

FULL SCIENTIFIC PROGRAMME



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Monday AM / Lundi matin Keynote Conferences / Conférences plénières

Philippe AUDRA : *Caves and Karsts of France / Grottes et karsts de France*

Laurent BRUXELLES : *Cradle of Humankind Karsts in Southern Africa / Les karsts du berceau de l'Humanité en Afrique australe*

Pierre-Yves JEANNIN : *From Oaxaca to La Chaux-de-Fonds... 25th anniversary of the Swiss Institute for Speleology and Karst-Studies, SISKA / D'Oaxaca à La Chaux-de-Fonds... Le 25ème anniversaire de l'Institut Suisse de Spéléologie et de Karstologie, ISSKA*

Monday / Lundi – 5A: ARAVIS SYMPOSIUM 03 - *Cave deposits / Dépôts karstiques*

- 14:00 - 14:10 INTRODUCTION S.03 - Chairmen : Gina MOSELEY & Bogdan ONAC
- 14:10 - 14:30 Isabelle COUCHOUD, Russell N. DRYSDALE, Yves PERRETTE, John C. HELLSTROM & Marine QUIERS : A Holocene speleothem record of paleoclimate in the northwestern Alps
- 14:30 - 14:50 Andrea COLUMBU, John HELLSTROM, Carlos PÉREZ-MEJÍAS, Hsun-Ming HU, Russell DRYSDALE, Jon WOODHEAD, Hai CHENG, Chuan-Chou SHEN, Jo DE WAELE, Veronica CHIARINI, Laura SANNA & Mario PARISE : Dating speleothems in Southern Italy (Apulia and Sardinia): palaeoclimate implications and speleogenetic clues
- 14:50 - 15:10 Isidoros KAMPOLIS, Bogdan P. ONAC, Stavros TRIANTAFYLIDIS, Victor POLYAK & Yemane ASMEROM : Climate and environmental changes at the MIS 5a/4 transition in southwestern Peloponnese (S. Greece)
- 15:10 - 15:30 Sebastian BREITENBACH, Jeremy McCORMACK, Rik TJALLINGII, Alexander OSINZEV, Yanjun CAI, Jon BAKER & Ola KWIECIEN : Glacial-interglacial environmental changes recorded in Sarma Cave, Northwestern Caucasus
- 15:30 - 15:50 Carole NEHME, Dominique TODISCO, Sebastian BREITENBACH, Isabelle COUCHOUD, Igor GIRAULT, Fabiana MARTIN, Luis BORRERO, John HELLSTROM, Rik TJALLINGII & Philippe CLAEYS : Climate Variability reconstructed from La Cueva Chica speleothems: implication for Megafauna and Human settlements in South Patagonia, Chile
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Gaël MONVOISIN, Arnaud DAPOIGNY, Églantine HUSSON, Stéphane JAILLET, Emmanuel MALET, Alexandre ZAPPELLI, Edouard REGNIER & Julia GARAGNON : Techniques de carottages sur calcite souterraine. Enjeux et méthodes
- 16:40 - 17:00 Yavor SHOPOV : New Powerful paleoclimatic Cycles Recorded in Speleothems
- 17:00 - 17:20 Christine PERRIN, Lilian LATAPIE, Charlotte HONIAT & Laurent PRESTIMONACO : Record of the Pyrenean climate since the last Interglacial by two stalagmites from Moulis Cave (Ariège, S. France)
- 17:20 - 17:40 Hege KILHAVN, Isabelle COUCHOUD, Russell N. DRYSDALE, John HELLSTROM & Fabien ARNAUD : The timing and impact of the 8.2 ka event in Europe

Monday / Lundi – 5A: BUGEY

SYMPOSIUM 11 - *Pseudokarst / Pseudokarsts*

- 14:00 - 14:10 INTRODUCTION S.11 - Chairman : Jan URBAN
- 14:10 - 14:30 Pavel BELLA, Rudolf PAVUZA, Jan URBAN : Pseudokarst as a term – current and future aspects
- 14:30 - 14:50 Fabiana FABRI, Joël RODET, Alessandra VASCONCELOS, Nicolas LECOQ, Cristiane OLIVEIRA, Fábio SOARES : Karstic processes in siliciclastic substratum of tropical areas: example of the Southern Espinhaço Range, Brazil
- 14:50 - 15:10 Rubens HARDT, Joël RODET, Leda DE ALMEIDA ZOGBI : Sandstone and karst development in Brazil
- 15:10 - 15:30 Włodzimierz MARGIELEWSKI, Jan URBAN, Valentina ZERNITSKAYA, Karel ZAK, Marzena SCHEJBAL-CHWASTEK : Dated episodes of eccentric growth of speleothems as a tool for the reconstruction of rock mass displacements in gravity induced caves: Polish Outer Carpathians case study
- 15:30 - 15:50 Jan URBAN, George SZENTES : Exploration history and morphogenesis - a case study of Groty Mechowskie, as a representative cave in Quaternary sandstones of Polish Lowlands
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Claude MOURET : A cave in massive granite with prehistoric artefacts: Grotte de la Croisière, Creuse, France
- 16:40 - 17:00 John MOSES : Pseudokarst in igneous rock of Far West Texas, USA
- 17:00 - 17:20 Claude MOURET : Ibaloi mummy caves in Kabayan, Benguet Province, Philippines
- 17:20 - 17:40 Manuela CORRÊA PEREIRA, Alessandra M. C. VASCONCELOS, Joël RODET, Joseane BIAZINI MENDES, Amanda DE FÁTIMA MARTIN CATARUCCI, Maria EUGÊNIA Silva DE SOUZA, Pillar CARVALHO DE OLIVEIRA RODRIGUES, Viviane VIANA COELHO, Rodrigo SESCONETE ARAÚJO : Overview of cave studies in quartzites, itabirites and granitoids in Southeastern Brazil
- 17:40 - 18:00 Saul HARTMANN RIFFEL, Raphael PARRA, Elizandra GOLDONI GOMIG, Rubens HARDT : Structural and stratigraphic influence over a sandstone cave evolution: Campo Minado Cave, Itirapina, São Paulo State, Brazil

Monday / Lundi – 5A: CHAMECHAUDE

SYMPOSIUM 09 - *Topography, Mapping, 3D, Documentation / Topographie, cartographie 3D, documentation*

- 14:00 - 14:10 INTRODUCTION S.09 - Chairman : Philipp HÄUSELMANN
- 14:10 - 14:30 Jean-Jacques DELANNOY, Jean-Michel GENESTE, Stéphane JAILLET, Julien MONNEY, Laurent BRUEL, Alain DAGAND & Nelly LE MASNE DE CHERMONT : Atlas de la grotte Chauvet-Pont d'Arc : (re)présenter une grotte ornée par les cartes
- 14:30 - 14:50 Philippe CROCHET & Annie GUIRAUD : What type of photograph can document caves?
- 14:50 - 15:10 Tommaso SANTAGATA, Francesco SAURO, Marco VATTANO, Geoffrey LE PIVAIN & Adrian BRIOD : Cave exploration and documentation through “collision-tolerant” drones
- 15:10 - 15:30 Dino GROZIĆ, Luka ANTONIĆ & Oleg ANTONIĆ : Large scale test of ALS LiDAR data utilization for cave entrance detection: a case study from the UNESCO World Heritage Site - Plitvice Lakes National Park, Croatia
- 15:30 - 15:50 Jean-Pierre CASSOU : La topographie des carrières souterraines de Citon-Cénac (Gironde)
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Silvain YART & Jean-Luc FRONT : Topographie en milieu urbain : le cas des carrières souterraines d'Orléans (France)
- 16:40 - 17:00 Claude MOURET : Strategies in cave mapping: an indicator of cavers' psychology
- 17:00 - 17:20 Silvain YART & Thomas JACOB : Coupling microgravimetry and laser scanning: a novel approach to improve underground cavities detection in urbanized areas
- 17:20 - 17:40 Paolo FORTI & Marco VATTANO : The oldest “cave cadaster” of the World
- 17:40 - 18:00 Philipp HÄUSELMANN : UIS sub-commission Survey and mapping: 24 years of existence

Monday / Lundi – 5C: MONTAGNE

SYMPOSIUM 16 - *Cave rescue / Le secours spéléologique*

- 14:00 - 14:10 INTRODUCTION S.16
- 14:10 - 14:30 Bernardo BIANCHETTI, Diego FERREIRA & Rodrigo SEVERO : The Brazilian Cave Rescue Structure
- 14:30 - 14:50 José Luis GÓMEZ : Accidentes en cuevas de Puerto Rico: estudios para exploración más segura en el Sistema de Cuevas de Aguas Buenas
- 14:50 - 15:10 Judicaël ARNAUD, Sylvain BOUTONNET, Jean-Michel SALMON & Bernard TOURTE : The new SSF technical guidebook
- 15:10 - 15:30 Nicolas MAGNON, Regula HÖHN, Andy SCHEURER & Christian SUTTER : A journey to the new manuals Spéléo-Secours Suisse

- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Jean-Michel SALMON, Jean-Paul COUTURIER, Dominique BEAU & Jean-Claude FRACHON (†) : The SSF accident database
- 16:40 - 17:00 François DE FELIX, Antoine AIGUEPERSE, Vincent BOILLOUX, Julien FOUQUET & Laurent MANGEL : An IT tool as operational support
- 17:00 - 17:20 Bernard TOURTE, Laurent MOREL, Jean-Pierre CASSOU, Baudouin LISMONDE & Sylvain BOUTONNET : Giant zip lines
- 17:20 - 17:40 Olivier LANET : Radio localisation applied to caving rescue
- 17:40 - 18:00 Ghada SALEM, Samer AMHAZ & Mazen ARZOUNI : Beirut: a call for action

Monday / Lundi – 5B: NIVOLET

SYMPOSIUM 01 - Karst, Heritage and Resources / Karst, Patrimoine et Ressources

- 14:00 - 14:10 INTRODUCTION S.01 SS1 - Chairmen : John GUNN & Serge DELABY
- 14:10 - 14:30 Joël RODET : Diversité patrimoniale du karst crayeux en Normandie (France).
- 14:30 - 14:50 Bernard CHIROL : Un géomorphosite karstique remarquable : la Cluse des Hôpitaux (Ain, France).
- 14:50 - 15:10 Katarina KOSIČ FICCO, William D. ORNDORFF, Thomas E. MALABAD & Michael J. FICCO : Buried world of Virginian karst: an introduction to karst resources in the compartmentalized and covered karst of Virginia, USA.
- 15:10 - 15:30 Nathalia UASAPUD, Marion WEBER & Juan Pablo PALACIO-HENAO : Oriente Antioqueño karst – A tropical stripe karst in Colombia.
- 15:30 - 15:50 Varoujan SISSAKIAN & Aqeel Abbas AL-ZUBAIDI : The influence of karst features on the biodiversity and cultural heritage near Al-Salman Depression, Iraqi Southern Desert.
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Angel ACOSTA-COLON : A unique karstic ecosystem and historical site in Puerto Rico: Las Cabachuelas Nature Reserve Cave System.
- 16:40 - 17:00 Afkar HADI : Biodiversity of Caves and Fractures in Safin Mountain, Kurdistan, North of Iraq.
- 17:00 - 17:20 José Maria CALAFORRA, Paolo FORTI, Fernando GAZQUEZ, Francesco SAURO, Tommaso SANTAGATA & Marco VATTANO : Giant gypsum crystal caves: different fates due to their peculiar socio-economic situation.
- 17:20 - 17:40 Samvel M. SHAHYNIAN, Smbat R. DAVTYAN, Artavazd E. JANOYAN & Andranik Kh. BUNATYAN : Makar Cave: discovery of a new heritage site of the Azat River Basin (Armenia).
- 17:40 - 18:00 Angel JR. GARCIA : Constructing cultural consensus models about cave and cave processes to characterize ethnogeology knowledge.

