

## Session I: (Seismo-)tectonics

I-1	Meike Bagge, Andrea Hampel	Coseismic Coulomb stress changes on intra-continental normal and thrust faults: insights from three-dimensional finite-element modelling
I-2	Silvia Brizzi, Fabio Corbi, Francesca Funicello, Monica Moroni	Analogue Models of Subduction Megathrust Earthquakes: Analyzing the Viscoelastic Rheological Parameter Space with an Innovative Monitoring Technique
I-3	Mathias Egglseder, Alexander Cruden	Upscaling of micro- and meso-scale structures to local- and regional scales: implications for 3D implicit and explicit models of structurally complex deformation of multi-layered rocks
I-4	Robert Herrendörfer, Ylona van Dinther, Taras Gerya and Luis A. Dalguer	Influence of the seismogenic downdip width on supercycles at subduction thrusts
I-5	Shaoyang Li, Marcos Moreno, Jon Bedford, Matthias Rosenau, Daniel Melnick & Onno Oncken	Geomechanical modeling of fault geometry role on subduction earthquake cycle: Case study of Chilean margin
I-6	Iskander A. Muldashev and Stephan V. Sobolev	Cross-scale model of seismic cycle: first results
I-7	Casper Pranger, Cedric Thieulot, Arie van den Berg, Wim Spakman	Numerical modelling of the instantaneous subduction dynamics of the Banda Arc region
I-8	Casper Pranger, Ylona van Dinther, Taras Gerya, Fabio Corbi, Francesca Funicello	Towards 3D seismo-thermo-mechanical models of the subduction thrust
I-9	Norikazu Suzuki	The concepts of complex network advance understanding of earthquake science
I-10	Tatarinov V.N, Kagan A.I., Tatarinova T.A.	Hypothesis of geodynamic processes in the lithosphere under catastrophic earthquake Tohoku-Oki

## Session II: Tectonics and Surface Processes

II-1	J. Alonso-Henar, G. Schreurs, J.J. Martínez-Díaz, J.A. Álvarez-Gómez, P. Villamor	Neotectonic evolution of the El Salvador Fault Zone. Insights from 4D analogue experiments
II-2	Blanco, A. & Alves da Silva, F.C.	Restraining and releasing bands along a sinistral strike-slip shear zone: A physical modeling approach
II-3	Christian Brandes and Jutta Winsemann	Numerical basin modelling of a salt rim syncline: insights into rim syncline evolution and salt diapirism
II-4	F. M. Rosas, J. Almeida, F. Barata, B. Carvalho, P. Terrinha, J. Duarte, C. Kullberg and R. Tomás	Exploratory analog modeling of the effects of a morpho-rheological obstacle across a wrench fault system: the example of the Gloria Fault – Tore Madeira Rise intersection in NE Atlantic

