

Keynotes**Auditorium, 9h00**

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|----------|---------|------|-----|---|
| François | Camille | 15th | K1 | The geodynamic evolution of Earth viewed by the PTt record of metamorphic rocks |
| Panek | Tomas | 16th | K2 | Large landslides and ice sheets: the Patagonian lesson |
| Rixhon | Gilles | 17th | K10 | A question of time: dating Quaternary fluvial archives and landscapes |

Forum**Thursday 16th, Room 2**

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|---------|-------|-------|-------|---|
| Fontijn | Karen | 12h30 | Forum | The present and future of geology education in Belgium – an open-forum discussion |
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Geologica Belgica Van den Broeck Medal 2021**Friday 17th, Auditorium, 14hr**

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|------------|---------|--|--|--|
| Camelbeeck | Thierry | Earthquake activity in Western Europe is typical of stable continental regions | | |
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Abstract code

K: Keynote, O: Oral, P: Poster; session number; order in session

Session 1: Geodynamics and Mineral Resources

Thursday 16th, Auditorium

| 1 ^{rst} author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|-----------|-------|----------|--|
| De Grave | Johan | 10h00 | O1-1 | Exhumation of the South Atlantic passive margin of the Democratic Republic of Congo |
| Akame | Joseph | 10h20 | O1-2 | A long-lasting Archean deformation history in the Sangmelima terrane, NW Congo Craton, Southern Cameroon |
| Borst | Anouk | 10h40 | O1-3 | Alkaline magmatism and critical metals in Angola: Field observations and petrography of the Nejoio nepheline syenite complex |
| Coffee break | | | | |
| Buyse | Florian | 11h30 | O1-4 | Carbonatitic affinity of the rare earth element (REE) mineralization at Gakara (Burundi). |
| Demaude | Merry | 11h50 | O1-5 | Experiments on silicate-carbonate liquid immiscibility in a Fe-P rich system, a premise for phosphorites formation in carbonatite complexes |
| Acke | Jolan | 12h10 | O1-6 | Au Vein-Type Mineralisation at Escádia Grande (Portugal): A Microstructural and Geochemical Analysis |
| Lunch break | | | | |
| Wouters | Sander | 14h00 | O1-7 | Characterization of auriferous quartz vein mineralizing fluids in the Mesoproterozoic Karagwe-Ankole belt (Byumba, Rwanda): Petrography, microthermometry and Raman spectroscopy |
| De Putter | Thierry | 14h20 | O1-8 | Western climate-oriented ethics and artisanal mining of cobalt in DRC |
| Abera | Kaleab | 14h40 | O1-9 | Influence of geological structures on failure possibility around Meli area gold mine site, north western Tigray region, north Ethiopia |
| Coffee break | | | | |
| Choulet | Flavien | 15h30 | O1-10 | Distribution of trace elements in the secondary minerals of Zn-Pb deposits: new results from Belgium and Moroccan willemite deposits. |
| Verhaert | Michele | 15h50 | O1-11 | Controls of host rocks on weathering processes and dating of Cu-As-Pb-rich supergene deposits (Moroccan Anti-Atlas Copperbelt, Morocco) |
| Dekoninck | Augustin | 16h10 | O1-12 | From Precambrian to Cenozoic the manganese odyssey of Morocco |
| Poster presentations, Foyer | | | | |
| Cibambula | Emmanuel | 13h00 | P1-1 | Le Sous-groupe de la Mpioka, témoins de la réactivation des failles post-Schisto-calcaire dans le fossé de la Basse-Sangha |
| De Clercq | Shana | 13h00 | P1-2 | Characterisation and Proterozoic evolution of the granitoids of the Karagwe-Ankole belt (KAB) in Rwanda |
| De Groote | Julie | 13h00 | P1-3 | Petrographical, mineralogical and geochemical study of the gold mineralization at Imonga-Saramabila, Maniema, DR Congo |
| Grine | Oumaima | 13h00 | P1-4 | Properties of refractory materials from low-cost Northern Tunisian kaolinitic clays |
| Moussi | Béchir | 13h00 | P1-5 | Valorization of Tunisian Numidian clays (Upper Oligocene) in the manufacture of ceramic tiles |
| Poot | Julin | 13h00 | P1-6 | Unravel the rate of pyrite oxidation under weathering conditions: an experimental approach |
| Nkodia | Hardy | 13h00 | P1-7 | Paleostress reconstruction and tectono-structural evolution of the West-Congo Orogen, in Republic Democratic of Congo and Republic of Congo |
| Furaha | Ghislain | 13h00 | P1-8 | Remapping of the Cohoha complex... |
| Kalikone Buzera | Christian | 13h00 | P1-9 | Tentative de décomplexification du complexe d'Uvira : Cas des secteurs d'Idjwi et Kalehe, Sud-Kivu/ RDC. Cartographie, pétrographie et minéralisation |
| Kalikone Buzera | Christian | 13h00 | P1-10 | Tentative de décomplexification du complexe de Butare: ses extrémités NW et SE respectivement à Kalehe et Idjwi à l'Est de la RDC et à Zina-Randa et Cohoha au Nord du Burundi |
| Kezimana | Lee-Fred | 13h00 | P1-11 | Tentative de décomplexification du complexe de Zina-Randa (Nord-Ouest du Burundi) |
| Ntenge | Alain | 13h00 | P1-12 | New insights from the revised geological map of the West Rwanda (Karongi-Nyamagabe-Rusizi districts) |

