



# Symposia Program 16<sup>th</sup> Swiss Geoscience Meeting

Bern, 30<sup>th</sup> November - 1<sup>st</sup> December 2018

## A Habitable Planet

sc | nat <sup>+</sup>

Swiss Academy of Sciences  
Akademie der Naturwissenschaften  
Accademia di scienze naturali  
Académie des sciences naturelles

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b  
UNIVERSITÄT  
BERN

## Wi-Fi / Internet Access

If «eduroam» does not work, you can obtain on Friday ([Fabrikstrasse 12](#)) a username and password at the registration desk. On Saturday ([Fabrikstrasse 6+8](#)) you can connect your device to the Wi-Fi access point «public-unibe». Select the menu item «Guest login» and register with your mobile number and voucher code. You will receive your access code by text message (SMS).

### Cover picture

The Aletsch Glacier in Switzerland with a length of 23 km and a surface area of c. 80 km<sup>2</sup> is the largest glacier in Europe. Originating at the upper slopes of the Eiger, Mönch and Jungfrau in the Bernese Oberland, the glacier flows down into the Valais. Like most glaciers worldwide the Aletsch Glacier is retreating in response to global warming, having lost well over 3 km of its length since 1870. The retreat of the glacier causes major slope instabilities.

Immediately southeast of the Aletsch Glacier near Moosfluh a huge rock mass (ca. 150 million m<sup>3</sup>) is actively moving downslope towards the glacier. In the fall of 2016 the rock mass at Moosfluh moved at a velocity of up to 80 cm/day and cracks of several hundred meters in length and up to tens of meters in depth opened on the upper parts of the slope. Pre-existing tectonic structures, such as Alpine shear zones and exfoliation joints in the gneisses making up the slopes at Moosfluh, contribute to the slope instabilities.

The mass movement at Moosfluh is the subject of several ongoing field-based studies and is being permanently monitored by stationary time-lapse cameras, satellite synthetic aperture radar interferometry, differential GPS, airborne digital photogrammetry, and a local seismic network.

Photo credit: Guido Schreurs

The small cover picture was taken by the Apollo 8 crew fifty years ago, in December 1968. As the Apollo 8 command module rounded the farside of the Moon, the crew could look toward the lunar horizon and see the Earth appear to rise, due to their spacecraft's orbital motion.

Photo credit: Apollo 8, NASA

# Welcome to Bern to the 16<sup>th</sup> Swiss Geoscience Meeting 2018

Dear Participants

Welcome to Bern! Thank you for joining us at the 16<sup>th</sup> Swiss Geoscience Meeting organized jointly by the Geography Institute and the Institute of Geological Sciences of the University of Bern under the auspices of the Swiss Academy of Sciences. We are looking forward to a very attractive meeting with over 500 submitted abstracts and we thank all session conveners for organizing a very attractive scientific program.

We are also pleased that the 4<sup>th</sup> edition of the Swiss Geoscience Master Congress will take place at the Institute of Geological Sciences of the University of Bern on Thursday, November 29<sup>th</sup>. We hope that the close association between this congress, organized by MSc students, and SGM becomes a tradition.

The theme of the SGM 2018 plenary session is “A Habitable Planet”. One of the most fundamental and fascinating questions in science is why is there life on Earth. What makes our planet habitable and what is, for example, the role of plate tectonics in planetary habitability? Geoscientists not only play a crucial role in studying the evolution of planet Earth and the origins of life, but their studies can also contribute to maintaining our planet habitable and liveable for future generations.

We have invited four keynote speakers to discuss various topics related to “A Habitable Planet”. Bernard Marty (Université de Lorraine, Nancy) will present his research on the origin and early evolution of the Earth's atmosphere. Recent advances in space missions (e.g., Rosetta) and in the geochemistry of ancient rocks permit to have insights into the origin of atmospheric/oceanic volatiles, such as water, nitrogen, noble gases, and into the composition of the atmosphere during the first half of Earth's history. Kathryn Goodenough (British Geological Survey) will discuss rare earth elements in the context of demand and global resources, and will consider challenges for future generations. Ben Marzeion (University of Bremen) will evaluate the influence of glacier melting on sea-level rise and discuss its consequences. The plenary session will conclude with a presentation by Lindsay Stringer from the University of Leeds who will talk about land degradation and desertification.

On Saturday, December 1<sup>st</sup>, a series of 22 scientific symposia will cover the diverse spectrum of current research in geosciences, encompassing the lithosphere, the hydrosphere, the cryosphere, the biosphere, the atmosphere and the anthroposphere.

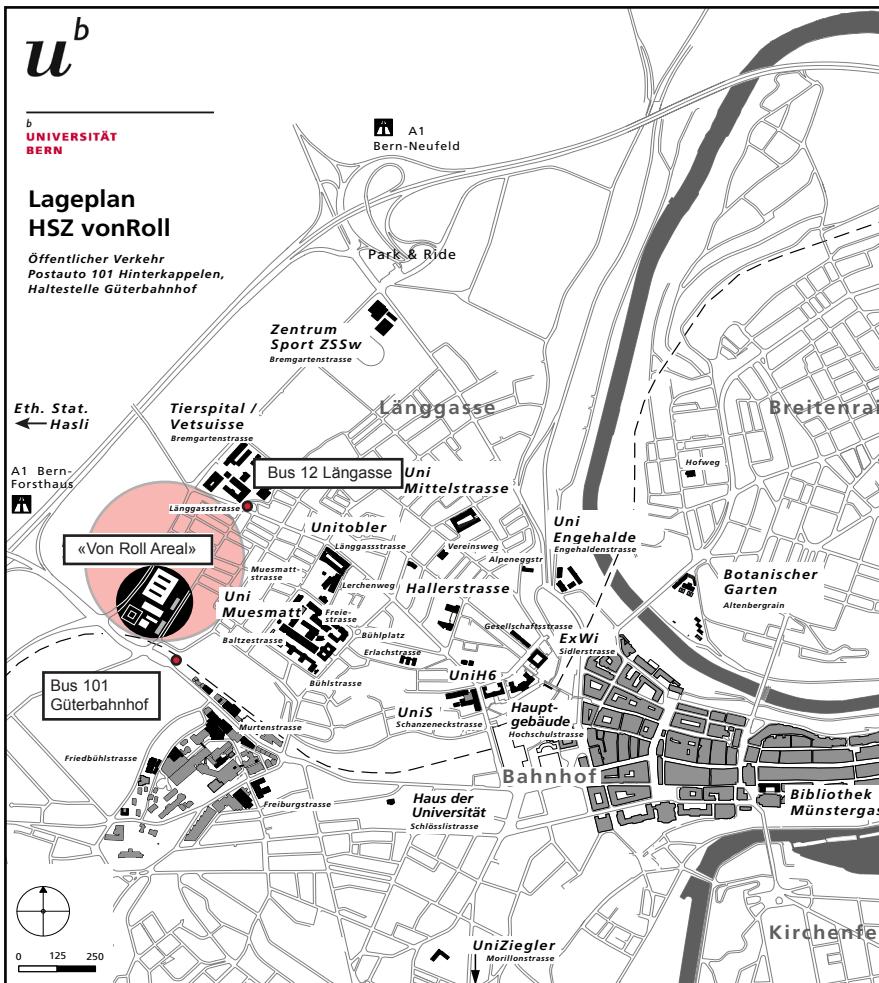
For the first time we offer children day care facilities during a SGM meeting. Day care is provided by the KIHOB (the day care centre of the University of Bern and the PH Bern) and is free of charge for registered SGM participants. Children day care is made possible through financial support of the Institute of Geography and the Institute of Geological Sciences of the University of Bern.

We hope that you enjoy our program and we wish you a great meeting!  
On behalf of the organising committee

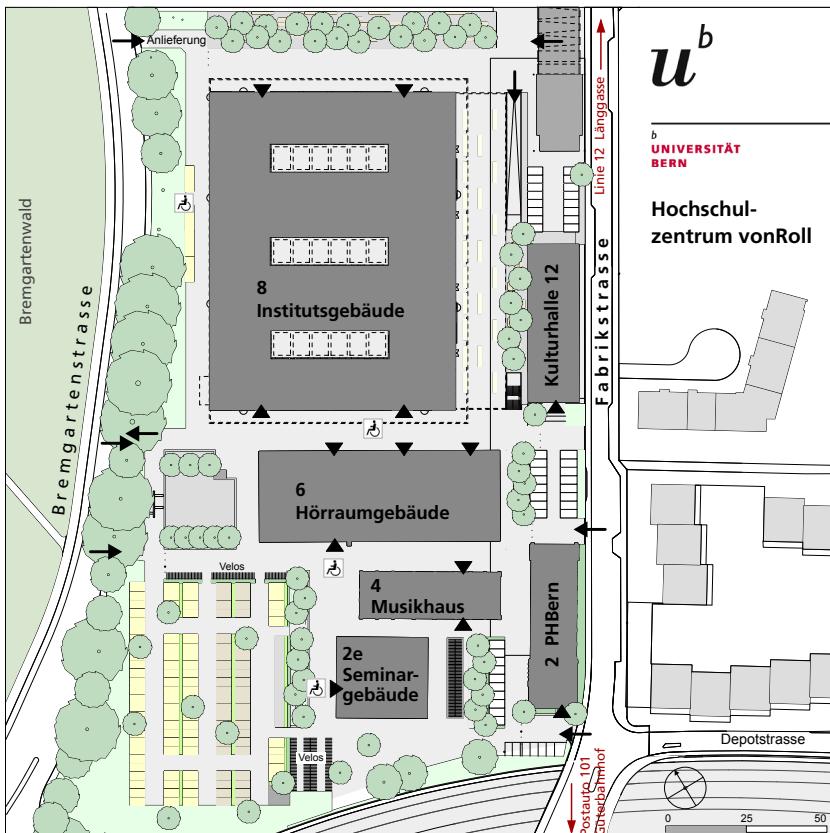
Guido Schreurs

## Location

- Location (1): Friday, 30.11.2018  
University of Bern, «Von Roll Areal»  
**Fabrikstrasse 12**, 3012 Bern
- Location (2): Saturday, 1.12.2018  
University of Bern, «Von Roll Areal»  
**Fabrikstrasse 6+8**, 3012 Bern



The Swiss Geoscience Meeting takes place in Bern at the «Von Roll Areal», **Fabrikstrasse 6+8 & 12**, which is within 20 minutes walking distance from the railway station. The Plenary Session on Friday afternoon will be held in the «Kulturhalle» at **Fabrikstrasse 12**, whereas the symposia on Saturday will take place in lecture halls at **Fabrikstrasse 6 and 8**. Taking the bus number 12 from the railway station to its terminus station «Länggasse» reduces the journey on foot to the «Von Roll Areal» by 6 minutes. Taking the Postbus number 101 towards «Hinterkappelen, Schlossmatt» or «Güterbahnhof» (stop at Güterbahnhof) brings you within 3 minutes on foot of the «Von Roll Areal».



## **Host institutions**

Institute of Geography and Institute of Geological Sciences of the University of Bern

## **Patronage**

Platform Geosciences of the Swiss Academy of Sciences, SCNAT

## **Local Committee**

Sébastien Boillat

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## **Exhibitors**

Bundesamt für Landestopografie swisstopo  
CHGEOL  
Geobrugg  
Geographica Bernensia  
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ThermoFisher Scientific  
Zeiss

## **Participating societies and organisations**

Georesources Switzerland Group  
International Union of Geodesy and Geophysics, Swiss Committee (IUGG)  
International Union of Geological Sciences, Swiss Committee (IUGS)  
Kommission der Schweizerischen Paläontologischen Abhandlungen (KSPA)  
Swiss Association of Energy Geoscientists (SASEG)  
Swiss Association of Geographers (ASG)  
Swiss Association for Geographic Education (VGDch)  
Swiss Commission for Remote Sensing (SCRS)  
Swiss Commission of Oceanography and Limnology  
Swiss Commission on Atmospheric Chemistry and Physics (ACP)  
Swiss Committee for Stratigraphy (Platform Geosciences/SCNAT)  
SWISS DRILLING  
Swiss Geodetic Commission (SGC)  
Swiss Geological Society (SGG/SGS)  
Swiss Geological Survey (swisstopo)  
Swiss Gemmological Society (SGG)  
Swiss Geomorphological Society (SGGm/SSGm)  
Swiss Geophysical Commission (SGPK)  
Swiss Geothermal Society  
Swiss Hydrogeological Society (SGH)  
Swiss Hydrological Commission (CHy)  
Swiss Paleontological Society (SPG/SPS, Swiss Geological Society)  
Swiss Snow, Ice and Permafrost Society (SIP)  
Swiss Society for Hydrology and Limnology (SGHL/SSHLL)  
Swiss Society for Quaternary Research (CH-QUAT)  
Swiss Society of Mineralogy and Petrology (SMPG/SSMP, Swiss Geological Society)  
Swiss Tectonics Studies Group (Swiss Geological Society)

## **Abstracts can be downloaded at:**

[www.geoscience-meeting.ch/sgm2018/downloads](http://www.geoscience-meeting.ch/sgm2018/downloads)

## Lecture rooms, exhibitors and poster locations

Saturday 1.12.2018

University of Bern, «von Roll Areal»

Fabrikstrasse 8, 3012 Bern

## **Ground Floor**



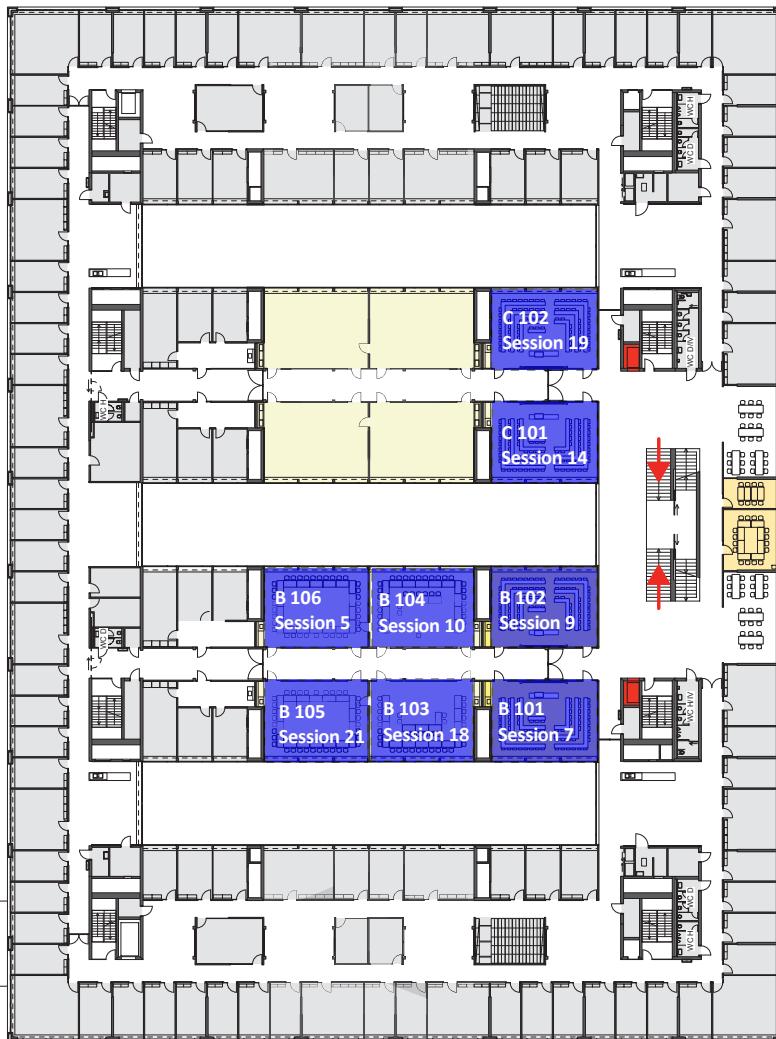
## Lecture rooms

Saturday 1.12.2018

University of Bern, «von Roll Areal»

Fabrikstrasse 8, 3012 Bern

### First Floor



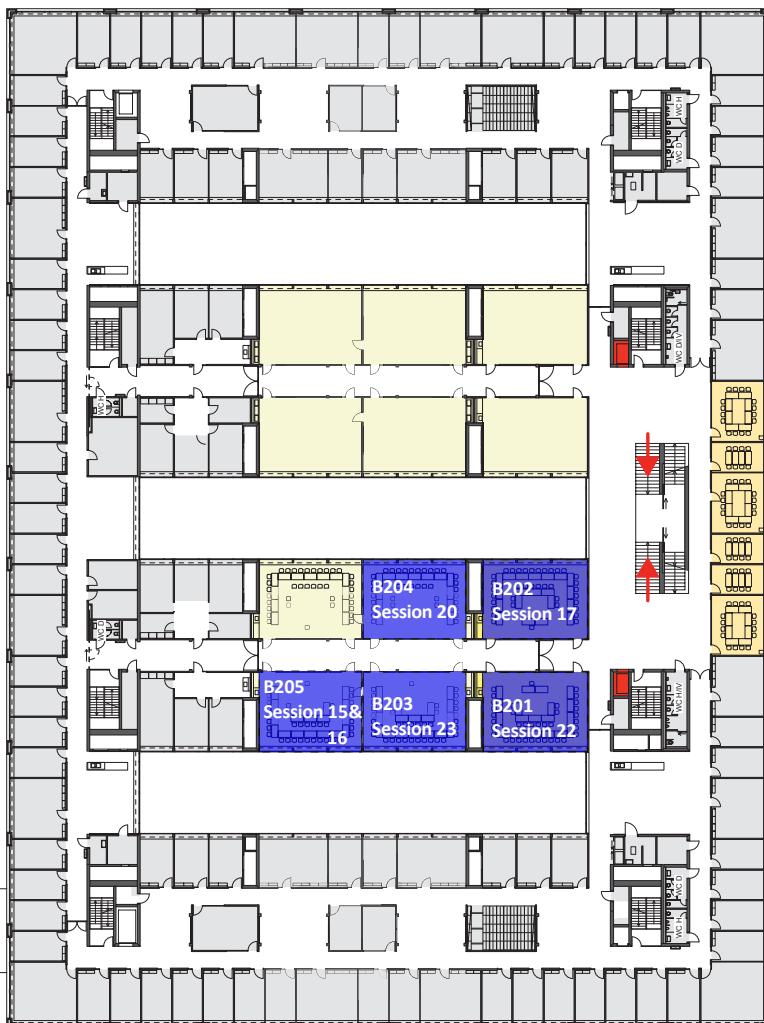
## Lecture rooms

Saturday 1.12.2018

University of Bern, «von Roll Areal»