Monday / Lundi – 5B: REVARD

SYMPOSIUM 05 - Karst hydrogeology, physical chemistry / Hydrogéologie karstique, physico-chimie des eaux

- 14:00 - 14:10 INTRODUCTION S.05
- 14:10 - 14:30 Terry BOLGER & Gheorghe M. L. PONTA : Hydrogeology and water chemistry of Hin Nam No National Park, Laos
- 14:30 - 14:50 Issam BOU JAOUDE, Rena KARANOUH & Wael KARANOUH : Damming the karst of Lebanon
- 14:50 - 15:10 Carlos CONDE-COSTAS : Hydrology of the El Convento Tropical Karst Stream, Puerto Rico
- 15:10 - 15:30 Matthew COVINGTON : Ventilation as a driver of variation in chemistry and dissolution rates within karst conduits
- 15:30 - 15:50 Philippe CROCHET : Apport de l'approche fonctionnelle pour l'étude des aquifères karstiques - Exemple du Causse Rouge
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Andrea Dawn CROSKREY : ASR and AR in Texas' Edwards and Trinity Aquifers
- 16:40 - 17:00 Sergio DAMBROSI : The experimental station in the Trebiciano Abyss
- 17:00 - 17:20 Alexander GUSEV : Water balance and temperature regime in the bottom of the Snezhnaya cave system (Western Caucasus)
- 17:20 - 17:40 Bulat MAVLYUDOV, Tatyana KUDERINA, Evgenij GRABENKO, Arsenij KUDIKOV & Yanvarbi EKBA : Some data about Lakes of Novoafonskaya Cave, Caucasus, Republic of Abkhazia
- 17:40 - 18:00 David VIENNET, Guillaume LORETTE, David LABAT, Nicolas MASSEI, Mathieu SEBILO, Cyril DELPORTE, Joël TREMOULET, Guy BARIVIERA, Marc GUICHOT, Nadir LASSON, Jérôme LIPPART, Christian BRUNET, Philippe BONNET, Denis ARNAL & Pierre CRANCON : Un observatoire scientifique et participatif : application au système karstique de l'Ouyse (Parc naturel régional et Géoparc mondial UNESCO des Causses du Quercy, France)

Tuesday / Mardi - 5A: ARAVIS

SYMPOSIUM 03 - Cave deposits / Dépôts karstiques

- 08:30 - 08:40 INTRODUCTION S.03 - Chairmen : Fadi NADER & Nadja ZUPAN
- 08:40 - 09:00 Marina LO CONTE, Massimo ERCOLANI & Paolo FORTI : Mineralogical curiosities: The "lapis specularis" coins of the Re Tiberio gypsum cave (Italy)
- 09:00 - 09:20 Bogdan ONAC, Jo De WAELE & Angelo NASEDDU : New data on selected minerals from Monte Guisi Cave, Sardinia
- 09:20 - 09:40 Francesco SAURO, Bogdan P. ONAC, Cristina CARBONE, Franco URBANI, Augusto AULER, Andrea COLUMBU, Martina CAPPELLETTI, Daniele GHEZZI, Leonardo PICCINI & Jo DE WAELE : Secondary cave minerals and sedimentary deposits in orthoquartzite and metaquartzite caves of South America: a review on their genesis and significance
- 09:40 - 10:00 Max WISSHAK, Hazel A. BARTON, Katey E. BENDER & Harvey R. DUCHENE : The barite conundrum: active growth of non-hydrothermal BaSO₄ speleothems in Lechuguilla Cave (New Mexico, USA)
- 10:00 - 10:20 Filip ŠARC, Andrea MARTÍN PÉREZ & Bojan OTONIČAR : The first cave occurrence of the mineral cattiite, Mg₃(PO₄)₂·22H₂O
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Jo DE WAELE & Paolo FORTI : Monocrystalline calcite speleothems: an overview and new insights
- 11:10 - 11:30 Ana MONTESERÍN, Fernando GÁZQUEZ, Ángel FERNÁNDEZ-CORTÉS, Manuel GUERRERO & José María CALAFORRA : Reconstructing the isotopic composition ($\delta^{18}O$ and δD) of paleo-aquifer water from gypsum crystals of the Giant Geode of Pulpí (SE Spain)
- 11:30 - 11:50 Daniel M. CLEARY, Oana A. DUMITRU, Victor J. POLYAK, Jonathan G. WYNN, Ioan POVARA, Yemane ASMEROM & Bogdan P. ONAC : Bladed stalactites: an unusual occurrence of cryogenic speleothem subtype
- 11:50 - 12:10 Gabriella KOLTAI, Christoph SPÖTL, Tanguy RACINE, Charlotte HONIAT, Lukas PLAN & Hai CHENG : Witnesses of former cave glaciation: cryogenic cave carbonates from the Eastern and Southern Alps
- 12:10 - 12:30 Aurélie MARTIN, Thomas LECOQC, Klaus-G. HINZEN, Thierry CAMELBEECK, Yves QUINIF & Nathalie FAGEL : Candlestick stalagmites, a tool to better understand the influence of past earthquakes on natural caves
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.03 - Chairs : S. Breitenbach & A. Haeuselmann
- 14:10 - 14:30 Alessia NANNONI, Leonardo PICCINI, Pilario COSTAGLIOLA, Nicolò BATISTONI, Pietro GABELLINI, Gabriele PRATESI & Silvia BUCCI : Natural and anthropogenic cave sediments: the example of the Apuan Alps (Central Italy)
- 14:30 - 14:50 Edwige PONS-BRANCHU, Louise BORDIER, Philippe BRANCHU, Arnaud DAPOIGNY, Eric DOUVILLE, Laurine DRUGAT, Emmanuel DUMONT, Gaël MONVOISIN, Jean-Pascal DUMOULIN, Jules QUERLEUX & Nadine TISNERAT-LABORDE : Spéléothèmes des grottes vs spéléothèmes des systèmes anthropiques (carrières, souterrains...). Problèmes chronologiques et apport des éléments traces pour étudier et reconstruire les climats et/ou l'occupation ou l'utilisation des sols dans le passé
- 14:50 - 15:10 Trevor FAULKNER & John CRAE : Exotic tufa and speleothem deposits on the calcareous island of Lismore, Argyll, Scotland
- 15:10 - 15:30 Daniel BALLESTEROS, Andrew FARRANT, Diana SAHY, Kim GENUITE, Ingrid BEJARANO & Carole NEHME : The Story behind the fluvial deposits in the Caumont chalk caves, France
- 15:30 - 15:50 Marianna JAGERCIKOVA, François LEMOT, Pierre VALLA, Speranta-Maria POPESCU, Séverine FAUQUETTE, Jean-Pierre SUC, Amandine SARTEGOU, Peter VAN DER BEEK, Ludovic MOCOCHAIN & Alexandre ZAPPELLI : Relief and paleoenvironmental conditions during the mid-late Miocene in the French Western Alps (Dévoluy Massif) revealed by Obiou cave deposits
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Nadja ZUPAN HAJNA, Andrej MIHEVC, Pavel BOSÁK, Petr PRUNER, Helena HERCMAN, Ivan HORÁČEK, Jan WAGNER, Stanislav ČERMÁK, Jacek PAWLAK, Paula SIERPIEŃ, Šimon KDÝR, Lucie JURÍČKOVÁ & Astrid ŠVARA : Updates on Račička pečina sedimentary sequence studies (SW Slovenia)
- 16:40 - 17:00 Sophie VERHEYDEN, Serge DELABY, Hubert CAMUS & Jacques JAUBERT : Sedimentary evolution of the Bruniquel Cave, France

Tuesday / Mardi - 5A: BUGEY

SYMPOSIUM 15 - Education commission, Material and Techniques / Enseignement de la spéléologie, matériels et techniques

- 08:30 - 08:40 INTRODUCTION S.15
- 08:40 - 09:00 Loredana BESSONE, Francesco SAURO, Jo DE WAELE, Marco VATTANO & Samuel J. PAYLER : ESA CAVES 2019: a new edition of the astronauts training in cave
- 09:00 - 09:20 Judicaël ARNAUD, Vincent BIOT, Vanessa KYSEL, Marc LATAPIE, Laurent MANGEL & Hélène MATHIAS : La formation de cadres au sein de l'École Française de Spéléologie
- 09:20 - 09:40 Vincent BIOT, Didier CAILHOL & Raphaël TROUILLER : Les guides de randonnée souterraine au Laos : mettre en place un réseau de formateur

- 09:40 - 10:00 Miguel BOLIGAN, Leslie F. MOLERO LEÓN, John FIORONI, Jesús M. PAJÓN & L. Yusnaviel GARCÍA-PADRÓN : The National Center for Speleological Training in Cuba
- 10:00 - 10:20 Mladen GARAŠIĆ, Davor GARAŠIĆ, Ivan KRPINA, Tomislav GOSPODINOVIĆ, Fadi Henri NADER & Johnny TAWK : International Educational Speleological Expeditions
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Pierre-Bernard LAUSSAC & Emmanuel TESSANNE : L'enseignement professionnel de la spéléologie en France
- 11:10 - 11:30 Hélène MATHIAS, Judicaël ARNAUD, Vanessa KYSEL & Laurent MANGEL : La formation personnelle au sein de l'École Française de Spéléologie
- 11:30 - 11:50 Gaël MONVOISIN & Pierre-Bernard LAUSSAC : Utilisation de cordelettes de petits diamètres (6mm) en spéléologie
- 11:50 - 12:10 Vincent ROUYER : La formation des professionnels de l'enseignement de la spéléologie dispensée par le ministère des Sports français
- 12:10 - 12:30 Mariana Barbosa TIMO, Luiz Afonso V. FIGUEIREDO, Teresa Maria da Franca Moniz de ARAGÃO & Ronaldo Lucrécio SARMENTO : Speleological training in Brazil: the implementation of the Brazilian School of Speleology

Tuesday / Mardi - 5A: BUGEY

SYMPOSIUM 12 - *Glacier, Firn and Ice Caves* / Spéléologie glaciaire

- 14:00 - 14:10 INTRODUCTION S.12
- 14:10 - 14:30 Matthew COVINGTON, Jason GULLEY, William GADD, Vickie SIEGEL, David OCHEL, Celia TRUNZ & Jessica MEJI : Instrumentation and exploration of moulins in the Paakitsoq region of the Greenland Ice Sheet
- 14:30 - 14:50 Trevor FAULKNER : Englacial conduits & crevasses in the artificial tunnel inside Langjökull glacier, Iceland
- 14:50 - 15:10 Gérald FAVRE : La rivière « chaude » supérieure de Kverkfjöll (Vatnajökull, Islande) : le plus profond réseau sous-glaciaire connu
- 15:10 - 15:30 Gérald FAVRE : Glaciospéléologie dans les Alpes suisses : plus de 40 années de recherche et d'exploration (résumé des types de cavités)
- 15:30 - 15:50 Lee FLOREA, Andreas PFLITSCH, Eduardo CARTAYA, & Christian STENNER : Fumarole-ice dynamics in cryo-speleology on volcanic edifices—Mount Rainier, Washington, USA
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Barnabé FOURGOUS, Alain MAURICE, Pierre-Bernard LAUSSAC, Tristan GODET, Benoit MAGRINA & Alexandre FAUCHEUX : How melting of the alpine glaciers impact development of glacio karst?
- 16:40 - 17:00 Richard MAIRE, Marius SCHAEFER, Masahiro MINOWA, Shuntaro HATA, Bernard TOURTE, Arnaud MALARD, Natalia MORATA : Le pseudo-karst du glacier Tempanos (Patagonie, Chili) – Indicateurs de fonte rapide
- 17:00 - 17:20 Bulat MAVLYUDOV : Possible huge cave system of Southern Inyltchek Glacier, Kyrgyzstan
- 17:20 - 17:40 Luc MOREAU & Luc PIARD : 30 years of sliding velocities continuous measurements under the Argentièr glacier (Mt-Blanc): 77% of speed loss!
- 17:40 - 18:00 Luc MOREAU, Farouk KADDED, Barnabé FOURGOUS & Tristan GODET : Moulins of the Mer de glace, from Vallot (1897) to today: filling, emptying and 3D measurements of the deformation in depth
- 18:00 - 18:20 Francesco SAURO, Alessio ROMEO, Joseph COOK, Alun HUBBARD & Arwyn EDWARDS : "Inside the glaciers" expeditions 2017-2018: hydrological and microbiological investigation of the Greenland icecap subsurface

Tuesday / Mardi - 5A: CHAMECHAUDE

SYMPOSIUM 09 - *Topography, Mapping, 3D, Documentation* / Topographie, cartographie 3D, documentation

- 08:30 - 08:40 INTRODUCTION S.09
- 08:40 - 09:00 Philip John ROWSELL & Graham HUNTER : Mobile Handheld 3D Laser Scanning Cave surveying of the future?
- 09:00 - 09:20 Vickie SIEGEL, William C. STONE, Kristof RICHMOND, John HARMAN, Christopher FLESHER & Neal TANNER : Survey and 3-D mapping of underwater caves using a SUNFISH® AUV
- 09:20 - 09:40 Tommaso SANTAGATA, Umberto DEL VECCHIO, Francesco SAURO, Elena Mateo MEDEROS, Matteo MASSIRONI & Riccardo POZZOBON : 3D mapping of the Corona lava tube system
- 09:40 - 10:00 Tommaso SANTAGATA, Alessandro MARRAFFA, Jo DE WAELE & Francesco SAURO : Detecting morphological changes through terrestrial laser scanning in salt and ice caves: the cases of Cueva Lechuza (Atacama, Chile) and Cenote Abyss (Dolomites, Italy)
- 10:00 - 10:20 Hicham BENANI, Larbi BOUDAD, Hassan RHINANE, Ayoub NEHILI, Abdelaziz AOUAAL, Makram LEKNIZI, Soufiane KAAB, Nadia SLIMANI, Mohamed BELFATMI, Ismail AJDOURI & Soufiane GANNAOUI : Modélisation 3D et apport du SIG dans l'exploitation de l'endokarst : cas de la grotte Aziza, province d'Errachidia, Maroc
- 10:20 - 10:50 PAUSE

