni Vasilescu, and Livio Belegante  
Investigation of local sulfur dioxide pollution from a thermal power plant using lidar and point monitors measurements
- A166 EGU2011-12539  
**Marina Cabral Pinto**, Maria M.G.V. Silva, Eduardo A. Ferreira da Silva, Pedro A. Dinis, and Fernando Rocha  
Geochemistry and mineralogy of stream sediments of Santiago island, Cape Verde
- A167 EGU2011-887  
**Maite Lacarra**, Marie-Noelle Houssais, Christophe Herbaut, Emmanuelle Sultan, and Abdou Aziz Mbengue  
Formation of dense shelf water on the east Antarctic continental shelf off Adelie Land during 2008-2010
- A168 EGU2011-10470  
**Aykan Karademir**, Bircan Telli, Seda Aslan Kilavuz, and Halim Aytekin Ergul  
Assessment of the PCDD/F pollution in the bottom sediments in Izmit Bay, Turkey
- A169 EGU2011-11938  
**Halim Aytekin Ergul**, Aykan Karademir, and Sayhan Topcu?lu  
Heavy Metal Concentrations in Bottom Sediment Samples from Izmit Bay
- A170 EGU2011-13141  
**Juan A. Romero Guadarrama**, Alberto Sanchez, Ana J. Marmolejo Rodriguez, Carles Canet, Martha Sanchez Martinez, and Victor R. Magallanes Ordoñez  
Geochemistry and mineralogy in sediments influenced by the gold mining district El Triunfo, Mexico
- A171 EGU2011-403  
Vladimir Masloboev, Dmitry Makarov, Dmitry Nesterov, Svetlana Mazukhina, and **Sergey Muravyov**  
Artificial geochemical barriers for directed formation of technogenic deposits and environment protection