Fabrikstrasse 8, 3012 Bern

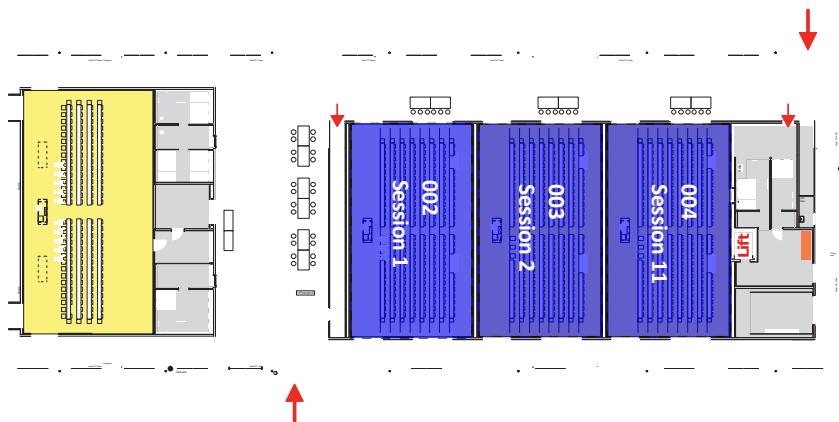
### Second Floor



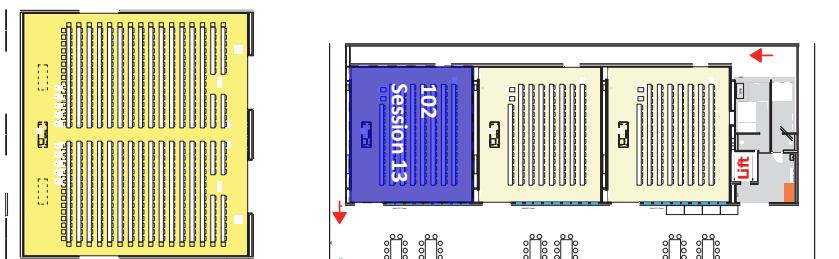
## Lecture rooms

Saturday 1.12.2018  
University of Bern, «von Roll Areal»  
Fabrikstrasse 6, 3012 Bern

### Ground Floor



### First Floor



## **Plenary Session, “A Habitable Planet”**

**Friday November 30th**

**Auditorium 2<sup>nd</sup> Floor, «Von Roll Areal» Fabrikstrasse 12, 3012 Bern  
(Eventfabrik/Kulturhalle)**

**Chairperson: Guido Schreurs**

13:30-13:45	Welcome address by the president of the Swiss Academies of Arts and Sciences Welcome address by the Vice-Rector for Development, University of Bern	Antonio Loprieno Achim Conzelmann
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**Chairperson: Daniela Rubatto**

13:45-14:30	On the Origin and Early Evolution of the Atmosphere	Bernard Marty – ENS, Université de Lorraine, Nancy, France
14:30-15:15	The Rare Earth Elements: Demand, Global Resources, and Challenges for Resourcing Future Generations	Kathryn Goodenough – British Geological Survey, Edinburgh, UK

**Chairperson: Pierre Dèzes**

15.15-15.30	Paul Niggli Awards	Maria Schönbächler
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**15:30-16:15 Coffee Break**

16:15-16:45	CHGEOL Award Swiss Geological Society – Best MSc Award Prix Schlüfli	Benoît Valley Neil Mancktelow Werner Eugster
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**Chairperson: Chinwe Ifejika Speranza**

16.45-17.30	Causes for 20 <sup>th</sup> Century Glacier Retreat and Implications for Future Sea-Level Rise	Ben Marzeion – University of Bremen, Germany
17.30-18.15	Identifying Social-Ecological Adaptation Pathways to a Habitable Planet	Lindsay Stringer – University of Leeds, UK

**Chairperson: Pierre Dèzes**

18.15-18.30	Presentation of SGM 2019 in Fribourg Acknowledgments	Bernard Grobety Guido Schreurs
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**18:30-22:30 Geoparty I (Apéro and Meal in Mensa – Fabrikstrasse 8)**

**20:00-24:00 Geoparty II (Live music in the Eventfabrik – Fabrikstrasse 12)**

## **On the origin and early evolution of the atmosphere**

Bernard Marty

*Ecole Nationale Supérieure de Géologie, Université de Lorraine, Nancy, France*

Recent advances in space missions (e.g., the European Space Agency Rosetta mission) and in the geochemistry of ancient rocks permit to have insights into the origin of atmospheric/oceanic volatiles such as water, nitrogen, noble gases, and into the composition of the atmosphere during the first half of Earth's history. In particular, the ROSINA instrument (PI, K. Altweiss, Univ. Bern) on board of the Rosetta spacecraft has analysed noble gases, among other elements and species. The isotopic composition of the heaviest stable noble gas, xenon, suggests strongly that comets have contributed volatile elements to the ancient atmosphere, up to ~20 % for Xe, but less than 1 % for water. Most of major volatiles such as water, carbon and nitrogen species were probably contributed by small bodies formed in the inner solar system during the major episodes of Earth's accretion.

Our group in Nancy, France, has also studied direct samples of the ancient atmosphere through the analysis of fluid inclusions in Archean hydrothermal quartz. These fluids are a mixture of hydrothermal components and presumably Archean seawater containing dissolved paleo-atmospheric gases. The partial pressure of atmospheric nitrogen was comparable to, or even lower than, the present-day  $P_{N_2}$ , leaving the possibility of a higher  $P_{CO_2}$  3.5 Ga ago. The isotopic composition of paleo-atmospheric nitrogen was similar to the modern one, suggesting that  $N_2$  did not escape to space and that there existed already a sufficiently robust terrestrial magnetic field. In contrast, the isotopic composition of paleo-atmospheric Xe evolved with time through isotope fractionation, as a result of preferential escape of xenon to space, likely related to its low first ionization potential and to the higher far UV flux of the young Sun. The salinity (Cl) of the Archean oceans was comparable to the modern one, but the seawater K content was about 30 % lower than Modern, in possible relation to a limited continental crust volume at that time.

## **The Rare Earth Elements: Demand, Global Resources, and Challenges for Resourcing Future Generations**

Kathryn Goodenough

*British Geological Survey, Edinburgh*

Decarbonisation of the global economy is now seen as a priority for our habitable planet. A key part of this is the switch away from fossil fuels, towards renewable energy sources and electric cars. These new, 'green' technologies are manufactured using a wide range of raw materials, including critical metals such as the rare earth elements (REE), lithium, niobium and tantalum. Of these, the REE have attracted particular attention, because of the dominance of China in their production. This talk will summarise new research, carried out as part of the EURARE, SoS RARE, and HiTech AlkCarb projects, on global geological resources of the REE. Despite the name, the rare earth elements are not rare in the Earth's crust; REE enrichments are particularly associated with alkaline igneous rocks and carbonatites, but can also be found in a range of other geological environments, from volcaniclastic sediments to weathered granites. Our ongoing research aims to improve understanding of how these REE deposits form, and how they can be effectively mined, which will underpin the availability of these resources for years to come.

# Causes for 20<sup>th</sup> century glacier retreat and implications for future sea-level rise

Ben Marzeion

*Institute of Geography and MARUM - Center for Marine Environmental Science,  
University of Bremen, Germany*

Melting glaciers have become icons of anthropogenic climate change. Their strong mass loss, most likely the biggest contributor to sea-level rise during the 20<sup>th</sup> century, and often documented in impressive picture comparisons, seems to unequivocally demonstrate the human interference with the climate system. However, glaciers respond to climate change with a lag. Observed glacier change is therefore often the result of climate change preceding the time of observation many decades, or even centuries.

Using formal detection and attribution methods, we show that only about 30 % of the global glacier mass loss since 1850 is attributable to anthropogenic forcing. However, this anthropogenic fraction increased almost linearly within the 20<sup>th</sup> century, reaching about 70 % in the past two decades.

The imbalance of glacier mass with concurrent climate conditions implies a strong commitment to further mass loss in the future. Different lines of evidence show that even without any additional warming, glaciers would eventually lose about one third of their present day mass. They will thus remain an important contributor to sea-level rise in the 21<sup>st</sup> century. Any additional emission will increase the committed glacier mass loss at a rate of roughly 15 kg of ice per kg of CO<sub>2</sub> emitted.

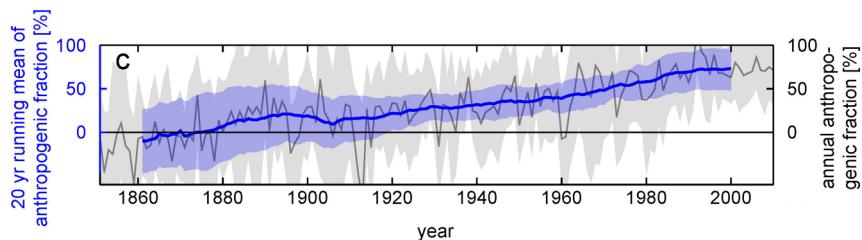


Figure: Annual and 20 yr running mean of the anthropogenic fraction of global glacier mass loss. Shading indicates 1 standard deviation of ensemble.

# Identifying social-ecological adaptation pathways to a habitable planet

Lindsay Stringer

*Sustainability Research Institute, School of Earth and Environment,  
University of Leeds*

Planet Earth is currently undergoing rapid transformations that affect its habitability, both now and into the future. Global temperatures are rising to the extent that there are uncertainties over whether we can achieve the Paris Agreement climate mitigation goal of keeping rises below 1.5-2 °C. At the same time, recent reports by the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) indicate that globally, biodiversity losses are at accelerated rates similar to the 'big five' mass extinctions in the fossil record. These kinds of challenges call into question the future habitability of some parts of the planet due to changes in temperature, sea level, seasonality shifts and extreme weather events, and the Earth's ability to continually provide the ecosystem services that humans demand from it. We are already seeing movement of people away from desertified dryland areas where land is no longer productive, access to water is insufficient to meet human demands, and populations lack options to support their wellbeing and development. Even in other (non-dryland) areas that currently enjoy sufficient water, human activities are degrading the land to the extent that ecosystem services are lost and poverty is being exacerbated. Restoration of degraded ecosystems is not always viable. Restoration is a slow process, the economic costs can be prohibitive, and future climate projections mean restoration to a desired previous state may not even be possible.

In this presentation, I argue that the kinds of challenges we see in relation to land degradation and desertification, our understanding of the drivers of change, and the human responses and adaptations being undertaken at present, offer important, useful insights into present and near-term future challenges and how we can manage them. However, it is important to recognise that current human adaptation research focuses on goal-oriented, short-term scenarios, and considers present-day economic, political, legal and social structures and human values, yet, the scale of environmental changes we are looking at extends beyond these time horizons.

Sustainability science commonly considers multiple time frames and advocates transdisciplinary approaches to understanding coupled human-environment systems. Often this involves looking forward, analysing the trade-offs associated with different decision options and identifying the 'winners' and 'losers' under different future scenarios. It is nevertheless vital that we look backward sufficiently as well. Past conditions evidenced in the fossil and palaeoclimate records reflect those projected for the post-2100s. By delving much further back into the past and understanding the climate and biodiversity conditions of the deep past, it could help us to identify how and where people can live in a radically changed future Earth. This would enable us to layer social and technological scenarios over deep past conditions, identifying future social-ecological adaptation pathways that can be directly applied in research, policy and practice to help keep our planet habitable.

## Symposium Sessions, Saturday December 1<sup>st</sup>

University of Bern, «von Roll Areal», **Fabrikstrasse 6+8, Bern**

1	Structural Geology, Tectonics and Geodynamics .....	p. 17
2	Mineralogy, Petrology, Geochemistry .....	p. 20
3	Non-Traditional Stable Isotope Geochemistry: Development and Applications.....	p. 24
4	Gemmology .....	p. 25
5	Palaeontology .....	p. 25
6	Stratigraphy .....	p. 27
7	Seismic Hazard and Risk in Switzerland: From Science to Mitigation .....	p. 28
8	Earthquakes from the Field to the Laboratory (merged with session 1)	
9	Shale-Gas, CO <sub>2</sub> Storage and Deep Geothermal Energy.....	p. 30
10	Celebrating 50 Years of International Ocean Drilling (1968-2018) .....	p. 33
11	Quaternary Environments: Landscapes, Climate, Ecosystems and Human Activity During the Past 2.6 Million Years.....	p. 35
12	Geomorphology for a Habitable Planet .....	p. 39
13	Cryospheric Sciences.....	p. 40
14	Hydrology, Limnology and Hydrogeology .....	p. 43
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16	Climate Change Education and Outreach.....	p. 47
17	Aerosols and Clouds in a Changing World.....	p. 48
18	Atmospheric Processes and Interactions with the Biosphere.....	p. 49
19	Environmental Biogeochemistry of Trace Elements .....	p. 51
20	Remote Sensing of the Spheres.....	p. 53
21	Geoscience and Geoinformation – From Data Acquisition to Modelling and Visualisation.....	p. 55
22	Human Geographies .....	p. 56
23	Sustainable Social-Ecological Systems: From Local to Global Challenges .....	p. 58

## Session 1: Structural Geology, Tectonics and Geodynamics

Room 002, *Fabrikstrasse 6*

**Convenors: Guido Schreurs, Neil Mancktelow, Paul Tackley, Daniel Egli**

**Chairperson: Guido Schreurs**

09:00-09:15	Yan J., Ballmer M.D., Tackley P.J.	The Evolution and Distribution of Chemical Heterogeneity in the Earth's Mantle
09:15-09:30	Kiss D., Candiotti L.G., Podladchikov Y., Duretz T., Schmalholz S.M.	Thermal softening induced strain localization: from first order features to high resolution lithospheric scale numerical models
09:30-09:45	Spitz R., Schmalholz S.	3D finite strain quantification and numerical modelling of the transition between viscous folding and thrusting.
09:45-10:00	Beaussier S.J., Gerya T., Burg J.-P.	Effects of extensional inheritance on passive margin collapse

**10:00-11:00 Morning Poster Session with coffee**

**Chairperson: Marco Herwegh**

11:00-11:15	Lu G., Fellin G., Winkler W., Willett S.D., Guillong M.	Fast exhumation in early Oligocene and syn-collisional volcanism as revealed by combined FT and U-Pb analysis of detrital zircons in the Central Alps
11:15-11:30	Mock S., Herwegh M., Schlunegger F., von Hagke Ch., Dunkl I.	New Thermochronological Constraints on Thrust Activity in the Subalpine Molasse: Implications for the Late Miocene Evolution of the Central Alps
11:30-11:45	Delunel R., Schlunegger F., Valla P.G., Dixon J., Glotzbach C., Kober F., Norton K.P., Salcher B., Wittmann H., Christl M.	Review of Alpine denudation rates from detrital <sup>10</sup> Be concentrations
11:45-12:00	Sternai P., Sue C., Husson L., Serpelloni E., Becker T., Willett S., Faccenna C., Walpersdorf A., Castelltort S.	Present-day uplift of the European Alps: mechanisms and relative contributions

**12:00-14:00 Lunch**

**Chairperson: Whitney Behr**

14:00-14:15	Ricchi E., Gnos E., Berger A., Rubatto D., Bergemann C.	Constraining deformation phases in the Aar Massif and the Gotthard Nappe (Switzerland) using Th-Pb crystallization ages of fissure monazite-(Ce)
14:15-14:30	Bergemann C.A., Gnos E., Whitehouse M.J.	Dating retrograde tectonic activity in the Mont Blanc and Aiguilles Rouges massifs dated through ion probe analysis of hydrothermal cleft monazite
14:30-14:45	Brett A.C., Diamond L.W., Weber S., Gilgen S.	Rock-matrix versus fracture-controlled fluid pathways in the upper oceanic crust
14:45-15:00	Giorgetti C., Tesei T., Scuderi M.M., Collettini C.	Reactivation of Gouge-bearing Faults: an Experimental Insight

**15:00-16:00 Afternoon Poster Session with coffee**

**Chairperson: Neil Mancktelow**

16:00-16:15	Akker I.V., Zwingmann H., Todd A., Berger A., Herwegh M.	The role of sheet-silicates in the formation of spaced cleavages under changing physico-chemical conditions
16:15-16:30	Bastias J., Spikings R., Ulianov A., Grunow A., Chiaradìa M., Riley T., Burton-Johnson A.	The Gondwanan margin in West Antarctica: insights from the Triassic metamorphic basement of the Antarctic Peninsula
16:30-16:45	Candiotti L.G., Schmalholz S.M., Duretz T., Picazo S.	The Alpine cycle: Modelling orogenic wedge formation from generation of hyper-extended passive margins and forced subduction to continent-continent collision
16:45-17:00	Behr W.M., Becker T.W.	Sediment Control on Subduction Plate Speeds

