

THE FIRST

# 100 IUGS GEOLOGICAL HERITAGE SITES

# PROGRAM

October 25

## AITA MARI VENUE

## OXFORD VENUE

### PARTICIPANTS REGISTRATION

15:00 -18:00

18:00-19:30

### OPENING CEREMONY

Institutional opening and remarks

19:30-20:30

### Opening Keynotes

**Standards and procedures for, and benefits of, IUGS recognition of geological heritage sites**

**Stanley Finney**, Secretary General. International Union of Geological Sciences.

**The International Union of Geological Sciences@ 60 years old**

**John Ludden**, President. International Union of Geological Sciences

Welcome cultural event

October 26

## HISTORY OF GEOSCIENCES

08:30-08:50

### Keynote lecture

**The beautiful history of a beautiful science. The historical value of Geosites**

**Ezio Vaccari**, Chair, IUGS Inter. Commission on the History of Geological Sciences (INHIGEO)

09:00

**001\_Siccar Point, Hutton's Unconformity. UK**

Martina Kölbl-Ebert, INHIGEO

09:15

**002\_The Quaternary Phlegrean Fields volcanic complex. Italy**

Kathleen Histon, INHIGEO

09:30

**004\_The Holocene Puy-de-Dôme and Petit-Puy-de-Dôme volcanoes. France**

Kathleen Histon, INHIGEO. Benjamin van Wyk de Vries, Univ. Clermont Auvergne.

09:45

**005\_The Paleocene volcanic rocks of the Giant's Causeway and Causeway coast. UK**

Mark Cooper, Geological Survey of Northern Ireland.

10:00

**006\_Funafuti Atoll. Tuvalu**

Sapolu Tetoa, Lands and Survey Department

10:15

**007\_Capelinhos volcano. Portugal**

Salomé Meneses, Azores UGGp

10:30

**008\_Taburiente volcanic Caldera in La Palma island. Spain**

Juana Vegas Salamanca, IGME, CSIC

10:45

**011\_GSSP for the Silurian-Devonian boundary at Klonk Hil. Check Republic**

Stan Finney, IUGS

11:00-11:30

Coffee break

11:45-12:15

Keynote lecture

**International Geoscience Program (IGCP) and Geoheritage**

**Ozlem Adiyaman**, UNESCO Earth Sciences and Geoparks section.

**IGNEOUS AND METAMORPHIC GEOLOGY**

12:15 **045\_Archean Rocks of the Eastern Beartooth Mountains. USA**

David W. Mog, Univ. Montana

12:30 **046\_The Stillwater Complex. USA**

Alan Boudreau, Duke University

12:45 **048\_Richat structure, a cretaceous Alkaline complex. Mauritania**

Michel Jébrak, UQAM, Montréal, Canada

13:00 **049\_The Miocene Torres del Paine intrusive complex. Chile**

Camilo Vergara, Ser. Nacional de Geología y Minería de Chile

**VOLCANOLOGY**

13:15 **052\_The Quaternary Cameroon Volcano. Cameroon**

Ghislain Zangmo Tefogoum, University of Maroua

13:30 **055\_The Holocene Ulmen Maar. Germany**

Georg Büchel, Vulkaneifel UGGp

13:45 **056\_The 1905-1911 Matavanu volcanic eruption. Samoa**

Iakopo Saumalu, Ministry of Natural Resources and Environment

14:00 **057\_The active Yasur-Yenkahe volcanic complex. Vanuatu**

Michel Leodoro, Ministry of Lands and Natural Resources.

**Lunch**

15:30 **060\_The Nevado del Ruiz Quaternary Volcanic Complex. Colombia**

Marcela Gómez-Pérez, Servicio Geológico de Colombia

15:45 **061\_The Cotacachi-Cuicocha volcanic complex. Ecuador**

Carlos Merizalde, Imbrabura UGGp

16:00 **063\_The vapor phase ignimbrites of Sillar in the Añashuayco Quarries of Arequipa. Peru**

Nélida Victoria Manrique Llerena, INGEMMET

16:15 **064\_The Pyroclastic deposits from the Huaynaputina volcano eruption 1600 CE. Peru**

Jersy Mariño Salazar, INGEMMET

16:30 **066\_El Tatío Geothermal field. Chile**

Camilo Vergara, Ser. Nacional de Geología y Minería de Chile

16:45 **067\_The Yellowstone volcanic and hydrothermal system. USA**

Jamie Farrell, University of Utah

17:15-17:30 **IUGS MEDALS**

Early career geoscientist medal. **Mónica Sánchez**  
Emile Argand IUGS medal. **Thure Edward Cerling**