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Session 2: Earth Surface Processes and Geohazards**Thursday 16th, Room 2**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|--|
| Sekajugo | John | 10h00 | O2-1 | Reliability of citizen scientists for near-real time reporting of geohazards. An analysis of biases and accuracy for the Rwenzori Mountains, Uganda |
| Ronchi | Bénédicte | 10h20 | O2-2 | How to integrate outbreak risk issues from drainage adits from abandoned mines in land use planning: a tool for decision-makers. |
| De Geeter | Sofie | 10h40 | O2-3 | Exploring the Curve Number method to predict gully head occurrence on the continental scale of Africa |
| Coffee break | | | | |
| Brosens | Lisa | 11h30 | O2-4 | Is there an environmental crisis in the Lake Alaotra region (Madagascar)? Insights from lavaka (gully) dynamics and floodplain sedimentation |
| Smets | Benoît | 11h50 | O2-5 | The May 2021 Flank Eruption of Nyiragongo Volcano, Democratic Republic of Congo |
| Hendrickx | Hanne | 12h10 | O2-6 | Close-range remote sensing of large consecutive rockfall events from a permafrost rock face, Matternal, Switzerland |
| Poster presentations, Foyer | | | | |
| Devleeschouwer | Xavier | 13h00 | P2-1 | The LASUGEO project: monitoring LAnd SUbSidence caused by Groundwater exploitation through gEOdetic measurements |
| Deijns | Axel | 13h00 | P2-2 | Landslide and flash flood timing from satellite radar imagery in the western branch of the East African Rift |
| Dewitte | Olivier | 13h00 | P2-3 | Landslide Timing in a Changing Tropical Environment: the North Tanganyika-Kivu Rift region, Africa |
| O'hara | Daniel | 13h00 | P2-4 | Numerical Modeling of Volcanic Edifice Degradation: Towards an Integrated Understanding of Edifice Morphologic Evolution. |
| Sekeraviti | K.A. | 13h00 | P2-5 | Analyse morpho-tectonique sur la ville de Matadi dans la province du Kongo Central (R.D.C) |
| Smets | Benoît | 13h00 | P2-6 | Remote Sensing of Geo-Hydrological Hazards in Central Africa |
| Delhaye | Louise | 13h00 | P2-7 | Application of Photogrammetry in Earth Sciences: Case Study of Lava Accumulation and Ground Deformation in an Active Volcanic Crater |
| Brosens | Lisa | 13h00 | P2-8 | Can the 12-m TanDEM-X DEM be used to accurately estimate lavaka (gully) volumes and mobilization rates? Insights from a comparative analysis with SRTM and a high resolution UAV-SfM DEM |
| Dewaide | Lorraine | 13h00 | P2-9 | RISSC: Towards a better management of cavity-related ground movements in Wallonia and Hauts-de-France Regions |

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Session 3: Planetary Magmatic and Metamorphic Systems