**Posters Session 1:**

P 1.1	Bessat A., Pilet S., Duretz T., Schmalholz S.M.	Numerical modelling of lithospheric flexure at subduction zones: investigation of forces involved in the flexure and in melt extraction from the LVZ.
P 1.2	Borderie S., Mosar J., Maillot B.	Stress in the Alpine foreland – a kinematic and mechanical approach
P 1.3	Borderie S., Vendeville B.C., Graveleau F., Witt C., Dubois P., Baby P., Calderon Y.	The Chazuta Thrust, a large-transport thrust in an evaporites-floored basin (Huallaga Basin, Peru): insights from analogue modelling.
P 1.4	Bouscary C., King G., Herman F., Biswas R., Chanard K., Lavé J., Hetényi G.	Luminescence dating and landscape evolution of the Himalaya, Nepal
P 1.5	Colavitti L., Hetényi G. and AlpArray Working Group	A new technique to construct crustal 3-D Vs models: Implementation of Ray Tracing, Model Parameterization and Inversion
P 1.6	Diehl T., Kissling E., Lee T., Nibourel L., Schmid S.	Linking seismicity with faults: Insights from a new high-resolution earthquake catalog of Switzerland
P 1.7	Dorostkar O., Carmeliet J.	Effect of grain friction on characteristics of seismic cycles in a sheared granular fault gouge
P 1.8	Fabbri S.C., Allenbach R., Herwegh M., Krastel S., Lebas E., Lindhorst K., Madritsch H., Wessels M., Wielandt-Schuster U., Anselmetti F.S.	Bedrock structure, postglacial infill and neotectonic fault structures in Lake Constance
P 1.9	Gilgannon J., Berger A., Poulet T., Regenauer-Lieb K., Veveakis M., Barnhoorn A., Herwegh M.	Upscaling microstructural analysis: A new approach applied to experimentally deformed calcite aggregates
P 1.10	Haddad A., Ganas A., Kassaras I., Lupi M.	Seismicity in Western Peloponnese and Ionian Islands: A new investigation with a local network

P 1.11	Hässig, M., Moritz, R., Popkhadze, N., Ulianov, A., Chiaradia, M., Galoyan, G.	Reconstruction of the geodynamic and magmatic evolution of the Somkheto-Karabah and Pontides Arcs from the Mesozoic to Early Cenozoic across Armenia, Georgia and NE Turkey
P 1.12	Hetényi G., Epard J.-L., Colavitti L., Hirzel A.H., Kiss D., Petri B., Scarponi M., Schmalholz S.M., Subedi S.	Spatial relation of surface faults and crustal seismicity: a first comparison in the region of Switzerland
P 1.13	Jiwani-Brown E.A., Lupi M., Pacheco J.F., Planes T. , Mora M.	A seismological study to investigate the volcanic behaviour of the Irazú-Turrialba complex
P 1.14	Kaveh Firouz A., Khodaverdian A., Danciu L.	Present-day crustal deformation of the Turkish-Iranian Plateau: insights from kinematic modelling
P 1.15	Kiss D., Duretz T., Schmalholz S.M.	High-resolution thermo-mechanical numerical simulations of basement-cover deformation with application to the Helvetic nappe system
P 1.16	Lee T., Diehl T., Kissling E., Wiemer S.	High-resolution earthquake catalogue and seismic velocity models to image the structure of seismogenic faults zones in the Valais (Switzerland)
P 1.17	Madella A. , Ehlers T.A.	Understanding seaward-concave subduction zones: insights from critical taper theory and forearc seismicity
P 1.18	Madonna C., Podladchikov Y., Burg J.-P.	Laboratory evidence of viscous heating-induced strain localization
P 1.19	Mair D., Lechmann A., Herwegh M., Nibourel L., Schlunegger F.	Understanding variations in the Alpine deformation imprint on the Aar massif's basement-cover-contact – the case of the Jungfrau-Eiger Mountains (Central Alps, Switzerland)
P 1.20	Malatesta L.C., Bruhat L., Finnegan N.J.	Co-location of the downdip end of seismic locking and the continental shelf break.
P 1.21	Mock S., Herwegh M., Diehl T., Mori A., Kissling E.	Approach for a new seismotectonic model of Switzerland
P 1.22	Nibourel L., Rahn M., Berger A., Herman F., Dunkl I., Herwegh M.	Neogene exhumation of the Aar Massif controlled by crustal thickening and paleogeography
P 1.23	Nosenzo F., Balestro G., Groppo C., Festa A.	Geological-structural and metamorphic study of the Southern Dora-Maira Massif in Valmalenco (Varaita Valley, Western Alps)
P 1.24	Scarponi M., Hetényi G., Plomerová J., Solarino S., Berthet T., Baron L.	High-resolution imaging of the Ivrea Geophysical Body: A joint seismic and gravity approach
P 1.25	Schenker F.L., Ambrosi C., Scapozza C., Czerski D., Maino M., Castelletti C., Gouffon Y.	Structural and metamorphic data in the nappes of the Leptine Dome (Central Alps)
P 1.26	Tackley P.J., Jain C., Rozel A.B., Lourenco D., Gerya T.V.	Archean tectonics and the generation of continental TTG crust in global mantle convection models

P 1.27	Ueda K., Gerya T., Willett S., May D.	Break-up of continental lithosphere interacting with upper mantle and surface processes
P 1.28	Vaughan-Hammon J.D., Moulas E., Schmalholz S.M.	Numerical two-wedge model applied to the Alpine orogeny
P 1.29	Vaughan-Hammon J.D., Luisier C., Schmalholz S.M.	Strain partitioning linked to high-pressure metamorphism in the Monte Rosa metagranitoids
P 1.30	Verbeken B., Schmitt N., Foubert A., Mosar J.	Microstructures in damage zones of limestone strike-slip fault in Eclépens.
P 1.31	Winterberg S., Picotti V., Willett S.	Uplift and exhumation history questions Messinian fluvial unconformities within the Alps
P 1.32	Zwaan F., Corti G., Keir D., Sani F.	The Western Afar Margin, Ethiopia: A new and detailed structural interpretation of a developing passive margin
P 1.33	Zwaan F., Schreurs G., Buitier S.J.H.	A direct comparison of experimental set-ups for simulating extensional tectonics

## Session 2: Mineralogy, Petrology, Geochemistry

Room 003, *Fabrikstrasse 6*

Convenors: Sébastien Pilet, Bernard Grobety, Eric Reusser

Chairperson: Pierre Lanari

09:00-09:15	Belgrano T.M., Diamond L.W., Vogt Y., Biedermann A., Gilgen S.A., Al-Tobi K.	A new map of the Oman ophiolite extrusives: insights into protoarc crust composition, boninite distribution and sulphide deposit prospectivity
09:15-09:30	Georgatou A., Chiaradia M.	Magmatic sulphide saturation in subduction and postsubduction magmas
09:30-09:45	Reynes J., Hermann J.	Water retention in garnets from subducted crust, Zermatt, Switzerland
09:45-10:00	Vho A., Lanari P., Rubatto D., Giuntoli F.	Fluid-rock interaction in subduction zones: an integrated thermodynamic and $\delta^{18}\text{O}$ fractionation modelling approach
10:00-10:15	Nitsche C., Radimilahy C., Schreurs G., Serneels V.	Petrology and Medieval Indian Ocean Trade: Studying Amphibole-bearing Softstone Vessels and Quarries in North Eastern Madagascar

**10:15-11:00 Morning Poster Session with coffee**

Chairperson: Tanya Ewing

11:00-11:15	Leuthold J.	High temperature crystal-melt reactions in mafic igneous complexes
11:15-11:30	Gianola O., Bartoli O., Ferri F., Cesare B., Galli A., Ferrero S., Capizzi L.	Melt inclusions and crustal anatexis at ultra-high temperature conditions
11:30-11:45	Bovay T., Rubatto D., Lanari P., Baumgartner L.	Garnet as a key mineral to trace the origin of fluid-rock interactions in high grade metamorphic rocks (Western Alps, Switzerland)

11:45-12:00 Ewing T.A., Rubatto D., Hermann J. Formation of felsic lower continental crust: insights from U–Pb geochronology of detrital zircon from lower crustal granulites

12:00-12:15 Bouvier A.-S., Baumgartner L.P., Rose-Koga E.F., Schiano P. What can we learn from  $\delta^{18}\text{O}$  in olivine-hosted melt inclusions?

**12:15-13:30 Lunch**

**Chairperson: Nicolas Greber**

13:30-13:45 Ravindran A., Mezger K., Balakrishnan S., Kooijman E., Schmitt M., Raith M.M. Apatite and barite preserve initial  $^{87}\text{Sr}/^{86}\text{Sr}$  isotope ratios: implications for Mesoarchean crust-mantle evolution

13:45-14:00 Maltese A., Mezger K., Upadhyay D. A new perspective on Earth's differentiation history from single zircon Hf isotope analysis

14:00-14:30 Hämerli J.\*., Kemp T., Whitehouse M. (\*Recipient Paul Niggli Medal) **Invited talk:** Metamorphic resetting explains the Hf and Nd paradox in Eoarchean rocks

14:30-14:45 Wotzlaw J.F., Guillong M., Bastian L., Forni F., Balashova A., Mattsson H., Bachmann O. In-situ garnet  $^{238}\text{U}-^{230}\text{Th}$  geochronology of Holocene silica-undersaturated volcanic tuffs at millennial-scale precision

14:45-15:00 Jollands M., Kempf E., Hermann J., Müntener O. Fast H loss from hydroxylated Si vacancies in experimentally dehydrated olivine

15:00-15:15 Popov D., Spikings R Diffusion of Ar in alkali feldspar from Shap granite (UK): fracturing of crystals and non-linear Arrhenius trajectories

**15:15-16:00 Afternoon Poster Session with coffee**

**Chairperson: Eric Reusser**

16:00:16:15 Roman Alday M.C., Kouzmanov K., Harlaux M., Stefanova E. Comparative study of XRF and portable XRF analysis and application in hydrothermal alteration geochemistry: The Elatsite porphyry Cu-Au-PGE deposit, Bulgaria

16:15-16:30 Blattmann T., Wang S.-L., Lupker M., Märki L., Haghipour N., Wacker L., Chung L., Bernasconi S., Plötze M., Eglington T. Sulphuric acid-mediated weathering on Taiwan buffers geological sinks of atmospheric carbon

16:30-16:45 Bulle F., Rubatto D., Ruggieri G., Luisier C., Bouvier A.S. Oxygen isotopes in white mica from the Larderello geothermal field – a tool to trace fluid flow in a complex magmatic – hydrothermal system

16:45-17:00 Klimentyeva D., Heinrich C., Von Quadt A. Formation of massive sulfide orebodies at Bor (Serbia)

## Posters Session 2:

P 2.1	Andrew M., Graham S.	Advances in geological microanalysis: Correlation and Machine Learning
P 2.2	Bejaoui J., Sellamiand A., Braham A.	Mineralization and fluid inclusion investigations of the Miocene sandstone hosted fluorite ore deposits, Northeastern Tunisia
P 2.3	Benz J.-M., Klimentyeva D., von Quadt A., Heinrich C.A.	Sr isotope geochemistry of the Bor Cu-Au system: Is Late Cretaceous seawater involved in magmatic-hydrothermal ore formation?
P 2.4	Brunner M., Müller L., Von Quadt A., Peytcheva I., Ivascanu P.	U/Pb zircon dating of Miocene magmatism in the Apuseni Mountains (Romania) and time relationship of intrusive events at the Certej Deposit
P 2.5	Calder M.F., Arribas A., Chang Z., Hedengquist J.W.	Porphyry-style alteration and vein types of the Far Southeast porphyry Cu-Au deposit, Mankayan District, Philippines
P 2.6	Caricchi L., Sheldrake T.E., Pioli L., Simpson G., Ball E.	Holuhraun-Bardarbunga 2014-2015 (Iceland) eruption: reconstructing deep magma dynamics with cluster analysis
P 2.7	Curry A., Caricchi L., Lipman P.	Rapid, distinct magma generation preceding four caldera-forming eruptions in the Southern Rocky Mountain Volcanic Field
P 2.8	Davies J.H.F.L., Greber N.D., Schaltegger U.	Do U-Pb zircon dates from residual melts in mafic magmatic systems record protracted crystallization?
P 2.9	Demers-Roberge A., Jollands M., Tollan P., Müntener O.	Water in orthopyroxene: orientation and thickness calibration using FTIR: from the lab to natural samples
P 2.10	Domínguez-Carretero D., Kouzmanov K., Dini A.	Architecture of a distal skarn system: Calamita Fe-skarn deposit, Elba Island, Italy
P 2.11	El Khor A., Boiron M.-C., Cathelineau M., Deloule E., Luais B.	Tracing Sn and W pre-concentrations in the Limousin ophiolite and Variscan granites
P 2.12	Golay T., Moritz R., Popkhadze N., Natsvlishvili M.	The Sakdrisi Au-Cu deposit, Bolnisi mining district, Georgia: providing a genetic model based on petrographic, geochemical, structural and alteration studies.
P 2.13	Grosjean M., Moritz R., Rezeau H., Melkonyan R., Hovakimyan S., Ulianov A.	Temporal and geochemical characterization of the Tejsar magmatic complex, northern Armenia, Lesser Caucasus
P 2.14	Hantsche A., Kouzmanov K., Vassileva R.	Pyroxene geochemical evolution in a distal Pb-Zn skarn body, Madan, Bulgaria
P 2.15	Higgins O., Caricchi L., Blundy J., Melekhova L.	A geochemical and petrological study to constrain the magmatic history of St Kitts and Nevis (Lesser Antilles)
P 2.16	Hovakimyan S., Moritz R., Tayan R., Harutunyan M., Rezeau H., Melkonyan R., Hovhannisy A.	Tectonic setting of the Cenozoic Kadjaran porphyry Cu-Mo – epithermal system, Armenia, Lesser Caucasus

P 2.17	Kempf E., Hermann J.	Prograde metamorphism in the Bergell contact Aureole: A field and experimental study
P 2.18	Leuthold J.	High temperature crystal-melt reactions in mafic igneous complexes
P 2.19	Manzotti P., Ballèvre M., Baumgartner L., Müntener O., Pitra P., Robyr M., Ruffet G.	Sodic amphibole and sodic clinopyroxene in the Dent Blanche (Western Alps): new constraints for an old question
P 2.20	Marxer F., Ulmer P.	Polybaric fractional crystallisation of arc magmas – an experimental study
P 2.21	Monsef R., Monsef I., Esmaili R.	Cenozoic magmatism in northwestern of Central Iran Block: Roll back, mantle upwelling and extension
P 2.22	Moulas E., Schmalholz S., Podladchikov Y., Tajčmanová L., Kostopoulos D., Baumgartner L.	Relation between mean stress, thermodynamic and lithostatic pressure
P 2.23	Müller L., von Quadt A., Peytcheva I., Ruff R., Halga S.	Geochronology and geochemistry of zircons from the Rovina Valley Project and the Stanija Prospect – Apuseni Mountains (Romania): constraints from LA-ICP-MS/TIMS dating, trace and REE geochemistry of zircons and whole rock
P 2.24	Müller I.A., Waajan I., Frieling J., Bijl P., Ziegler M.	Carbonate clumped isotope climate reconstructions on fossil coral samples of the Early Eocene
P 2.25	Myint Myat Phyto, Guillong M., Berger A., Balmer W., Franz L., Hao A.O. Wang, Krzemnicki M.S.	A geochronological study of zircon and zirconolite observed in ruby and spinel gemstones and in marble host rock from Mogok, Myanmar
P 2.26	Naumenko-Dézes M., Rolland Y., Gallet S., Lanari P., Villa I.M.	High precision Ar/Ar age traverses reveal intragrain inhomogeneities of pristine magmatic micas
P 2.27	Nformidah S., Tollar P., Hermann J., Tchouankoue J.P.	Spinel lherzolite xenoliths from the Cameroon Volcanic Line (CVL): Implications for mantle processes and equilibrium conditions
P 2.28	Pein S.F., Diamond L.W., Belgrano T.M.	Characterisation of hydrothermal recharge alteration of seafloor basalts in the Oman ophiolite
P 2.29	Pistone M., Petri B., Müntener O., Almqvist B.S.G., Zanetti A., Hetényi G., Zappone A.S., Baumgartner L.P.	Unravelling magma emplacement mechanism in the lower crust: A forensic investigation of the Mafic Complex, Ivrea-Verbano Zone (Italy)
P 2.30	Pohlner J.E., Schmitt A.K., Chamberlain K.R., Austermann G., Hildenbrand A.	U-Pb baddeleyite geochronology: two case studies from the western Avalon Peninsula, Newfoundland
P 2.31	Richter L., Diamond L.W.	Epidote formation in the oceanic crust: Composition and P-T properties of the metasomatizing fluid
P 2.32	Roman Alday M.C., Kouzmanov K., Harlaux M., Stefanova E.	Comparative study of XRF and portable XRF analysis and application in hydrothermal alteration geochemistry: The Elatsite porphyry Cu-Au-PGE deposit, Bulgaria

P 2.33	Schaltegger U., Ovtcharova M., Davies J.H.F.L., Greber N.D., Farina F., Widmann P., Lena L.	How to achieve 100 ppm precision on a U-Pb zircon age: recent developments and their limitation
P 2.34	Schenker F.L., Scapozza C.	Soapstones: fields and production laboratories between Ticino and Moesano
P 2.35	Schmitt J., Seth B., Köhler P., Willenbring J., Fischer H.	On CF <sub>4</sub> – a trace gas in granites and in the past atmosphere
P 2.36	Tollan P., Ellis B., Troch J., Neukampf J., Bachmann O., Hermann J.	A method for determining magmatic volatile records by FTIR analysis of unexposed melt inclusions and their minerals hosts
P 2.37	Weber G., Simpson G., Caricchi L.	Thermal perspectives on the diversity and temporal evolution of magma chemistry
P 2.38	Weber S., Diamond L.W., Alt-Epping P.	Insights into formation of epidosites in oceanic crust from reactive-transport modeling
P 2.39	Zuluaga N., Belgrano T., Diamond L.W.	Hydrothermal alteration associated with volcanogenic massive sulfide (VMS) deposits in the Semail Ophiolite, Oman
P 2.40	Zurbriggen R.	Relationships of banded amphibolites and Ordovician orthogneisses in pre-Variscan basements of the Alps

