

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES

INTERNATIONAL UNION OF THE HISTORY & PHILOSOPHY OF SCIENCE & TECHNOLOGY



**INTERNATIONAL COMMISSION ON THE HISTORY OF
GEOLOGICAL SCIENCES (INHIGEO)**

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**To: Professor Dr. Qiuming CHENG,
President of IUGS
Professor Dr. Stanley C. Finney
Secretary General of IUGS**

**From: Professor Dr. Marianne Klemun,
INHIGEO Secretary-General**

Date: 13 January 2019

**Subject: 2018 ANNUAL REPORT AND GRANT REQUEST
Transmitted from INHIGEO to IUGS**

The following Annual Report and IUGS Grant request responds to an email received from the IUGS Secretariat on 23 October 2018.

2018 has been a very busy and productive year for INHIGEO.

The **43rd Annual INHIGEO Conference of 2018** and the business meeting were at the heart of this year's activities.

The **43rd Annual Conference of INHIGEO** took place at the Palace of Mining in **Mexico City** from 12 to 22 November 2018 **with 46 contributions in seven sessions.**

This conference was organised by the Vice-President of the INHIGEO of Latin America L.F. Azuela in cooperation with the Institute of Geography, the Institute of Geology, the Institute of Geophysics of the Universidad Nacional Autónoma de México (UNAM) and has received financial support from UNAM.

The official accompanying book (with the general program, the abstracts, a short, but comprehensive, overview of the geology of Mexico and detailed fieldtrip-guides) totalling 130 pages demonstrate this successful organisation and event.

Many young scholars attended the meeting. The theme occupying two sessions, on “Early Modern Geological Agency” that discussed aspects of the *anthropocene* as historical phenomenon was one of several highlights of the meeting.

OTHER CONFERENCES were organised by INHIGEO members of affiliated associations that were open for all members of the INHIGEO as crossroads between these associations.

An overview will be available in our next *Annual Record 51* (for the year 2018), which will be completed in the Summer 2019.

The content of the *Annual Record (AR 50)* show how vibrant the INHIGEO is with its numerous activities::

In **Argentina** the most important activity related to the history of geology was a Symposium on the Birth of Geology in Argentinean Universities held during the Argentinian Geological Congress. There were 12 presentations.

The **Austrian** Working Group AWGHES (“History of Earth Sciences”) this year organised an annual meeting dedicated to the topic “Gender and Woman”.

The Geological Society of **Chile** organised the VIIIth Chilean Symposium of History of Geology with 40 presentations.

The History of Geoscience Section in **Italy** of the Geological Society of Italy organised several meetings during the year.

The **Japanese** Association for the History of Geological Sciences held two meetings in Tokyo.

The Petroleum History Institute Annual Symposium and the Field Trip in Findlay, Ohio was attended by fifty participants.

Preamble of the INHIGEO

INHIGEO is an ongoing Commission established by the International Union of Geological Sciences in 1967. It is also a Commission affiliated with the International Union of the History and Philosophy of Science and Technology (IUPST).

The primary objective of the International Commission on the History of Geological Sciences (INHIGEO) involves the promotion of studies on the history of geological disciplines in an international context. In so doing, INHIGEO endeavours to promote and co-ordinate the activities of regional, national, and international organisations having shared purposes. INHIGEO also works to foster the publication of individual or collective works that illuminate the history of the geological sciences and to maintain an information-rich website.

Communication and Business Meeting

The INHIGEO Board, through its Secretary-General, distributes information to Members by means of regular emails. The quarterly *INHIGEO Circular* continues to be very successful with issues in March, June, September and December of each year, prepared by the Secretary-General, as well as the *INHIGEO Annual Record*. Both are published in English.

INHIGEO Business Meetings are held yearly during INHIGEO meetings or, fourth-yearly, at meetings of the International Geological Congress. The business meetings discuss reports on the work of INHIGEO as well as considering future plans, finalising Board membership (for confirmation by the IUGS Council) and to deal with any other Commission business that may come before it.

A new INHIGEO website, which came online in 2016 and enhances communication between the commission and the public and is accessible at: www.inhigeo.com .

