

POSTERS



POSTER SESSIONS

S0- What's up in Modelling

Chairs: R. Darnault and J. Malavieille

Brand, D., and Davaille, A., Laboratory characterization of thermal plumes at high Rayleigh numbers.

Buiter, S., et al., Benchmarking numerical models of brittle thrust wedges.

Galland, O., et al., Laboratory geodesy: Application of open-source photogrammetric software MicMac for monitoring surface deformation in laboratory models.

Görz, I., et al., Generating tetrahedral meshes for finite element simulations on complex geological structures.

Haug, Ø. T., et al., Cem-GM: Cemented granular material as rock analogue to model irreversible fragmentation of rocks in landslides.

Jacquey, A. and M. Cacace, Modelling fully-coupled Thermo-Hydro-Mechanical (THM) processes in fractured geothermal reservoirs using GOLEM: a massively parallel open-source simulator.

Klinkmüller, M., et al., The GEOMOD2008 materials benchmark 1: Properties of granular analogue model materials.

Mourgues, R., et al., New anisotropic analogue materials for tectonics and hydraulic fracturing experiments.

Poppe, S., et al., Characterising the physical properties of granular crustal analogues in laboratory experiments imaged with X-ray Computed Tomography.

Rudolf, M., et al., The GEOMOD2008 materials benchmark 2: Properties of viscoelastic analogue model materials.

Schreurs, G., et al., Benchmarking analogue models of brittle thrust wedges.

Trippanera, D., et al., EPOS' Multi-Scale Laboratory platform: a long-term reference tool for experimental Earth Sciences.

Zwaan, F., et al., A new analogue modelling machine to study scissor tectonics.

S1- Geodynamics and Plate Tectonics

Chairs: T. Duretz and L. Le Pourhiet

Aourari, S., Neotectonics characterization of the South Kabylia fault zone Mila- region (Eastern Algeria).

Arcay, D., How to simulate the subduction interface in a convective and compositional model ? The effects of numerical and rheological parameters.

Bauville, A., and Furuichi, M., Hydro-thermo-mechanical numerical simulations for the control of sea floor topography on interplate strength in subduction zones.

Davaille, A. Plumes to initiate subduction, continental growth and plate tectonics : comparison between laboratory experiments, Venus and the Early Earth.

Duretz, T., et al., Extension of a mechanically heterogeneous lithosphere: the role of structural softening.

Fedorik, J., et al., 4D analogue modeling of interaction between compressive and transcurrent structures: insights from SW Sicily and the Sicily Channel.

Glerum, A., et al., Three-dimensional instantaneous dynamics modeling of present-day Aegean subduction.

Grabkowiak, A. and de Viron, O., Confronting geoid to the mantle structures in the Mediterranean.

Hertgen, S. et al., Impact of the overriding plate crustal rheology on convergence zones dynamics.

Jourdon, A., et al., Role of structural inheritance in the localization of intraplate deformation: application to the Kyrgyz Tien Shan Cenozoic tectonics.

Kabakl, A., et al., Sea level changes in Lycia region and their effect to ancient port cities

Karatun, L., and Pysklywec, R., 3-D Computational Modelling of Oblique Continental Collision near South Island, New Zealand.

Kohanpour, F., et al., Tectonic scenarios of the Halls Creek Orogen, Western Australia – insight from geodynamic numerical modeling.

Le Pourhiet, L., et al., Dynamics of lithospheric scale accommodation zones in oblique rift system.

Lu, C-Y., et al., Extrusion tectonics at plate corner in northern Taiwan: an example from field observations and sandbox models.

Malavieille, J., et al., Mountain building in Taiwan, insights from analog models.

Montesi, L., and Gueydan, F., Strength and Deformation Rate of Plate Boundaries.

Peral, M., et al., Analogue modelling of double polarity subduction.

Petit, C., et al., Tectonic inversion of the North African margin (Algeria) and possible subduction inception: insights from numerical thermo-mechanical models.

Plunder, A., et al., The effect of oblique trenches on temperature in subduction zones.

Roda, M., and Zanoni, D., Testing the thermal state of Biella pluton country rocks via numerical model of magma cooling.

Ruh, J. and Vergès, J., Tectonic inversion of a basement-involved fold-and-thrust belt: Numerical modelling applied to the Kopet Dagh Mountains.

Salze, M., et al., Influence of spreading ridge's subduction on plate dynamics: insights from laboratory models.

Strak, V., and Schellart, W., P., Control of Hikurangi plateau-Chatham rise and free northern slab edge on evolution of the Tonga-Kermadec-Hikurangi subduction zone.

Yamato, P., and Duretz, T., Lithospheric-scale shear zone development in convergent setting: time-evolution and switches in dominant rheological behaviour.

Zwaan, F., and Schreurs, G., Influences of oblique extension and structural inheritance on rift interaction: a 4D analog modelling study.