Thursday 16th, Room 1

| 1 st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|---------------|-------|----------|--|
| André | Luc | 10h00 | O3-1 | The early growth of felsic continental crust revisited from Germanium/silicon versus silicon isotopic evidences |
| Shepherd | Kathleen | 10h20 | O3-2 | Trace element partitioning between clinopyroxene, magnetite, ilmenite, and ferrobaltic magmas: an experimental study |
| Van Gerve | Tomas | 10h40 | O3-3 | Constraints on deep magmatic volatile budgets from olivine hosted melt inclusions. |
| Coffee break | | | | |
| Molendijk | Sander Martij | 11h30 | O3-4 | Petrology of the Nyiragongo Volcano, DR Congo |
| Zaronikola | Nina | 11h50 | O3-5 | Petrogenesis and isotopic investigation of Pillow Lavas from the Troodos ophiolite, Cyprus: Cu and Zn isotopes |
| Vander Auwera | Jacqueline | 12h10 | O3-6 | Calbuco (Central Southern Volcanic Zone, Chile): petrology of a hazardous volcano |
| Lunch break | | | | |
| Bechon | Tonin | 14h00 | O3-7 | Insights on mantle melting below Osorno Volcano (Southern Volcanic Zone, Chile) |
| Fugmann | Paul | 14h20 | O3-8 | Constraining the conditions of magmatic differentiation under Villarrica stratovolcano (Central Southern Volcanic Zone, Chile) |
| van der Does | Laura | 14h40 | O3-9 | Combining tourmaline crystal morphology and geochemistry to investigate disequilibrium crystallization in pegmatitic melts |
| Coffee break | | | | |
| Radelet | Sasha | 15h30 | O3-10 | The response of a magmatic plumbing system to sector collapse: constraints from petrology and geochemistry at Mt. Meru, Tanzania |
| Charlier | Bernard | 15h50 | O3-11 | Mercury and its exploration by the BepiColombo mission |
| Pirotte | Hadrien | 16h10 | O3-12 | Equilibria and trace element partitioning in silicate-metal-sulfide melts under highly reducing conditions: a key to understand the evolution of Mercury |
| Poster presentations, Foyer | | | | |
| Billon | Melvyn | 13h00 | P3-1 | Timescales of crystal mush storage in the Central Southern Volcanic Zone of Chile |
| Celis | Joren | 13h00 | P3-2 | Experimental constraints on the internal structure of Mercury |
| Kamate | Ephrem | 13h00 | P3-3 | Petrology of Nyamulagira volcano, Virunga Province, DR Congo |
| Zhang | Yi-shen | 13h00 | P3-4 | Silicate liquid immiscibility of low-Ti and high-Ti basalts in the Emeishan Large |

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Session 4: Geology, Man and Society**Wednesday 15th, Room 2**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|---|
| Teck | Priscilla | 10h00 | O4-1 | Characterization of metal particles in municipal solid waste incineration ashes using neural network based image analysis |
| Dreezen | Roland | 10h20 | O4-2 | Pierre de Meuse, an exceptional Belgian historical heritage stone from the Meuse valley |
| Dusar | Michiel | 10h40 | O4-3 | Sourcing natural stone used in the architecture of stone-poor landscapes, demonstrated for northern Belgium |
| Coffee break | | | | |
| Lahaye | Mike | 11h30 | O4-4 | 3D mapping of underground galleries from Maastricht limestone extraction in Riemst |
| Compernelle | Tine | 11h50 | O4-5 | Towards a dynamic and interdisciplinary assessment for the sustainable management of geological resources |
| Barros | Renata | 12h10 | O4-6 | Structural framework as the new fundament for international geoscientific cooperation and policy support |
| Lunch break | | | | |
| Van Haren | Tom | 14h00 | O4-7 | Getting the picture of the shallow urban subsurface: a shallow subsurface model of the city of Antwerp as test case |
| Piessens | Kris | 14h20 | O4-8 | Enhanced rock weathering: the overlooked hydrodynamic trap |
| Poster presentations, Foyer | | | | |
| Denayer | Julien | 13h00 | P4-1 | 'Fossiles en Ville': popularizing the History of Life and Earth through urban palaeontology and geology |
| Pan | Chen-guang | 13h00 | P4-2 | Seasonal variations of water-soluble heavy metals in atmospheric deposition at NE Sichuan, Central China: Natural and anthropogenic effects |
| Pas | Damien | 13h00 | P4-3 | Service Géologique de Wallonie : a new chapter |
| Van der Geest | Hannah | 13h00 | P4-4 | Geochemistry and petrography of in-situ flints from the type-Maastrichtian (NE Belgium and SE Netherlands): implications for flint formation processes and flint provenancing |
| Verheyden | Sophie | 13h00 | P4-5 | UNESCO Global Geopark Famenne-Ardenne, Belgium – opportunities and role for geoscientists |
| Mambwe | Pascal | 13h00 | P4-6 | Tectonostratigraphic evolution coupled with climate changes of the pre-Sturtian Fungurume-Mwashya platform in the Tenke-Fungurume Mining District, Democratic Republic of the Congo |
| Bevandic | Srecko | 13h00 | P4-7 | Pb and Zn deportment estimation of historic mine waste by using an integrated mineralogical and geochemical approach: a case study from the Plombières mine waste (eastern Belgium) |
| Wong Hearing | Thomas | 13h00 | P4-8 | The Rock Garden: increasing the accessibility of geoscience skills training with a field course on campus |
| Welkenhuysen | Kris | 13h00 | P4-9 | Naturally CO ₂ -rich water springs in Belgium evidencing complex subsurface interactions |