MEMBERSHIP NUMBERS OF THE COMMISSION:

Currently INHIGEO has 301 members from 59 countries (including 14 Associate members). This is a small increase on 297 members from 58 countries reported at the Cape Town meeting in 2016 and a very slight reduction (of one) in comparison with 2017.

The annual membership ballot took place in early 2018 (April/May) and 7 new members were elected.

The following members have passed away since the last business meeting: Trevor Ford (UK), Phillip Playford (Australia), Cecil J. Schneer (USA), Arkady Karakhanyan (Armenia), Hakuyu Okada (Japan), Robert H Dott (USA), Ursula Marvin (USA), Ken Aalto (USA).

Recent membership expansion is shown in the following annual statistics:

2012: 231 members from 47 countries
2013: 238 members from 49 countries
2014: 265 members from 54 countries
2015: 286 members from 57 countries
2016: 289 members from 58 countries
2017: 302 members from 59 countries
2018: 301 members from 59 countries

2. ACTIVITIES 2018. Conferences, workshops, symposia, outreach:

a. Annual meeting, Congress

MEXICO, INTERNATIONAL COMMISSION ON THE HISTORY OF GEOLOGICAL SCIENCES, 43rd CONFERENCE, 2018

The Mexican Delegation of the International Commission on the History of Geological Sciences announced late last year a programme for 43rd INHIGEO Conference that was held at the Palace of Mining, Mexico City, from 12 to 22 November 2018 Immediately prior to the meeting a field trip was organised by Institute of Geophysics, UNAM to the Comarca Minera Global Geopark A detailed account of the meeting, including the INHIGEO business meeting and field trips, will appear in the forthcoming Annual Record (AR 51).

Program

Sunday 11th		
Pre-Meeting Field Trip		
Comarca Minera Unesco Global Geopark		
	Departure from Minería Palace	07:30
	Arrival to Minería Palace	18:30
Monday 12th		
Palace of Mining		
	Registration	9:00-9:50
	Inaugural Ceremony	9:50-10:20
Keynote Speech		
James A. Secord	Global Geology and the Tectonics of Empire	10:20-11:20
	Coffee Break	11:20-11:40

History of Vulcanology Symposium (I)		
Chairman: Hugo Delgado		11:40-13:00
Ezio Vaccari, and Andrea Candela	The Great Volcano of the Italian Prealps: A European Controversy Between the 18th and the 19th Century	1. History of vulcanological studies
Guillermo Alvarado	Overview of the History of Vulcanology in Central America	1. History of vulcanological studies
Hugo Delgado	History of Mexican Vulcanology	1. History of vulcanological studies
Lunch		13:00-14:30
History of Vulcanology Symposium (II)		
Chairman: Hugo Delgado		14:30-16:10
Alejandro Pastrana	Sequences of the Geo-Archaeological Studies of the Obsidian Source of the Sierra Las Navajas, Hidalgo, Mexico	1. History of vulcanological studies
Claus Siebe	Clues for the Jorullo Eruption in Michoacan (Mexico) from the Diary of Fray Francisco de Ajofrín Who Visited the Volcano in May/June 1764	1. History of vulcanological studies
Claudia Principe	Development of the Ignimbrite Concept in Vulcanology: Monte Amiata Rheomorphic Ignimbrite	1. History of vulcanological studies
Maria Margaret Lopes	'As if Geology ended at the Seaside': the Brazilian Volcanic Islands in the Atlantic	1. History of vulcanological studies
Coffee Break		16:10:16:30
History of Vulcanology Symposium (III)		
Chairman: Hugo Delgado		16:30-18:10
Michiko Yajima	Volcanic Eruption and Trial of Prediction: Case Study of Izu- Oshima Volcano near Tokyo	1. History of vulcanological studies
Patricia Plunket	Major Eruptions of Popocatépetl Volcano in the First Millenium AD: A View from Northeast Flank	1. History of vulcanological studies

Servando de la Cruz	The Paricutin Volcano Eruption: A Watershed in the Worldwide Vulcanological Research	1. History of vulcanological studies
Silvia F. de M. Figuerôa	Volcanoes, Earthquakes, and Science Fiction: "The Day the World Screamed" by Conan Doyle	1. History of vulcanological studies