S2- Coupling Tectonics and Surfaces processes

Chairs: O. Ferrer and P. Steer

Babault, J., et al., Transverse- to longitudinal-dominated drainage network reorganization process: from nature to experimental modelling.

Borderie, S., et al., How to localize deformation in a salt detached foreland basin: results from analogue models and study of the Chazuta Thrust in the Huallaga Basin (Peru).

Carmona, A., et al., The Effect of syntectonic sedimentation on fold geometry: Insights from numerical modelling.

Croissant, T., et al., Export of earthquake-triggered landslides in active mountain ranges: insights from 2D morphodynamic modelling.

Corti, G., and Zeoli, A., Influence of ice shelf collapse on the flow of ice sheets grounded below sea-level: insights from analogue modelling.

Guerit, L., et al., Experimental drainage basins as markers of large-scale horizontal deformation.

Gutscher, M-A., et al., Active deformation and kinematics of the Calabria accretionary wedge (Ionian Sea): Constraints from high-resolution bathymetry and analog modeling.

Haug, Ø., T., et al., The effect of fragmentation on rock avalanches: travel and deposit length.

Jeandet, L., et al., Calibration of the landsliding numerical model SLIPOS and prediction of the seismically induced erosion for several large earthquakes scenarios.

Kaislaniemi, L., and Whipp, D., What controls deformation in a bent three-dimensional orogen? An example from the Bolivian Andes.

Lazaroto, A., et al., Deep-seated Gravitational Slope Deformations in Pienza (Tuscany, Italy): Insights from 3D Modeling and Physical Analogue Experiments

Lelandais, T., et al., Analog modelling of pressurized subglacial water flow: Implications for tunnel valley formation and ice dynamics.

Malavieille, J., et al., Impact of surface processes on large scale faulting and folding in fold and thrust belts: analogue models and case studies.

Malavieille, J., et al., Modeling the interaction between slip events, erosion and sedimentation along an active strike-slip fault in New Zealand: insights from morphotectonic experiments.

Moragas, M., et al., Diapiric architecture controlled by syn- and post-extension prograding sedimentary wedges.

Ueda, K., et al., Co-evolving complexity in coupled geomorphological-thermomechanical models.

Viaplana-Muzas, M., et al., Evolution of morphotectonic parameters in an experimental wedge.

Zeumann, S., and Hampel, A., Forearc deformation induced by aseismic ridge subduction and impact on river networks at continental margins using 3D finite-element models.

S3- Volcanoes: from the plumbing system to the eruptive plume

Chairs: C. Annen and F. Maccaferri

Bertelsen, H., et al., Stress-strain relationships in intruded viscoelastic media: insights from analogue modeling.

Corbi, F., et al., The link between circumferential dikes and eruptive fissures around calderas: insights from analog and numerical models.

Galland, O., et al., Are igneous sheet intrusions really mode I elastic fractures ?

Galland, O., et al., Laboratory modeling of volcano plumbing systems: A review.

Guldstrand, F., et al., Predicting Volcanic Eruption Locations Based on Surface Deformation Precursors.

Guldstrand, F., et al., Dynamics of Surface Deformation Induced by Dyke and Cone Sheet Emplacement in Laboratory Models.

Haug, O., T., et al., Modeling viscous flow using discrete particles: limits and applications to magma intrusions.

Haug, O., T., et al., Quantitative experimental modeling of fragmentation during phreatic and phreatomagmatic eruptions.

Le Corvec, N., From sill to radial dike systems on Venus: the role of upward flexure environments and elliptical magma reservoirs.

Montanari, D., et al., Structural control on fluid pathways close to shallow magma intrusions: clues from analogue models.

Musiol, S., et al., Lithospheric flexure and gravity spreading of Olympus Mons volcano, Mars.

Pinel, V., et al., Magma propagation modeling: towards the coupling of rock fracturing and fluid dynamics.

Pucciarelli, G., and Gariglia, E., Volcanology of Phlegrean Fields: a Continuous and Fractional Wavelet Approach. (Canceled)

Souche, A., et al., The role of magma viscosity on the faulting mechanism around magma intrusions: a 2D FEM study.

S4- Seismic cycle and Earthquake dynamics

Chairs: R. Cattin and M. Rosenau

Amirzada, Z., et al., Simulations of seismic slip on rough surfaces. (**Canceled**)

Cavalié, O., et al., Interpreting strike-slip fault interseismic deformation with elasto-plastic models.

Corbi, F., et al., Control of barrier width on asperities synchronization and genesis of great subduction megathrust earthquakes: insights from 3D analog models.

Caniven, Y., et al., A new multilayered visco-elasto-plastic experimental model to study strike-slip fault seismic cycle.

Dominguez, S., et al., A visco-elastic model to study experimentally megathrust seismic cycle in subduction tectonic settings.

Gomez-Novell, O. and Ortuño, M., Seismic amplification due to topography: preliminary results of a gelatin model.