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Session 5: Basin Research and Sedimentology - Stratigraphy

Fiday 17th, Auditorium

| Name | Surname | Time | Abstract | Abstract title |
|---------------------|-----------|-------|----------|---|
| Poty | Edouard | 10h00 | O5-1 | Frasnian–Famennian deposits of Southern Belgium: thick and complex key sections to understand the Late Frasnian extinctions and the role played by tsunamis |
| Arts | Michiel | 10h20 | O5-2 | Silurian solid bitumen from Huy: evidences for a petroleum system in Belgium |
| Wei | Wei | 10h40 | O5-3 | Depositional environment and characteristics of organic matter of Namurian Shale, Namur Synclinorium and Campine Basin (Belgium and the S-Netherlands) |
| Coffee break | | | | |
| Engel | Max | 11h30 | O5-4 | A 1500 years-record of North Atlantic storminess from the Shetland Islands (UK) – preliminary insights |
| Meyer | Inka | 11h50 | O5-5 | Lake Chala 2k: the last two millennia of environmental change in equatorial East Africa |
| Clark | Alexander | 12h10 | O5-6 | A model – proxy data comparison of mid to late Miocene paleotemperatures in western and central Europe |
| Dekoninck | Augustin | 12h30 | O5-7 | The French Massif Central: a witness of successive weathering periods since the Early Cretaceous in the Alpine foreland |

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|---------|--------|-------|-------|---|
| Arfaoui | Imen | 15h30 | O5-8 | Sedimentology and Microfacies assessment of Ypresian carbonate formations in the Tellian zone (NW of Tunisia) |
| Tuema | L.O. | 15h50 | O5-9 | Etude paléoenvironnementale des roches carbonatées de la région Lufu-Toto située dans le degré carré de Mbanza Ngungu (Province du Kongo Central, R.D. Congo) |
| Delvaux | Damien | 16h10 | O5-10 | Structure and evolution of the Congo Basin: long-lived record of tectonic and climatic events during the last Billion years |

Coffee break

Poster presentations, Foyer

| | | | | |
|----------------|----------|-------|------|---|
| Wils | Kathleen | 13h00 | P5-1 | Uncovering earthquake doublets in a lacustrine sedimentary record |
| Catherina | Basile | 13h00 | P5-2 | Stratigraphic architecture, sedimentology and structure of the Corinth Canal (Greece) |
| Walstra | Jan | 13h00 | P5-3 | Correlating cross-border Cenozoic stratigraphy in the Belgian-Dutch border region: results from H30 – De Voorkempen |
| Cibambula | Emmanuel | 13h00 | P5-4 | Les sous-groupes Schisto-calcaire et de la Mpioka dans la chaîne panafricaine West-Congo, témoins de l'évolution paléoclimatique post-Cryogénien, Province du Kongo Central, R.D. Congo |
| Van der Meeren | Thijs | 13h00 | P5-5 | Lake Naivasha's response to the end of the African Humid Period |
| Herbosch | Alain | 13h00 | P5-6 | Stratigraphic correlations between the Brabant Massif and the Stavelot, Rocroi and Givonne inliers (Belgium), geological implications |
| Kadima | Etienne | 13h00 | P5-7 | Crustal and sedimentary structures of the Congo basin constrained by geophysical signatures |

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Session 6: Past, Present and Future of Life on Earth