- 10:50 - 11:10 Jules KEMPER, Stéphane JAILLET, Jean-Jacques DELANNOY, Laurence AUDIN, Marie BARDISA & Kim GENUITE : A high-resolution 3D model of the Chauvet cave entrance area (Ardèche, France): scree, scarp and related caves
- 11:10 - 11:30 Isidoros KAMPOLIS, Stavros TRIANTAFYLIDIS & Sotiris KOKKALAS : Revisiting the speleomorphology of the Cave of Lakes in northern Peloponnese (S. Greece) from a 3D laser scanning perspective
- 11:30 - 11:50 Margot VIVIER, Jean-Baptiste CHARLIER, Pauline COLLON & Stéphane JAILLET : Characterizing 3D geomorphology of a karst network using Karstnet: application to the Verneau system (French Jura)
- 11:50 - 12:10 Philip R. SCHUCHARDT : CaveWhere® – Creating 3D Cave Maps by Warping and Projecting 2D Profile Sketches
- 12:10 - 12:30 Julian TODD & Phil ROWSELL : Movie style cave fly-thoroughs and 3D visualisation made possible with TunnelVR
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.09 – Chairman : Yavor SHOPOV
- 14:10 - 14:30 Matic DI BATISTA & Špela BORKO : eKataster – online cave database solution
- 14:30 - 14:50 Graziano W. FERRARI : Virtual caving libraries: toward a network of bibliographic information resources
- 14:50 - 15:10 Éric MADELAINE, Peter MATTHEWS & Frédéric URIEN : KarstLink: organise the sharing of karst data
- 15:10 - 15:30 Frédéric URIEN & Didier BORG : GrottoCenter / Wikicaves : partager l'information
- 15:30 - 15:50 Anamaria Diana HÄUSELMANN, Didier BORG & Frédéric URIEN : The evolution of the Speleological Abstracts (BBS/SA)
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Eric MADELAINE & Yves MARGARIA : Radiolocalisation à la grotte de Pâques
- 16:40 - 17:00 Gergely SURÁNYI, Gergő HAMAR, Dezső VARGA, Szabolcs J. BALOGH, Gábor NYITRAI, Gábor MOLNÁR, Ádám L. GERA, Gábor GALGÓCZI & Gergely G. BARNAFÖLDI : Cavity Location by Muon Tomography
- 17:00 - 17:20 Yavor SHOPOV, Ognian OGNIANOV & Krisia PETKOVA : Remote Location of unknown caves by Thermal Cameras
- 17:20 - 17:40 Cécile VERDET, Colette SIRIEIX, Antoine MARACHE, Joëlle RISS & Jean-Christophe PORTAIS : Observer un karst sous couverture en 3D grâce à la géophysique (TRE) Colline de Lascaux
- 17:40 - 18:00 Yavor SHOPOV & Lyudmil TSANKOV : First Successful finding of an Unknown Cave by Remote Location by Near Infrared Imaging using NDVI index
- 18:00 - 18:20 Yavor SHOPOV : The International Program on "Techniques for Remote Location of Caves" (RLC) of the International Union of Speleology (UIS): state-of-the-art

Tuesday / Mardi - 5D: VANOISE

SYMPOSIUM 04 - Geomorphology and Speleogenesis / Géomorphologie et spéléogénèse

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- 08:30 - 08:40 INTRODUCTION S.04
- 08:40 - 09:00 Maria-Laura TÎRLĂ, Alexandru POLOGEA, Ovidiu DOLCAN & Gabriel CONSTANTINESCU : Geomorphology of Ponorul Suspendat Cave, Southern Carpathians: An interplay between thrust tectonics, faulting and karstification
- 09:00 - 09:20 Isidoros KAMPOLIS & Kyriaki PADOPOULOU-VRYNIOTI : A speleogenetic comparison between caves located in two neotectonic grabens in southern Greece
- 09:20 - 09:40 Ana MLADENOVIĆ & Jelena ČALIĆ : Speleo-morphology and tectonic processes – What can be seen in slowly deforming regions?
- 09:40 - 10:00 Silvana MAGNI : Stylolites control karst formation
- 10:00 - 10:20 Antonio GONZÁLEZ-RAMÓN, Jorge JÓDAR, José María SAMSÓ, Sergio MARTOS ROSILLO, Javier HEREDIA, Ane ZABALETA, Iñaki ANTIGÜEDAD, Emilio CUSTODIO & Luis Javier LAMBÁN : Vertical repetition of structures and cave patterns in the National Park of Ordesa and Monte Perdido (N of Spain) and its relationships with the functioning of recharge in the karstic system
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Robert A. WATSON, Simone FIASCHI, Eoghan P. HOLOHAN & John WALSH : Structural control on the geomorphology of karst depressions and caves in the Burren, Ireland
- 11:10 - 11:30 Neven BOČIĆ, Valerija BUTORAC, Teo BARIŠIĆ, Mladen KUHTA, Darko BAKŠIĆ & Tomislav KUREČIĆ : Morphogenesis of the karst system of the Crnopac massif (Velebit, Croatia, Dinaric karst)
- 11:30 - 11:50 Jean-Yves BIGOT, Jean-Loup GUYOT & Philippe AUDRA : Speleogenesis of juvenile serial sinkhole-resurgence systems in the karsts of the Amazonian side of the Andes Mountains, Peru
- 11:50 - 12:10 Alessia NANNONI, Marco ANTONELLINI, Bartolomeo VIGNA & Jo DE WAELE : Fractured speleothems as proxies for cave evolution
- 12:10 - 12:30 Davor GARAŠIĆ & Mladen GARAŠIĆ : Some indicators of seismic activity in the caves of the Dinaric Karst of Croatia
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.04

- 14:10 - 14:30 Kim GENUITE, Stéphane JAILLET, Jean-Jacques DELANNOY, Jean-Jacques BAHAIN, Pierre VOINCHET, Edwige PONS-BRANCHU, André REVIL & Marceau GRESSE : Late Quaternary evolution of the Ardèche river. Study of the karst-river relationships based on an integrated topographical approach
- 14:30 - 14:50 Meriem Lina MOULANA, Aurélia HUBERT, Mostefa GUENDOUZ, Camille EK & Bernard COLLIGNON : The karst geomorphology of the Boukadir region (Chelif – Algeria)
- 14:50 - 15:10 Joël RODET, Frederico A.A. GONÇALVES & Luc WILLEMS : L'endokarst témoin de l'évolution complexe du paysage régional en milieu tropical : l'exemple du Curral das Pedras (Minas Gerais, Brésil)
- 15:10 - 15:30 Benjamin LANS, Richard MAIRE, Yves QUINIF & Michel DOUAT : The paleocaves of Pierre-Saint-Martin/Larra massif (France/Spain). Mapping and diagnostic
- 15:30 - 15:50 France DUBICH, Élodie LECORNU, Jean-Jacques DELANNOY & Stéphane JAILLET : Géomorphologie des vides et remplissages de la grotte touristique de Saint-Marcel d'Ardèche (France) : Construction de clés de lecture comme support de médiation scientifique
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Mark E. TRINGHAM : A major paleokarst horizon found within a modern cave in NE India; the Pielkhlieng Pouk-Krem Sakwa System, Meghalaya
- 16:40 - 17:00 Hugo E. SALGADO-GARRIDO, Salvador TREJO-PELAYO, Rafael LÓPEZ-MARTÍNEZ, Ricardo BARRAGÁN, German YAÑEZ & Luis MEJÍA-ORTÍZ : Advances in the speleogenetic characterization of the flank margin caves from Cozumel island, México
- 17:00 - 17:20 Giuliana MADONIA, Giuseppe RIOLO, Cipriano DI MAGGIO, Rosario DI PIETRO, Ilenia M. D'ANGELI, Jo DE WAELE & Marco VATTANO : New insights on the Carburangeli Cave speleogenesis: a flank margin cave in Northern Sicily (Italy)
- 17:20 - 17:40 Patricia KAMBESIS : Karst Development on the Southern Peninsula of Haiti
- 17:40 - 18:00 Maria Jhonnie VILLAREAL & John JENSON : Hydrogeological Characterization of a High-Discharge Coastal Freshwater Spring System: Ayuyu Cave, Northwest, Guam

Tuesday / Mardi - 5B: NIVOLET

SYMPOSIUM 01 - *Karst, Heritage and Resources* / Karst, Patrimoine et Ressources

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- 08:30 - 08:40 INTRODUCTION S.01
- 08:40 - 09:00 Issam BOU JAOUDE, Rena KARANOUH & Wakel KARANOUH : The History of Lebanon exposed through the darkness of Jeita Cave.
- 09:00 - 09:20 Stefan ZAENKER, Christian ZAENKER, Bärbel VOGEL, Andreas WOLF & Friedhart KNOLLE : CaveLife App - Applications and Results.
- 09:20 - 09:40 Oier GOROSABEL : El papel de los espeleólogos en la gestión del patrimonio subterráneo: ¿miembros activos del equipo de gestión, o simples peones?
- 09:40 - 09:50 INTRODUCTION S.01 SS2 - Chairman : Jean-Pierre BARTHOLEYNS
- 09:50 - 10:30 John GUNN & David GILLIESON : The UIS-UICN Guidelines for Cave and Karst Protection (Keynote IYCK 40')
- 10:30 - 10:50 PAUSE
- 10:50 - 11:10 Bärbel VOGEL, Jörg DREYBRODT, John GUNN, Andreas WOLF & Friedhart KNOLLE : Engagement in international institutions for cave and karst protection.
- 11:10 - 11:30 Jure TIČAR : Cave pollution-can we predict and solve it? Experience gained by the big data approach from Slovenia.
- 11:30 - 11:50 Maria-Laura ȚIRLĂ, Bogdan BĂDESCU & Georgeta ȚÎȚAN : Cave restoration and depollution: Towards a favorable conservation status of the 8310 habitat (ROSCI0031, SW Romania).
- 11:50 - 12:10 Leda ZOGBI, Allan S. CALUX, Annie GUIRAUD, Philippe CROCHET & Kevin DOWNEY : Lights in the Darkness: caving-photographic expeditions to highlight the heritage values of the caves in Brazil.
- 12:10 - 12:30 Patricia E. SEISER : What will Cave Wilderness Mean for Resource Protection and Management Concerns?
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S. 01 - Chairman : Jean-Pierre BARTHOLEYNS
- 14:10 - 14:30 Joerg DREYBRODT, Urs ETTER, Nyi Nyi AUNG, Naw Yuzana WIN & Fleur LOVERIDGE : Karst and Cave Conservation in Myanmar.
- 14:30 - 14:50 Fadi Henri NADER & Johnny TAWK : The outstanding karstic features of Lebanon: a call for protection.
- 14:50 - 15:10 Claude MOURET : The karst of Sagada in the Philippines: will of conservation vs general degradation.
- 15:10 - 15:30 Issam BOU JAOUDE & Rena KARANOUH : El Kassarat Cave: From Destruction to Protection.
- 15:30 - 15:50 Adriana NERI : "Cave Museum": a new virtual platform for the conservation and dissemination of the karst heritage.
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 SS3 Chairman : Jean-Claude THIES
- John GUNN : A global overview of UNESCO protected areas that contain carbonate or evaporite caves and karst.

- 16:40 - 17:00 Kasimir MICULINIĆ, Andrijana BROZINČEVIĆ, Željko RENDULIĆ & Dino GROZIĆ : Disclosing the underground secrets of The Plitvice Lakes National Park: new approach to cave exploration for the management of the natural heritage.
- 17:00 - 17:20 Joško BOŽANIĆ, Jelena KURTOVIĆ MRČELIĆ & Paola BOŽANIĆ : The Azure Sun in the UNESCO Geopark Vis Archipelago, Adriatic Sea, Croatia.
- 17:20 - 17:40 Serge DELABY & Sophie VERHEYDEN : Le karst du Géoparc mondial UNESCO Famenne-Ardenne.
- 17:40 - 18:00 Vincent BIOT, Delphine JACONELLI, Benjamin WEBER & Thierry PÉLISSIE : Le développement des sentiers karstiques : l'exemple de l'Occitanie et des Causses du Quercy.