Tuesday 13th

Palace of Mining

Symposium Early Modern Geological Agency (I)

Chairman: Marianne Klemun

9:30-11:10

Andre Wakefield	The Mine as Adversary: Leibniz versus the Harz Mountains	Early Modern Geological Agency
Jonathan Regier	Relating the Cosmological and Geological in Early Modern Philosophy: The Case of Johannes Kepler and Anselmus Boëtius de Boodt	Early Modern Geological Agency
Pietro Omodeo	Natural History and Human Praxis between Renaissance Vitalism and Magic	Early Modern Geological Agency
Sara Miglietti	An early modern Anthropocene? The idea of Anthropogenic Climate Change in the Early Royal Society	Early Modern Geological Agency

Coffee Break

11:10-11:30

Early Modern Geological Agency (II)

Chairman: Marianne Klemun

11:30-12:50

Tina Asmussen	Spirited Matter: Mining and Natural Agency in the Harz Mountains	Early Modern Geological Agency
Ernst Hamm	"On Nature," Goethe, Spinoza and Geognosie: Late 18th Century Variants of Human and Natural Agency	Early Modern Geological Agency
Francesco Luzzini	Sounding the Depths of Providence. On Mineral (Re)generation and Human-Environment Interaction in the Early Modern Period	Early Modern Geological Agency

Lunch		12:50-14:30
Session 1		
	Chairman: Ezio Vaccari	14:30-15:50
Marianne Klemun	“Humboldtian Science” and Beyond: Potentials and Limits of a Historiographical Concept	2. Humboldt’s influence in earth sciences
Luz Fernanda Azuela	Travel, Maps and Books as Imperial Instruments. The Case of Geological Research in Nineteenth Century Mexico	5. General contributions on the history of Geology
Johannes Mattes	Look Like an Earth Scientist: Thoughts on Scientific Self-depiction on the Example of a Photo Album Dedicated to the Viennese Geologist Eduard Suess (1901)	5. General contributions on the history of Geology
Coffee Break		15:50-16:10
Session 2		
	Chairman: Barry Cooper	16:10-17:30
Francisco Omar Escamilla González	Werner’s Legacy in Mexico: The First Decade of Orictognosy, 1795-1805	3. Werner's Neptunist in America
Lucero Morelos Rodríguez	From Geognosy to Geology: Werner’s Followers and Early Earth Sciences in Mexico	3. Werner's Neptunist in America
Renee M. Clary	The Royal School of Mines: Henry De la Beche’s Convergence of Professionalization and Public Advocacy	4. History of mining and oil research
Business Meeting 17:45		
Wednesday 14th		
Mid-Meeting Trip		
Tepoztlán		
Departure from Minería Palace		
Arrival at Minería Palace		

Thursday 15th		
Palace of Minig		
Session 3		
Chairman: Michiko Yajima		9:20-11:00
John Diemer	Humboldt's Influence on Murchison's Russian Fieldwork	2. Humboldt's influence in earth sciences
Maddalena Napolitani	The Siberian Expedition of Jean Pierre Alibert (1844-1857): The Graphite Exploitation between Art and Science	4. History of mining and oil research
José Alfredo Uribe Salas, and Laura Valdivia	The Cacahuamilpa Caverns: A Space for Geological Sciences of the 19th Century	5. General contributions on the history of Geology
Margret Hamilton	Friedrich Becke's Notes on the Excursion of the Radium Commission of the Imperial Academy of Sciences Vienna to St. Joachimsthal in 1904	4. History of mining and oil research
Coffee Break		11:00-11:20
Session 4		
Chairman: Mike Johnston		11:20-13:00
Carlos Alberto Mondragón Colín	Geology's Bibliographical Sources in Mexico in the Last Third of the 19th Century	5. General contributions on the history of Geology
Oscar Hugo Jiménez Salas	The First Hundred Years of the Mexican Geological Society (1904-2006)	5. General contributions on the history of Geology
Leonid R. Kolbantsev	Soviet Geologists at the XXth Session of the IGC, Mexico, 1956	5. General contributions on the history of Geology
Dorothy Sack	Marie Morisawa's Itinerant Path to Success	5. General contributions on the history of Geology
Lunch		13:00-14:30