<b>II-5</b>	Ana Carmona, Roger Clavera-Gispert, Oscar Gratacós, Stuart Hardy, Josep Anton Muñoz de la Fuente	Modelling Syntectonic Sedimentation in a Extensional Faults System
<b>II-6</b>	Roger Clavera-Gispert, Oscar Gratacós, Miguel López-Blanco, Raimon Tolosana-Delgado	Process-Based Forward Numerical Modelling SIMSAFADIM-CLASTIC: The Vilomara Composite Sequence case (Eocene, Ebro basin, NE Iberian Peninsula)
<b>II-7</b>	Kristen Cook, Fabien Graveleau, Jens Turowski, Niels Hovius, and John Suppe	The balance between uplift and fluvial erosion over a single seismic cycle – an example from Taiwan
<b>II-8</b>	F. M. Rosas, J. Almeida, F. Barata, B. Carvalho, P. Terrinha, J. Duarte, C. Kullberg and R. Tomás	Exploratory analog modeling of the effects of a morpho-rheological obstacle across a wrench fault system: the example of the Gloria Fault – Tore Madeira Rise intersection in NE Atlantic
<b>II-9</b>	Marcel Frehner	Fold growth rates in 3D buckle folds
<b>II-10</b>	Marcel Frehner, Isabelle Gärtner-Roer, and Anna H.M. Ling	Furrow-and-ridge morphology on rockglaciers explained by gravity-driven buckle folding: A case study from the Murtèl rockglacier (Switzerland)
<b>II-11</b>	Humaad Ghani, Hamid Hussain, Muhammad Zafar, Irum Khan, Aamir Malik, Muhammad Abid, Ehtisham Javed	Structural Evolution and Structural Style of South Eastern Kohat Deciphered through 3D-Geoseismic Model using MOVE Software, Shakardarra Area, KP Pakistan
<b>II-12</b>	Diego Gracia-Marroquín, Rodrigo Portillo-Pineda, Mariano Cerca, and Giacomo Corti	Lithospheric scale analogue models of the southern Gulf of California oblique rift
<b>II-13</b>	Fabien Graveleau, Olivier Averbuch, Bruno Vendeville, Aimie Quinion, Mustapha Ouzgaït	The negative inversion of thrust faults and related basin geometries: insight from analogue modelling experiments
<b>II-14</b>	Fabien Graveleau, Vincent Strak, Stéphane Dominguez, Jacques Malavieille, Marina Chatton, Isabelle Manighetti, Carole Petit	Experimental modelling of deformation-erosion-sedimentation interactions in compressional, extensional and strike-slip settings
<b>II-15</b>	Jie Liao, Taras Gerya	From continental rifting to seafloor spreading: Insight from 3D thermo-mechanical modeling
<b>II-16</b>	Muhammad Armaghan Faisal Miraj, Christophe Pascal	Numerical Modeling of Main Inverted Structures in the Western Barents Sea
<b>II-17</b>	F. M. Rosas, J. Almeida, F. Barata, B. Carvalho, P. Terrinha, J. Duarte, C. Kullberg and R. Tomás	Exploratory analog modeling of the effects of a morpho-rheological obstacle across a wrench fault system: the example of the Gloria Fault – Tore Madeira Rise intersection in NE Atlantic
<b>II-18</b>	Sarah Schroeder, Richard Gloaguen, Jens Tjympel, Andrey Babeyko, Stephan V. Sobolev	DANSER: an open source surface evolution code beyond coupling with tectonic models
<b>II-20</b>	Xiaoping Yuan, Yves M. Leroy, Bertrand Maillot, Yves Guéguen	Stability of over-pressured cohesive and frictional materials based on Sequential Limit Analysis
<b>II-21</b>	Yan, Jie, Lennox, Paul, Kelly, Bryce F.J. and Offler, Robin	Kinematic reconstruction of the Hastings Block, Southern New England Orogen, Australia
<b>II-22</b>	Frank Zwaan, Guido Schreurs	4D Transfer Zone Modeling in Continental Rift Systems

## Session III: Volcanism and Volcanotectonics

<b>III-1</b>	F. Corbi, E. Rivalta, V. Pinel, F. Maccaferri, V. Acocella	The origin of circumferential Fissures: insights from analog models
<b>III-2</b>	Olivier Galland, Galen Gisler, Øystein Thordén Haug*	Morphology and dynamics of explosive vents through cohesive rock formations
<b>III-3</b>	Olivier Galland, Steffi Burchardt, Erwan Hallot, Régis Mourgues, Cédric Bulois	Toward a unified dynamic model for dikes and cone sheets in volcanic systems
<b>III-4</b>	E.P. Holohan, H. Sudhaus, M.P.J. Schöpfer, T.R. Walter & J.J. Walsh	Use of the Distinct Element Method in Volcano-tectonic Modeling
<b>III-5</b>	D. La Marra and M. Battaglia	Three-Dimensional Analysis of dike/fault interaction at Mono Basin (California) using the Finite Element Method
<b>III-6</b>	S. Musiol, B. Cailleau, E.P. Holohan, T.R. Walter, D.A. Williams, A. Dumke, S. van Gasselt	The formation of terrace-bounding faults on Olympus Mons volcano, Mars
<b>III-7</b>	S. Poppe, E. Holohan, E. Pauwels, V. Cnudde, M. Kervyn	Overburden bulking in analogue models of depletion-induced collapse quantified with computed X-ray microtomography
<b>III-8</b>	Salvatore Scudero, Giorgio De Guidi, Sebastiano Imposa, and Mimmo Palano	Influence of crust type on the long-term deformation of a volcano: example from Mt. Etna (Italy)
<b>III-9</b>	Trippanera D., Lamarra D., Acocella V., Ruch J., Rivalta E.	Analogue and numerical modeling of rifting events. Complementary tools to understand the rifting process

## Session IV: Geodynamics

<b>IV-1</b>	Barantseva O., Artemieva I.M., Thybo H., Herceg M.	Anomalous structure of the oceanic lithosphere in the North Atlantic and Arctic oceans: preliminary analysis based on bathymetry, gravity and crustal structure
<b>IV-2</b>	Sascha Brune	Oblique extensional structures from initial deformation to breakup: Insights from numerical 3D lithospheric-scale experiments
<b>IV-3</b>	Sascha Brune, Christian Heine, Marta Pérez-Gussinyé, Stephan V. Sobolev	A new model for the architecture of magma-poor rifted margins
<b>IV-4</b>	Susanne Buitter, Joya Tetreault, and Reza Khabbaz Ghazian	Initial models of the influence of collision-phase inheritance on continental rifting
<b>IV-5</b>	Mauro Cacace, Magdalena Scheck-Wenderoth	Modelling subsidence history of rift-type basins
<b>IV-6</b>	Juliane Dannberg, Stephan V. Sobolev	Surface manifestations of low-buoyancy mantle plumes: Insights from geodynamic modeling