Tuesday / Mardi - 5B: REVARD

SYMPOSIUM 05 - *Karst hydrogeology, physical chemistry* / Hydrogéologie karstique, physico-chimie des eaux

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- 08:30 - 08:40 INTRODUCTION S.05 - Traçages et Hydrochimie – Chairman : Bernard COLLIGNON
- 08:40 - 09:00 Gérald FAVRE : Le karst de Tsanfleuron (Valais, Suisse) : Dynamique des écoulements souterrains dans le karst et le glacier
- 09:00 - 09:20 Romain DELEU, Amaël POULAIN, Gaëtan ROCHEZ & Vincent HALLET : Multi-Point Dye Tracing in Karstic Rivers: Early Results from Transversal Configuration
- 09:20 - 09:40 Amaël POULAIN, Gaëtan ROCHEZ, Geert DE SADELAER & Vincent HALLET : Développement d'un fluorimètre compact, pour le traçage hydrogéologique en environnement difficile
- 09:40 - 10:00 Yavor SHOPOV, Ivan ANTONOV & Valentin LOZANOV : Invisible Dye Tracing- an Efficient Technique for Cave Exploration
- 10:00 - 10:20 Vincent BAILLY-COMTE, Yannick MANCHE & Claudine LAMOTTE : Outil d'interprétation de traçages artificiels suivis par sondes multispectrales : Exemple d'application au Causse Méjean
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Philippe MARTIN : Variation de la température de la rivière souterraine de Cauvel (Gard) : comment en tirer des enseignements sur le fonctionnement de ce karst ?
- 11:10 - 11:30 Sarah BURGESS, Lee FLOREA & Tracy BRANAM : Sulfur systematics and implications for carbon flux in two karst basins of the Mitchell Plateau, Indiana, USA
- 11:30 - 11:50 Liz HIDALGO, James APAESTEGUI, Christelle BATIOT, Jean Loup GUYOT, Hervé JOURDE, Naomi MAZZILLI & Abdel SIFEDDINE : L'apport en matériel dissous d'un karst andin tropical (Alto Mayo, Pérou) vers l'Amazone
- 11:50 - 12:10 Gheorghe M. L. PONTA, Stuart W. MCGREGOR, Rebecca A. BEARDEN & Christine F. EASTERWOOD : Monitoring karst aquifers at Redstone Arsenal, a U.S. Army facility in Alabama, USA
- 12:10 - 12:30 Veronika SYNKOVÁ & Pavel PRACNÝ : Hydrogeochemical and stable isotope properties of the dripwaters in the caves of the Moravian Karst (Czech Republic)
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.05 - Hydrologie et crues
- 14:10 - 14:30 Jean-Baptiste CHARLIER, Vincent BAILLY-COMTE, Vivien HAKOUN, Bernard LADOUCHE & Jean-Christophe MARÉCHAL : Understanding the origin of flood water in an urban karst spring using a high-frequency physico-chemical monitoring
- 14:30 - 14:50 Bernard COLLIGNON : Maillet or not Maillet? What the recession curves of the Fontaine de Vaucluse (France) tell us about the structure of karst
- 14:50 - 15:10 Manon ERGUY, Judicaël ARNAUD, Anne JOHANNET, Séverin PISTRE, Didier CAILHOL, Guillaume ARTIGUE & Stéphane JAILLET : Hydrogeological Behaviour Characterization of the Foussoubie Karst Network using Statistical Approaches
- 15:10 - 15:30 Antonio González-Ramón, José María CALAFORRA, Juan Leandro RONDA, Tomás RODRÍGUEZ-ESTRELLA & Juan MELERO : The "Los Chorros del Río Mundo" cave (Albacete, Spain). Hydrogeological functioning and cave patterns
- 15:30 - 15:50 Eva KAMINSKY, Lukas PLAN, Barbara FUNK & Thomas WAGNER : Discharge modelling of a highly dynamic flow regime in an Alpine vadose shaft (Hochschwab, Austria)
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Arnauld MALARD & Pierre-Yves JEANNIN : Inferring karst conduits organization from the use of hydraulic models; application to the Beuchire-Creugenat flow-system (JU, Switzerland)
- 16:40 - 17:00 Ulrich MEYER, Georg ZAGLER & Giorgio HÖFER-ÖLLINGER : The hydrology of Riesending cave in Untersberg
- 17:00 - 17:20 Alessia NANNONI, Bartolomeo VIGNA, Adriano FIORUCCI, Marco ANTONELLINI & Jo DE WAELE : Effects of an extreme flood on an alpine karst system
- 17:20 - 17:40 Vincent SCHNEIDER, Alexandre ZAPPELLI, Gael MONVOISIN, Fabien FECHEROUILLE, Thomas GASLONDE, Gaëtan PERRIER, Fabien COUTURIER & Bernard LE BIHAN : Suivi hydrologique du réseau souterrain de Francheville (Côte-d'Or, France) : instrumentation, dynamique des mises en charge et sécurisation des explorations

Tuesday / Mardi – 5C: MONTAGNE

SYMPOSIUM 14 - *Volcanic caves / Volcanospéléologie*

- 10:50 - 11:10 INTRODUCTION S.14
- 11:10 - 11:30 Raquel DAZA, Rafael LÓPEZ-MARTÍNEZ, Ramón ESPINASA-PEREÑA & Ricardo BARRAGÁN : Speleothems and mineralogies in lava tubes of Mexico
- 11:30 - 11:50 Gérald FAVRE : Le Wood Valley pit crater (Hawaii, Big Island) : un pit crater très particulier
- 11:50 - 12:10 Paolo FORTI & Michele SIVELLI : Fingal's cave: the myth of a cave through its iconography
- 12:10 - 12:30 Ana Z. MILLER, Francesco SAURO, Matteo MASSIRONI, Nicasio T. JIMENEZ-MORILLO, José M. DE LA ROSA, Rogier MILTENBURG, Igor TIAGO, Alejandro MARTINEZ, Samuel PAYLER, Serguei KUD-SVERCHKOV, Francis ZINO, Manuel BISCOITO, António CANDEIAS & Ana Teresa CALDEIRA : A once-in-a-lifetime microbiological and speleological expedition to the remote Selvagens Islands

Thursday / Jeudi - 5A: ARAVIS

SYMPOSIUM 13 - *Artificial cavities / Cavités artificielles*

- 08:30 - 08:40 INTRODUCTION S.13
- 08:40 - 09:00 Jean-Claude STAIGRE & Jean-Luc AUDAM : Le patrimoine souterrain artificiel de la craie normande
- 09:00 - 09:20 Alexandre PHILIPPE, Ludovic DORE, Thomas JACOB, Silvain YART & Imed KSIBI : Rediscovering the largest underground artificial cavity in Orléans
- 09:20 - 09:40 Gwenaél ROY & Nicolas HOLZEM : Évolution structurelle et fonctionnelle d'un souterrain à Betz-le-Château dans l'Indre-et-Loire (France), du Moyen Âge à nos jours
- 09:40 - 10:00 Xavier PENNEC & Marie Christine BAILLY-MAITRE : La mine du Milieu : une mine de très haute altitude préservée par un glacier
- 10:00 - 10:20 Alexandru MUREȘAN, Traian MINGHIRAȘ, Dragoș CONȚIU & Tudor TĂMAȘ : The Thurzó canal : a XVth century aqueduct from Baia Mare (Maramureș, Romania)
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Mathieu FERNANDEZ, Philippe BRANCHU, Emmanuel DUMONT, André GUILLERME, Laurence LESTEL, Edwige PONS-BRANCHU & David RAMIER : Amélioration de l'information spatiale concernant des infrastructures hydrauliques disparues : les anciens aqueducs de Paris
- 11:10 - 11:30 Marie-Élise PORQUEDDU, Anaïs LAMESA & Claudia SCIUTO : IRAAR: A project for promoting the study of rock-cut sites and quarries
- 11:30 - 11:50 Josiane LIPS : La faune des souterrains de Lyon (France)
- 11:50 - 12:10 Luciano Emerich FARIA, Bruna Borges Sena LEITE, Antoniel Silva FERNANDES, Jussara da Silva Diniz LIMA & Renato Costa SOARES : The artificial caves in the city of Rio de Janeiro (BR) and their historical and scientific context

Thursday / Jeudi - 5A: ARAVIS

SYMPOSIUM 18 - *Socio-economic aspects / Approches socio-économiques*

- 14:00 - 14:10 INTRODUCTION S.18 – Chairman : Paolo FORTI
- 14:10 - 14:30 Antonio DE VIVO, Paolo FORTI & Elisabeth MACLANG : Speleology and Sustainable Development
- 14:30 - 14:50 Vincent BIOT, Didier CAILHOL & Raphaël TROUILLER : Le karst, levier de développement écotouristique : la province de Khammouane au Laos
- 14:50 - 15:10 Carlos CONDE-COSTAS : The Cueva Ventana Experience, Porto-Rico: Challenges and Rewards
- 15:10 - 15:30 María Alejandra PÉREZ : How Caves Gather: The Power and Potential of a Radical Speleology
- 15:30 - 15:50 Mohamed EL KADIRI, Mohamed EL AHAMADI, Andrés ROS, José L. LLAMUSÍ, José AMOROS & Manuel TREMIÑO : The Grotte du Chameau and the Grotte des Pigeons, Morocco. A project of nature tourism
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Johnny TAWK & Fadi NADER : A new renovation project for the oldest Lebanese show-cave (the Kadisha cave; North Lebanon)
- 16:40 - 17:00 Gabriele CATONI & Ferdinando DIDONNA : Evoluzione di una grotta turistica: il caso della Grotta di Beatrice Cenci e dell'Ovido di Petrella
- 17:00 - 17:20 Veronica CHIARINI, Massimiliano COSTA, Elena LIBERATOSCIOLI, Mariano SPERA, Marco CARAFA, Luciano DI MARTINO, Oscar ZANI & Jo DE WAELE : Caves and sustainable tourism: an opportunity for natural and cultural heritage conservation- The Interreg ADRION – Adriaticaves project
- 17:20 - 17:40 Philippe FLEURY : Ce qui est donné à voir, à ressentir et à comprendre dans les grottes touristiques

Thursday / Jeudi - 5A: BUGEY

SYMPOSIUM 10 - *History of Speleology / Histoire de la spéléologie*

- 08:30 - 08:40 INTRODUCTION S.10 – Chairman : Johannes MATTES
- 08:40 - 09:00 Christophe GAUCHON : Bernard Gèze (1913-1996) : sa personnalité et son rôle dans la création de l'UIS
- 09:00 - 09:20 Sandra KLOS : Contested memories and memorable continuities. Austrian Geographer Hugo Hassinger (1877–1952) and his legacy within speleology
- 09:20 - 09:40 Alain DOLE : L'abbé Bernard Abadie, Passeur de savoirs, d'espaces et de temps
- 09:40 - 10:00 Oier GOROSABEL : Félix Ruiz de Arcaute, forjador de cadenas
- 10:00 - 10:20 Konstantina ARETAKI : The Pioneers of Cretan Speleology (Greece) I : Paul Faure
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Maurizio TAVAGNUTTI : Federico de Comelli von Stuckenfeld e la ricerca dell'acqua potabile a Gorizia alla fine del 1800
- 11:10 - 11:30 Luciano Emerich FARIA, Antoniel Silva FERNANDES, Marcos Giovanni MOREIRA, Jussara da Silva Diniz LIMA & Débora Evelyn Vieira ALMEIDA : Peter W. Lund's first steps in the caves of Minas Gerais (BR) - the 220 years of birth of this incredible scientist
- 11:30 - 11:50 Johnny TAWK, Fadi Henri NADER & Ronald SULTANEM : Sami Karkabi & the Spéléo Club du Liban
- 11:50 - 12:10 Ayoub NEHILI, Yahia EL KHALKI et Hicham BENANI : Chronologie et évolution de la spéléologie au Maroc
- 12:10 - 12:30 Paul CADAS, Theologos TSALIKOGLOU & George KONTOSTAVLOS : The Hellenic Speleological Society (1950-2020). Marking 70 years of speleology in Greece
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.10 – Chairman : Friedhart KNOLLE
- 14:10 - 14:30 Gyula HEGEDŰS : 60 years for cavers in Hungary. History of Hungarian Cave Rescue Service
- 14:30 - 14:50 Tom Dias Motta MORITA, Bárbara da Silva ERNANDES, Priscila de OLIVEIRA, Lúcio Dias Cruz MASSARI, Lucas Padoan de Sá GODINHO, Henrique Albuquerque FERNANDES, Daniel Bittencourt GOLDNER, Paulo César BOGGIANI & Ivo KARMANN : Historical importance of GGeo group for the development of Brazilian karst research
- 14:50 - 15:10 Henk GOUTIER & Gerard CAMPION : History and future activities of the European Speleological Federation FSE
- 15:10 - 15:30 Bernard CHIROL : Commentaires de lecture sur l'exploration des grottes de La Balme (38) avant la Révolution Française
- 15:30 - 15:50 Éric de VALICOURT : La grotte d'Espalungue, une grotte touristique au XIXe siècle
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Philippe FLEURY : Diau cave (France): history of its exploration and caving practices
- 16:40 - 17:00 Lionel BARRIQUAND, Daniel VERGNAUD, Matthieu DUCHASSIN, Françoise GARDETTE & Jean-René CHEVALLIER : The Cailleverdière Cave at Blanot (Saône-et-Loire, France) and Benoît Dumolin, a precursor site for speleology, karstology and underground tourism (1739-1939)
- 17:00 - 17:20 Jean-Yves BIGOT, Laurent BRUXELLES, Jean-Louis GALERA & Michel WIENIN : The absence of signatures from the XVIIIth century in two caves of the south border of the Massif Central (France). The cases of Faux-monnayeurs Cave (Millau, Aveyron) and Protestants Cave (Saint-Hippolyte-du-Fort, Gard)
- 17:20 - 17:40 Christophe GAUCHON : Histoire de la spéléologie en Savoie
- 17:40 - 18:00 Yuanhai ZHANG & Weihai CHEN : Research History of Guangxi Karst, Southwest China