### Session 3: Non-Traditional Stable Isotope Geochemistry: Development and Applications

Room B005, *Fabrikstrasse 8*, Ground Floor

Convenors: Afifé El Korrh, Andres Rüggeberg

Chairpersons: Afifé El Korrh, Andres Rüggeberg

09:00-09:15	Nägler, T F., Pierret M.-C., Voegelin A.R., Pettke T., Aschwanden L., Villa I.M.	Small catchment scale Mo isotope balance and its implications for global Mo isotope cycling
09:15-09:30	O'Sullivan E., Nägler T., Wille M., Kamber B.	Ocean redox state at the dawn of the Boring Billion: Mo isotopic constraints from a 1.85 Ga black shale
09:30-09:45	Rickli J., Janssen D., Elwood M., Hassler Ch., Jaccard S.	Southern Ocean dissolved chromium isotope compositions
09:45-10:00	Pathak D., Mezger K.	A non-traditional stable isotope method to understand Sn isotope fractionation in geochemical and cosmochemical processes

10:00-11:00 Morning Poster Session with coffee

Chairpersons: Afifé El Korrh, Andres Rüggeberg

11:00-11:30	Greber N.D. (Recipient Paul Niggli Medal)	<b>Invited talk:</b> The U and Mo isotopic compositions of Archean granitoids
11:30-11:45	Wolf M., Romer R.L., Glodny J.	Isotopic fractionation (Li, B, Sr, Nd, and Pb) during partial melting

11:45-12:00	Grosjean M., André-Mayer A.S., Deloule E., Turlin F., Eglinger A., Muchez P., Debruyne D., Voudouris P., Rouxel O.	SIMS Cu-isotopes study: Cu-sulfides standard elaboration and application on the Copperbelt (RDC, Zambia)
12:00-12:15	Looser N., Guillong M., Laurent O., Fernandez A., Samankassou E., Moscariello A., Bernasconi S.M.	Tracking temperature and $\delta^{18}\text{O}$ fluid evolution during burial with combined carbonate clumped isotopes and in-situ (LA-ICP-MS) U-Pb dating – A case study in the Swiss Jura Mountains

**12:15-14:00 Lunch**

## Session 4: Gemmology

*Room B005, Fabrikstrasse 8, Ground Floor*

**Convenors:** Michael S. Krzemnicki, Laurent E. Cartier

**12:00-14:00 Lunch**

**Chairperson:** Leander Franz

14:00-14:15	Xu W., Link K., Liu C., Kiefert L.	Age determination of zircon inclusions in sapphire from Kashmir and characterization with Raman spectroscopy
14:15-14:30	Balmer W.A., Hauzenberger C.A., Fritz H., Suthirat C.	Marble-hosted ruby deposits of the Morogoro Region, Tanzania
14:30-14:45	Myint Myat Phyo, Bieler E., Franz L., Balmer W., Krzemnicki M.S.	A new suite of inclusions in spinel from Mogok (Myanmar) – a study using Raman microspectroscopy and scanning electron microscopy
14:45-15:00	Krzemnicki M.S.	Colour instability of Padparadscha-like Sapphires

**15:00-16:00 Afternoon Poster Session with coffee**

## Session 5: Palaeontology

*Room B106, Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors:** Christian Klug, Torsten Scheyer, Lionel Cavin

**Chairperson Palaeozoic, taphonomy and methods:** Torsten Scheyer

09:00-09:15	Daley A.C., Antcliffe J.B., Drage H.B., Pates S.	The early fossil record of Euarthropoda and the Cambrian Explosion
09:15-09:30	<u>Laibl L.*</u>	Early post-embryonic stages of Cambrian trilobites: morphological and ecological disparity
09:30-09:45	Klug C., Samankassou E., Pohle A., Zapalski M., Korn D.	Couscous ai frutti di mare – the spectacular Moroccan mudmound locality Hamar Laghdad and its palaeoecology
09:45-10:00	Antcliffe J.B.	Anoxia can increase the rate of decay for cnidarian tissue: Using <i>Actinia equina</i> to understand the early fossil record

10:00-10:15	Gueriau P.	Besides phase-contrast tomography, synchrotron imaging also rhymes with chemical mapping: new advances in 2D synchrotron imaging of fossils
<b>10:15-11:00 Morning Poster Session with coffee</b>		
<b>Chairperson Triassic: Christian Klug</b>		
11:00-11:15	Ferrante C.*, Cavin L., Furrer H., Martini R.	Coelacanths from the Middle Triassic of Switzerland show unusual morphology
11:15-11:30	Galasso F.*, Pereira P., Fernandes P., Spina A., Marques J.	Permian-Triassic palynology of the Karoo Supergroup from the N'Condézzi region, Tete Province, Mozambique
11:30-11:45	Scheyer T.M., Klein N.	Bone Histology of <i>Cyamodus hildegardis</i> (Placodontia: Cyamodontoidea) from the Besano Formation of Monte San Giorgio, Switzerland: inferences for Ecology and Lifestyle
11:45-12:00	Zahner M.*, Brinkmann W.	The first theropod skeleton from Switzerland and what it tell us about the early evolution of neotheropod dinosaurs
<b>12:00-14:00 Lunch</b>		
<b>Chairperson Mesozoic and publishing: Allison Daley</b>		
14:00-14:15	Weinkaup M.F.G.*, Hoffmann R., Wiedenroth K., Goedertz P., De Baets K.	Morphological disparity and ontogeny of the endemic heteromorph ammonite genus <i>Aegocrioceras</i>
14:15-14:30	Burek I., Anquetin J.	New material from the Banné Marls (Kimmeridgian) in Glovelier (JU) reveals novel insights on plesiochelyid turtle morphology
14:30-14:45	Rollot Y.*, Joyce W.G.	New insights into the cranial circulation and innervation of baenid turtles
14:45-15:00	Anquetin J., Billet G.	Peer Community in Paleontology (PCI Paleo): a community-driven, transparent, free and open peer-review platform for Paleontology
<b>15:00-16:00 Afternoon Poster Session with coffee</b>		
<b>Chairperson Paleogene and Neogene: Walter Joyce</b>		
16:00-16:15	Maridet O., Balme C., Lapauze O., Legal S., Lu X., Mennecart B., Tissier J., Vasilyan D., Costeur L.	The locality of Murs (Southeastern France): Rediscovery of a forgotten Early Oligocene fauna
16:15-16:30	Tissier J.*, Antoine P.O., Becker D.	Oligocene-Miocene Rhinocerotidae from Europe: systematics, phylogeny and diversification
16:30-16:45	Vasilyan D.*, Sakahyan L., Hovakimyan H., Lazarev S., Maul L., Caves J.K.	New data on the upper Miocene continental record of Armenia
16:45-17:00	Friesenhagen T.*, Knappertsbusch M.	Test-Size Evolution of the Planktonic Foraminifer <i>Globorotalia menardii</i> in the Tropical Atlantic Since the Upper Miocene
17:00	<b><u>Paleoprize candidates*</u></b>	<b><u>Paleoprize &amp; End of oral presentations</u></b>

## Posters Session 5:

P 5.1	Schläfli P., Gobet E., Tinner W., Schlunegger F.	Biostratigraphic dating and reconstruction of vegetation responses to Quaternary climate change in the Swiss North Alpine foreland
P 5.2	Sharma N., Adatte T., Sordet V., Vennemann T., Keller G., Schoene B., Khadri S.	Paleoenvironmental implications of Deccan volcanism relative to the KTB extinction: evidences from the red bole record

## Session 6: Stratigraphy

Room A004, *Fabrikstrasse 8, Ground Floor*

**Convenors: Alain Morard, Reto Burkhalter, Oliver Kempf & Ursula Menkveld-Gfeller**

**Chairperson: Alain Morard**

**Stratigraphic calibration and characterization of key successions**

9:00-9:15	Widmann P., Bucher H., Leu M., Schneebeli-Hermann E., Goudemand N., Bagherpour B., Schaltegger U.	The timing of the largest Early Triassic extinction: implications for lethally hot vs. lethally cold climate
09:15-9:30	Fleischmann S., Picotti V., Bernasconi S., Caves J.K.	Isotope stratigraphy of a Tethyan platform and slope across the Pliensbachian-Toarcian. The impact of the precursor of the Toarcian-OAE on carbonate productivity and climate
9:30-9:45	Honegger L., Adatte T., Poyatos-Moré M., Chanvry E., Puigdefabregas C., Clark J., Castelltort S.	Identification and expression of hyperthermal events in continental settings: an example from the early Eocene Pyrenean foreland basin, Spain
9:45-10:00	Castelltort S., Nowak A., Hunger T., Laeuchli C., Honegger L., Spangerberg J., Adatte T., Puigdefabregas C., Fildani A., Chanvry E., Foreman B., Poyatos-More M., Clark J.	Sediment-supply forced deltaic regression during early Eocene hyperthermals in the South-Pyrenean foreland basin, Roda de Isabena, Spain

**10:00-11:00 Morning Poster Session with coffee**

**Chairperson: Oliver Kempf**

**Stratigraphic calibration and characterization of key successions**

11:00-11:15	Feist-Burkhardt S., Bläsi H., Deplazes G., Hostettler B., Wohlwend S.	High resolution dinoflagellate cyst palynostratigraphy of the Middle Jurassic in northern Switzerland
11:15-11:30	Lauper B., Vogel H., Deplazes G., Jaeggi D., Ariztegui D., Fouquet A.	Geochemical characterization of the Opalinus Clay/ Passwang Formation boundary

11:30-11:45	Lena L., López-Martínez R., Lescano M., Aguirre-Urrreta B., Concheyro A., Vennari V., Naipauer M., Samankassou E., Pimentel M., Ramos V.A., Schaltegger U.	The importance of radio-isotopic dating of the stratigraphic record – an example from the Jurassic/Cretaceous boundary
11:45-12:00	Pictet A., Kürsteiner P., Tschanz K., Tajika A.	Ammonite biostratigraphy of the Tierwis and Schratzenkalk formations in the Alpstein Massif, northeastern Switzerland
12:00-12:15	Hilbert-Wolf H., Roberts E., Stevens N., O'Connor P., Lawrence L., Orr T.	Explosive volcanism and the preservation of vertebrates at the close of the Paleogene in the western branch of the East African Rift
<b>12:15-14:00    Lunch</b>		

## Posters Session 6:

P 6.1	Blattmann F.R., Wohlwend S., Becker J.K., Deplazes G.	Tracing facies variability in the Middle Jurassic Passwang-Formation (Frickberg, AG)
P 6.2	Garefalakis P., Schlunegger F.	Stratigraphic architecture of the Upper Marine Molasse implies incipient westward tilt of the foreland plate
P 6.3	Strasky S., Schaltegger U., Ovtcharova M., Hofmann B., Kälin D.	Age determination and correlation of the Wolhusen Bentonite (Upper Freshwater Molasse, Middle Miocene, Napf alluvial fan, Switzerland)

## Session 7: Seismic Hazard and Risk in Switzerland: From Science to Mitigation

Room B101, *Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors: Donat Fäh, Katrin Beyer, Blaise Duvernay**

**Chairperson: Donat Fäh**

09:00-09:15	Bodenmann L., Galans P., Broccardo M., Stojadinovic B.	Measuring the Benefit of Seismic Retrofitting in Reducing the Risk of Direct Earthquake Losses
09:15-09:30	Inamasu H., Siani N-G., Roger L.R., Elkady A., Kohrangi M., Lignos D.G.	Seismic Risk Assessment of Existing Steel Frame Buildings in Switzerland
09:30-09:45	Hobiger M., Fäh D., Zimmermann E., Michel C., Clinton J., Cauzzi C., Weber F., Duvernay B.	The renewal project of the Swiss strong motion network (SSMNet)
09:45-10:00	Hohensinn R., Geiger A.	Stand-alone GNSS Receivers as Velocity Seismometers: Geohazard Monitoring and Earthquake Detection
10:00-10:15	Poster authors P 7.1 – P 7.4	Short 3 Min. Poster Presentations in the conference room

**10:15-11:00    Morning Poster Session with coffee**

**Chairperson: Katrin Beyer**

11:00-11:15	Roth P., Danciu L., Duvernay B., Fäh D., Kästli P., Lestuzzi P., Wiemer S.	ERM – Towards the first Swiss seismic risk model
11:15-11:30	Bergamo P., Perron V., Panzera F., Hammer C., Fäh D.	Ongoing development of the site response module in the Earthquake Risk Model Switzerland project
11:30-11:45	Diana L., Lestuzzi P.	Improving capacity curves and displacement demand prediction for accurate seismic vulnerability assessment at urban scale using mechanical methods
11:45-12:00	Michel C.	Earthquake loss scenarios: What, Why, How?
12:00-12:15	Poster authors P 7.5 – P 7.8	Short 3 Min. Poster Presentations in the conference room

**12:15-14:00 Lunch****Chairperson: Blaise Duvernay**

14:00-14:15	Kremer K., Anselmetti F.S., Boes R.M., Evers F.E., Fäh D., Fuchs H., Hilbe M., Kopf A., Lontsi A., Nigg V., Razmi M.A., Shynkarenko A., Stegmann S., Strupler M., Vetsch D.F., Wiemer S.	Lake Tsunamis in Switzerland: From causes to hazard
14:15-14:30	Shynkarenko A., Kremer K., Stegmann S., Lontsi A.M., Bergamo P., Hobiger M., Hammerschmidt S., Kopf A., Fäh D.	Geotechnical and Seismological Studies to Assess Slope Stability in Lake Lucerne
14:30-14:45	Lontsi A.M., García-Jerez A., Molina Villegas J.C., Sánchez-Sesma F.J., Ohrnberger M., Krüger F., Hobiger M.T., Molkenthin C., Shynkarenko A., Fäh D.	A generalized theory for full microtremor H/V (z, f) spectral ratio interpretation in offshore and onshore environments
14:45- 15:00	Häusler M., Fäh D.	Monitoring the slope instability at Brienz / Brinzauls using ambient vibrations and earthquake recordings
15:00-15:15	Poster authors P 7.9 – P 7.13	Short 3 Min. Poster Presentations in the conference room

**15:15-16:00 Afternoon Poster Session with coffee****Posters Session 7:**

P 7.1	Bora S., Imperatori W., Bergamo P., Fäh D.	Challenges in earthquake ground-motion prediction for Switzerland
P 7.2	Grolimund R., Boesch E., Fäh D.	Seismicity in Switzerland in the early instrumental period Re-assessment of the period 1911-1963 from a heterogeneous dataset

P 7.3	Chieppa D., Hobiger M., Fäh D.	Investigation of the Swiss Molasse basin with passive seismic methods
P 7.4	Nigg V., Girardclos S., Kremer K., Anselmetti F.S.	Identification and characterization of lake-tsunami deposits in Switzerland
P 7.5	Schweizer N., Fabbri S., Wirth S.B., Anselmetti F.S., Gilli A., Kremer K.	Traces of the Ralligen Rockfall in Lake Thun
P 7.6	Strupler M., Kremer K., Anselmetti F.S., Razmi A., Wiemer S.	A first step towards an extensive estimation of the tsunami hazard in Swiss lakes
P 7.7	Evers F.M., Fuchs F., Razmi A.M., Vetsch D.F., Boes R.M.	Subaqueous Mass Failure: Hydraulic Lab Experiments
P 7.8	Noël C., Pimienta L., Violay M.	Time-dependent deformations of sandstone during fluid pressure oscillations: implications for natural and induced seismicity
P 7.9	Cornelio C., Spagnuolo S., Passelègue F., Nielsen S., Di Toro G., Violay M.	The different effect of fluid viscosity in earthquake nucleation and propagation.
P 7.10	Violay M., Giorgetti C., Cornelio C., Di Stefano G., Wiemer S., Burg J.-P.	A New State-of-the-art Apparatus to Study Earthquake Nucleation and Propagation: HighSTEPS
P 7.11	Antunes V., Planès T., Carrier A., Obermann A., Mazzini A., Ricci T., Sciarra A., Moretti M., Lupi M.	A back-projection location method based on the cross-correlation envelope of signals at different station pairs
P 7.12	Alvizuri C., Hetényi G.	Full moment tensors for exotic seismic sources including induced events, landslides, and nuclear tests
P 7.13	Acosta M., Passelègue F.X., Schubnel A., Gibert B., Violay M.	Influence of fluid pressure level on the nucleation of laboratory earthquakes.