Wednesday 15th, Auditorium

| 1 st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|---------------|-------|----------|---|
| Zambon | Raphaël | 10h00 | O6-1 | Assessing the diversity of insects damage traces in the fossil flora of Gelinden (Limburg, Belgium) |
| Vellekoop | Johan | 10h20 | O6-2 | Rapid biological recovery following the Cretaceous-Paleogene boundary catastrophe in the Maastrichtian type area |
| Olive | Sebastien | 10h40 | O6-3 | Deciphering early stages of vertebrate evolution thanks to long ignored soft-bodied fossils from the Early Devonian of Belgium |
| Coffee break | | | | |
| Goolaerts | Stijn | 11h30 | O6-4 | X-ploring new tools for paleontologists: the RBINS-RMCA micro-CT lab at your service |
| da Silva | Anne-Christin | 11h50 | O6-5 | Timing and pacing of the Hangenberg Crisis (Devonian-Carboniferous Boundary) in the Chauxhe sections, Belgium |
| De Brito | Léa | 12h10 | O6-6 | Pinaceae diversity from the Lower Cretaceous of Belgium |
| Chatar | Narimane | 12h30 | O6-7 | Cranio-mandibular anatomy of <i>Panthera gombaszoegensis</i> from la Belle-Roche (Liège, Belgium) |
| Lunch break | | | | |
| Dubois de Laviger | Guillaume | 14h00 | O6-8 | Stratigraphical context of the Pliocene right whales (Balaenidae) from the North Sea |
| Smith | Thierry | 14h20 | O6-9 | Contributions to Belgian Paleogene (plant) research: a tribute to Philippe Gerrienne |
| Van Horebeek | Nick | 14h40 | O6-10 | Changing life mode of <i>Campanile giganteum</i> (Lamarck, 1804) with age Shifting habitat or food sources |
| Coffee break | | | | |
| Lambert | Olivier | 15h30 | O6-11 | Echolocating toothed whales (Cetacea, Odontoceti) from the Neogene of Belgium |
| Denayer | Julien | 15h50 | O6-12 | Belgium is the best place to define the Devonian-Carboniferous Boundary |
| Jimenez | Elodie-Laure | 16h10 | O6-13 | Caverne Marie-Jeanne (Belgium): How an old collection from the Royal Belgian Institute of Natural Sciences sheds new light on cave hyaenas' behaviour and adaptation |
| Vancoppenolle | Iris | 16h30 | O6-14 | The mid-Maastrichtian event in the Maastrichtian-type area and its benthic foraminiferal response |
| Martens | Lise | 16h50 | O6-15 | Mid-latitude tropical conditions during the Early Eocene Climatic Optimum: Reconstruction of a coastal paleoenvironment in the southern North Sea Basin |
| Poster presentations, Foyer | | | | |
| Candela | Yves | 13h00 | P6-1 | First occurrence of linguliform brachiopods in the lower Tremadocian (Ordovician) of the Brabant Massif (Belgium) |
| Doubrawa | Monika | 13h00 | P6-2 | Shelf ecosystems along the Maryland Coastal Plain prior to and during the Paleocene-Eocene Thermal Maximum |
| Goolaerts | Stijn | 13h00 | P6-3 | CT-CEPH: Applying micro-CT imaging in the study of Belgian fossil Nautilid Cephalopods |
| Klassen | Jacques | 13h00 | P6-4 | Variation in long bone morphology of true seals (Mammalia, Phocidae), and its impact on understanding the fossil record |
| Pereira | Sofia | 13h00 | P6-5 | Hirnantia Fauna from the Condroz Inlier, Belgium another case of a relict Ordovician shelly fauna in the Silurian |
| Willems | Anthéa | 13h00 | P6-6 | A paleoenvironmental reconstruction of the <i>Campanile giganteum</i> (Lamarck, 1804) bed (Lutetian, Paris Basin) utilizing quantitative macro- and micropaleontological data |

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Session 7: Karst Investigation and Subsurface Researches**Wednesday 15th, Room 2**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|--|
| Fontaine | Olivier | 15h30 | O7-1 | Sedimentary processes inside the Han-sur-Lesse Cave (Belgium) |
| Dewaide | Lorraine | 15h50 | O7-2 | Karstification and associated processes of the Waulsort Formation (Furfooz, Belgium) |
| Deleu | Romain | 16h10 | O7-3 | Tracer tests in La Lembrée karstic system: the crucial importance of a good geological map |
| Poster presentations, Foyer | | | | |
| Dehandschutter | Boris | 13h00 | P7-1 | Radon gas in karstic environments, the case of the Noû Bleû Cave, Belgium |
| Lahogue | Pascale | 13h00 | P7-2 | State of knowledge on Kongo Central karst, DRC |
| Moulana | Meriem Lina | 13h00 | P7-3 | Origin of the collapse sinkholes of the Boukadir region (Chelif-Algeria) |