<b>IV-7</b>	João C. Duarte, Zhihao Chen, Wouter P. Schellart and Alexander R. Cruden	Three dimensional laboratory models of subduction: plate interface, overriding plate deformation and energy dissipation
<b>IV-8</b>	Urmi Dutta, Shamik Sarkar, Nibir Mandal	Geometrical transitions of mantle plumes: an insight from numerical simulations
<b>IV-9</b>	Menno Fraters, Anne Glerum, Cedric Thieulot, Wim Spakman	Thermo-mechanically coupled subduction with a free surface using ASPECT
<b>IV-10</b>	E. H. Fritzell, A. L. Aller and G. E. Shephard	The Role of the Initial Condition in Numerical Models of the Present-day Mantle Flow Field
<b>IV-11</b>	Lev Karatun, Cedric Thieulot, Russell Pysklywec	3-D computational modeling of the continental plate collision near South Island, New Zealand
<b>IV-12</b>	Volker Klemann, Magdala Tesauero, Zdenek Martinec, Ingo Sasgen	Featuring lithosphere rheology in models of glacial isostatic adjustment
<b>IV-13</b>	Peter Klitzke, Jan Inge Faleide, Judith Sippe, Magdalena Scheck-Wenderoth	The 3D density and temperature distribution in an intracratonic basin setting: The Barents Sea and Kara Sea region
<b>IV-14</b>	Diogo Louro Lourenço, Paul J. Tackley	The effect of melting and crustal production on plate tectonics on terrestrial planets
<b>IV-15</b>	F.O. Marques, F.R. Cabral, T.V. Gerya, G. Zhu, D.A. May	3-D numerical modelling of subduction initiation at curved passive margins
<b>IV-16</b>	Elvira Mulyukova, Bernhard Steinberger, Marcin Dabrowski, Stephan V. Sobolev	Segregation, Accumulation, and Entrainment of the Oceanic Crust in the Lowermost Mantle, Exploring the Range of Governing Parameters with Numerical Modelling.
<b>IV-17</b>	Nestola, Y., F. Storti, and C. CavoZZi	Role of extensional strain-rate on lithosphere necking architecture during continental rifting
<b>IV-18</b>	Florian Neumann, Alberto Vazquez, Gustavo Tolson and Juan Contreras	Toroidal, Counter-Toroidal, and Poloidal Flows of the Rivera and Cocos Plates
<b>IV-19</b>	Soran Parang	Estimating Crustal Thickness of Iran Using Euler Deconvolution Method and EIGEN-GL04C Geopotential Model
<b>IV-20</b>	Alexey G. Petrunin, Mikhail K. Kaban, Bernhard Steinberger, Harro Schmeling	How do weak plate boundaries affect the dynamic topography and geoid?
<b>IV-21</b>	Adina E. Pusok, Boris Kaus, Anton Popov	The development of topographic plateaus in an India-Asia-like collision zone using 3D numerical simulations
<b>IV-22</b>	Malte C. Ritter, Matthias Rosenau, Karen Leever, and Onno Oncken	Towards quantification of the interplay between strain weakening and strain localisation using analogue models
<b>IV-23</b>	Shephard, G. E., Bull, A. L., Gaina, C.	Modelling plate kinematics, slabs and LLSVP dynamics – an example from the Arctic and northern Panthalassa
<b>IV-24</b>	Arash Sohrabi, Alireza Nadimi	Strike-slip movements and Rotation of tectonic blocks in the Kaboodan area, south Khur, Central Iran
<b>IV-25</b>	Anna Eliza Svartman Dias, Luc L. Lavier, Nicholas W. Hayman	The role of crustal thickness and lithospheric rheology on rifted margins width and tectonic subsidence
<b>IV-26</b>	Cedric Thieulot, Anne Glerum, Bram Hillebrand, Stefan Schmalholz, Wim Spakman, and Trond Torsvik	A two- and three-dimensional numerical modelling benchmark of slab detachment