## Session 9: Shale-Gas, CO<sub>2</sub> Storage and Deep Geothermal Energy

Room B102, *Fabrikstrasse 8, 1<sup>st</sup> Floor*

Convenors: Lyesse Laloui, Larry Diamond, Paul Bossart

Chairperson: Lyesse Laloui (CO<sub>2</sub> Geosequestration)

9:00-9:15	Grimm-Lima M.M., Vogler D., Schädle P., Saar M.O., Xiang-Zhao Kong	Impact of effective normal stress on CO <sub>2</sub> injection into a brine-saturated single fracture with rough surfaces
9:15-9:30	Minardi A., Laloui L.	Experimental investigation on the sealing capacity of Opalinus Clay to CO <sub>2</sub> injection
9:30-9:45	Grab M., Obermann A., Rinaldi A., Madonna C., Nussbaum C., Jaeggi D., Manukyan E., Maurer H.R., Zappone A.	Geophysical instrumentation for monitoring CO <sub>2</sub> -brine injected into the main fault in Mont Terri

9:45-10:00	Ma J., Querci L., Hattendorf B., Saar M., Kong X.Z.	Dissolution of dolomite cement in sandstones when subjected to CO <sub>2</sub> -enriched brine
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**10:00-11:00 Morning Poster Session with coffee**

**Chairperson: Paul Bossart (Fractures)**

11:00-11:15	Schmitt N., Jansen G., Miller S., Valley B., Mosar J.	Fracture network stability analysis for coupled EGS prospection project in Eclépens.
11:15-11:30	Fryer B., Siddiqi G., Laloui L.	Reservoir stimulation and its effect on depletion-induced seismicity
11:30-11:45	Wenning Q.C., Madonna C., Pini R., Kurotori T., Petrini C., Hosseinzadeh Hejazi S.A.	Computerized tomography imaging of fracture aperture distribution and tracer transport within sheared fractures
11:45-12:00	Krietsch H., Villiger L., Doetsch J., Gischig V., Amann F.	Complex interplay between fracture opening and shearing during in-situ stimulation experiments

**12:00-14:00 Lunch**

**Chairperson: L.W. Diamond (In-situ Experiments & Field Tests)**

14:00-14:15	Nawratil de Bono C. and GGeo-01 team	GEO-01: The first GEothermie 2020 P&D well in the Canton of Geneva – Preliminary results
14:15-14:30	Nussbaum C., Guglielmi Y., de Barros L., Cappa F., Birkholzer J., Bossart P.	Aseismic and seismic reactivation of a velocity-strengthening clay-rich fault zone: the Mont Terri Main Fault FS experiment
14:30-14:45	Schneeberger R., Egli D., Lanyon B., Mäder U.K., Berger A., Kober F., Blechschmidt I., Herwegen M.	Large-scale structures governing water flow in crystalline bedrock at Grimsel Test Site (Switzerland).
14:45-15:00	Boulicault L., Reynolds L., Allenbach R., Minnig C., Baumberger R.	Latest Results of the GeoTherm and GeoMol Projects for Deep Geothermal Energy

**15:00-16:00 Afternoon Poster Session with coffee**

**Chairperson: Benoît Valley (Geothermal)**

16:00-16:15	Makhlofi Y., Samankassou E., Meyer M.	Early dolomitization and dedolomitization of the Late Jurassic limestones in the Geneva Basin (Switzerland and France)
16:15-16:30	Omodeo-Salé S., Do Couto D., Corrado S., Carraro D., Ziegler L., Moscariello A.	Thermal modelling to prevent risks in geothermal exploration: the Geneva Basin case study (Western Switzerland)
16:30-16:45	Moscariello A., Clerc N., Pierdona L., De Haller A.	Exploring the interface between shallow and deep geothermal systems: new insights from the Mesozoic-Cenozoic transition.
16:45-17:00	Diamond L.W., Wanner C., Waber H.N.	Penetration depth of meteoric water and maximum temperatures in orogenic geothermal systems

## Posters Session 9:

P 9.1	Ahkami M., Roesgen T., Saar M.O., Xiang-Zhao Kong	High-resolution temporo-ensemble PIV to resolve pore-scale flow in 3D-printed fractured porous media
P 9.2	Alt-Epping P., Diamond L.W., Wanner C.	Simulations of fluid flow and chemical reactions in the deep orogenic hydrothermal system at Grimsel Pass, Switzerland
P 9.3	Antunes V., Planès T., Carrier A., Martin F., Meyer M., Lupi M.	Detecting microseismicity in the Geneva Basin and surrounding areas using coherence of signals at different stations
P 9.4	Aschwanden L., Diamond L.W., Mazurek M., Davis D.	Creation of secondary porosity in dolostones by upwelling basement water in the foreland of the Alpine Orogen
P 9.5	Carrier A., Lupi M., Fishanger F., Collignon M.	Brand new deep electrical resistivity tomography (ERT) methodology for middle-enthalpy geothermal exploration in the Geneva Basin, Switzerland.
P 9.6	Caspari E., Greenwood A., Baron L., Egli D., Toschini E., Holliger K.	Geophysical characterization of a fracture network surrounding a hydrothermally active shear zone: a case study from the Grimsel pass
P 9.7	Collignon M., Klemetsdal Ø., Møyner O., Alcanié M., Carrier A., Nilsen H., Rinaldi A., Lupi M.	Heat storage in the Canton of Geneva basin: a numerical modelling study
P 9.8	Butler N.	Fracture geometry and fracture growth of an in-situ hydraulic fracturing (HF) experiment
P 9.9	Jaeggi D., Hesser J., Nussbaum C., Bossart P.	A new mine-by experiment at the Mont Terri rock laboratory to assess hydromechanical behavior of the sandy facies of Opalinus Clay
P 9.10	Kong X.-Z., Parmigian A., Di Palma P., Leclair S., Saar M.O.	Dynamics of phase exsolution in porous media
P 9.11	Omodeo-Salé S., Eruteya O.E., Guglielmetti A., Moscarello A.	New insights into the thermal and petroleum system of the St Gallen area: Implication for geothermal exploration
P 9.12	van den Heuvel D.B., Mock S., Egli D., Diamond L.W., Herwegen M.	Compilation of data relevant for geothermal exploration – a first step towards a Geothermal Play Fairway Analysis of the Rhône Valley, Switzerland
P 9.13	van den Heuvel D.B., Wanner C., Mäder U., Diamond L.W.	Investigating mineral reactions during high-temperature aquifer thermal energy storage (HT-ATES) in the Swiss Molasse Basin

## **Session 10: Celebrating 50 Years of International Ocean Drilling (1968-2018)**

*Room B104, Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors: Silvia Spezzaferri, Gretchen Früh-Green, Marc Lever, Judith McKenzie, Helmut Weissert, Andrea Moscariello and Flavio Anselmetti**

**Chairpersons: Flavio Anselmetti, Mark Lever**

09:00-09:15	Jaccard S.L., Hayes C.T., Martinez-Garcia A., Hodell D.A., Anderson R.F., Sigman D.M., Haug G.H.	Two Modes of Change in Southern Ocean Productivity Over the Past Million Years
09:15-09:30	Stainbank S., Rüggeberg A., Spezzaferri S., Kroon D., de Leau E.S., Zhang M., Raddatz J.	Planktonic foraminifera calcification depths in the Indian Ocean: controls and implications
09:30-09:45	Rüggeberg A., Spezzaferri S., Stainbank S., Coletti G., Kroon D., Lüdemann T., Eberli G., Betzler C.	Paleodepth reconstruction of the Inner Sea based on benthic foraminifera, IODP Exp. 359, Maldives
09:45-10:00	Fentimen R., Früh-Green G.L., Foubert A., Spezzaferri S.	Facies analyses and benthic foraminiferal assemblages from the Atlantis Massif (MAR 30°N)

### **10:00-11:00 Morning Poster Session with coffee**

**Chairpersons: Gretchen Früh-Green, Andrea Moscariello**

11:00-11:15	Bernasconi S.M., Fernandez A., Mejia L.M., Stoll H.	Recent advances in carbonate clumped isotope thermometry: towards high resolution paleoclimate reconstructions from marine sediments
11:15-11:30	Fernandez A., Mejia L.M., Jaroszewicz E., Guitian J., Zhang H., Bernasconi S., Stoll H.	Tropical sea surface temperatures during the Cretaceous Thermal Maximum
11:30-11:45	Stoll H., Guitian J., Hernandez I., Mejia L.M., Tanner T., Zhang H.	New estimations of past atmospheric CO <sub>2</sub> from ancient algae
11:45-12:00	Leila M., Moscariello A.	Origin and evolution of the Eonile River unraveled by a deep basin -onshore correlation: the role of the Messinian Salinity Crisis in shaping the modern Egyptian landscape.

### **12:00-14:00 Lunch**

**Chairpersons: Silvia Spezzaferri**

14:00-14:30	Kroon D., Leg 208 Scientific Party and Many Others	Windows of climate and carbon cycle variability on orbital time scales from the Late Cretaceous to Quaternary
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14:30-15:00 Spezzaferri S., Anselmetti F., McKenzie J., Weissert H. and Guests 50 years of International Ocean Drilling – The early years

**15:00-16:00 Afternoon Poster Session with coffee**

**Chairpersons:** Judith A. McKenzie and Helmut Weissert

**16:00-17:00 Round Table**

## Posters Session 10:

P 10.1	Eickenbusch P., Jørgensen B.B., Lever M.A.	Short-chain organic acid concentrations and implications for microbial life in active serpentinite mud volcanoes of the Mariana forearc
P 10.2	Frueh-Green G.L., Orcutt B.N., Rouméon S., Lilley M.D., Morono Y., IODP Expedition 357 Science Party	In search of life in the subseafloor of serpentinized peridotites: An overview of IODP Expedition 357 (Atlantis Massif, Mid-Atlantic Ridge 30°N)
P 10.3	Guitián J., Phelps S., Polissar P.J., Hernández-Almeida I., Stoll H.M.	Oligocene-Miocene sea surface temperatures from North Atlantic sediments.
P 10.4	Hernández-Almeida I., Diz P., Bernádez P., Pérez-Arlucea M., Hall I.	Variability in the East Equatorial Pacific paleoproductivity during the Middle and Late Pleistocene
P 10.5	Karpoff A.M., Manatschal G., Pinto V.H., Ulrich M., Sauter D.	Rifted margins revisited: insights from ODP sites off Iberia and field observations in the Alps
P 10.6	Knappertsbusch M., Friesenhausen T.	Morphological evolution of menardiform globorotalids are different in the Atlantic and Pacific oceans
P 10.7	McKenzie J.A., Huebscher C., Aloisi G., Bertoni C., Camerlenghi A., Evans N., Hodell D., Lofi J.	Demise of a salt giant: Dolomite formation at the termination of the Messinian Salinity Crisis in the Ionian Basin of the Central Mediterranean Sea
P 10.8	Mejia L.M., Fernandez A., Guitian J., Zhang H., Bernasconi S., Stoll H.	Unraveling the potential for sea surface temperature reconstructions using coccolith clumped isotopes
P 10.9	Ternieta L., Früh-Green G.L., Bernasconi S.M., Lilley M.D.	Carbon Geochemistry and Mineralogy of Serpentinized Mantle Peridotites at the Atlantis Massif: Results from IODP Expedition 357
P 10.10	Zhang H., Stoll H., Chuanlian Liu	The relationship between inorganic/organic carbon pump and benthic foraminifera carbon isotope in the last 5 Ma: a perspective from tropical ocean

## **Session 11: Quaternary Environments: Landscapes, Climate, Ecosystems, Human Activity During the Past 2.6 Million Years**

*Room 004, Fabrikstrasse 6*

**Convenors: Naki Akçar, Christine Pümpin, Stéphanie Girardclos, Gaudenz Deplazes, Stephanie Wirth, Jean Nicolas Haas, René Löpfe, Loren Eggenschwiler**

**Chairpersons: Naki Akçar & Stefanie Wirth**

09:00-09:05	Welcome – Naki Akçar	
09:05-09:20	Baggenstos D., Häberli M., Schmitt J., Fischer H.	An attempt to reconstruct planetary radiative imbalance over the last 40,000 years
09:20-09:35	de Potter Longchamp C., Goyette Pernot J.	Influence of the geology and meteorological conditions on indoor radon concentrations in the Jura mountains: preliminary results of the Interreg project Jurad-bat
09:35-09:50	Grischott R., Kober F., Ivy-Ochs S., Hippé K., Lupker M., Christl M., Vockenhuber C., Maden C.	Timing the deposition of Swiss Deckenschotter with cosmogenic isochron burial dating
09:50-10:05	Groos A.R., Akçar N., Vockenhuber C., Veit H.	Glacial chronology of the Bale Mountains and its implications for the early human occupation of the southern Ethiopian Highlands

### **10:05-11:00 Morning Poster Session with coffee**

**Chairpersons: Stéphanie Girardclos & Gaudenz Deplazes**

11:00-11:05	CH-QUAT- Naki Akçar	
11:05-11:20	Akçar N., Yeşilyurt S., Christl M., Vockenhuber C.	Fluctuations of the Eastern Antarctic Ice Sheet in Queen Maud Land
11:20-11:35	Hofmann F.M., Alexanderson H., Schoeneich P., Mertes J.R., Léanni L., ASTER Team (Aumaître G., Bourlès D.L., Keddadouche K.)	<sup>10</sup> Be exposure dating reveals multiple glacier advances and still stands in the southern Écrins massif (French Alps) during the Late Glacial and the Early Holocene
11:35-11:50	Hofmann B.A., Akçar N., Valla P.	Twannberg: Meteorite strewn field and glacial transport
11:50-12:05	Kronig O., Ivy-Ochs S., Grazioli S., Luetscher M., Schide K., Gallen S., Vockenhuber C.	Quantifying subglacial erosion beneath the Tsanfleuron glacier, Switzerland

### **12:05-13:30 Lunch**

**Chairpersons: Loren Eggenschwiler, Christine Pümpin & René Loepfe**

13:30-13:45	Lombardo U.	Neotectonics drove landscape evolution in SW Amazonia
13:45-14:00	Luetscher M., Moseley G.E., Festi D., Hof F., Spötl C., Edwards R.L.	A new speleothem record of the last interglacial (MIS-5e) from the Sieben Hengste

14:00-14:15	Singeisen C., Ivy-Ochs S., Wolter A., Kronig O., Yesilyurt S., Vockenhuber Ch., Akcar N.	New insights into the detachment mechanism, runout and age of the Kandersteg rock avalanche
14:15-14:30	Spillmann T., Madritsch H., Deplazes G., Hauvette L., Fiebig B., Keller L., Höcker A.	Seismic analysis of overdeepened Quaternary deposits, northern Switzerland
14:30-14:45	Studer A.S., Sigmar D.M., Martínez-García A., Thöle L.M., Michel E., Jaccard S.L., Lippold J.A., Mazaud A., Wang X.T., Robinson L.F., Adkins J.F., Haug G.H.	Increased nutrient supply to the Southern Ocean during the Holocene and its implications for the pre-industrial atmospheric CO <sub>2</sub> rise
14:45-15:00	Zaki A.S., Schuster M., King G., Herman F., Castelltort S.	How was the amount of precipitation perturbed during the Late Pleistocene in North Africa?

**15:00-16:00 Afternoon Poster Session with coffee**

## Posters Session 11:

P 11.1	Affolter S., Häuselmann A. , Fleitmann D., Leuenberger M.	Temperature reconstruction using speleothem fluid inclusions from Milandre cave, Jura Mountains, Switzerland
P 11.2	Amsler H.E., Schmid N., Jaccard S.L., Kuhn G., Ikehara M.	Variations in near-bottom flow of ACC during the past glacial cycle in SW Indian Ocean
P 11.3	Bandou D., Schläfli P., Schwenk M., Douillet G.A., Kissling E., Schlunegger F.	Gravity model of the overdeepenings from the Bern area
P 11.4	Beccari V., Basso D., Almogi-Labin A. , Hyams-Kaphzan O. , Makovski Y. , Spezzaferri S.	Macro- and micro-fauna from cold-seeps in the Palmahim Disturbance Zone (off-shore Israel)
P 11.5	Bolland A., Rey F., Tinner W., Heiri O.	Using chironomids to constrain Late Glacial climate trends in Burgäschisee, Switzerland
P 11.6	Buechi M.W., Deplazes G., Anselmetti F.S.	Sedimentology of the glacial facies within the Deckenschotter of Northern Switzerland
P 11.7	Czerski D., Mosetti L., Cardani Vergani R., Pellegrini M., Federici-Schenardi M., Gillioz M., Scapozza C.	The evolution of the fluvial environments and the history of human settlements during the Late Holocene on the Piano di Magadino (Cantone Ticino, Switzerland): new sedimentological and geoarchaeological data
P 11.8	Dieleman C., Akçar N., Christl M., Vockenhuber C.	Isochron-burial dating of Swiss Deckenschotter
P 11.9	Gegg L., Buechi M.W., Deplazes G., Madritsch H., Mueller D., Preusser F., Anselmetti F.S.	In quest of a pre-LGM (sub-)glacial history: drilling the overdeepened Lower Aare Valley