Thursday / Jeudi - 5A: CHAMECHAUDÉ

SYMPOSIUM 07 - *Biology, Subterranean Life / Biologie, Vie souterraine*

- 08:30 - 08:40 INTRODUCTION S.07
- 08:40 - 09:00 Florian MALARD & Louis DEHARVENG : Subterranean life: What are we speaking about?
- 09:00 - 09:20 Stefano MAMMOLA & Pedro CARDOSO : Caves as simplified settings for testing ecological theory
- 09:20 - 09:40 Maria Elina BICHUETTE : Ecology and Conservation of Brazilian subterranean Fishes, an Update
- 09:40 - 10:00 Anna BIRÓ, Gergely BALÁZS, Žiga FIŠER & Gábor HERCZEG : Gender inequality in the dark: are adaptations to the cave environment sex-specific?
- 10:00 - 10:20 Carlos CONDE-COSTAS : Nitrogen Dynamics in a Tropical Karst Cave Stream
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Angel GINÉS, Alberto SENDRA, Joan J. FORNÓS, José M. CALAFORRA, Joaquín GINÉS, Oana A. DUMITRU & Ángel FERNÁNDEZ-CORTÉS : Terrestrial cave-fauna enduring extreme CO2 seasonal changes in the vadose environment: lessons from Dragonera Islet, Balearic Islands
- 11:10 - 11:30 Elena PIANO & Marco ISAIA : Ecological drivers of lampenflora growth in Italian show caves
- 11:30 - 11:50 George VENI & Michael JONES : GIS Modeling of the Ranges of Endangered Troglolobites

- 11:50 - 12:10 François LEFEBVRE, Michel CAILLON, Claude BOU, Florian MALARD & Christophe J. DOUADY : Distribution, ecology, and diversity of the genus *Gallasellus* (Isopoda, Asellidae)
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.07
- 14:10 - 14:30 Omar CALVA & Reyna A. CASTILLO-GÁMEZ : Mammals and birds cave use in the Sonoran desert, Mexico
- 14:30 - 14:50 Myrtille BÉRENGER & Rémi FONTERS : Étude des chauves-souris à la grotte du Bournillon, Châtelus, Vercors, France
- 14:50 - 15:10 Myrtille BÉRENGER & Céline LE BARZ & Quentin CHABANNE : Étude du regroupement automnal des Chiroptères sur le gouffre Berger et ses environs, Vercors, France
- 15:10 - 15:30 Oana Mirela CHACHULA, Adrian SOPINCEAN & Ioan COROIU : Seven decades of study of the biggest hibernacula of *Pipistrellus pipistrellus* and *Miniopterus schreibersii* in South East Europe
- 15:30 - 15:50 Adora THABAH & Oana Mirela CHACHULA : The relevance of cave features in roost selection of *Otomops wroughtoni* in Meghalaya, North East India
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Florian MALARD, Philippe GRISON, Louis DUCHEMIN, Maud FERRER, Julian LEWIS, Lara KONECNY-DUPRÉ, Tristan LEFÉBURE & Christophe J. DOUADY : An introduction to the World Asellidae Database
- 16:40 - 17:00 Maja ZAGMAJSTER, Špela BORKO, Teo DELIĆ, Christophe DOUADY, David EME, Florian MALARD, Peter TRONTEJ & Cene FIŠER : Availability of DNA barcodes in subterranean amphipods of Europe
- 17:00 - 17:20 Dieter WEBER, Lee R. F. D. KNIGHT & Alice SALUSSOLIA : Microniphargus, first results of phylogenetic analysis
- 17:20 - 17:40 Josiane LIPS & Marcel MEYSSONNIER : Le GEB : Groupe d'Etude de Biospéléologie

Thursday / Jeudi - 5D: VANOISE

SYMPOSIUM 04 - *Geomorphology and Speleogenesis* / Géomorphologie et spéléogénèse

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- 08:30 - 08:40 INTRODUCTION S.04 - Ghost rocks session
- 08:40 - 09:00 Yves QUINIF, Alain RORIVE, Luciane LICOUR, Grégory DANDURAND & Laurent BRUXELLES : Cellules de convection géothermiques et fantômisation
- 09:00 - 09:20 Yves QUINIF, Alain RORIVE & Laurent BRUXELLES : Fantômisation et hydrogéologie
- 09:20 - 09:40 Philippe VERNANT, Oswald MALCLES, David FINK & Gaël CAZES : Regional karst network genesis due to removal of ghost rocks revealed by burial dating
- 09:40 - 10:00 Benjamin LANS, Richard MAIRE, Yves QUINIF & Caroline DUBOIS : Ghost-rock karstification in Gironde (France): Highlighting in quarries and drillings
- 10:00 - 10:20 Églantine HUSSON, Gildas NOURY, Hélène TISSOUX, Alexis GUTIERREZ & Jérôme PERRIN : Le karst de la région d'Orléans : quels processus et quels âges ?
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Grégory DANDURAND, Yves QUINIF, Richard MAIRE, Didier CAILHOL & Laurent BRUXELLES : Le système karstique de la Touvre (Charente, France). Spéléogénèse par fantômisation
- 11:10 - 11:30 Joël RODET, Anne-Véronique WALTER-SIMONNET & Stéphane CHEDEVILLE : Le primokarst de la Mansonnière (Perche, France)
- 11:30 - 11:50 Olivier KAUFMANN & Yves QUINIF : Les effondrements karstiques du Tournaisis : un exemple révélateur du rôle des paléo-altérations dans le développement du karst
- 11:50 - 12:10 Cécile HAVRON : Les formes karstiques et le fantôme de roche dans les travaux BTP en Wallonie (Belgique) - Retours d'expérience
- 12:10 - 12:30 Laurent BRUXELLES, Richard MAIRE & Dominic STRATFORD : The role of ghost rocks (phantomisation) in the formation of the Sterkfontein cave and the Gauteng karsts (South Africa)
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.04
- 14:10 - 14:30 Jean-Jacques DELANNOY, Bruno DAVID, Joanna FRESLOV, Russell MULLET, Glawac Gunaikurnai Land and Waters Aboriginal Corporation, Helen GREEN & Johan BERTHET : Apports de l'archéo-géomorphologie dans l'étude de Cloggs cave (Victoria - Australie)
- 14:30 - 14:50 Laurent BRUXELLES & Michel WIENIN : Ghost rocks and hypogene mineralization: Questions raised by the Grande Vernissière mine complex (Gard, France)
- 14:50 - 15:10 Dorota JAROMIN : Altération à volume constant et modelé karstique en Préalpes : Bauges, Chartreuse (France)
- 15:10 - 15:30 Matthew COVINGTON, Max COOPER & Franci GABROVŠEK : Modeling the evolution of cave passage cross-sections: Understanding drivers of passage shape
- 15:30 - 15:50 André Silva TAVARES & Rogério Soares UAGODA : Assessment of Soil Losses by Erosion in a Karst Environment in the Cerrado Biome of Brazil
- 15:50 - 16:20 PAUSE

- 16:20 - 16:40 Alena GESSERT, Zdenko HOCHMUTH & Mária SCHWARZOVA : Intensity of chemical corrosion on limestone plates at two localities in the Slovak Karst (Slovakia)
- 16:40 - 17:00 Philippe MONTEIL & Malo COURTIER : Estimation de paléodébits dans une cavité du karst alpin : la galerie Isa du gouffre de la Petite Marielle (massif de Platé, Haute-Savoie, Alpes externes, France)
- 17:00 - 17:20 Joël RODET : L'origine des puits : du cryptokarst à l'aven
- 17:20 - 17:40 Manfred KUPETZ : Anthropogenic salt karst in Germany
- 17:40 - 18:00 Poster session

Thursday / Jeudi - 5B: NIVOLET

SYMPOSIUM 02 - *Caving and Explorations / Spéléologie et Explorations*

- 08:30 - 08:40 INTRODUCTION S.02 – Chairman : Roman HAPKA
- 08:40 - 09:00 Péter BÖRCSÖK, Riccardo CORAZZI, László EGRI, Erik GORDOS & László SZEGEDI : The exploration of the Boegan system (Abisso Cesare Prez-ET5-Abisso Eugenio Boegan)
- 09:00 - 09:20 Tanguy RACINE & Jana ČARGA : Caving in the 'Hollow Mountain': exploration of the longest cave system in Slovenia
- 09:20 - 09:40 Špela BORKO, Jure BEVC & Matic DI BATISTA : Hidden gem in the heart of karst exploration
- 09:40 - 10:00 Matthew COVINGTON, Špela BORKO & Matic DI BATISTA : Following the siren's call of Euclid's flute: The discovery and exploration of Sistem Pokljuškega grebena
- 10:00 - 10:20 Jo DE WAELE, Franci GABROVŠEK, Samuel PAYLER, Loredana BESSONE & Francesco SAURO : The scientific program of the ESA Caves astronaut training course in Slovenia
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Michael J. FICCO, Katarina KOSIČ FICCO, Teo DELIĆ, Philip SCHUCHARDT & Sara FLEETWOOD : Exploration in Kučka Korita, Montenegro
- 11:10 - 11:30 Marina GRANDIĆ, Lovel KUKULJAN, Valentina PLEMENČIĆ, Dino GROZIĆ, Marko RAKOVAC & Dalibor PAAR : Nedam Cave - a new deep cave on Velebit Mt., Dinaric karst, Croatia
- 11:30 - 11:50 Teo BARIŠIĆ & Aida BARIŠIĆ : Crnopac Cave System (Jamski sustav Crnopac)
- 11:50 - 12:10 Špela BORKO, Matic DI BATISTA & Matthew COVINGTON : Connecting the void below mt. Kanin
- 12:10 - 12:30 Sebastien AKL, Ghada SALEM & Badr JABBOUR-GEDEON : Houet Qattine Azar. A generous cave system that keeps on developing...
- 12:30 - 12:50 Frederico TÁTÁ REGALA, Maria José PINTO, Luís Meira PAULO, René BOBE, Vera ALDEIAS, Will ARCHER, David R. BRAUN, Jacinto MATHE, Solange MACAMO, Marion BAMFORD, Marc STALMANS & Susana CARVALHO : The caves of Gorongosa National Park, Mozambique
- 12:50 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.02 – Chairwoman : Sybille KILCHMANN
- 14:10 - 14:30 Rosario RUGGIERI, Antonio BAMBINA, Iolanda GALLETI, Gianmarco AGOSTA, Roberto GINTOLI, Zainul Fikri MOHD IDRIS, Muhammad RIDUWAN ALI, Syed Nu'aim SYED HAMZAH, Muhammad HARIZ IBRAHIM & M. NOR SAIFUL : Lenggong Karst Project (Perak, Malaysia)
- 14:30 - 14:50 Nyi Nyi AUNG, Fleur LOVERIDGE, Mike FUTRELL, Pete TALLING, Andrea FUTRELL & Dominik FROHLICH : Som Hein, Mapping of Longest Cave in Myanmar
- 14:50 - 15:10 Eva LOURAU, Omar ABOU NADER, Will HARDIE & Toufic ABOU NADER : The Treasures of Amir Temur Cave
- 15:10 - 15:30 Michael LAUMANN, Matt OLIPHANT & Nancy PISTOLE : Karst and Caves of the Republic of China (Taiwan)
- 15:30 - 15:50 Zdenek MOTYCKA, Michal FILIPPI & Zhang YUAN HAI : Discoveries of large caves in Xiaonanhai Karst, Shaanxi province, China
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Andrea BENASSI : Il fiume sotterraneo de Auk (Nuova Guinea)
- 16:40 - 17:00 Simon James BROOKS : Caving in the Abode of the Clouds, Meghalaya, North East India – An enduring partnership
- 17:00 - 17:20 Simon James BROOKS : Cave Exploration in Pakistan – finding caves in an ever changing landscape
- 17:20 - 17:40 Francesco SAURO, Laura KERBER & Loredana BESSONE : Planetary caves: open windows into the future of space exploration
- 17:40 - 18:00 Roman HAPKA : Spéléologie aux franges des déserts : Expéditions SpéléOman de 1990 à 2020
- 18:00 - 18:20 Jean-Loup GUYOT & James APAESTEGUI : Histoire et bilan des explorations spéléologiques au Pérou

Thursday / Jeudi - 5B: REVARD

SYMPOSIUM 08 - *Archaeology and Palaeontology in caves / Archéologie et paléontologie en grottes*