Session 5		
	Chairman: Silvia Figuerôa	14:30-16:10
Martina Kölbl-Ebert	German Petroleum Geologists in World War II	4. History of mining and oil research
Andrea Candela	Searching for Radioactive Minerals in post-WWII Italy	4. History of mining and oil research
Oscar Moisés Torres Montúfar	Building Shortage Geology, Sulfur, and Postwar Economics in the Gulf of Mexico, 1951-1953	4. History of mining and oil research
Tatiana Ivanova Kuzminichna, and Poludetkina Elena	The Discovery of Samotlor, the Largest Russian Oilfield	4. History of mining and oil research
Coffee Break		16:10-16:30
Session 6		
	Chairman: Dante Morán	16:30-17:50
Barry J. Cooper	A History of Iron Ore Mining in Australia	4. History of mining and oil research
Mike Johnston	The Haupiri Question The influence of Mining in Elucidating the Early Paleozoic Stratigraphy of New Zealand	4. History of mining and oil research
Juan Manuel Rodríguez-Caso	The Role of Geology in the Development of Natural Selection Theory: Charles Darwin and Alfred R. Wallace	5. General contributions on the history of Geology
Friday 16th		
Palace of Mining		
Session 7		
	Chairman: Luz Fernanda Azuela	10:00-11:40
Sharad Master	Manuscript Reports on the Gold Mines of Monomotapa by Francisco de Livera (1633), and on the Rios de Cuama (Zambezi River delta, Mozambique) by João da Costa	4. History of mining and oil research

Dorothy Sack	Contribution of the Scientists of the Moscow University Natural History Museum in Development of Geosciences in XIXth century	5. General contributions on the history of Geology
Oscar Irazabá-Ávila, and Luis Espinosa A.	The Historical Mineralogical Collections of the Museum of the Institute of Geology of the National and Autonomous University of México (UNAM)	4. History of mining and oil research
Luis Espinosa Arrubarrena, and Lucero Morelos	The Museum of the Institute of Geology, UNAM and its Paleontological Heritage: Highlights of Specimens with Historical and Scientific Relevance	5. General contributions on the history of Geology
Coffee Break		11:40-12:00
Keynote Speech		
Dante Morán	Historical Evolution of Concepts on the Tectonic Framework of Mexico	12:00-13:00
Lunch		13:00-14:30
Departure to Museum		14:30
Tour Guide		15:00-16:30
Cocktail		16:30-18:00
Back to Tolsá Square		18:00
Post-Meeting Field Trip		
Tlayúa		Saturday 17th
Oaxaca		Sunday 18th
Oaxaca		Monday 19th
Oaxaca		Tuesday 20th
Back to Mexico City		Wednesday 21st at 12:00

2.b ACTIVITIES – PUBLICATIONS

Celebrating INHIGEO's 50th anniversary, in Yerevan, the following was published:

Mayer, W., Clary, R. M., Azuela, L. F., Mota, T. S. & Wolkowicz, S. (eds) *History of Geoscience: Celebrating 50 Years of INHIGEO*. Geological Society, London 2017, Special Publication 442. The book, which includes studies and reviews on the history of geology in various countries and regions, was presented within a symposium “Celebrating 50 Years of INHIGEO” in 2017 at the anniversary conference held in Yerevan, Armenia.

Two books (based on the lectures given at the conference in Yerevan in 2017) are under preparation:

Some of the papers of the meeting in 2017 regarding the **History of geology and archaeology** will be published in 2019/2020 by Springer. The volume is edited by **Cooper Klemun / Vaccari / Meliksetian / Badalyan**.

The 25th International Congress on the History of Science and Technology (ICHST) – Rio de Janeiro (Brazil), took place on 23–29 July 2017 on the Praia Vermelha campus of the Federal University of Rio de Janeiro (UFRJ). The overall conference theme was “Science, Technology and Medicine between the Global and the Local”. The second publication relates to an INHIGEO session about “**Black Gold”: History, Exploration & Exploitation of Oil and Gas in National and International Contexts**” is in preparation. It is edited by INHIGEO members Bill Brice, Drielly Peyerl, Greg Good and Silvia Figueirôa and will be published by Springer.

