POSTER SESSION

Monday, September 28, 5:30–8:00 PM
LBNL Cafeteria

BOARD	TITLE / AUTHOR
Carbon Dioxide Storage	
Board 1	**Pressure management during geological CO_2 sequestration: Optimal well placement and brine extraction in a heterogeneous reservoir** **Abdullah Cihan**, Jens Birkholzer (Lawrence Berkeley National Laboratory (LBNL)), Marco Bianchi (British Geological Survey)
Board 2	**Risk scenario analysis for heterogeneous geological model in a carbon sequestration application in Taiwan** Chi-Wen Yu and **Shih-Chang Lei** (Sinotech Engineering Consultants Inc.)
Board 3	**ECO2N V2.0: Enhancements for modeling CO_2-H_2O-NaCl system in TOUGH2** **Lehua Pan**, Nicolas Spycher, Christine Doughty, Karsten Pruess (LBNL)
Board 4	**The effect of natural groundwater flow on CO_2 migration and trapping: The case of the Jurassic saline aquifer of the Negev (Israel)** **Ravid Rosenzweig** and Ran Calvo (Geological Survey of Israel)
Geothermal	
Board 5	**Experimental study on flow friction and heat transfer performance of a single rough fracture in granitic rock under confining pressure** **Xiaoxue Huang**, Jialing Zhu, Jun Li (Tianjin University)
Board 6	**Stress field respond to massive injection of cold water into a geothermal reservoir: TOUGH-FLAC simulation** **Pierre Jeanne** and Jonny Rutqvist (LBNL)
Board 7	**Modeling laboratory experiments of fluid flow and heat transfer in supercritical-CO_2-saturated cores with ECO2N V2.0** **Mario Magliocco** (University of California, Berkeley), Christine Doughty, Tim Kneafsey (LBNL), Steve Glaser (University of California, Berkeley, LBNL)
Board 8	**Geothermal exploration through numerical modeling of cold CO_2 soil fluxes** Loic Peiffer (Universidad Nacional Autónoma de México), Christoph Wanner (University of Bern), Lehua Pan (LBNL)
Numerical Methods	
Board 9	**pTOUGH+: Status of re-engineering parallel TOUGH+** **Noel Keen**, Jeff Johnson, George Moridis, Matt Reagan (LBNL)
Board 10	**iMatTOUGH: An open-source Matlab-based graphical user interface for pre- and post-processing of TOUGH2 and iTOUGH2 models** **Anh Phuong Tran**, Baptiste Dafflon, Susan Hubbard (LBNL)
Board 11	**Using GMS as a pre- and post-processor for TOUGH2** **Andrea Borgia** (LBNL)
Coupled Fluid Flow and Geomechanics	
Board 12	**Inverse modeling of coupled fluid flow and geomechanics with iTOUGH2-PEST and TOUGH-FLAC: Application to In Salah CO_2 storage site** Antonio P. Rinaldi (LBNL, Swiss Seismological Service), **Jonny Rutqvist**, Stefan Finsterle (LBNL), H.H. Liu (Aramco Research Center)