- 14:00 - 14:10 INTRODUCTION S.08 - Session Paleospeleology & Varia

- 14:10 - 14:30 Philippe GALANT, Jean-Yves BIGOT & Laurent BRUXELLES : Pister les spéléologues de la Préhistoire
- 14:30 - 14:50 Philippe GALANT : Caractérisation d'une exploration spéléologique préhistorique dans la grotte d'Aldène (Cesseras, Hérault, France)
- 14:50 - 15:10 Jean-Yves BIGOT, Laurent BRUXELLES & Philippe AUDRA : Speleo-archeology, or the search of historic and prehistoric constructions in the caves of Southern France
- 15:10 - 15:30 Jean-Yves BIGOT, Philippe AUDRA & Laurent BRUXELLES : Speleothems break and regrowth testifying past visits in some caves of Southern France
- 15:30 - 15:50 Catherine FERRIER, Jean Claude LEBLANC, Delphine LACANETTE, Jean-Christophe MINDEGUIA & Fabien SALMON : Le feu, vecteur d'appropriation de l'endokarst par Néandertal et Homo sapiens - Étude des altérations thermiques et apports des expérimentations
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Sophie VERHEYDEN, Jacques JAUBERT, Michel SOULIER & Denise SOULIER : Human presence in the Salle de la Structure of the Bruniquel cave, France, inferred from speleothem studies
- 16:40 - 17:00 Sophie VERHEYDEN, Maria GUROVA, Elena MARINOVA, Stefanka IVANOVA, Christian BURLET, Hai CHENG & R. Lawrence EDWARDS : Did Neanderthals visit the Mishin Kamik cave, western Stara Planina, Bulgaria, 200 000 years ago (MIS7)?
- 17:00 - 17:20 Bogdan P. ONAC, Steven M. BAUMANN, Dylan S. PARMENTER, Eric WEAVER & Tiberiu B. SAVA : The relationship between use of ice from a lava tube in El Malpais (New Mexico) and drought events in the southwestern USA
- 17:20 - 17:40 Luna VALENTIN & Philippe MONTEIL : Mesures acoustiques dans la grotte du Déroc (Vallon Pont d'Arc - Ardèche)
- 17:40 - 18:00 Jean-Jacques DELANNOY, Bruno DAVID, Birgitta STEPHENSON, Joanna FRESLOV, Lee J. ARNOLD, Russell MULLET, Glawac Gunaikurnai Land & Waters Aboriginal Corporation & Helen GREEN : Apports de l'approche intégrée dans l'étude des fréquentations, aménagements et usages passés. Application à Cloggs cave (État de Victoria- Australie)
- 18:00 - 18:20 Florence GUILLOT, Frédéric LOPPE, Henri de PARISOT DE LA BOISSE & Rodrigue TRÉTON : La fortification médiévale de la Caune de La Valette (Véraza – Aude)

Friday / Vendredi - 5A: ARAVIS

SYMPOSIUM 19 - *Medicine, health* / Médecine et santé

- 08:30 - 08:40 INTRODUCTION S.19
- 08:40 - 09:00 Jean-Noël DUBOIS : La bilharziose en canyon
- 09:00 - 09:20 Guillaume SECHAUD & France ROCOURT : Fractures et luxations en spéléo
- 09:20 - 09:40 Guillaume SECHAUD, France ROCOURT & Thierry LARRIBE : Profil du médecin en secours spéléo
- 09:40 - 10:00 Jean-Pierre BUCH & Cécile MORVANT : L'exposition au radon en spéléologie, Actualisation 2020
- 10:00 - 10:20 Jean-Pierre BUCH : Risques toxiques en spéléologie minière
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Jean-Noël DUBOIS, Patrick GUICHEBARON & Jean-Pierre BUCH : Pratique de la cardiofréquence-métrie en spéléologie et canyonisme
- 11:10 - 11:30 Christian CLOT, Jérémy ROUMIAN & Stéphane BESNARD : Deep Time, méthodologie pour une expérience hors du temps ?
- 11:30 - 11:50 Olha I. LEMKO : Artificial analogies of speleotherapy and their medical use
- 11:50 - 12:10 Ivan S. LEMKO, Iuri SIMIONKA & Andrij A. MAYOR : Speleotherapy: mechanism of influence, assessment of suitability of underground objects for medical use

Friday / Vendredi - 5A: ARAVIS

SYMPOSIUM 18 - *Socio-economic aspects* / Approches socio-économiques

- 14:00 - 14:10 INTRODUCTION S.18
- 14:10 - 14:30 Yannick MANCHE, Vincent BAILLY-COMTE, Claudine LAMOTTE & Alain JACQUET : Collaboration entre les bénévoles spéléologues et les professionnels : étude hydrogéologique du causse Méjean, un partenariat entre le CDS 48, l'Établissement public Parc national des Cévennes et le BRGM
- 14:30 - 14:50 Jean-Philippe DÉGLETAGNE, Lionel BARRIQUAND, Claire GAILLARD & Didier ACCARY : Un nouvel outil pour la valorisation du patrimoine souterrain : le jumeau numérique 3D. L'exemple de la grotte de l'Été, Saint-Gengoux-de-Scissé (France)
- 14:50 - 15:10 Philippe FLEURY & Jean-Marc VERDET : Techniques of the body and caving: practice and learning
- 15:10 - 15:30 Cécile PROUST : Projet « Estime de soi »
- 15:30 - 15:50 Fabrice MOURAU & Bruno ARFIB : Hydrogéologie karstique à l'école
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Élodie MULOT, Arnaud MALARD, Bernard TOURTE, Natalia MORATA, Jérémie PRIEUR-DEVIRON & toute l'équipe de Centre-Terre : Découvrir la spéléologie à l'école à travers les expéditions Ultima Patagonia : un projet éducatif réussi impulsé par José Mulot !

- 16:40 - 17:00 Teresa Maria da F. Moniz de ARAGÃO : Les grottes dans l'école, l'école dans les grottes
- 17:00 - 17:20 Konstantina ARETAKI : 12 years of the Environmental Educational Program and National Thematic School Network about caves of the Centre of Environmental Education of Vamos (KPE Vamos), Crete, Greece

Friday / Vendredi - 5A: BUGEY

SYMPOSIUM 10 - *History of Speleology* / Histoire de la spéléologie

- 08:30 - 08:40 INTRODUCTION S.10 – Chairman : Ferdinando DIDONNA
- 08:40 - 09:00 Johannes MATTES & Ottilie MANEGOLD : Career paths of women in speleology: A historical analysis on the example of the earth scientists Elise Hofmann & Maria Mottl
- 09:00 - 09:20 Luiz Afonso V. FIGUEIREDO, Arnaldo A. SILVA-JUNIOR & Robson de A. ZAMPAULO : Scientific research and academic qualification in speleology and related themes: historical aspects and scientific genealogy in Brazil (1945-2020)
- 09:20 - 09:40 Pierre-Olaf SCHUT : La place de la spéléologie dans les politiques sportives en France depuis les années 1980
- 09:40 - 10:00 Claude MOURET : A significant part of the History of speleology: war actions in caves and karst areas
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Friedhart KNOLLE & Rudolf G. A. FRICKE : Worldwide first evidence of underground radioactivity in Harz Mts. caves, Germany
- 11:10 - 11:30 David N. BRISON : Cave inspired Music database Website
- 11:30 - 11:50 Claude MOURET : Buddhist and animist practices in caves of Myanmar (ex-Burma)
- 11:50 - 12:10 Claude MOURET : Ancient religious use of caves in Khammouane, Laos

Friday / Vendredi - 5A: BUGEY

SYMPOSIUM 06 - *Climatology* / Climatologie souterraine

- 14:00 - 14:10 INTRODUCTION S.06
- 14:10 - 14:30 Christophe GAUCHON, Gaël AMIARD, Thierry AUBÉ, Bruno FROMENTO & Didier GIGNOUX : Les glaces souterraines de la grotte Devaux (Hautes-Pyrénées) : 80 ans de mesures de la température
- 14:30 - 14:50 Matej BLATNIK, Jaroslav OBU, Jure KOŠUTNIK, Alojzij BLATNIK, Simon FILHOL, Luc GIROD, Simon ZWIEBACK, Paul OVERDUIN & Julia BOIKE : Sorted patterned ground in karst caves – indicator of similarities between caves and periglacial environment
- 14:50 - 15:10 Julia GARAGNON, Marc LUETSCHER & Eric WEBER : Ventilation regime in a karstic system (Milandre Cave, Switzerland)
- 15:10 - 15:30 Laurent MAGNE, Nicolas LECOQ, Joël RODET, Stéphane CHEDEVILLE & Jean-Pierre VIARD : Le rôle des inversions de la circulation de l'air dans les grottes à une entrée et son impact sur les variations des stocks de CO₂
- 15:30 - 15:50 Claudio PASTORE, Frédéric DOUMENC, Marc LUETSCHER, Amir SEDAGHAKTISH, Eric WEBER & Pierre-Yves JEANNIN : Assessing temperature profiles in a ventilated cave – a case study from Longeaigne cave (Val-de-Travers, CH)
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Jozef ŠUPINSKÝ, Zdenko HOCHMUTH, Ján KAŇUK & Michaela NOVÁKOVÁ : 3D interpolation of temperature distribution in the Silická ľadnica cave
- 16:40 - 17:00 Delphine LACANETTE, Philippe MALAURENT & Jean-Christophe PORTAIS : Climate monitoring of the Lascaux cave
- 17:00 - 17:20 Lluís DOMINGO MILÀ, Lluís FRUCTUOSO BAREA, Ángel FERNÁNDEZ CORTÉS, Ignasi de YZAGUIRRE, Raúl CANO, Xavier FONT, José María CALAFORRA & Raúl PÉREZ LÓPEZ : Atmospheric pollution of the karst vadose zone by landfill biogas: case of Garraf Massif
- 17:20 - 17:40 Camille EK, Jean GODISSART, Sophie VERHEYDEN, Meriem Lina MOULANA & Vincent de WALEFFE : Caves and global change in Belgium. Carbon dioxide, temperature and vegetation rise
- 17:40 - 18:00 Elsa BERTHOMÉ, Laureline BONNET, Claire ESCOURROU, Laurent APRIN, Judicaël ARNAUD, Sandrine BAYLE, Didier CAILHOL, Florian DIZIER, Romain FRANQUET, Stéphane JAILLET & Anne JOHANNET : Underground air circulation modelling of the Saint-Marcel Cave (Ardèche, France) to adapt the opening system of the cave entrance to optimal habitat conditions for bats
- 18:00 - 18:20 Annika K. GOMELL & Andreas PFLITSCH : Air pressure propagation through barometric caves – A case study from Wind Cave and Jewel Cave (South Dakota)

Friday / Vendredi - 5A: CHAMECHAUD

SYMPOSIUM 07 - *Biology, Subterranean Life* / Biologie, Vie souterraine

- 08:30 - 08:40 INTRODUCTION S.07
- 08:40 - 09:00 Ana Zélia MILLER, José Luis GONZALEZ-PIMENTEL, Ana Teresa CALDEIRA, Nicasio T. JIMÉNEZ-MORILLO, Leonila LAIZ, José M. DE LA ROSA, António CANDEIAS, Christine MOISSE-EICHINGER & Jo DE WAELE : Search of life in a Mars analogue site - microbes and associated biosignatures in the deep and completely dark salt caves of the Atacama Desert

- 09:00 - 09:20 Bella G. BABAYAN, Samvel M. SHAHINYAN & Aram R. MIKAELYAN : Cave Microbiome in karsts of Armenia
- 09:20 - 09:40 Daniele GHEZZI, Andrea FIRRINCIELI, Paolo Emidio COSTANTINI, Luca SALVI, Zeinab KHALIL, Robert CAPON, Jo DE WAELE, Francesco SAURO & Martina CAPPELLETTI : Bioprospecting and genome mining of culturable bacteria from a quartzite cave
- 09:40 - 10:00 Caio César Pires de PAULA, Carla Andréa LEITE, Maria Elina BICHUETTE & Mirna Helena Regali SELEGHIM : Taxonomic and metabolic profiles show different structures and energetic metabolism into the microbial communities in a tropical cave (Brazil)
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Martina CAPPELLETTI, Daniele GHEZZI, Andrea FIRRINCIELI, Andrea COLUMBU, Jo DE WAELE, Cristina CARBONE, Peiyong HONG, Freddy VERGARA & Francesco SAURO : Geomicrobiology of amorphous silica speleothems
- 11:10 - 11:30 Paolo AGNELLI, Antonio DE VIVO, Paolo FORTI, Leonardo PICCINI & Stefano VANNI : Fauna and conservation in a show cave, Puerto Princesa Underground River Park, Palawan, Philippines
- 11:30 - 11:50 Berta CABALLERO-LÓPEZ, Neus BRAÑAS, Jorge MEDEROS, Sergi GAGO, Miguel PRIETO, Floren FADRIQUE, Lluís DOMINGO, Daniel PONS & Glòria MASÓ : Invertebrate cave fauna in three protected areas in Catalonia: an excellent team-building exercise
- 11:50 - 12:10 Helaleh NATEGHEH & Zahra MALEKPOUR-FARD : Biodiversity and conservation status of Divrash cave, Guilan province, Iran
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.07
- 14:10 - 14:30 Louis DEHARVENG, Guy BARVIERA, Anne BEDOS, Patricia FABRIZI, Sunbin HUANG, Nadir LASSON, Jérôme LIPPART, Guillaume LORETTE, Marko LUKIĆ, Thierry PÉLISSIÉ & Philippe TYSSANDIER : Subterranean invertebrates of Quercy (France)
- 14:30 - 14:50 Jacques CHAUVIN : Données complémentaires sur la biodiversité cavernicole du Pays basque
- 14:50 - 15:10 Carlos CONDE-COSTAS : Stygobites of Puerto Rico: Natural History and Relationship with Caribbean Species
- 15:10 - 15:30 Sunbin HUANG, Mingyi TIAN & Arnaud FAILLE : A summary of our knowledge of the cavernicolous trechine beetles from mainland China (Insecta: Coleoptera: Carabidae)
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Josiane LIPS & Christian DODELIN (†) : Étude de la faune cavernicole du massif de Chartreuse (France)
- 16:40 - 17:00 Soumia MOUTAOUAKIL, Mohamed GHAMIZI & Mohamed BOULANOUAR : Contribution to the knowledge of cavernicolous Isopoda from Moroccan Occidental High Atlas and Anti Atlas
- 17:00 - 17:20 Quentin WACKENHEIM, Marina FERRAND & Yann BUSSIÈRE : Can an artificial cave be a hotspot for mollusc diversity? Overview of land snail biodiversity underneath Paris and surrounding area