Lefevre, M., et al., Control of geometrical and mechanical parameters on strike-slip fault segmentation: insights from sandbox experiments.

Malavieille, J., et al., Impact of surface processes on the location of large seismogenic faults in Taiwan.

Marechal et al., Evidence of interseismic coupling variations along the Himalayan arc from new GPS data in Bhutan

Preuss, S., et al., Seismic cycle modeling on evolving faults: The question of fault branching.

van Rijsingen, E. et al., How does subducting seafloor roughness relate to the seismogenic behaviour of subduction zones?

Rosenau, M. et al., Shocks in a Box 3D: Analogue modelling of along strike seismotectonic segmentation and synchronization of subduction zone forearcs.

Soliva, R., et al., Rupture envelopes of fault systems.

Tarayoun, A., et al., Localization of deformation and seismicity in intraplate domains : réactivation of crustal and lithospheric paléo-structures.

S5- Rheology, strain localization, folding and faulting

Chairs: M. Frehner and F. Maerten

Abdelmalak, M., et al., Description of new dry granular materials of variable cohesion and friction coefficient: implications for laboratory modelling of the brittle crust.

Abecassis, S., et al., Subduction initiation at fracture zone : conditions and various modes.

Bölük, H., et al., Sandbox and ERT studies on normal faults: An example of laboratory based geomodelling.

Frehner, M., Fold axis rotation during transpressional folding: Insights from numerical modeling and application to the Zagros Simply Folded Belt.

Frehner, M., and Schmid, T., Structural inheritance during multilayer buckle folding: How pre-existing asymmetries result in parasitic folds with wrong vergence.

Gaete, A., Topography controlled sill intrusions: Modeling magma propagation in the crust.

Heurtebize, Y., et al., Initiating subduction at (weak) fracture zones : a numerical approach.

Maerten, L., and Maerten, F., Stress distribution around complex salt structures: A new approach using fast 3D boundary element method.

Masuti, S., et al., Estimating the rheological properties of the oceanic asthenosphere using geodetic data.

Peters, M., et al., The initiation and development of folding and boudinage structures can be treated within a unified energy bifurcation theory for layered ductile materials.

Toeneboehn, K., et al., Development of slip partitioning within wet kaolin and dry sand oblique-convergence experiments.

S6- Dynamics of Sedimentary Basins

Chairs: G. Corti and J.-C. Ringenbach

Arfaoui, I., et al., Burial history characterization of Ordovician reservoir (Bir Ben Tartar Formation) in South Remada region (South east of Tunisia).

Berthelon, J., et al., Mechanical restoration of gravity-driven deformations using Limit Analysis Theory: the Baram delta in NW Borneo.

Borderie, S., et al., Late extension in compressional wedges above an interbedded weak, viscous *décollement*: results from analogue modeling.

Borderie, S., et al., Along-strike structural coupling in fold-and-thrust belts controlled by lateral changes in basal *décollement* strength: results from analogue modeling.

Cacace, M., et al., Coupled Thermo-Hydraulic (TH) modelling of geothermal systems – a review from the geothermal facility at Groß Schönebeck, North Germany.

Darnault, R., et al., Application of 3D structural analogue modeling to hydrocarbon exploration: examples from Subandean Bolivia, the Gulf of Mexico and Papua New Guinea.

Maalla, I., et al., Physicochemical characterization of miocene sands of Bou chebka (Kasserine: south west of Tunisia) and industrial valorization assessment.

Malavieille, J., et al., Formation of ophiolite-bearing tectono-sedimentary mélanges in accretionary wedges by gravity driven submarine erosion: Insights from analogue models and case studies.

Moore, J., Plate flexure and the development of depositional cycles in sedimentary basins: The Steer rears its head.

Neumaier, M., et al., The impact of the Messinian Salinity Crisis on Petroleum Systems – A Modelling Perspective.

Räss, L., et al., High-resolution numerical modelling to resolve fluid pathways generation in porous rocks.

Smit, J., et al., Salt tectonics in thick-skinned extensional and strike-slip settings: recognising strike-slip reactivation of the extensional basins in the Southern North Sea.

Souche, A., et al., Interrelation between surface and basement heat flow in sedimentary basins.

Turrini, C. and G., Toscani., Sandbox modelling of foredeep deformation and application to the Southern Alps Northern Apennines system.

Yahyaoui, A., et al., Contribution of the spatial distribution and geostatistics in the study of waters geochemistry of Wadi Meliane, in the capital of Tunisia.

Zanella, A., et al., Modelling of shales and maturation of organic matter by the using of the mechanism of phase transition in physical models.

Miscellaneous Informations :

- Keynote : 25 min speech + 5 min questions
- Regular Talk : 15 min speech + 5 min questions
- The posters will be presented during the entire conference. Each poster session will start with a 1-2 min. short presentation of all participating posters.

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