<b>IV-27</b>	Anthony Osei Tutu	The effect of strong heterogeneities in the upper mantle rheology on the dynamic topography and geoid
<b>IV-28</b>	Iris van Zelst, Cedric Thieulot, Susanne J. H. Buitter	The role of weak seeds in numerical modelling of continental extensional systems
<b>IV-29</b>	Katharina Vogt, Liviu Matenco, Taras Gerya and Sierd Cloetingh	The up side down logic of orogenic collision: on the formation of low-topography mountain ranges
<b>IV-30</b>	Marius Walter, Javier Quinteros and Stephan V. Sobolev	Implementing fluid flow in SLIM-3D
<b>IV-31</b>	Hongliang Wang, Jeroen Van Hunen, D. Graham Pearson	The mechanical erosion of metasomatised continental lithosphere by plume driven mantle flow
<b>IV-32</b>	Stefanie Zeumann, Andrea Hampel	Deformation of forearcs during ridge subduction

## Session V: Rheology

<b>V-1</b>	Marta Adamuszek, Marcin Dabrowski, Daniel W. Schmid	Fold Geometry Toolbox 2: A New Tool to Estimate Mechanical Parameters and Shortening from Fold Geometry
<b>V-2</b>	Marcin Dabrowski	Mechanical anisotropy development and localization in two-phase composite rocks
<b>V-3</b>	Candela Garcia-Sancho, Rob Govers, Karin N. Warners-Ruckstuhl, Magdala Tesauero	Present-day intra-plate deformation of the Eurasian plate
<b>V-4</b>	M. Peters, T. Poulet, M. Veveakis, A. Karrech, M. Herwegh, and K. Regenauer-Lieb	Numerical bifurcation analysis of spontaneous strain localization resulting in necking of a layer
<b>V-5</b>	Hiroki Sone	Finite element model investigation of fault shear stress accumulation due to elastic loading and viscous relaxation
<b>V-6</b>	Magdala Tesauero, Mikhail K. Kaban, Sierd Cloetingh, Walter D. Mooney	Lithospheric strength and elastic thickness variations in the North American continent

## Session VI: Fluids and Deformations

<b>VI-1</b>	Badmus Biodun Suraj	Assessment of microbial contamination of groundwater near solid waste dumpsites in basement complex formation, using total plate count method
<b>VI-2</b>	Badmus Biodun Suraj	Physico-chemical properties of soil samples and environmental impact of dumpsite on groundwater quality in basement complex terrain, South Western Nigeria
<b>VI-3</b>	Sahar Hamidi, Thomas Heinze, Boris Galvan, Stephen Miller	THC modelling of an Enhanced Geothermal System

## Session VII: Methods and Materials

<b>VII-1</b>	Zahra Amirzada, Øystein Thorden Haug, Arnaud Burtin, Tuna Eken & Matthias Rosenau	Seismological monitoring of lab-scale landslides: Method & benchmark
<b>VII-2</b>	Giacomo Corti, Antonio Zeoli, Irene Iandelli	Small-scale modelling of ice flow perturbations induced by sudden ice shelf breakup
<b>VII-3</b>	E. Di Giuseppe, F. Corbi*, F. Funiciello, A. Massmeyer, T.N. Santimano, M. Rosenau, A. Davaille	Carbopol® for experimental tectonics: a rheological benchmark study
<b>VII-4</b>	T. Dotare, Y. Yamada, T. Hori, H. Sakaguchi	Initiation process of the frontal thrust revealed from detailed analogue experiments
<b>VII-5</b>	Olivier Galland, Eoghan Holohan, Guillaume Dumazer	The Use of Scaling Theory in Geological Laboratory Models
<b>VII-6</b>	C. J. S. Gomes, Rodrigues, B. A., Endo, I.	Flanking Structures - New Insights from Analogue Models
<b>VII-7</b>	J. Großmann, J. F. Ellis and H. Broichhausen	The Ribbon Tool - Model Building using 3D Dip Domains
<b>VII-8</b>	Øystein Thordén Haug, Matthias Rosenau, Zahra Amirzada, Karen Leever and Onno Oncken	A new method to study the energy budget of rock fragmentation
<b>VII-9</b>	Carlos Mares, Bernardino Barrientos-García, Mariano Cerca*, Damiano Sarocchi, and Luis Angel Rodriguez Sedano	Fringes projection for 3D displacement analysis of experimental dry granular avalanches
<b>VII-10</b>	von Tschärner, Marina & Schmalholz, Stefan	A 3-D Lagrangian finite element algorithm with contour-based re-meshing for simulating large-strain hydrodynamic instabilities in visco-elastic fluids
<b>VII-11</b>	Ali Yassaghi	Some Remarks on wet gypsum as a viscous material for physical modeling
<b>VII-12</b>	I. Görz, F. Träger, B. Zehner, J. Pellerin	Testing tools for the generation of an unstructured tetrahedral grid on a realistic 3D underground model