Friday / Vendredi - 5D: VANOISE

SYMPOSIUM 04 - *Geomorphology and Speleogenesis / Géomorphologie et spéléogénèse*

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- 08:30 - 08:40 Anatoliy BULYCHOV : Speleogenesis and geomorphology of caves in conglomerate rocks in the Eastern Sayan
- 08:40 - 09:00 Harald SCHERZER, Holger CLASS, Bettina STRAUCH, Martin ZIMMER & Andreas LAENGE : Nerochytical Speleogenesis (NERO), mobil CO₂ as a drive for karstification
- 09:00 - 09:20 INTRODUCTION S.04 - session Hypogene karsts
- 09:20 - 09:40 Ilenia M. D'ANGELI, Mario PARISE, Marco VATTANO, Giuliana MADONIA & Jo DE WAELE : Dissolution-corrosion measurements with limestone and gypsum tablets in active sulphuric acid caves of southern Italy
- 09:40 - 10:00 Roi RODED, Einat AHARONOV, Amos FRUMKIN, Nurit WEBER, Boaz LAZAR & Piotr SZYMCZAK : Hypogene maze cave formation in confined carbonate aquifer by cooling geothermal flow
- 10:00 - 10:20 Ilenia M. D'ANGELI, Stefano M. BERNASCONI, Cristina CARBONE, Mario PARISE, Giuliana MADONIA, Marco VATTANO, Jo DE WAELE : Sulphur stable isotope signatures from sulphuric acid caves of Italy
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Marjan TEMOVSKI, László RINYU, István FUTÓ & László PALCSU : Some insight on hydrothermal speleogenesis based on conventional and clumped carbonate stable isotopes – preliminary results from the Mariovo hypogene karst system
- 11:10 - 11:30 Alexander KLIMCHOUK, Sasa MILANOVIC & Cristian BITTENCOURT : Hypogene karst associated with igneous intrusions and its influence on the subsequent karst evolution in high mountains (Central Andes, Peru)
- 11:30 - 11:50 José Luis LLAMUSI, Andrés ROS, José M. CALAFORRA, Ángel FERNANDEZ-CORTES, Fernando GÁZQUEZ, José SOTO & Alejandro GETINO : Morfologías de origen hipogénico en la Cueva del Agua, Cartagena, España
- 11:50 - 12:10 Alessandro MARRAFFA, Ivano FABBRI, Katia POLETTI, Claudio PASTORE, Wainer VANDELLI, Michele SIVELLI & Jo DE WAELE : The first important thermal sulphuric caves of Albania (Holtas canyon, Central Albania)
- 12:10 - 12:30 Alexander B. KLIMCHOUK, Romeo EFTIMI & Viacheslav N. ANDREYCHOUK : Hypogene karst in the External Albanides and its pronounced geomorphological effect
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.04

- 14:10 - 14:30 Luca PISANI, Marco ANTONELLINI, Jo DE WAELE, Augusto AULER, Philippe AUDRA, Giovanni BERTOTTI, Cayo PONTES, Vincenzo LA BRUNA, Fabrizio BALSAMO & Francisco Hilario BEZERRA : Hypogenic karst inception and super-permeability zones in Neoproterozoic carbonates of Northeastern Brazil
- 14:30 - 14:50 Philippe AUDRA, Jo DE WAELE, Andrea COLUMBU, Ilenia Maria D'ANGELI, Fernando GÀZQUEZ, Jean-Yves BIGOT, Roberto CHIESA, Tsai-Luen YU, Chuan-Chou SHEN, Cristina CARBONE, Vasile HERESANU, Gabriella KOLTAI & Jean-Claude NOBECOURT : Speleogenetic evolution of the Toirano cave system (Liguria, northern Italy)
- 14:50 - 15:10 Amos FRUMKIN : Karst terrain in the western upper Galilee, Israel
- 15:10 - 15:30 Trevor FAULKNER : The caves of Hellfjell, Norway, and their speleogenesis
- 15:30 - 15:50 Trevor FAULKNER : Why there are probably caves beneath the Norwegian Sea
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Rannveig SKOGLUND, Stein-Erik LAURITZEN, Sara SKUTLABERG & Hilde HESTANGEN : Entangling the influence of the last deglaciation on a complex cave system: Grønli-Seter cave system, Northern Norway
- 16:40 - 17:00 Trevor FAULKNER : The high-flow low-storage extreme in marble aquifers
- 17:00 - 17:20 Astrid ŠVARA, Andrej MIHEVC & Nadja ZUPAN HAJNA : Active water cave Vodna jama v Lozi and Loza Unroofed Cave – a case of morphogenesis in the Slavina Corrosional Plain (SW Slovenia)
- 17:20 - 17:40 Matej LIPAR & Mateja FERK : Fluviokarst on Quaternary eogenetic conglomerates; an example from Slovenia
- 17:40 - 18:00 Aaron CAMPION : The lost river of Ingleborough
- 18:00 - 18:20 Stein-Erik LAURITZEN, Lene BUKHOLM, Linett JENSSEN, Thea KROSSØY, Terje REMMEN, Markus TORSTAD, Jenny MACCALI, Ana Sofia REBOLEIRA, Rannveig SKOGLUND, Christos PENNOS : Speleogenesis and assessment of Elgfjellet stripe karst, North Norway

Friday / Vendredi - 5B: NIVOLET

SYMPOSIUM 02 - *Caving and Explorations / Spéléologie et Explorations*

- 08:30 - 08:40 INTRODUCTION S.02 – Chairman : Mladen GARASIC
- 08:40 - 09:00 Serge DELABY et Hugo SALGADO GARRIDO : Le karst du Tzontzeucuculi (Sierra Negra septentrionale - Mexique)
- 09:00 - 09:20 María de los Ángeles VERDE-RAMÍREZ, Ramsés Alejandro MIRANDA-GAMBOA, Alan WARILD, Benno Wolfgang FIEHRING, Gustavo VELA-TURCOTT & David CILIA-GARCÍA : GEU-UNAM Explorations in Plan de Escoba, Huautla de Jiménez, Oaxaca, 2016 to 2019
- 09:20 - 09:40 Zdenek MOTYCKA : Another four years of exploration in cave systems in Riviera Maya, Mexico
- 09:40 - 10:00 Leda A. ZOGBI, Aécio Rodrigo S. MOTTA & Lucas P. S. GODINHO : “Mãos” cave, an unknown treasure in the heart of the Amazon, Brazil
- 10:00 - 10:20 Arnaud MALARD, Bernard TOURTE, Natalia MORATA, Richard MAIRE & Stéphane JAILLET : Ultima Patagonia: 20 years of expedition in patagonian karst islands of Chile
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Lee FLOREA, Sarah BURGESS, Chris BAUER, Harry GOEPEL, Brian DEVINE & Nathan CANARIS : New Frontiers in the Cumberland Escarpment of Kentucky, USA
- 11:10 - 11:30 Robin THOMAS, Philip SCHUCHARDT & Pete JOHNSON : Cave Exploration and Management on the Bridger-Teton National Forest, Wyoming USA
- 11:30 - 11:50 Ulrich MEYER : The exploration of Riesending
- 11:50 - 12:10 Trevor FAULKNER : South Nordland Caving Expeditions to Norway 1974–2011
- 12:10 - 12:30 Gina E. MOSELEY, Hazel A. BARTON, Christoph SPÖTL, Paul TÖCHTERLE, M. Paul SMITH, Christopher BLAKELEY, Robbie C. SHONE, Peter D. HODKINSON, Mark WRIGHT, Stig E. BJERKENÅS & Hans C. SIVERTSEN : Greenland Caves Project
- 12:30 - 14:00 LUNCH
- 14:20 - 14:30 INTRODUCTION S.02 – Chairman : Simon BROOKS
- 14:30 - 14:50 Vickie SIEGEL, William STONE & Kristof RICHMOND : Exploration of Dragon's Breath Cave and Harasib Cave using an autonomous underwater vehicle
- 14:50 - 15:10 Ümit GÜNHAN & John FIORONI : Morca Cave and its speleogenesis
- 15:10 - 15:30 Boaz LANGFORD, Yoav NEGEV, Antoniya VLAYKOVA, Encho ENCHEV, Efraim COHEN, Raz BEN-YAIR, Omri GASTER, Yuval SOBOLEEV & Amos FRUMKIN : Malham cave, Israel, (again) the longest salt cave in the world
- 15:30 - 15:50 Gor HOVHANNISYAN, Samvel SHAHINYAN, Mikayel SHELEMETEV, Tigran ARMENYAN & Ani HANESYAN : 2013-2020 Scientific Expedition Results of the Caves in the Syunik, Shirak, Vayk regions of the Republic of Armenia and the Artsakh Republic
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Samer AMHAZ, Ghada SALEM & Mazen ARZOUNI : Mgharet Ain El Libné, nouvelles découvertes depuis la publication de 1996 : la première grotte touristique sportive du monde arabe
- 16:40 - 17:00 Bernard LOISELEUR : Autrans-Méaudre-en-Vercors - la région de Gève – Évolution de la connaissance spéléologique régionale

- 17:00 - 17:20 Lionel BARRIQUAND & Didier ACCARY : 1963-2020: 57 years removing obstructions and the discovery of the salle du Palindrome
- 17:20 - 17:40 Bruno FROMENTO, Gaël AMIARD & Théophile CAILHOL : Une exploration au cœur du Parc national des Pyrénées : la grotte Devaux
- 17:40 - 18:00 Stelios ZACHARIAS, Panagiotis PAPADAKOS, Markos DIGENIS, Alexandros MARGIOLIS, Michail TSOPELAS, Methodios PSOMAS, Chryssa MAVROKOSTA, Andreas APOKORONOTAKIS, Konstantinos KOSTIDIS, Ifiyenia PAPAMATTHAIKI, Ioannis SOULTATOS & Kostas ADAMOPOULOS : Sternes: the deep cave in the White Mountains (Lefka Ori) of Crete (Greece), still attracting cave explorers
- 18:00 - 18:20 George KONTOSTAVLOS, Theologos TSALIKOGLOU, Paul CADAS, George OIKONOMIDIS, Aliko KONSOLAKI & Gerasimos BENEZIS : Expedition to Zagorochoria (Epirus – NW Greece) - Marking the 70th anniversary of the Hellenic Speleological Society (H.S.S.)