Session 8: New Spectroscopic Methods Applied to Geosciences**Fiday 17th, Room 1**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|--|
| Aruaujo | Fernando P. | 14h00 | O8-1 | High-resolution Raman mapping: using micro-analyses to reveal geological processes |
| Kaskes | Pim | 14h20 | O8-2 | Latest developments in micro-X-ray fluorescence (μ XRF) analysis in geosciences: high-resolution element mapping, digital image analysis, and quantifications |
| Buyse | Florian | 14h40 | O8-3 | Unravelling the genesis of critical mineral resources by employing advanced imaging techniques |
| Coffee break | | | | |
| Verheyden | Sophie | 15h30 | O8-4 | Development of a Laser-Induced Breakdown spectrometry (LIBS) instrumentation and protocols for rapid screening of soils |
| Baele | Jean-Marc | 15h50 | O8-5 | Combined Laser-Induced Breakdown Spectroscopy (LIBS) and Plasma-Induced Luminescence (PIL) for geochemical mapping and profiling of geological samples |
| Burlet | Christian | 16h10 | O8-6 | The ROBOMINERS LIBS spectrometer: a mining sensor prototype for autonomous in-stream, in-slurry geochemical diagnostics |
| Meyvisch | Piotr | 16h30 | O8-7 | Recent advances in infrared spectroscopy applied to single specimen dinoflagellate cysts: methodological framework and applications |
| Poster presentations, Foyer | | | | |
| Stasi | Giorgia | 13h00 | P8-1 | ROBOMINERS changing the ground rules |
| Cobert | Corentin | 13h00 | P8-2 | New thermal data for the Rocroi inlier, France and Belgium, based on Raman Spectroscopy of Carbonaceous Material (RSCM) |
| Papier | Severine | 13h00 | P8-3 | Geochemical imaging at hand-sample scale of Belgian Zn-Pb ores using Laser-Induced Breakdown Spectroscopy (LIBS) |
| Meyvisch | Piotr | 13h00 | P8-4 | Recent advances in infrared spectroscopy applied to single specimen dinoflagellate cysts: methodological framework and applications |
| Hulsbosch | Niels | 13h00 | P8-5 | Phase identification and mapping of melt inclusions in complex mineral hosts by confocal Raman spectroscopy and multivariate statistics |

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Session 9: Arctic and Polar Sciences - Ice-sheets and permafrost**Thursday 16th, Room 2**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|---|
| Villani | Mäelle | 14h00 | O9-1 | Influence of permafrost degradation and shift in vegetation on litter and soil properties. Case study in Central Alaska |
| Gilliot | Alexia | 14h20 | O9-2 | Evolution of iron-organic carbon interactions during abrupt thaw in ice-rich permafrost: case study in Siberia |
| Hayes | Nicholas | 14h40 | O9-3 | Towards a Coupled Hydrological-Biogeochemical Model of Subglacial Environments |
| Coffee break | | | | |
| Muller | Sofia | 15h30 | O9-4 | Seasonal dynamics of nitrous oxide in sea ice in the Central Arctic: insights from the MOSAiC Expedition |
| Delhasse | Alison | 15h50 | O9-5 | Greenland mass balance by 2200 using coupled atmospheric (MAR) and ice sheet (PISM) models |
| Fettweis | Xavier | 16h10 | O9-6 | Reduction of the future Greenland ice sheet surface melt with the help of solar geoengineering |
| Poster presentations, Foyer | | | | |
| Louis | Justin | 13h00 | P9-1 | Influence of thermokarst formation on manganese-organic carbon interactions in ice-rich permafrost |
| Mauclet | Elisabeth | 13h00 | P9-2 | Influence of permafrost degradation on foliar mineral element cycling upon changing subarctic tundra vegetation |
| de la Fuente Ruiz | Maria | 13h00 | P9-3 | Modelling methane efflux and ocean acidification triggered by hydrate dissociation |
| Lefebvre | Constance | 13h00 | P9-4 | Assessing the production and efflux of methane gas from thawing subsea permafrost on the warming Arctic shelf |
| Ridolfi | Emilia | 13h00 | P9-5 | Modeling methane production and emission from thawing sub-sea permafrost on the warming Arctic Shelf |
| Placitu | Silvia | 13h00 | P9-6 | Quantifying Fe-OC associations in sediment using Na-dithionite in Flow-Through Reactors (FTR) |
| Geels | Alexis | 13h00 | P9-7 | Quantifying carbon transformations and fluxes at active methane seeps on the East Siberian Arctic Shelf |