BOARD	TITLE / AUTHOR
Coupled Fluid Flow and Geomechanics (cont.)	
Board 13	**Modelling fault reactivation and velocity dependent friction with TOUGH-FLAC** **Luca Urpi** (Utrecht University), Antonio P. Rinaldi (Swiss Seismological Service, LBNL), Brecht Wassing (TNO Geo Energy)
Board 14	**A coupled flow and geomechanics simulator for CO_2 storage in fractured reservoirs** **Philip H. Winterfeld** and Yu-Shu Wu (Colorado School of Mines)
Hydrocarbon Recovery and Reservoir Processes	
Board 15	**iTOUGH2-FLAC modeling of thermal-hydraulic-mechanical processes related to steam-assisted heavy oil recovery from diatomite** **Laura Blanco-Martin**, Jonny Rutqvist, Christine Doughty, Yingqi Zhang, Stefan Finsterle, Curtis M. Oldenburg (LBNL)
Board 16	**Modeling steam, water, and oil flow overlying a heavy oil reservoir undergoing cyclic steaming** **Christine Doughty**, Laura Blanco-Martin, Yingqi Zhang, Curtis M. Oldenburg (LBNL)
Board 17	**Water injection close to fault risk analysis, field application** **Julia Diessl**, Vahid Serajian, Mike S. Bruno (GeoMechanics Technologies)
Board 18	**Methane diffusion and adsorption in shale rocks – A numerical study using the Dusty Gas Model in TOUGH2/EOS7C-ECBM** **Weijun Shen** (Chinese Academy of Sciences, University of Chinese Academy of Sciences), Liange Zheng, Curtis M. Oldenburg, Abdullah Cihan, Jiamin Wan, Tetsu K. Tokunaga (LBNL)
Environmental Engineering and Vadose Zone	
Board 19	**Multiphase flow and transport of methane in soil under varying subsurface and atmospheric conditions: Bench-scale experimental and numerical study** **Chamindu Deepagoda**, Kathleen. Smits, Tissa llangasekare (Colorado School of Mines), Curtis M. Oldenburg, Abdullah Cihan (LBNL)
Board 20	**TOUGH2 application for an assessment of open pit slope stability using saturated/unsaturated groundwater flow modeling to estimate hydraulic forces, Arkhangelsk kimberlite pipe, Russia** **Ivan Leonidovich Kharkhordin** (Geostroyproekt Ltd), V.V. Nazima, A.N. Gurin (VNIMI Institute), I.E. Shkil (Severalmaz Co.)
Board 21	**Influence of permeability on the initial gas bubble evolution in compressed air energy storage in aquifers** **Chaobin Guo** (Tongji University), Keni Zhang (Tongji University, Beijing Normal University), Cai Li (University of Sydney)
Board 22	**Simulating water flow through a layered snowpack** Ryan W. Webb (Colorado State University) and **Stephen W. Webb** (Canyon Ridge Consulting, LLC)
Reactive Transport	
Board 23	**Modeling processes affecting carbon dynamics at a biogeochemical hotspot in a floodplain aquifer** **Bhavna Arora**, Dipankar Dwivedi, Nicolas Spycher, Carl Steefel (LBNL)
Board 24	**Analysis of fault "self-sealing" associated with CO_2-leakage in geologic carbon sequestration** Vivek V. Patil, Brian J. McPherson (University of Utah), Alexandra Priewisch (University of New Mexico), Joseph Moore, **Nathan Moodie** (University of Utah)
Board 25	**Numerical simulations of the chemical impact of impurities on geological CO_2 storage – Comparison between TOUGHREACT V2.0 and TOUGHREACT V3.0-OMP** **Dorothee Rebscher**, Jan Lennard Wolf (Bundesanstalt für Geowissenschaften und Rohstoffe, BGR), Jacob Bensabat (Environmental and Water Resources Engineering, EWRE Ltd.), Auli Niemi (Uppsala Universitet)
Board 26	**Potential chemical impacts of CO_2 leakage on underground sources of drinking water (USDWs) assessed by quantitative risk analysis** **Ting Xiao**, Brian McPherson, Feng Pan, Rich Esser (The University of Utah)

BOARD	TITLE / AUTHOR
Optimization, Parameter Estimation, Data-Worth Analysis	
Board 27	**Effect of anisotropy on multi-directional pressure-pulse-decay experiments** **Michael J. Hannon, Jr**. (The University of Alabama at Birmingham) and Stefan Finsterle (LBNL)
Board 28	**fKF-TOUGH: A software package for data assimilation in TOUGH2 using Fast Kalman Filters methods** **Amalia Kokkinaki**, J.Y. Li, H. Ghorbanidehno, E.F. Darve, P.K. Kitanidis (Stanford University)
Board 29	**Smoothing-based compressed state Kalman Filter (sCSKF) for real-time data assimilation: Applications in CO_2 reservoir monitoring and characterization** Judith Yue Li, **Amalia Kokkinaki**, Eric F. Darve, Peter K. Kitanidis (Stanford University)
Board 30	**Global sensitivity and data-worth analyses in iTOUGH2** Haruko Wainwright and **Stefan Finsterle** (LBNL)