Some papers from the Mexico City meeting will be published in the *Journal Earth Science History*.

Contributions to *Episodes*

Mike Johnston and Marianne Klemun have submitted an article to *Episodes*. It was already under review and will be published soon.

INHIGEO Annual Record

The *INHIGEO Annual Record* has continued publication in the past year with reports of activities focused on the previous calendar year.

The success of the *INHIGEO Annual Record* also owes much to the creation of separate position of Editor, which is currently held with distinction by William Brice (United States). Under his direction the *Annual Record* has attained an impressive size. Annual Record 50 (2018) for the year 2017 comprises 279 pages. It contains 5 book reviews, 1 historical article, 1 Interview, many Conference reports, 6 obituaries as well as 22 country reports. (*see* www.inhigeo.com)

INHIGEO Circulars

Since 2012 the *INHIGEO Circular* has been issued quarterly by the Secretary-General in March, June, September and December of each year. This arrangement has proved very successful especially as it facilitates an annual cycle of activities to be cultivated and promoted including *Annual Record* preparation, Annual conference promotion, Annual Membership Ballot etc.

INHIGEO archives

An important development has been the signing of a formal agreement between INHIGEO and the University of Oklahoma Library (USA) by which all separate INHIGEO publication will be stored and made available to the general public on the internet.

This initiative has originated from our Past-President Ken Taylor and his UO colleague Kerry Magruder, both very active INHIGEO members.

Contributions to the IUGS-website and the E-Bulletin

8 contributions of “Anniversaries” (March, April, May, June, July, August, December 2018, January 2019)

3. FUTURE PLANS

3a. Future Conferences

44th INHIGEO Symposium, Varese and Como (Italy), 2-12 September 2019

The conference will take place at the University of Insubria, with scientific sessions being held in Varese and Como and a final session in memory of Nicoletta Morello at the Visconti di San Vito medieval castle in Somma Lombardo. This area of North-Western Lombardy is also known as the Italian ‘lake district’, located within the mountains and the attractive scenery of the Prealps bordering Switzerland. Participants will be based in Varese and transport for the sessions in Como and Somma Lombardo will be provided. The morning scientific session in Como will be followed by a half-day visit of the city.

There will be a special program for accompanying persons.

Conference themes:

- History of the Earth sciences in mountain environments
- History of communication in the geological sciences
- General contributions on the history of geology

The mid-meeting one-day field trip will follow the path of the geo-paleontological excursion on the Prealps north of Varese, undertaken by the participants of the 7th meeting of the Italian Society of Natural Sciences in September 1878.

A post-meeting five-day field trip (8-12 September) will include the UNESCO World Heritage Site of Monte San Giorgio (one of the most important fossil localities in the world for the Middle Triassic, which has been studied since the mid-19th century), the mining park in Cortabbio, the quarries of Valceresio and Ornavasso, Turin city, Oulx and Monginevro in the western Alps.

History of Stratigraphy at the 3rd International Congress on Stratigraphy - STRATI 2019 (Milan, 2-5 July 2019)

In July 2019 Italy will also host the 3rd International Congress on Stratigraphy - STRATI 2019 (Milan, 2-5 July 2019), where a session on History of Stratigraphy had been proposed by members of the Italian delegation (Ezio Vaccari, Andrea Candela, Marco Pantaloni, Luigina Vezzoli). A sponsorship by INHIGEO to this session is requested by the convenors and by Claudia Principe, Italian member of INHIGEO and of the Scientific Committee of the Congress. INHIGEO SYMPOSIA 2019-2021

INHIGEO Annual Conferences during this period are scheduled as follows.

- 2019 – 44th INHIGEO Symposium Como/Varese, Italy, 2-12 September 2019
- 2020 – 45th INHIGEO Symposium New Delhi, India (in association with the 36th International Geological Congress) 2-8 March 2020
- 2021 – 46th INHIGEO Symposium, Krakow, Poland, 18-24 July
and ICHST Conference in Prague, Czech Republic, 25-31 July

Symposium New Delhi, India (in association with the 36th International Geological Congress) 2-8 March 2020

We will be part of the section (1) ‘Geosciences for Society’ with the following topics:

1. Historical achievements in geology on the Indian subcontinent
2. Historical textbooks and handbooks: their function in earth sciences
3. Moving knowledge in earth sciences: historical communication and circulation
4. General contributions on the history of geology

Abstract submissions opens December 2018 and closes August 2019

Early registration opens February 2019 and closes October 2019!