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Session 10: Quaternary and Anthropocene (BELQUA)**Fiday 17th, Room 1**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|-----------------------------------|----------------|-------------|-----------------|---|
| Fripiat | François | 10h00 | O10-1 | The highest latitude waters of the Southern Ocean and glacial-interglacial change in atmospheric CO ₂ |
| Vandermaelen | Nathan | 10h20 | O10-2 | Constraining the depositional history of Quaternary fluvial deposits based on grain size, geochemistry and cosmogenic radionuclides |
| Auboiron | Jeanne | 10h40 | O10-3 | Lacustrine record of last millennia precipitation from Lake Esponja and Lake Bertrand of Northern Chilean Patagonia (72°W) |

Coffee break

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|------------|--------|-------|-------|--|
| Wanlin | Gaëlle | 11h30 | O10-4 | Mineralogical and geochemical signal of the crater lake La Alberca de Tacámbaro in Central Mexico as an archive of precipitation over the last millennia |
| Negash | Emnet | 11h50 | O10-5 | Topoclimate and spatio-temporal distribution of summer rain over the Ethiopian highlands |
| Swinnen | Ward | 12h10 | O10-6 | Anthropogenic legacy effects control sediment and organic carbon storage in temperate river floodplains |
| Augustijns | Femke | 12h30 | O10-7 | Vegetation history in the Ethiopian Highlands for the past 18000 years: a multi-proxy analysis of high altitude wetlands |

Lunch break

Fiday 17th, Room 2

Poster presentations, Foyer

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|----------------|---------------|-------|--------|---|
| Bogemans | Frieda | 13h00 | P10-1 | Reconstructing the late Holocene sedimentary landscape of the Zwin area nearby Bruges late-medieval outport Hoeke |
| Astuti | Anik Juli Dwi | 13h00 | P10-2 | Has hydrologic connectivity been taken into account in the Lake Tana Basin (Ethiopia): a literature review on climate, hydrology and geomorphology |
| Broothaerts | Nils | 13h00 | P10-3 | Changes in vegetation and sediment transfers over the last 3000 years in the catchment of Lake Alaotra, Madagascar |
| Engel | Max | 13h00 | P10-4 | Metagenomics of tsunami deposits: developments and challenges from a case study on the Shetland Islands (UK) |
| Fagel | Nathalie | 13h00 | P10-5 | The last millenia sedimentary record of Lago Esponja from Northern Chilean Patagonia |
| Kangi | Gladys | 13h00 | P10-6 | Spatio-temporal variation of the Omo Delta (1990-2018) what remote sensing data reveal and models explain |
| Lyu | Anqi | 13h00 | P10-7 | Regional sensitivity of East Asian summer monsoon to ice sheet and orbital forcing |
| Rosas-Barturen | Miluska | 13h00 | P10-8 | Spatial variation and factors controlling sediment fluxes along the western slopes of the Peruvian Andes |
| SU | Qianqian | 13h00 | P10-9 | The response of global terrestrial vegetation to orbital forcing and CO ₂ during MIS 11 and MIS 13 |
| van de Velde | Sebastiaan | 13h00 | P10-10 | Reconstructing the spatial redox structure of anoxic oceans using a 3D ocean-based Earth system model Title |
| André | Coralie | 13h00 | P10-11 | Preliminary results from palynological and diatoms analyses from three sites of the Medieval harbour network in the Zwin area in North of Belgium and the Netherlands: Hoeke, Mude and Aardenburg |
| Liang | Ming-Qiang | 13h00 | P10-12 | Paleoclimatic evolutions during the Holocene: A stalagmite $\delta^{18}O$ record from Majiaping Cave, Guizhou, China |