17:30-18:00

Keynote lecture

**Isotopes, improbable questions, an unexpected journey**

**Thure Edward Cerling**, University of Utah

**STRATIGRAPHY**

Keynote lecture

**GSSP. Establishment of global standards for the history of the Earth**

**David Harper**, Chair. IUGS International Commission on Stratigraphy

**013\_Paleoproterozoic Banded Iron Formation of the Quadrilátero Ferrífero. Brazil**

Joana Sánchez, Un. Goiás

**014\_Glacial record of the Marinoan snowball Earth. Namibia**

Helke Mocke, Geological survey of Namibia

**015\_The Cambrian Explosion in Sirius Passet. Greenland**

David Harper, IUGS- ICS

**016\_The Great Unconformity at Grand Canyon. USA**

Karl E. Karlstrom & Laura J. Crossey, Un. of New Mexico

**017\_The Ordovician rocks of the Mount Everest. China and Nepal**

David Harper, IUGS- ICS

**018\_Permian-Triassic great extinction and GSSPs of Meishan. China**

David Harper, IUGS- ICS

**019\_Carboniferous – Triassic Unconformity in Telheiro. Portugal**

João Xavier Matos, LNEG

**021\_Cretaceous-Paleogene transition at Seymour (Marambio) Island. Antarctica**

Jerónimo López-Martínez, Universidad Autónoma de Madrid, Scientific Committee on Antarctic Research (SCAR)

**022\_Cretaceous-Paleogene stratigraphic section of Zumaia. Spain**

Laia Alegret, Univ. Zaragoza

**023\_GSSP of the Meghalayan Stage in the Mawmluh Cave. India**

Satish C. Tripathi, The Society of Earth Scientists

18:00-19:00 Boat trip to Zumaia section

20:00 Transfers to hotels located out of Zumaia

## AITA MARI VENUE

## PALEONTOLOGY

08:30-09:00

## Keynote lecture

**Paleontological heritage. The great episodes of life on Earth**

**Isabelle Rouget**, International Paleontological Association, IPA

09:00

**027\_Burgess Shale Cambrian Palaeontological Record. Canada**

Todd Keith, Parks Canada

09:15

**028\_Ordovician Fezouata Shale fossil site at JbelTizagzaouine. Morocco**

Khadija El Hariri, Université Cadi Ayyad

09:30

**029\_Middle Ordovician giant trilobites of Canelas Quarry. Portugal**

Artur Abreu Sá, Arouca UGGp

09:45

**032\_Late Permian Tete Fossil Forest. Mozambique**

Nelson Ernesto Nhamutole, National Museum of Geology

10:00

**033\_The Ammonite Slab of Digne-les-Bains. France**

Nicolas Charles, BRGM

10:15

**034\_Jurassic Solnhofen-Eichstätt Archaeopteryx serial site. Germany**

Roland Eichhorn, Bavarian Geological Survey

10:30

**035\_Marine Reptile Lagerstätte from the Lower Cretaceous of the Ricaurte Alto. Colombia**

Marcela Gómez-Pérez, Servicio Geológico de Colombia

10:45-11:15

11:30-12:00

## Keynote lecture

**Past, present and global challenges for Geoconservation**

**Lars Erikstad**, President, International Association for the Conservation of Geological Heritage, ProGeo

12:00

**037\_Late Cretaceous Rudist Bivalves of the Caribbean province. Jamaica**

Sherene James-Williamson, University of the West Indies

12:15

**038\_Eocene paleontological record of Messel Pit Fossil Site. Germany**

Marie-Luise Frey, Welterbe Grube Messel gGmbH

12:30

**039\_Miocene Primates Paleontological site of Napak. Uganda**

Jackline Nyiracyiza Besigye, Commissioner Museums and Monuments, Ministry of Tourism, Wildlife and Antiquities