Friday / Vendredi - 5B: REVARD

SYMPOSIUM 08 - *Archaeology and Palaeontology in caves* / Archéologie et paléontologie en grottes

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- 08:30 - 08:40 INTRODUCTION S.08 - Varia
- 08:40 - 09:00 Jean-Baptiste FOURVEL, Amélie BEAUDET, Clément ZANOLLI, Grégory DANDURAND, Marcelino MOIANA, Dominic STRATFORD, Bastien CHADELLE & Laurent BRUXELLES : The HOMME project – Human Origins in Mozambique and Malawi Environments: looking for our origin in the Mozambican karst
- 09:00 - 09:20 Bastien CHADELLE & Laurent BRUXELLES : Identification par SIG des karsts du Mozambique et d’Afrique australe
- 09:20 - 09:40 George VENI : Initial Geoarcheological Survey of Caves at Chichén Itzá, Yucatan, Mexico
- 09:40 - 10:00 Alessia FUSCONE : Grotte preistoriche e catasto in Campania: analisi preliminare per la classificazione tipologica delle cavità
- 10:00 - 10:20 Christophe DELAERE, Yves BILLAUD & Cécile ANSIEAU : Archéologie en contexte karstique subaquatique : une nouvelle approche des dépôts anthropiques et naturels à la résurgence de la Lesse aux grottes de Han (Province de Namur, Belgique)
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Kim GENUITE, Geneviève PINCON, Jean-Jacques DELANNOY, Oscar FUENTES & Stéphane JAILLET : 3D geomorphology and landscape evolution of the Roc-aux-Sorciers site (Vienne, France)
- 11:10 - 11:30 Tommaso SANTAGATA, Francesco SAURO, Paolo FORTI & Jo DE WAELE : 3D scanning tools for paleontological studies in caves
- 11:30 - 11:50 Jérémy DOLBOIS, Gwenaël ROY & Christophe TARDY : CISAP : Une équipe de l’INRAP spécialisée dans les interventions au sein des structures profondes
- 11:50 - 12:10 Veronica CHIARINI, Isabelle COUCHOUD, Émilie CHALMIN, Silvia FRISIA, Simone MILANOLO, Russell Neil DRYSDALE, John HELLSTROM, Gian Domenico CELLA & Jo DE WAELE : An early Middle-Age dark layer in Bosnian stalagmites: possible link to an historical event
- 12:10 - 12:30 Hildegard RUPP & Friedhart KNOLLE : Bats (Chiroptera) from the Archaeological Site of the Lichtenstein Cave, Harz Mountains, Germany
- 12:30 - 14:00 LUNCH
- 14:00 - 14:10 INTRODUCTION S.08 Varia & session Natural Traps
- 14:10 - 14:30 Jean-David MOREAU, Vincent TRINCAL, Emmanuel FARA, Louis BARET, Alain JACQUET, Claude BARBINI, Rémi FLAMENT, Michel WIENIN, Benjamin BOUREL & Amandine JEAN : Middle Jurassic sauropod tracks in the Castelbouc cave N°4 (Lozère, France)
- 14:30 - 14:50 Dominique ARMAND : Exploitation des ours au Paléolithique : les sites avec des restes d’ours isolés et portant des traces de boucherie
- 14:50 - 15:10 Jean-Claude LA MILZA, Jean-Yves COURTOIS, Franck LEANDRI, Patrice COURTAUD, Céline BRESSY-LEANDRI & Philippe GALANT : La cavité sépulcrale de Laninca (Corse) : un témoignage unique d’une pratique funéraire en Méditerranée à l’âge du Bronze
- 15:10 - 15:30 Philippe FOSSE, Gérard CAZENAVE, Marie Christine DELMASURE, Michel DOUAT, Jean Baptiste FOURVEL & Henri LABORDE : The recent history of the Spanish ibex (*Capra pyrenaica*) in the French Pyrenees: a contribution of speleology to palaeontology
- 15:30 - 15:50 Jean-Christophe CASTEL, Jean-Philip BRUGAL, Mathieu LURET & Myriam BOUDADI-MALIGNE : Les aven-pièges : apport à la connaissance des paléoenvironnements pléistocènes et implications archéologiques. L’exemple du Quercy
- 15:50 - 16:20 PAUSE
- 16:20 - 16:40 Évelyne CRÉGUT-BONNOURE, Jacqueline ARGANT, Fabrice AUBERT, Nicolas BOULBES, Éric COLLIER, Emmanuel DESCLAUX, Jan FIETZKE, Jean-Baptiste FOURVEL, Nicolas FREREBEAU, Adrian MARCISZAK, Maxime PELLETIER, Florent RIVALS & Thierry ROGER : Deux avens-pièges remarquables du Sud-Est de la France : Le Coulet des Roches et l’aven des Planes (Monieux, Vaucluse)
- 16:40 - 17:00 Jean-Christophe CASTEL, Mathieu LURET, Jean-Philippe BRUGAL, Antigone UZUNIDIS, Myriam BOUDADI-MALIGNE, Wendy MARGOT & Éric VIRGOULAY : L’igüe de la Cave-aux-Endives II (Loubressac, Lot) : une accumulation remarquable de mammifères du Pléistocène supérieur dominée par le bison

- 17:00 - 17:20 Joël HALGAND(†), Philippe GALANT & Hubert CAMUS : L'aven de la Rouvière (Rogues, Gard) : approche géoarchéologique et paléospéléologique d'une grotte citerne néolithique
- 17:20 - 17:40 Christophe GRIGGO, Michel PHILIPPE, Fabien HOBLÉA, Louis CHAIX, Jacques NANT, Pascal BADIN, Loup COUARD & Samuel GUIBOT : Des avens-pièges à Artiodactyles dans le massif des Bauges : Trois exemples sur le plateau du Revard (Savoie)
- 17:40 - 18:00 Mélanie LEPENANT, Yves BILLAUD, Laurent CRÉPIN, Camille DAUJEARD, Jean-Baptiste FOURVEL, Nicolas LATEUR, Olivier TOMBRET & Simon PUAUD : Caractérisation du gisement fossilifère de l'aven du Devès de Reynaud (Saint-Remèze, Ardèche, France). Histoire et apport de l'étude des paléofaunes
- 18:00 - 18:20 Micka ULLMAN : The Late Prehistory of Wadi Chariton Caves, Southern Levant

Saturday / Samedi - 5A: ARAVIS

SYMPOSIUM 17 - *Cave Diving* / Plongée souterraine

- 08:30 - 08:40 INTRODUCTION S.17
- 08:40 - 09:00 David BIANZANI : Grotte de Bournillon
- 09:00 - 09:20 Philippe BRUNET : Les rivières sous Lifou
- 09:20 - 09:40 Karol KÝŠKA, Daniel HUTŇAN, Leo FANCELLO, Roberto LORU & Miroslav MANHART : Sardinia, Bue Marino – Su Molente
- 09:40 - 10:00 Stéphane LIPS & Manu TESSANNE / Prérouge, 8 au 10 février 2015 : le bout du rêve ?
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Rui F. LUÍS, Pedro I. ARRIEGAS & Armando RIBEIRO : Underwater exploration on Alviela Spring, Portugal – One of the deepest underwater cave in the world
- 11:10 - 11:30 Xavier MENISCUS, Jean-Claude PINNA & David BIANZANI : Émergence de Bourne

Saturday / Samedi - 5A: BUGEY

SYMPOSIUM 20 - *International Year of Caves and Karst* / Année internationale des grottes et du karst

- 10:40 - 10:50 INTRODUCTION S.20 - Chairman : Fadi NADER
- 10:50 - 11:10 Vincent BIOT, Fabien HOBLÉA, Fadi Henri NADER & Nadja ZUPAN HAJNA : International Year of Caves and Karst: Actions and Results
- 11:10 - 11:30 George VENI : The International Year of Caves and Karst: History, Purpose, Plans, and Predictions.
- 11:30 - 11:50 Philipp HÄUSELMANN : Speleogenesis: the other view
- 11:50 - 12:10 Nadja ZUPAN HAJNA : Karst, Caves and People
- 12:10 - 12:30 Bärbel VOGEL, Stefan ZAENKER, Hannes KÖBLE, Andreas WOLF & Friedhart KNOLLE : First International Cave Animal of the Year

Saturday / Samedi - 5D: VANOISE

SYMPOSIUM 04 - *Geomorphology and Speleogenesis* / Géomorphologie et spéléogénèse

- 08:30 - 08:40 INTRODUCTION S.04 - session Rock-living interaction
- 08:40 - 09:00 Lionel BARRIQUAND & Laurent BRUXELLES : The karst: a mineral environment also shaped by the living
- 09:00 - 09:20 Stéphane PFENDLER & Lionel BARRIQUAND : Assessment of colored bacterial colonies on Azé and Blanot caves limestone walls
- 09:20 - 09:40 Rosangela ADDESSO, Daniela BALDANTONI, Jo DE WAELE & Ana Z. MILLER : Controlling lampenflora, the green disease of show caves
- 09:40 - 10:00 Laurent BRUXELLES, Lionel BARRIQUAND, Jean-Yves BIGOT, Didier CAILHOL, Kim GENUITE & Stéphane JAILLET : Origin of the asymmetry of certain fossil galleries: the major role of biocorrosion as exemplified in the Roquette cave (Gard, France)
- 10:00 - 10:20 José María CALAFORRA, Jo DE WAELE, Paolo FORTI, Fernando GÁZQUEZ, Tommaso SANTAGATA & Marco VATTANO : The guano holes and guano pots: two new climate-controlled biogenic corrosion forms in Puerto Princesa karst area (Palawan, Philippines)
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Laurent BRUXELLES, Jean-Yves BIGOT, Didier CAILHOL, Grégory DANDURAND, Jean-Louis GALERA, Frédéric SWIERCZYNSKI, Nathalie VANARA & Franck VASSEUR : Are reshaped speleothems reliable indicators of former rises of the karstic base level? Some criteria for distinguishing between flooding, hydrodynamic reuse and biocorrosion

- 11:10 - 11:30 Tom Dias Motta MORITA, Ivo KARMANN, Renato Gamba ROMANO, Lucas Padoan de Sá GODINHO & Vivian PELLIZAR : Biogenic origin of sulfuric acid and its corrosive action in speleogenesis in the karst of the Irecê Basin, Una Group, Bahia state, Brazil
- 11:30 - 11:50 Lionel BARRIQUAND, Michel PHILIPPE, Jean-René CHEVALLIER, Vasile HERESANU, Daniel ARIAGNO, Georges DEDIENNE, Isabelle DONZEY & Claire GAILLARD : The multiple impacts on caves of the European badger (*Meles meles*), the case study of the Mâconnais (France)
- 11:50 - 12:10 Mark E. TRINGHAM : Large barrage-type tufa deposits in the karst of Northwest Namibia a preliminary evaluation of their occurrence, hydrology and caves
- 12:10 - 12:30 Leonardo MENDES, Adivane NOGUEIRA, Dandara CALDEIRA & Rogério UAGODA : Identification of calcareous tufa in northeast of the state of Goiás, Brazil
- 12:30 - 14:00 Laurent BRUXELLES, Lionel BARRIQUAND & Dominic STRATFORD : Conclusion to symposium 4: Geomorphology and speleogenesis

Saturday / Samedi - 5B: REVARD

SYMPOSIUM 08 - *Archaeology and Palaeontology in caves / Archéologie et paléontologie en grottes*

- 08:30 - 08:40 INTRODUCTION S.08 - Varia & Session Paleoecology
- 08:40 - 09:00 Nathalie VANARA, Manon RABANIT, Hubert CAMUS, Xavier MUTH, Olivia RIVERO & Diego GARATE : État de surface du panneau orné des chevaux sur argile de la grotte d'Oxocelhaya (Pyrénées-Atlantiques, France)
- 09:00 - 09:20 Angel A. ACOSTA-COLÓN & Reniel RODRÍGUEZ-RAMOS : Absolute Temporality of Cave Pictographic Rock Art in Puerto Rico
- 09:20 - 09:40 Efraín MATOS PAGÁN, José L. GÓMEZ CABRERA, Ángel M. NIEVES-RIVERA : Complejo de Cuevas Ventana: Estudiando el Arte Rupestre encontrado en las Cuevas Ventana Superior, Intermedia e Inferior (Puerto Rico)
- 09:40 - 10:00 Jean-Claude STAIGRE & Jean-Luc AUDAM : L'art pariétal des cavités de la craie de Normandie (France) et sa survivance
- 10:00 - 10:20 Jean-Jacques MILLET : Les espaces sépulcraux en milieu karstique dans les Alpes nord occidentales : synthèse des chaînes opératoires et approche des pratiques de gestion de l'espace funéraire du Paléolithique à l'âge du Bronze
- 10:20 - 10:50 PAUSE
- 10:50 - 11:10 Alain ARGANT, Lionel BARRIQUAND & Jacqueline ARGANT : Les grottes d'Azé : de la spéléologie à la paléontologie, en passant par les ours
- 11:10 - 11:30 Jean-Yves BIGOT, Laurent BRUXELLES, Philippe AUDRA, Didier CAILHOL & Céline PALLIER : Bear claw marks in clay: differential conservation in caves harboring bat colonies. Mas d'Azil, Sirach and Lare caves, France
- 11:30 - 11:50 Jean-Philip BRUGAL, Guy ANDRÉ, Jean-Baptiste FOURVEL, Philippe FOSSE, Marina IGREJA, Pierre MAGNIEZ, Léo PASCAL & Antigone UZUNIDIS : Le site archéo-paléontologique du Mas des Caves à Lunel-Viel (Hérault) : Historique des recherches et nouveaux travaux
- 11:50 - 12:10 Philippe FOSSE, Jean Baptiste FOURVEL, François BALEUX, Nicolas FREREBEAU, Carole FRITZ, Oscar FUENTES, Diego GARATE MAIDAGAN, Nicolas LATEUR, Antoine LAURENT, Michel PHILIPPE, Olivia RIVERO, Thomas SAGORY & Gilles TOSELLO : The Cave bear (*Ursus spelaeus*) scratches in Chauvet cave (Ardèche, France): identification, 3D mapping and paleoethological consideration from wall marking activities
- 12:10 - 12:30 Nicolas LATEUR, Jean-Baptiste FOURVEL & Philippe GALANT : Nouveau regard sur l'éthologie de l'hyène des cavernes et sa fréquentation de l'endokarst profond. L'exemple de l'Aldène (Hérault)