Abstract code

K: Keynote, O: Oral, P: Poster; session number; order in session

Session 11: Geophysics and Seismology**Fiday 17th, Room 2**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|--|
| Neefs | Ben | 10h00 | O11-1 | The effects of Belgian crustal geology and its sedimentary cover on macroseismic intensity attenuation |
| Camelbeeck | Thierry | 10h20 | O11-2 | A new Hainaut coal area earthquake intensity attenuation model using 19th-20th century shallow seismicity data |
| Zeckra | Martin | 10h40 | O11-3 | Towards a site-characteristic database for the Belgian permanent seismic network |
| Coffee break | | | | |
| Gobron | Kevin | 11h30 | O11-4 | Statistical imaging of the deformation over Belgium using multiple geodetic techniques |
| Dupont | Nicolas | 11h50 | O11-5 | Redefinition of the structural units of the Variscan Front based on the results of the Mons2012 and Hainaut2019 seismic surveys in the Hainaut (SW Belgium) |
| Rombout | Bernd | 12h10 | O11-6 | Analyzing seismic anomalies in Carboniferous strata in the surroundings of three wells in Mol (Campine Basin, northern Belgium) by means of Amplitude Variation with Offset (AVO) analysis shows potential for deep geothermal exploration |
| Deckers | Jos | 12h30 | O11-7 | Insights from the new 3D fault model for eastern Flanders (northern Belgium) |
| Poster presentations, Foyer | | | | |
| Albers | Stijn | 13h00 | P11-1 | CO2 gas discharge in Laacher See: visualization and mapping of accumulated gas in the water column and sedimentary infill of a caldera lake in western Germany |
| Nkodia | Hardy | 13h00 | P11-2 | Slip tendency apply to faults systems in the Congo Basin and its surroundings: A clue to explain western central African passive margin seismicity |
| Martin | Aur lie | 13h00 | P11-3 | Study of the eigenfrequencies of stalagmites to better understand paleoseismicity |
| Walstra | Jan | 13h00 | P11-4 | Geophysical well log correlations in the Quaternary deposits of the Campine area, northern Belgium |

Abstract code

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Session 12.1: Geo-energy: Opportunities and Constraints for Subsurface Uses**Wednesday 15th, Room 1**

| 1st author Name | Surname | Time | Abstract | Abstract title |
|------------------------------------|----------------|-------------|-----------------|---|
| Van Daele | Johanna | 10h00 | O12-1 | Optimal geodata centralization and disclosure as support for subsurface exploration |
| Dupont | Nicolas | 10h20 | O12-2 | Delineation of inferred high-transmittivity zones in the Dinantian geothermal reservoir of Hainaut (SW Belgium) |
| Tovar | Alejandra | 10h40 | O12-3 | Ranking CO2 storage capacities and identifying their technical, economic and regulatory constraints: A review of methods and screening criteria |
| Coffee break | | | | |
| Welkenhuysen | Kris | 11h30 | O12-4 | Decision support under uncertainty for geothermal applications: case selection and concept development |
| Arndt | Martin | 11h50 | O12-5 | The Lower Carboniferous geothermal reservoir of the deep subsurface of North Rhine-Westphalia and its border regions: New insights from 3D mapping |
| Gkousis | Spiros | 12h10 | O12-6 | Deep Geothermal Energy Extraction, a Review on Environmental Hotspots with Focus on Geo-technical Site Conditions |
| Poster presentations, Foyer | | | | |
| Ferret | Helga | 13h00 | P12-1 | How geomanifestations can help in policy challenges |
| Meyvis | Bruno | 13h00 | P12-2 | Influence of the heat network rollout time on the risk and profitability of a deep geothermal plant |
| Swennen | Rudy | 13h00 | P12-3 | Fractured Lower Carboniferous carbonates of the Campine Basin (NE-Belgium) as potential geothermal reservoirs: age and origin of open carbonate veins |
| Welkenhuysen | Kris | 13h00 | P12-4 | Analysing CO2 capture, transport, and storage chain options for cement industry in the LEILAC2 project |
| Petitclerc | Estelle | 13h00 | P12-5 | New geological information of the Cambrian basement obtained from geothermal exploration projects in Brussels and Walloon- and Flemish-Brabant |

Session 12.2: DGE Rollout, Roll-out of Deep Geothermal Energy in NW-Europe**Wednesday 15th, Room 1**

| 1st author Name | Slot | Time | Abstract | Abstract title |
|-----------------------------------|-------------|-------------|-----------------|---|
| Fritschle | Tobias | 14h00 | O12-7 | DGE-ROLLOUT - Promoting Deep Geothermal Energy in North-West Europe |
| Broothaers | Matsen | 14h20 | O12-8 | Deep geothermal energy in the Lower Carboniferous carbonates in the Belgian Campine Basin: current status of the Balmatt project in Mol |
| Oswald | Thomas | 14h40 | O12-9 | Exploration for Deep Geothermal Energy at the RWE Power Plant Weisweiler, Germany |
| Passamonti | Arianna | 15h30 | O12-10 | A Fraunhofer demonstrator on high temperature heat pump coupled with high temperature mine thermal energy storage |
| Van Melle | Timme | 15h50 | O12-11 | Sustainability and renewability of Geothermal Energy |
| Piessens | Bastian | 16h10 | O12-12 | High-Temperature Medium Deep Borehole Thermal Energy Storage Pilot Plant |

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