12:45

**040\_Lesvos Early Miocene Petrified Forest. Greece**

Nikolaos Zouros, Lesvos Petrified Fores UGGp

13:00

**041\_Palaeoanthropological Sites of Human Evolution of Laetoli–Olduvai Gorge. Tanzania**

Nikolaos Zouros, Lesvos

13:15

**042\_Late Quaternary asphalt seeps and paleontological site of La Brea Tar Pits. USA**

Lori Bettison-Varga, Natural History Museum of Los Angeles County

13:30

## OXFORD VENUE

## GEOMORPHOLOGY

## Keynote lecture

**Geomorphological landscapes: valuable hosts of remarkable Geoheritage**

**Mauro Soldati**, Inter. Association of Geomorphologists, IAG

**079\_The Sugar Loaf monolith of Rio de Janeiro. Brazil**

Joana Sánchez, Univ. de Goiás

**084\_The Grand Canyon. USA**

Karl E. Karlstrom & Laura J. Crossey, University of New Mexico

**088\_Jutulhogget Canyon. Norway**

Tom Heldal, Geological Survey of Norway

**089\_Perito Moreno Glacier. Argentina**

Piotr Migoń, International Association of Geomorphologists

**090\_Rockglaciers of the Engadine. Switzerland**

Isabelle Gärtner-Roer, University of Zurich

Coffee break

**092\_Yardang (Kalut) in the Lut Desert. Iran**

Alireza Amrikazemi, Member of the Scientific Committee of Lut Desert World Heritage Base

**093\_Namib Sand Sea. Namibia**

Piotr Migoń, IAG

**095\_Vajont landslide. Italy**

Paola Coratza, University of Modena and Reggio Emilia

**096\_Pamukkale Travertines. Turkey**

Mehmet Özkul, Pamukkale University

**098\_Škocjan Caves in the Classical Karst. Slovenia**

Matevž Novak, Geological Survey of Slovenia

**099\_Sac Actun Underwater Cave System. Mexico**

Rafael López Martínez, UNAM

Lunch

<b>15:15-15:45</b>	<p><b>GEOCOLLECTIONS</b></p> <p>A new IUGS recognition for the greatest geological collections at international level</p> <p><b>Rachel Wallcot, Angela Ehiling &amp; Marcela Gómez,</b> IUGS-ICG. Subcommission on Geocollections</p>
<b>15:45-16:45</b>	<p><b>THE FIRST 100</b></p> <p>Evaluation and selection process Definition and main standards. What is next?</p> <p><b>Asier Hilario, Benjamin Van Wyk de Vries, Juana Vegas, Zhang Jianping,</b> IUGS - ICG. Subcommission on Sites.</p>
<b>16:45-17:45</b>	<p><b>IUGS STONE HERITAGE DESIGNATIONS</b></p> <p><b>Kaur Gurmeet, Angela Ehiling &amp; Victor Cardenes,</b> IUGS-ICG. Sub-commission on Stone Heritage</p>

<b>18:00-19:00</b>	<b>Boat trip to Zumaia section</b>
<b>20:00</b>	<b>Tranfers to hotels located out of Zumaia</b>

<b>08:30</b>	<p><b>TECTONICS</b></p> <p><b>069_ Namakdan Salt Cave. Iran</b> Alireza Amrikazemi, Qeshm island UGGp</p>
<b>08:45</b>	<p><b>071_ Upper Jurassic ophiolitic sequence in La Désirade Island. France</b> Nicolas Charles, BRGM</p>
<b>09:00</b>	<p><b>073_ Northern Snake Range metamorphic core complex. USA</b> David Mogk, Montana state Univ</p>
<b>IMPACT STRUCTURES</b>	
<b>09:15</b>	<p><b>100_ Domo de Araguainha Impact Structure. Brazil</b> Jaana Sánchez, Univ. de Goiás</p>
<b>09:45-10:15</b>	<p><b>Keynote lecture</b></p> <p><b>Global Geopark: Memory of the Earth sustaining local communities</b></p> <p><b>Nickolas Zouros.</b> President. Global Geoparks Network. GGN</p>

**MINERALOGY**

<p><b>075_ Tsumeb ore deposit. Namibia</b> Helke Mocke, Geological Survey of Namibia</p>
<p><b>076_ The giant mercury deposit of the Almadén syncline. Spain</b> José Luis Gallardo Millán, Univ. Castilla la Mancha</p>
<p><b>077_ Deposits of Amethyst of Los Catalanes Gemological District. Uruguay</b> César Goso Aguilar, Univ. de al República. Mauricio Faraone, Servicio Geológico de Uruguay</p>

**IUGS 60th ANNIVERSARY CELEBRATION FINAL EVENT**  
*Oficial announcement of the First 100 IUGS Geological Heritage Sites*  
*IUGS Zumaia declaration and Cultural performance*

**Final Lunch**