P 11.10	Råman Vinnå L., Bouffard D., Wüest A., Girardclos S., Dubois N.	Spatial focusing of lake sedimentation by wind driven circulation
P 11.11	Dubois N., Råman Vinnå L., Rabold M., Hilbe M., Anselmetti F.S., Wüest A., Meuriot L., Jeannet A., Girardclos S.	Subaqueous slope instabilities due to river correction and artificial dumps (Lake Biel, Switzerland)
P 11.12	Šegvić B., Girardclos S., Zanoni G., González C.A., Steimer-Herbet T., Besse M.	Fe-Mn nodules in young soils of Grand-Saconnex (Geneva, Switzerland): encrustation hampered by the Late Neolithic soil drainage?
P 11.13	Gribenski N., Valla P., Preusser F., Crouzet C., Buoncristiani J.F.	Constraining the maximum glacial timing of the Lyon Lobe, French Alps, Using OSL dating
P 11.14	Ivy-Ochs S., Viganò A., Rossato S., Martin S., Vockenhuber C., Rigo M., Campedel P.	Reconstructing the sequence of massive rock-slope failures in Valle di Tovel, Trentino (Italy)
P 11.15	Kamleitner S., Ivy-Ochs S., Monegato G., Gianotti F., Salcher B., Reitner J.M.	Tackling North-South differences of the Last Glacial Maximum in the Alps
P 11.16	Lechleitner F.A., Amirnezhad-Mozhdehi S., Columbu A., Comas-Bru L., Labuhn I., Pérez-Mejías C., Rehfeld K.	What do speleothems in Western Europe record? Assessing regional and temporal trends in speleothem $\delta^{18}\text{O}$ with the SISAL database
P 11.17	Lehmann A., Paul C., Filippidou S., Ballif L., Dyer S., Junier P., Vennemann T.	Reconstruction of ecological evolution of lakes based on multidisciplinary proxies: the case of Lake Liambezi, Botswana.
P 11.18	Ludwig A.	Evolution of local topography by fluvial and hillslope processes: a GIS-based study in the eastern Jura Mountains and the Wutach valley (southern Germany)
P 11.19	Magrani F., Valla P.	Spatial patterns of glacial erosion in the Alpine foreland: Morphometric analysis of overdeepenings
P 11.20	Mair D., Lechmann A., Yesilyurt S., Tikhomirov D., Vockenhuber C., Akçar N., Schlunegger F.	Erosional dynamics of steep high alpine headwalls revealed by exposure ages (Eiger mountain, Central Swiss Alps)
P 11.21	Makri S., Grosjean M., Rey F., Gobet E.	Long-term high-resolution productivity and meromixis dynamics on the Swiss Plateau (Lake Moossee, Switzerland) inferred from Hyperspectral Imaging
P 11.22	Mohammadi A., Moazzen M., Moazzen M., Kaveh Firouz A.	Investigations on different rock types used in Urartian Gavur castle in Azerbaijan Province, NW Iran

P 11.23	Negga H., Jaramillo-Vogel D., Rime V., Schaegis J.-C., Perrochet L., Wyler P., Filfilu E., Hailu A., Braga J.C., Balemwal A., Tesfaye K., Foubert A.	Palaeo-environmental evolution of the Danakil Depression during the Pleistocene (Northern Afar, Danakil Depression)
P 11.24	Ott R., Gallen S., Ivy-Ochs S., Caves Rugenstein J.K., Willett S., Helman D., Fassoulas C., Vockenhuber C., Christl M., Haghipour N.	Quantification of chemical and mechanical denudation in karst landscapes and mechanisms for steep and high carbonate topography on the island of Crete
P 11.25	Rigoussen D., Diaz N., Van Thuyne J., Verrecchia E.	Occurrence and significance of sepiolite deposits in the Chobe enclave (Northern Kalahari Basin, Botswana)
P 11.26	Schwenk M.A., Bandou D., Schläfli P., Douillet G.A., Schlunegger F.	Origin and preservation of pre-Eemian lacustrine deposits in overdeepenings along the Aare Valley between Thun and Bern
P 11.27	Serra E., Gribenski N., Valla P.G.	Alpine Glacier Fluctuations and Paleoclimatic Reconstructions
P 11.28	Stalder C., El Kateb A., Camozzi O., Spangenberg J., Therzhaz L., Spezzaferri S.	Living benthic foraminifera from cold water coral ecosystems in the Mellilla Mound Field, Alboran Sea, Western Mediterranean
P 11.29	Thoele L., Martinez-Garcia A., Studer A.S., Auderset A., Moretti S., Mazaud A., Michel E., Jaccard S.L.	Reconstruction of sea surface temperature gradients in the Southern Indian Ocean over the last glacial cycle
P 11.30	Luyao Tu, Grosjean M.	High-resolution eutrophication history records and phosphorus retention in Lake Burgaschi (Switzerland) since ~1800 AD
P 11.31	Van Thuyne J., Verrecchia E.P.	Fungus-growing termites as geological agents transforming savanna landscapes
P 11.32	Wartenweiler S.H., Gilli A., Rey F., Bernasconi S.M., Gobet E., Tinner W.	A high-resolution late-glacial lake sediment record of climate changes and associated environmental impacts from Moossee (Switzerland)
P 11.33	Yesilyurt S., Dogan U., Ivy-Ochs S., Vockenhuber C., Akçar N.	Evidence for a local last glacial maximum during the MIS-3 in eastern Turkey
P 11.34	Gallach X., Deline P., Carcaillet J., Ravanel L., Perrette Y., Lafon D., Ogier C.	TCN dating of high-elevated rockfalls in the Mont Blanc massif. A new method of dating rockfalls in the Mont Blanc massif using reflectance spectroscopy

## Session 12: Geomorphology for a Habitable Planet

Room A008, *Fabrikstrasse 8, Ground Floor*

**Convenors:** Nikolaus Kuhn, Christoph Graf, Isabell Kull,  
Geraldine Regolini, Isabelle Gärtner-Roer, Margreth Keiler,  
Christophe Lambiel, Christian Scapozza, Reynald Delaloye,  
Negar Haghipour

**Chairperson:** Margreth Keiler

09:00-09:15	Bigler S., Zimmermann M., Keiler M.	Assessment and documentation of a large-scale debris flow in Barsem, Tadzhikistan.
09:15-09:30	Vos H.C., Fister W., Kuhn N.J.	Assessing the boundary conditions of dust emission from croplands in the Free State, South Africa
09:30-09:45	Hirschberg J., McArdell B., Molnar P.	A systematic comparison of rainfall thresholds for debris flows initiation at the Illgraben catchment
09:45-10:00	Märki L., Lupker M., Gajurel A., Haghipour N., Schide K., France-Lanord C., Lavé J., Morin G., Gallen S., Eglinton T.	Inter-seismic monsoonal control on organic and inorganic long-term carbon budget of Himalayan erosion

**10:00-11:00 Morning Poster Session with coffee, chairperson: Cristian Scapozza**

**Chairpersons:** Nikolaus Kuhn

11:00-11:15	Strozzi T., Wegmüller U., Caduff R., Raezo H.	Sentinel-1 Persistent Scatterer Interferometry – Continuity for precise slope displacement observations over Switzerland
11:15-11:30	Zaki A.S., Edgett K.S., Gupta S., Castellort S.	Inverted fluvial networks in the Sahara as a terrestrial analogue to study the geomorphology, sedimentology, and paleohydrology of similar landforms on Mars
11:30-12:00	Sobecka K., Allen J.	Cycles of Discussion, Circulation of Images
12:00-14:00	<b>General Assembly with lunch</b>	

**15:00-16:00 Afternoon Poster Session with coffee, Chairperson: Christophe Lambiel**

## Posters Session 12:

p 12.1	Giaccone E., Mariéthoz G., Lambiel C.	How geomorphological factors and microclimate influence alpine vegetation? Cases study in the Western Swiss Alps
p 12.2	de Palézieux L., Leith K., Loew S.	Assessing the predictive capacity of hillslope projected channel steepness for rockslope instability in the High Himalaya of Bhutan
p 12.3	Douillet G.A., Kueppers U., Schlunegger F.	Pyroclastic dune bedforms: macroscale structures and lateral variations

p 12.4	Elkadi J., Lehmann B., King G.E., Kronig O., Biswas R., Ivy-Ochs S., Christl M., Herman F.	Constraining paleo-ice extents and post glacier erosion in the Western Alps since the Last Glacial Maximum.
p 12.5	Greenwood P., Baumann P., Pulley S., Kuhn N.	The invasive alien plant, <i>Impatiens glandulifera</i> (Himalayan Balsam), and increased soil erosion: causation or association? Case studies from a river system in Switzerland and the UK
p 12.6	Greenwood P., Bauer J., Kuhn N.	Hillslope sediment transport by tree-throw: a field study in the Jura Mountains, northwest Switzerland
p 12.7	Krenz J., Kuhn B., Kuhn N.	Assessing Badland Sediment Sources Using Unmanned Aerial Vehicles in the Karoo rangelands, South Africa
p 12.8	Schlatter D.M., Hughes H.S.R., Schenkel R., Pasqualini I., Brichet N.S.	An ice-free Northwest Passage: What are the consequences for exploration and exploitation of mineral resources and other raw materials in Greenland and in the Canadian Arctic?
p 12.9	Sprafke T., Veit H.	Biomantles and cover beds – competing concepts for soil formation and landscape evolution?
p 12.10	Walter F., Mangeney A.	Seismic constraints on effective friction of rock-ice avalanches
p 12.11	Bruni E., Gallen S., Picotti V., Willett S.	Origin and Late Quaternary emplacement of the unique fans in the Klados River catchment, Crete, Greece
p 12.12	Salehipour Milani A., Yazdani T.	Modeling behavior and hazards of Popocatépetl Volcano, Mexico
p 12.13	Tonini M., Zanetta F., Amato F., Kanevski M.	Modelling natural hazards using Machine Learning: the case study of landslides in Canton Valais, Switzerland

## Session 13: Cryospheric Sciences

Room 102, *Fabrikstrasse 6, 1<sup>st</sup> Floor*

**Convenors: Margit Schwikowski, Martin Heggli, Matthias Huss, Jeannette Nötzli, Daniel Tobler, Andreas Vieli**

**Chairperson: Andreas Vieli**

09:00-09:15	Caduff R., Strozzi T.	Mapping and monitoring of Arctic lowland active layer permafrost movement with satellite SAR interferometry
09:15-09:30	Cicoira A., Vieli A., Faillettaz J.	Investigating the influence of temperature and liquid water on variations in rockglacier flow
09:30-09:45	Mollaret C., Wagner F., Hilbich C., Hauck C.	Petrophysical joint inversion of electrical and refraction seismic datasets in alpine permafrost to image ice, water and air contents
09:45-10:00	Wicky J., Hauck Ch.	Assessing the influence of convection in the active layer of a rock glacier on ground temperatures

**10:00-11:00 Morning Poster Session with coffee**

**Chairperson: Margit Schwikowski**

11:00-11:15	Gräff D., Walter F., Clyne E.	In-situ Measurements of an Active Seismic Fault at the Bed of an Alpine Glacier
11:15-11:30	Preiswerk L.E., Walter F.	What does ambient seismic noise tell us about glacial crevassing?
11:30-11:45	Steiner L., Meindl M., Geiger A.	Quantification of Snow Water Equivalent Using Buried Low Cost GPS Antennas
11:45-12:00	Kronenberg M., Machguth H., Eichler A., Schwikowski M., Hoelzle M.	Changing firm properties on glaciers in Central Asia

**12:00-14:00 Lunch****Chairperson: Matthias Huss**

14:00-14:15	Imhof M., Cohen D., Jouvet G., Seguinot J., Funk M.	Comparing shallow and full-Stokes models of the Rhine Glacier during the Last Glacial Maximum
14:15-14:30	Walter A., Lüthi P.M., Vieli A.	Analysing calving activity of Eqip Sermia, Greenland, using continuous direct observations
14:30-14:45	Zekollari H., Huss M., Farinotti D.	Modelling the evolution of Alpine glaciers under the EURO-CORDEX RCM ensemble
14:45-15:00	Ferguson J., Vieli A.	Modelling steady states and the transient response of debris-covered glaciers

**15:00-16:00 Afternoon Poster Session with coffee****Chairperson: Theo Jenk**

16:00-16:15	Paul F., Rastner P., Azzoni R.S., Fugazza D., Le Bris R., Nemec J., Rabaté A., Ramusovic M., Schwaizer G., Smiraglia C.	Glacier shrinkage in the Alps continues unabated as revealed by a new glacier inventory from Sentinel 2
16:15-16:30	Haeberli M., Baggenstos D., Schmitt J., Kellerhals T., Fischer H.	Long-term change in ocean heat content using ice core noble gas thermometry
16:30-16:45	Brugger S.O., Gobet E., Rohr C., Schanz F.R., Rey F., Schwörer C., Sigl M., Schwikowski M., Tinner W.	Millennial ice record reveals industrial footprint in European vegetation

**16:45-17:00 SEP Young Scientist Award Ceremony****Posters Session 13:**

P 13.1	Church G.J., Bauder A., Maurer H.R.	Seasonal evolution of englacial conduits through repeated ground penetrating radar measurements
P 13.2	Hellmann S., Bauder A., Kerch J., Maurer H.	Crystal orientation fabric analysis on ice core samples from a temperate Alpine glacier

P 13.3	Lindner F., Walter F., Laske G.	Locating and monitoring glaciohydraulic tremors on Glacier de la Plaine Morte, Switzerland
P 13.4	Neyer F., Guillaume S., Limpach P., Geiger A.	Long-term multi-resolution terrestrial photogrammetry at the Moosfluh landslide
P 13.5	Azisov E., Barandun M., Hoelzle M., Kronenberg M., Vorogushyn S., Saks T., Usualiev R.	A more than 100 years time series of seasonal mass balance for Golubin Glacier, Northern Tien Shan
P 13.6	Ghirlanda A., Kronenberg M., Barandun M., Azisov E., Kayumov A., Kenzehbaev R., Machguth H., Saks T., Tarasov Y., Usualiev R., Yakovlev A., Hoelzle M.	Mass balance monitoring and capacity building in Central Asia
P 13.7	Grab M., Langhammer L., Bauder A., Rabenstein L., Schmid L., Maurer H.R.	Ice volume estimation in the Swiss Alps from helicopter-borne GPR and glaciological modeling
P 13.8	Groos A.R., Munz L., Bertschinger T.	The potential of low-cost UAVs and open-source photogrammetry software for high-resolution glacier monitoring – A case study from the Kanderfirn (Swiss Alps)
P 13.9	Lüthi M.	Calorimetric determination of the unfrozen water content in glacier ice
P 13.10	Schlüthess M., Mölg N., Vieli A.	Inverting debris thickness on glaciers from UAV thermal imagery
P 13.11	Van Dongen E., Walter A., Jouvet G., Farinotti D., Funk M.	Monitoring and modeling a recurrent calving event at Bowdoin Glacier, Greenland
P 13.12	Vieli A.	State and evolution of thermal conditions of a small ice cap on Disko Island, West Greenland
P 13.13	Mölg N., Bolch T., Walter A., Vieli A.	Reconstructing century-long debris-covered glacier history from observation. How are changes in debris cover, surface topography, mass balance, and flow dynamics connected and interacting?
P 13.14	Förster S., Huss M., Funk M.	The effect of volcanic eruptions on the long-term evolution of Alpine glaciers
P 13.15	Lehmann P., Seth B., Schmitt J., Fischer H.	Development of a method for the measurement of $\delta_{15}\text{NH}_4$ in ice core samples
P 13.16	Maechler L., Bereiter B., Scheidegger P., Walther R., Tuzson B., Schmitt J., Emmenegger L., Fischer H.	Towards gas measurements in extremely thinned ice with sublimation extraction and mid-IR spectroscopy
P 13.17	Schmidely L., Bock M., Nehrbass-Ahles C., Silva L., Schmitt J., Fischer H., Stocker T.	Calibration of the new wet-extraction system for $\text{CH}_4$ and $\text{N}_2\text{O}$ , and plans for high-resolution measurements in the EPICA Dome C ice core (EDC)

P 13.18	Silva L., Nehrbass-Ahles C., Schmidely L., Schmitt J., Fischer H., Stocker T.F.	Exploring centennial-scale CO <sub>2</sub> reconstruction in the last interglacial
P 13.19	Amschwend D., Ivy-Ochs S., Frehner M., Kronig O., Christl M.	Combining exposure dating, finite-element modelling, and feature tracking to decipher rockglacier evolution: A case study from the Bleis Marscha rockglacier (Val d'Err, Grisons)
P 13.20	Cohen D., Zwinger T., Person M., Haeberli W., Fischer U.H.	Effects of ice cover and permafrost on groundwater flow during the last glacial cycle in the Swiss lowlands
P 13.21	Haeberli W., Magnin F., Linsbauer A.	Modeling permafrost occurrence, glacier-bed topography and possible future lakes for assessing changing hazard conditions in cold mountain regions
P 13.22	Mollaret C., Pellet C., Hilbich C., Hauck C.	Towards a joint database and statistical analysis of electrical resistivity and refraction seismic tomography datasets in mountain permafrost
P 13.23	Hilbich C., Hauck C., Hählen N.	Establishing a permafrost monitoring network in the Bernese Alps: geophysical characterisation of potential monitoring sites and validation of permafrost distribution models
P 13.24	Bavay M., Egger T., Fierz C.	Interactive snow profile edition with niViz
P 13.25	Capelli A., Reiweger I., Schweizer J.	Prediction of snow failure: mission impossible?
P 13.26	Richter B., van Herwijnen A., Rotach M.W., Schweizer J.	How meteorological input uncertainty affect modeled snow instability

## Session 14: Hydrology, Limnology and Hydrogeology

Room C101, *Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors:** Massimiliano Zappa, Michael Doering, Tobias Jonas, Michael Sinreich, Bettina Schaeffli

### Chairperson Limnology: Michael Döring

09:15-09:35	Fiskal A., Deng L., Han X., Michel A., Eickenbusch P., Lagostina L., Rong Zhu, Bernasconi S.M., Dubois N., Schroth M.H., Sander M., Lever M.A.	Effects of eutrophication on sedimentary organic carbon cycling in five Swiss lakes ( <b>Keynote</b> )
09:35-09:50	Sepúlveda Steiner O., Forrest A., McInerney J., Baracchini T., Lavanchy S., Bouffard D., Wüest A.	Basin-scale gyres: Rotationally-driven mixing in Lake Geneva
09:50-10:05	Baracchini T., Bouffard D., Wüest A.	meteolakes.ch – An online platform for monitoring and forecasting the 3D bio-physical state of Swiss lakes

**10:05-11:00 Morning Poster Session with coffee**

**Chairperson Hydrogeology: Michael Sinreich**

11:00-11:20	Thornton J.M., Mariethoz G., Brunner P.	Integrated hydrological modelling of a steep, geologically complex, snow-dominated Alpine catchment ( <b>Keynote</b> )
11:20-11:35	Moeck C., Grech-Cumbo N., Gurdak J., Schirmer M.	Global simulated distribution of periodic diffuse groundwater recharge response to climate variability
11:35-11:50	Benettin P., Queloz P., Bensimon M., McDonnell J.J., Rinaldo A.	A multitracer experiment on a vegetated lysimeter to measure water transit times in the subsurface
11:50-12:05	Beria H., Larsen J., Schaefli B.	Development of a two-component linear mixing model to quantify the influence of rainfall and snowmelt in groundwater recharge