3b. INHIGEO website

Dr. Johannes Mattes was appointed in 2016 as webmaster. He redeveloped the current website and updates it regularly. All issues of the Newsletter (now Annual Record) and the Annual Record dating back to 1967 are now available at this site.

3c. INHIGEO Virtual Bibliography

In December 2013, after receiving a formal proposal from Francesco Gerali (Italy), INHIGEO established the “INHIGEO Virtual Bibliography”, a comprehensive listing of historic publications by INHIGEO members. This has been recommended by the Commission for Bibliography and Documentation of the International Union of History and Philosophy of Science.

All INHIGEO members have been asked to submit a list of their history of geology contributions and many have provided this. Gerali has subsequently edited and placed these into a formal database with grouping by nation. The development of this database makes the historical contributions of members more readily available to all.

3d. Governance

No major changes are projected.

4. FINANCE

4a. 2017-2018 report

INHIGEO has operated during 2017-2018 in a positive financial position. We do, however, depend on grants from IUHPST/DHST and IUGS as our sole source of income, without which the Commission could not operate.

Fortunately members of the INHIGEO Board contribute much time and effort voluntarily in support of the Commission. Institutional employers also provide significant assistance. Such contributions are of an “in kind” character. Members, who volunteer their time and energy to INHIGEO are in many cases encouraged to do so by their institutions and in many cases the university infrastructure has supported what the Secretary-General or President have done, through provision computer facilities, and the cost of mailing, telephone etc.

For 2018, IUGS awarded INHIGEO 5000\$ (=4234,78 €)

Our accounts in Austria and in Euros for the period October 2017–December 2018 have been:

Operating expenses

- Website maintenance: 500,00 € (Johannes Mates)
- Mail, office supplies: 300,00 €
- Conference support:
- Young scholars support:
 - Francesco Luzzini 750,00 €
 - Lucero Morelos..... 500,00 €
 - Maddalena Napolitani..500,00 €
- Annual Record production (Printing, by W. Brice): 820 €
- Postage Costs (Annual Record, W. Brice):
- International bank transfer fees: 60,00
- Secretary-General Travel Allowance: 2000 € (not yet paid)

In 2018, INHIGEO introduced limited grants to assist PhD students and recently graduated post-docs to attend the INHIGEO annual conference. It turns out that the support of 500 Euro does not cover the expenses of students. Unfortunately, two postdocs could not attend the conference because he could not afford the travelling costs!

Expenses for the coming year remain unpredictable, given the fluctuating state of world currencies and potential expenses associated with the INHIGEO Symposium in Como. Extra support for students, post-doctoral researchers at an early stage in their careers, and possibly representatives from third world countries, to attend our annual conference may be anticipated.

IUGS financial support is primarily channelled into producing the annual newsletter and supporting travel expenses to the annual INHIGEO conference.

4b. 2018-2019 Budget

Website: €600 (including webmasters hours for development and maintenance.)

Administrations costs: €300

Conference support: €1500

INHIGEO needs to welcome young researchers and support them with travel expenses to the annual conference of the INHIGEO: €3200 (for 4 grants each € 800)..3200 €

4c. Concluding Comments

Over many years INHIGEO has functioned primarily as a result of the generosity of its office bearers in providing their time coupled with annual financial support as provided by IUGS and IUHPS. These circumstances have continued during the last year. Limited grants to assist students and recently graduated post-doctoral scholars to attend the INHIGEO annual conference and to offer a presentation were provided.

5. GRANT REQUEST:

Euro 5600 (see 4b)

As demonstrated above, INHIGEO has remained an extremely successful IUGS-Commission over the year 2018 and it is requested, with respect, that IUGS continue its essential support for the Commission for the period 2019.

Marianne Klemun m.p
Secretary-General
January 2019