**12:05-13:00 Lunch****Chairperson SGHL, Hydrology I: Massimiliano Zappa**

13:00-14:00	For SGHL Members or candidate members	General Assembly of the Swiss Society for Hydrology and Limnology SGHL
14:00-14:45	Presented by Reinhard Bachofen	Hydrobiology-Limnology Award
14:45-15:05	Brunner M.I., Zappa M., Stähli M.	Water shortages under current and future extreme streamflow conditions in Switzerland ( <b>Keynote</b> )
15:05-15:20	Florianic M., Berghuijs W.R., Molnar P.	Low flow seasonality across Switzerland – Climatic drivers and the influence of landscape

**15:20-16:00 Afternoon Poster Session with coffee****Chairperson SGHL, Hydrology II: Bettina Schaefli**

16:00-16:15	Bergami G., Molnar P., Burlando P.	Interactions between Surface Water and Groundwater in a regulated alpine gravel-bed River (Maggia)
16:15-16:30	Kauzlaric M., Rössler O., Mosimann M., Zischg A.P.	A roadmap towards a short-term flood impact forecasting system
16:30-16:45	Andres N., Badoux A.	Normalization and trends of damage due to floods and landslides in Switzerland

**Posters Session 14:**

P 14.1	Battista G., Molnar P., Burlando P.	A spatially distributed numerical model for simulating sediment connectivity at the catchment scale
P 14.2	Brauchli T., Beria H., Michelon A., Larsen J., Schaefli B.	Estimating the precipitation in a high-alpine catchment combining local meteo stations and Swiss-wide meteo products
P 14.3	Bulgheroni M., Lepori F., Pozzoni M., Capelli C., Pera S., Scapozza C., Colombo L.	Reconstructing long-term trends in surface water summer temperature in a high-altitude lake: A modelling approach
P 14.4	Chun J., Sprenger M.	Investigation of Moisture Front Convection over Europe using Cloud-Resolving COSMO model: a Case Study

P 14.5	Doda T., Ulloa H., Ramón Casañas C., Wüest A., Bouffard D.	Buoyancy-driven cross-shore flows in lakes induced by night-time cooling: field observations
P 14.6	Falatkova K., Sobr M., Slavik M., Bruthans J., Jansky B.	Characteristics of meltwater passage through the proglacial area at Adygine complex, Northern Tien Shan
P 14.7	Horton P., Brönnimann S.	Sensitivity of statistical precipitation downscaling to the choice of an atmospheric reanalysis
P 14.8	Joss L., Prasuhn V.	Renewal of the high-resolution map of direct and indirect connectivity of erosion risk areas to surface waters in Switzerland
P 14.9	Kiewiet L., van Meerveld H.J., Seibert J.	Identification of pre-event water sources to streamflow and uncertainty associated with end-member characterization
P 14.10	Leonarduzzi E.	Resolution matters: numerical analysis of the effect of subgrid heterogeneities with a physically based hydrological model
P 14.11	Michel A., Brauchli T., Bavay M., Lehning M., Schaeefli B., Huwald H.	Modelling Stream Temperature of Rivers in Switzerland
P 14.12	Pool S., Brunner M., Kiewiet L., Acheson E.	The other's perception of a streamflow sample: From a bottle of water to a data point
P 14.13	Sanchini A., Grosjean M.	New Approach to Quantify Organic Matter Freshness and Paleoproductivity In Lake Sediments Through Spectral Deconvolution of the UV-VIS Absorption Spectra
P 14.14	Wicki A., Stähli M.	Soil wetness data for landslide early warning
P 14.15	Zander P., Grosjean M., Tylmann W., Filipiak J.	Combining Hyperspectral Imaging and µXRF data to link varve-formation processes with meteorological data, Lake Zabinskie, Poland

## Session 15: The New Climate Change Scenarios CH2018

Room B205, *Fabrikstrasse 8*, 2<sup>nd</sup> Floor

**Convenors: Stefan Brönnimann, Andreas Fischer, Kuno Strassmann**

**Chairperson: Stefan Brönnimann**

09:00-09:15	Brönnimann S.	Climatic changes in Switzerland over the last 300 years
09:15-09:30	Kotlarski S., Feigenwinter I., Casanueva A., Rajczak J., Fischer A.M., Schwierz C.	The localized CH2018 scenarios: Methods, products, limitations
09:30-09:45	Casanueva A., Kotlarski S., Fischer A.M., Schwierz C., Liniger M.A.	The CH2018 scenarios: evaluation and projection of heat stress in Switzerland

09:45-10:00	Skelton M., Bresch D.N., Pohl C., Dessai S.	The CH2018 Stakeholder Dialogues on Urban Heat in Zurich and Schaffhausen: Discussing practitioners' challenges and science's support
10:00-10:15	Frehner S., Berger M., Worlitschek J.	HVAC design based on Swiss Climate Scenarios CH2018
10:15-10:30	Felber R., Calanca P.	Promoting the use of CH2018: interactive tools for exploring in a flexible way the implications of climate change

**10:30-11:00 Morning Poster Session with coffee**

**Chair: Andreas Fischer**

11:00-11:15	Holzkämper A., Rössler O., Cochand F., Brunner P., Hunkeler D.	Impacts of climate change and management adaptations on agriculture and water resources
11:15-11:30	Oliveira Hagen E., Sun Q., Liu Y., Wittwer R., Hartmann M., Keller T., van der Heijden M., Buchmann N.	Resilience of arable cropping systems against climate change – Drought Simulation – Part I Soil Physical parameters
11:30-11:45	Mülchi R., Rössler O., Schwanbeck J., Zekollari H., Huss M., Martius O., Weingartner R.	Hydro-CH2018 – new transient hydrological scenarios for Switzerland
11:45-12:00	Zappa M., Zekollari H., Farinotti D., Huss M., Brunner M., Bernhard L.	A hydrological perspective on the use of the CH2018 scenarios: first experiences
12:00-12:15	Moraga J.S., Peleg N., Molnar P., Fatichi S., Burlando P.	Methodology to estimate future hydrological flows in Switzerland using the new CH2018 climate scenarios
12:15-12:30	Schirmer M., Peleg N.	Using the new gridded CH2018 climate scenarios for high resolution snowmelt modelling in small alpine catchments

**12:30-14:00 Lunch**

**Posters Session 15:**

P 15.1	Fluixá-Sanmartín J., García Hernández J., Roquier B.	Effects of climate change on drought occurrence in the Valais region (Switzerland) under the new CH2018 scenarios
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## Session 16: Climate Change Education and Outreach

Room B205, *Fabrikstrasse 8, 2<sup>nd</sup> Floor*

**Convenors:** Moritz Gubler, Marco Adamina, Matthias Probst,  
Sibylle Reinfried, Peter Stucki

12:00-13:30 *Lunch*

**Chairperson:** Moritz Gubler

13:30-13:35	Welcome & Introduction	
13:35-13:55	Reinfried S., Adamina M., Probst M.	Education on climate change and climate policy: learning opportunities for all school levels. Part I
13:55-14:15	Adamina M., Probst M., Reinfried S.	Education on climate change and climate policy: learning opportunities for all school levels. Part II
14:15-14:35	Probst, M. Reinfried S., Adamina M.	Education on climate change and climate policy: learning opportunities for all school levels. Part III

**14:35-15:30 Afternoon Poster Session with coffee**

**Chairperson:** Sibylle Reinfried

15:30-15:50	Colberg C.	Experiences of nature and environmental attitude of primary school children as a starting point for research-based Climate Change Education in teacher training
15:50-16:10	Guckes K., Fischer S., Siegmund A.	Dem Klimawandel nachhaltig begegnen lernen – Förderung der Handlungskompetenz von Jugendlichen zur Anpassung an die regionalen Folgen von Klimaveränderungen in Baden-Württemberg
16:10-16:30	Gubler M., Brügger A., Brönnimann S., Eyer M.	Opportunities and limitations of local climate information in climate change education
16:30-16:50	Linsbauer A., Chow N., Christen J., Gattlen J., Gertschen M., Heeb N., Hoelzle M., Keller F., Lozza H., Meeus B., Millhäusler A., Scherler M., Spoerri R.	Expedition 2 degree: The 2°C target in the Alps – An Experience in Virtual Reality
<b>16:50-17:00</b>	<b>Conclusions &amp; Outlook</b>	

## Posters Session 16:

P 16.1	Eugster M.	Climate change education and projects in Swiss secondary schools
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P 16.2	Hernández-Almeida I., Korpanty C., Boehnert S., Borges R., Cavaleiro C., Contreras A., Durán Toro V., Elyashiv H., Hohmann S., Kirillova V., Liu Y., Madaj L., Martínez Méndez G., Müller-Dum D., Neto dos Santos C., Paz Orfanoz-Cheuquela A., Costa Portilho-Ramos R., Rebotim A., Reyes Macaya D., Rossel P., Saavedra-Pellitero M., Schmidt C., Tamborrino L., Tangunan D., Wang H.	"Once Upon a Time..." – Using fictional stories to educate about climate, oceans and science
P 16.3	Subedi S., Hetényi G., Sauron A., Denton P.	Seismology-at-School in Nepal: Education and outreach
P 16.4	Winkler B., Cook J.	Using an interdisciplinary MOOC to teach climate science and science communication to a global classroom
P 16.5	Naegeli K., Habermann M., Kronenberg M., Hellmann L., Schwikowski M.	Girls on Ice Switzerland – using immersion to inspire interest in science

## Session 17: Aerosols and Clouds in a Changing World

Room B202, *Fabrikstrasse 8, 2<sup>nd</sup> Floor*

Convenors: Christopher Hoyle, Ulrich Krieger

Chair: Uli Krieger

09:00-09:20	Mahrt F., Wieder J., Dietlicher R., Stopford C., Smith H., Kanji Z.A.	A new instrument for cloud particle phase determination
09:20-09:40	Jorge T., Wienhold F.G., Cesbron G., Weers U., Vecellio M., Oelsner P., Meier S., Naeberl T., Brossi S., Brossi T., Dirksen R., Peter T.	Peltier Cooled Frost point Hygrometer: PCFH Future instrument for balloon borne water vapor measurements in the UTLS
09:40-10:00	Brunamonti S., Jorge T., Wienhold F.G., Luo B.P., Peter T.	Balloon-borne measurements of cirrus clouds and aerosols in the Asian summer monsoon anticyclone during StratoClim 2016-2017

**10:00-11:00 Morning Poster Session with coffee**

Chair: Uli Krieger

11:00-11:20	Ammann M., Alpert P.A., Corral Arroyo P., Dou J., Luo B., Krieger U.K.	Feedbacks between indirect photochemical aerosol aging and microphysical properties
11:20-11:40	Molteni U., Sosedova Y., Dommen J., the NUCLACE collaboration	Free troposphere wintertime gas-phase composition using CI-API-TOF

11:40-12:00	Gilgen A., Wilkenskjeld S., Kaplan J., Raddatz T., Lohmann U.	Aerosols and land cover in the Roman Empire
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**12:00-13:30   Lunch**

**Chair: Chris Hoyle**

13:30-14:00	tba	<b>ACP award talk</b>
14:00-14:20	Friebel F., Mensah A.A.	From the lab to the atmosphere: Re-assessing the impact of Ozone and Temperature on the CCN-activity of soot particles.
14:20-14:40	Kilchhofer K., Mahrt F., Kanji Z.A.	Pre-activation of soot particles and the effect on ice nucleation in subsequent cloud formation cycles
14:40-15:00	David R.O., Fahrni J., Marcolli C., Mahrt F., Brühwiler D., Lohmann U., Kanji Z.A.	The Role of Pores on Ice Nucleation

**15:00-16:00   Afternoon Poster Session with coffee**

**Chair: Chris Hoyle**

16:00-16:20	Eirund G., Possner A., Lohmann U.	Relaxation times of Arctic mixed-phase clouds to short-term aerosol perturbations
16:20-16:40	Sonwani S., Kulshrestha U.	Real-Time Wet Scavenging of Organic Carbon and Elemental Carbon during Monsoon and Non-Monsoon Seasons at Delhi

## Poster Session 17:

P 17.1	Mahrt F., Marcolli C., David R.O., Grönquist P., Barthazy Meier E.J., Lohmann U., Kanji Z.A.	Ice nucleation abilities of soot particles determined with the Horizontal Ice Nucleation Chamber
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## Session 18: Atmospheric Processes and Interactions with the Biosphere

*Room B103, Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors: Christof Ammann, Stefan Brönnimann, Susanne Burri, Martin Steinbacher**

**Chairpersons: Christof Ammann, Susanne Burri, Martin Steinbacher, Stefan Brönnimann**

09:00-09:15	Pieber S.M., Brunner D., Henne S., Steinbacher M., Tuzson B., Emmenegger L.	A decade of continuous atmospheric CO <sub>2</sub> isotope ratio measurements at Jungfraujoch
09:15-09:30	Affolter S., Schibig M., Berhanu T., Leuenberger M.	Comparison of two high alpine CO <sub>2</sub> records from the Jungfraujoch area

09:30-09:45 Bernet L., Kämpfer N., Hocke K. Stratospheric ozone recovery at mid-latitudes: improved ground-based time series and trend estimations

09:45-10:00 Brogli R., Kröner N., Sørland S.L., Lüthi D., Schär C. The role of Hadley circulation and lapse-rate changes for the future European summer climate

10:00-10:20 div. Poster Authors Short presentation of posters (2 min each)

**10:20-11:00 Morning Poster Session with coffee**

**Chairpersons:** Christof Ammann, Susanne Burri, Martin Steinbacher, Stefan Brönnimann

11:00-11:15 Zamuriano M. Atmospheric characteristics of a heavy snowfall event over the central Andes

11:15-11:30 Brönnimann S. and the OCCR-1868 team 1868 – the flood that changed Switzerland

11:30-11:45 Mazzotti G., Malle J., Barr S., Essery R., Jonas T. Capturing spatial patterns of sub-canopy irradiance: mobile radiometer surveys and model results

11:45-12:00 Volk M., Wahl A.-L., Giger R., Bassin S. Subalpine grassland growth during five years of warming

**12:00-14:00 Lunch**

**Chairpersons:** Christof Ammann, Susanne Burri, Martin Steinbacher, Stefan Brönnimann

14:00-14:15 Vogt R., Schmutz M., Feigenwinter C., Parlow E. Seasonal and inter-annual variability of CO<sub>2</sub> fluxes: 14 years of eddy covariance measurements in Basel

14:15-14:30 Paul S., Leifeld J., Alewell C., Ammann C. Carbon budget response of an agriculturally used fen soil to a heavy precipitation event

14:30-14:45 Osterwalder S. Upward, downward or neither: ecosystem scale mercury flux at forest and ocean ICOS sites

14:45-15:00 Jiskra M. Effects of the vegetation mercury pump on seasonal variations in atmospheric mercury concentrations

**15:00-16:00 Afternoon Poster Session with coffee**

**Posters Session 18:**

P 18.1 Feigenwinter I., Buchmann N. Investigating N<sub>2</sub>O fluxes over permanent grassland

P 18.2 Jensen C.M., Fischer H., Erhardt T. First continuous high-resolution record from the East Greenland Ice Core Project (EGRIP), covering the last 2800 years

P 18.3 Leuenberger M., Herrmann L. First eddy covariance flux analysis at the tall tower site Beromünster, Switzerland

P 18.4 Li Y., Riedl A., Aemisegger F., Buchmann N., Eugster W. Quantifying the effect of dew and fog water on Swiss grasslands with stable isotopes

P 18.5	Liu Y., Klaus V., Gilgen A.K., Buchmann N., Oliveira Hagen E., Wittwer R.,	Assessment of Ecosystem Services of Arable Land in Response to Farming Practice and Drought
P 18.6	Maier R., Buchmann N.	Assessing resilience against climate change from greenhouse gas flux measurements in Switzerland
P 18.7	Paul S., Ammann C., Alewell C., Leifeld J.	Do cover fills reduce peat oxidation and carbon emissions from managed organic soils?
P 18.8	Record S., Siegenthaler A.	Influence of the mangrove forest on the net emission of methane in water bodies of the Gandoca Lagoon (Costa Rica) and its managerial implications
P 18.9	Riedl A., Yafei Li, Eugster W.	The Importance of Dew and Fog for Swiss Grasslands
P 18.10	Saxena P., Ghosh C.	A Sustainable Tool for Assessment of Effect of Ozone on Delhi Ridge, India
P 18.11	Schibig M.F, Nyfeler P., Leuenberger M.C.	High precision CO <sub>2</sub> and O <sub>2</sub> measurements at the High Altitude Research Station Jungfraujoch, Switzerland
P 18.12	Qing Sun, Gilgen A.K., Klaus V., Signarbieux C., Buchmann N.	Plant water relations under drought in organic and conventional farming systems
P 18.13	Bühler M., Häni C., Kupper T., Ammann C., Brönnimann S..	Assesment of methane emissions from animal and waste processing operations using an inverse dispersion technique

## Session 19: Environmental Biogeochemistry of Trace Elements

Room C102, *Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors:** Moritz Bigalke, Montserrat Filella, Adrien Mestrot, Andreas Voegelin, Lenny Winkel

**Chair:** Moritz Bigalke

09:00-09:30	Bettina Hitzfeld	<b>Keynote:</b> Challenges of trace elements in the Swiss environment
09:30-9:45	Filella M., Turner A.	Should plastics be considered in the biogeochemical cycles of trace elements?
9:45-10:00	Feinberg A., Maliki M., Stenke A., Sudret B., Gysin S., Peter T., Winkel L.H.E.	Using global sensitivity analysis to establish priorities in atmospheric selenium research

**10:00-11:00 Morning Poster Session with coffee**

**Chair:** Adrien Mestrot, Montserrat Filella

11:00-11:15	Catrouillet C., Hirose S., Manetti N., Peña J.	Arsenic removal in manganese-containing groundwater
11:15-11:30	de Meyer C., Rodriguez J., Wahnfried I., Kipfer R., Berg M.	Geogenic contaminants in groundwater resources of Amazonian riverine communities: results of a vast exploratory field-study

11:30-11:45	Marafatto F.F., Ferreira-Sanchez D., Grolimund D., Göttlicher J., Voegelin A.	X-ray spectroscopic characterization of As(V)-rich Tl(III)-particles in a weathered Tl-As-Fe-sulfide mineralization
11:45-12:00	Wanner C., Pöthig R., Carrero S., Fernandez-Martinez A., Jäger C., Furrer G.	Uptake of As by nanocrystalline Al-hydroxysulfates naturally forming along a mountainous stream in the Engadin area
12:00-12:15	Viacava K., Dyer S., Leberdalle Meibom K., Mestrot A., Bernier-Latmani R.	Arsenic methylation across microbial phyla
12:15-12:30	Caplette J., Mestrot A.	Trapping of volatile antimony (Sb): method validation and first in-situ measurements

**12:30-13:45 Lunch**

**Chair: Andreas Voegelin**

13:45-14:00	Bagnoud A., Chourey K., Hettich R.L., de Brujin I., Andersson A.F., Diomidis N., Leupin O.X., Schwyn B., Bernier-Latmani R.	<b>Laureate Prix Schläfli 2018:</b> A microbial ecosystem in Opalinus Clay rock fueled by hydrogen gas
14:00-14:30	Bernier-Latmani R., Loreggian L., Bretagne S., Novotny A.	Keynote: Oxidation of non-crystalline U(IV): role of reduced sulfur
14:30-14:45	Etique M., Bouchet S., Byrne J., Thomas Arrigo L., Kaegi R., Kretzschmar R.	Mercury reduction by vivianite
14:45-15:00	Liu Y., Schäffer A., Lenz M.	Studying Bacterial Selenium Methylation at Environmental Relevant Concentrations

**15:00-16:00 Afternoon Poster Session with coffee**

**Chair: Lenny Winkel**

16:00-16:15	Cheolyong Kim, Inseong Hwang	Transformation of Nano Zero-Valent Iron during Oxidation Process using Persulfate
16:15-16:30	Gogos A., Wielinski J., Voegelin A., Kaegi R.	Transformation of cerium dioxide nanoparticles during incineration of sewage sludge
16:30-16:45	Van Groeningen N., Christl I., Kretzschmar R.	Competitive sorption of Mn(II) and Cd(II) to clay minerals
16:45-17:00	Wick S., Peña J., Voegelin A.	Thallium Sorption onto Birnessite

## Posters Session 19:

P 19.1	Gfeller L., Mestrot A.	Methylmercury distribution and formation in polluted agricultural floodplain soils
P 19.2	Hausladen D., Keilweit M., Peña J.	Transformation of Manganese Oxides by Organic Constituents in Natural and Laboratory Systems
P 19.3	Imseng M., Wiggenhauser M., Frossard E., Müller M., Keller A., Wilcke W., Bigalke M.	Copper mass balances and stable isotopes as analytical tool to trace sources and processes in agricultural systems
P 19.4	Jiranek G., Filella M., Loizeau J.-L., Cobelo-García A.	Evolution of Technology-Critical Element contents in sediments of a contaminated bay of Lake Geneva (Switzerland) over the past century
P 19.5	Manetti N., Catrouillet C., Peña J.	Arsenic removal from lake water, river water and groundwater using an electrocoagulation system
P 19.6	Müller E., Bouchet S., von Gunten U., Winkel L.	Reactions between hypobromous acid, organic sulfur species and dissolved organic matter in marine waters
P 19.7	Roethlin R.L., Dubois N.	Paleo-ecotoxicology: Shining a light on the true impacts of pollution
P 19.8	Segovia Campos I., Martignier A., Jaquet J.-M., Barja F., Filella M., Ariztegui D.	Investigating the potential of intracellular mineral inclusions in microalgae as a novel bioremediation method for radioactive <sup>90</sup> Sr water pollution
P 19.9	Wielinski J., Gogos A., Marafatto F., Voegelin A., Morgenroth E., Kaegi R.	Transformation of Cu (nanoparticles) during sewage sludge incineration studied by bulk- and micro-XAS

## Session 20: Remote Sensing of the Spheres

Room B204, *Fabrikstrasse 8, 2<sup>nd</sup> Floor*

**Convenors: Stefan Wunderle, Mathias Kneubühler, Dominik Brunner, Alain Geiger**

**Chairpersons: Stefan Wunderle, Mathias Kneubühler, Dominik Brunner, Alain Geiger**

09:00-09:20	Giuliani G., Chatenoux B., Poussin C., Richard J.-P., Dao H., Allenbach K., Rodila D., De Bono A., Peduzzi P., Schaeppman M.E., Small D., Steinmeier C.	Swiss Data Cube: Big Earth Observation Data for Sustainable Development
09:20-09:40	Röösli C., de Jong R., Schaeppman M.E.	From Space to Earth: Observing Land Surface Phenology Processes using Dense Time-Series of Landsat 8, Sentinel-2 and Phenocams
09:40-10:00	Rodriguez A.C., Wegner J.D.	Counting the Uncountable: Deep Semantic Density Estimation from Space

**10:00-11:00 Morning Poster Session with coffee**

**Chairperson**

11:00-11:20	Manconi A., Casu F., Zinno I., De Luca C., Manunta M., Manzo M., Bonano M., Lanari R.	Monitoring Surface Deformation with Radar Interferometry at the Country-scale in Alpine Regions? First Results obtained With Sentinel-1 over Switzerland
11:20-11:40	Baffelli S., Frey O., Hajnsek I.	Polarimetric Analysis of Natural Terrain Observed With A Ku-Band Terrestrial Radar
11:40-12:00	Wilgan K., Siddique M.A., Strozzi T., Geiger A., Frey O.	Tropospheric Path Delays derived from Global Navigation Satellite Systems Data and Spaceborne SAR Interferometry: A Case Study in Swiss Alps

**12:00-14:00 Lunch****Chairperson**

14:00-14:20	Rietze N., Dizerens C.	Snow Classification of Webcam Images in Switzerland
14:20-14:40	Zweifel L., Meusburger K., Alewell C.	Spatio-Temporal Pattern of Soil Degradation in Swiss Alpine Grasslands Revealed by Object-Based Image Analysis
14:40-15:00	Rothenbühler E., Wunderle S., Dizerens C.	Comparison of Cloud Base Retrieval from Satellites with Ceilometer and Observer Data
14:45-15:00	Jiskra M.	Effects of the vegetation mercury pump on seasonal variations in atmospheric mercury concentrations

**15:00-16:00 Afternoon Poster Session with coffee****Posters Session 20:**

P 20.1	Lainer M., Hocke K., Kämpfer N.	Long-term measurements of middle atmospheric water vapor at the Zimmerwald observatory
P 20.2	Leuenberger M.	Quality check of water isotope distribution from space to ground by vertical profiling and altitude dependent in-situ records
P 20.3	Leuenberger M.	Glider-AirCore analyses linking ground-based and column integrated trace gas measurements with satellite retrievals
P 20.4	Leuenberger M.	Horizontal open-path FTS measurements for bridging the gap between high accurate point measurements and spatially averaging atmospheric models using vertical greenhouse gas retrievals from satellite (H-OP-FTS)
P 20.5	Rossi C., Risch A.C., Kneubühler M., Schütz M., Haller R.M., Schaepman M.E.	Assessing plant traits and diversity from local to regional scales in differently managed alpine grasslands
P 20.6	Schranz F., Tschanz B., Rüfenacht R., Kämpfer N.	Middle-atmospheric H <sub>2</sub> O and O <sub>3</sub> measurements by ground-based microwave radiometry in the Arctic

## **Session 21: Geoscience and Geoinformation – From Data**

### **Acquisition to Modelling and Visualisation**

*Room B105, Fabrikstrasse 8, 1<sup>st</sup> Floor*

**Convenors: Nils Oesterling, Adrian Wiget, Massimiliano Cannata, Michael Sinreich**

**Chairperson: Adrian Wiget**

09:00-09:20	Garrard R., Landgraf A., Limpach F., Brockmann P., Spillmann T., Madritsch H., Schnellmann M., Müller R. M.	A permanent GNSS network for recording geodynamic movements in northern Switzerland
09:20-09:40	Brockmann E., Ineichen D., Lutz S., Schaer S.	Stability of the Swiss National Reference frame derived from GNSS analysis in Switzerland and Europe
09:40-10:00	Antonovic M., Brodhag S., Cannata M., Hoffmann M., Oesterling N.	Open source web-application for acquisition and exchange of borehole data

**10:00-11:00 Morning Poster Session with coffee**

**Chairperson: Nils Oesterling**

11:00-11:20	Heuberger S.	120 years of institutional research on Swiss georesources
11:20-11:40	Fulda D., Grünig A., Heuberger S.	The Resource Information System (RIS) – the digital memory of mineral resource occurrences in Switzerland
11:40-12:00	Grünig A., Fulda D.	Harmonizing and aggregating datasets of different periods of time – the process explained by means of Swiss quarries

**12:00-14:00 Lunch**

**Chairperson: Nils Oesterling**

14:00-14:20	Huber E., Ginsbourger D., Caers J., Huggenberger P.	A marked Strauss process model for uncertainty quantification in geophysical stereology
14:20-14:40	Gechter D., Allenbach R., Baumberger R.	Development of a Geophysics Management System: Aims and first results with 2D deep seismic reflection data
14:40-15:00	Röthlisberger V., Zischg A., Keiler M.	Data mining for (flood) exposure analyses

**15:00-16:00 Afternoon Poster Session with coffee**

**Chairperson: Michael Sinreich**

16:00-16:20	Perego R., Pera S., Galgaro A., Dalla Santa G., Cultrera M., De Carli M., Emmi G., Bertermann D., Müller J., Mendrinos D., Karytsas K., Vercruyse J., Pasquali R., O'Neill N., Bernardi A,	Mapping the techno-economic potential of closed-loop geothermal systems: a Europe-tested method
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16:20-16:40	Makhloifi Y., Le Cotonne A., Moscariello A., Samankassou E.	Constraining architecture and geometry of sedimentary bodies in a reef complex using high-resolution 3D digital outcrop model from UAV photogrammetry (Saint-Germain-de-Joux, Eastern France).
16:40-17:00	Vivero S., Lambiel C.	Monitoring the crisis of a rock glacier in the Western Swiss Alps with UAV surveys

## Posters Session 21:

P 21.1	Alcanié M., Collignon M., Carrier A., Møyner O., Lupi M.	Numerical modeling of the Geneva Basin : Various scale geological model building for groundwater flow simulations
P 21.2	Cierpka A., Mettier R., Corbe S.	Simulating surface runoff in urban areas on a budget: How efficient is model refinement through terrain mapping with a consumer drone?
P 21.3	Fulda D., Grünig A.	The Resource Information System (RIS): A web application for mineral resource data of Switzerland
P 21.4	Guignard F., Lovallo M., Laib M., Golay J., Kanevski M., Helbig N., Telesca L.	Application of the Fisher-Shannon plane to high frequency wind speed in Switzerland
P 21.5	Hunziker J., Greenwood A., Minato S., Barbosa N., Caspari N., Holliger K.	Estimating fracture apertures and related parameters using tube-wave data
P 21.6	Laib M., Guignard F., Kanevski M., Telesca L.	Mutual information-based complex network for wind speed in Switzerland
P 21.7	Milani A. S., Pouladi G., Mohammadi Z.	Hazard and Risk Mapping During a Flood Event in Bangladesh
P 21.8	Tonini M., Cama M.E., Kanevski K.	Spatio-temporal kernel density analysis and 3D visualisation of landslides causing damage in Switzerland

## Session 22: Human Geographies

Room B201, *Fabrikstrasse 8, 2<sup>nd</sup> Floor*

**Convenors: Martin Müller, Jevgeniy Bluwstein, Karine Duplan, Olivier Graefe, Francisco Klauser, Christian Kull, Rafael Matos-Wasem, Elisabeth Militz, Patrick Réat**

**Chairpersons: Bluwstein, J., Graefe, O., Kull, C.**

09:00-09:20	Andriamahefazafy M., Sinan H.	The paradox of tuna fisheries in the Indian Ocean: between visions of sustainable management and realities of access
09:20-09:40	Fall J.J.	When and where is nature natural? Invasive alien species, colonisation, and scientific denialism
09:40-10:00	Bétrisey F., Boisvert V.	Amaranth: Superweed, Superfood or Decolonising Agent? Exploring powerful 'promising' discourses

10:00-10:20	Weber H.	The role of sheep in the political dynamics within sheep farming in Switzerland
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**10:20-10:50 Morning Poster Session with coffee**

**Chairpersons:** Bluwstein, J., Graefe, O., Kull, C.

10:50-11:00	Müller M., Klauser F.	Welcome note
11:00-11:20	Backhaus N.	The (im)possibility of creating a national park with a bottom-up process
11:20-11:40	Florin I.	Exploring the political natures of large-scale conservation in Northern Europe : underlying values and strategic uses
11:40-12:00	Sanchez J.	The depoliticization of urban governance in Myanmar: insights from sanitation planning in Mandalay

**12:00-13:00 Lunch**

**Chairpersons:** Müller, M., Rérat, P.

13:00-14:15	Oldfield S.; discussants: Barella J., Narayanan N.	Keynote: The Urban as Political Terrain: Building Collaborative Urban Geography in Everyday Southern City Life
14:15-14:35	Hug M.	Planned Improvisation. The Rail Redevelopment Neugasse Zürich
14:35-14:55	Paulos J.	Governing the 'multiple city': From planning logics to normative objects
14:55-15:15	Söderström O.	What travelling architecture types and urban development models do

**15:15-15:40 Afternoon Poster Session with coffee**

**Chairpersons:** Duplan, K., Militz, E..

15:40-16:00	Chossiere F.	Spaces and scales of queer refugees' intimate: global sexualized geographies of power
16:00-16:20	Hergon F.	French State Of Emergency, Police Searches & Islamophobia: A Coercive Rupture Of Intimate Spaces, Bodies and Subjectivities
16:20-16:40	Ishitsuka A.M.	When Business Interests Meet Racialized Desires: Young Professionals' Bodies in Global Shanghai
16:40-17:00	Laketa S.	The atmospheric (geo)politics of love and vigilance: Affect and urban security in Brussels
		The panel discussion below will take place in Hörsaal 002, Department of Geography, Hallerstrasse 12, Bern. This is about a 15 minute walk from the conference location.
17:20-18:30	Wolfe, D., Hug, M. (moderators)	Panel discussion (open to all): PhD, what next? Early career options in human geography

## **Session 23: Sustainable Social-Ecological Systems: From Local to Global Challenges**

*Room B203, Fabrikstrasse 8, 2<sup>nd</sup> Floor*

**Convenors: Chinwe Ifejika Speranza, Sébastien Boillat, MD  
Sarwar Hossain Sohel**

**Chairperson: Chinwe Ifejika Speranza**

09:00-09:20	Llopis J.C., Diebold C., Zaehringer J.G.	Sustainable development and human well-being under telecoupling: insights from the biodiversity hotspot of northeast Madagascar
09:20-09:40	Adams T.	The effects of Large-scale land investments, institutional change and gender relations: Case studies of sugarcane outgrower contract farming in Malawi.
09:40-10:00	Ellison D.	The Forest-Water Divide – Is More Debate Really Necessary?

**10:00-11:00 Morning Poster Session with coffee**

**Chairperson: Sébastien Boillat**

11:00-11:20	Ramirez J.A., Hossain S., Haisch T., Martius O., Ifejika Speranza C., Mayer H., Keiler M.	A coupled human and landscape conceptual model of risk and resilience in Alpine mountain communities
11:20-11:40	Skelton M., Porter J., Dessai S., Bresch D.N., Knutti R.	A new north-south divide for climate knowledge? A case study of climate projections in UNFCCC's National Communications
11:40-12:00	Sobecka K., Allen J.	Cycles of Discussion, Circulation of Images

**12:00-14:00 Lunch**

**Chairperson: Md Sarwar Hossain Sohel**

14:00-14:20	Adenle A.A., Ifejika Speranza C., Daniel D.	Characterising Land Degradation in the Guinea Savannah Region of Nigeria
14:20-14:40	Jendoubi D., Liniger H., Karbout N., Ifejika Speranza C., Critchley W.	Effects of land use management, landscape forms and soil types on soil organic carbon in the watershed of Wadi Beja in Northwest of Tunisia
14:40-15:00	Rodrigues L., Sprafke T., Comptour M., Bokatola C., McKey C.	Wetland raised-field agriculture and its potential role in adapting to climate change in floodplains of the Congo Basin's cuvette centrale

**15:00-16:00 Afternoon Poster Session with coffee**

**Chairperson: Chinwe Ifejika Speranza**

16:00-16:20	Garrard R., Carey M.	Beyond Images of Melting Ice: Hidden Histories of People, Place, and Time in Repeat Photography of Glaciers
16:20-16:40	Payne D., Snethlage M., Spehn E.M., Fischer M.	Towards biodiversity-related opportunities for sustainable livelihoods in mountains
16:40-16:45	Concluding remarks and end of oral presentations	











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