

CNR-IAVCEI
Activities' Report - Year 2024
Gilberto Saccorotti

1. Introduction

IAVCEI stands for the “International Association of Volcanology and Chemistry of the Earth’s Interior”. IAVCEI was founded in 1919 as an international special interest group; at present, it is a member organization of the International Union of Geodesy and Geophysics (IUGG), but is autonomous in its leadership structure and work processes. IAVCEI is based in Munich, Germany, and it pursues exclusively and directly non-profit and charitable purposes. IAVCEI organizes two international conferences, the IAVCEI Scientific Assembly and the IAVCEI General Assembly, the latter taking place during the IUGG General Assembly. The last General Assembly was held in 2023 (Berlin, Germany), and the next will be held in Incheon, Korea (2027). Next Scientific Assembly will be in Geneva (Switzerland), on June 2025. IAVCEI’s President is Prof. Costanza Bonadonna, from the Université de Genève, Switzerland. The Secretary General is Dr. Ulrich Kueppers, from Ludwig-Maximilians-Universität München (LMU), Germany. Vice-Presidents are Dr. Marta Lucia Calvache (Colombian Geological Survey) and Prof. Andrew Harris (Université Clermont Auvergne – Aubière, France).

2. Main activities carried on by IAVCEI during 2024 relevant for Italy and for CNR

During the referenced year, IAVCEI was active in organizing schools, workshops and conferences either through its commissions or by sponsoring events promoted by other institutions. Some of these events have been held in Italy, such as the Rittmann conference (co-organized by INGV, the University of Catania, and the Italian Association for Volcanology). This particular event saw the massive participation of Italian researchers; in addition, the Conference addressed several topics which are of primary relevance for our country, such as the ongoing unrest episode at the Campi Flegrei Caldera. Of particular importance was also the City on Volcanoes Conference (Antigua, Guatemala), whose scope is to establish a linkage between the volcanology community and emergency managers, thus providing a communication channel between “volcano cities”. It is superfluous to specify the importance that such arguments have for Italy, where some 3 millions citizens are exposed to volcanic hazards. In the following I report a list of activities which, to my opinion, have a significant relevance for Italy.

Detailed list of Conferences / Workshops / Schools organized – sponsored by IAVCEI

Cities on Volcanoes 12

February 11–16, 2024, Antigua, Guatemala
[commission Cities and Volcanoes]
<https://citiesonvolcanoes.wordpress.com/>
<https://congress.iavceivolcano.org>

10th International Conference on Tephra Studies September 8–15, 2024, Catania, Italy

[commissions Tephrochronology; Tephra Hazard Modelling]
<https://cot.iavceivolcano.org/>; <https://thm.iavceivolcano.org/>

IASPEI/IAVCEI Commission on Volcano Seismology and Acoustic annual meeting

September 16–21, 2024, El Paso, Canary Islands
[IASPEI/IAVCEI Commission]
<https://www.ign.es/web/ign/portal/vlc-congreso-la-palma-2024>

6th Conference Alfred Rittmann

September 18–20, 2024, Catania, Italy

9th school on Convective and Volcanic Clouds (CVC)

October 5–13, 2024, Nicolosi, Italy

[IAVCEI-sponsored]

<http://www.cvctrainingschool.org/school/>

3. Activities carried on by Gilberto Saccorotti within the Association during 2024 and impact on the Italian scientific community

The undersigned was appointed representative of IAVCEI by the end of February, 2024 (provision of the President of the CNR n. 36/2024 of 29.02.2024 prot. 0069656). While not having conducted activities solely related to IAVCEI, during 2024 I participated continuously to the CNR-IUGG commission. In particular, I attended all four Commission meetings, which were held on March, June and September 2024. Significant effort was dedicated to the organization of the workshop '*Eventi Naturali Potenzialmente Pericolosi: Modelli, Incertezze, Comunicazione*', which was held at the CNR headquarter in Rome, on September 25-26, 2024. The workshop was entirely conceived and organized by the CNR-IUGG Commission, and gathered the maximum allowed number of participants (~100 attendees). Each presentation treated a theme strictly related to the different associations affiliated to the CNR-IUGG Commission. The volcanology-related communication was entitled 'Role of uncertainties in the evaluation of volcanic hazards (Ruolo dell'incertezza nella valutazione della pericolosità vulcanica)' and was given by dr Paolo Papale, from INGV.

4. Evaluation of the participation in terms of benefits and membership cost

Italy's participation in IAVCEI remains strategically essential. As a country exposed to the highest volcanic risk worldwide, Italy cannot reasonably consider withdrawal from the most authoritative and globally recognized volcanological community. Volcanology is a rapidly developing field that still requires strong international collaboration, as each volcanic system represents a unique and invaluable natural laboratory. In this context, the scientific and operational benefits derived from Italy's engagement with IAVCEI far outweigh the associated costs, rendering the cost-benefit ratio clearly favorable. This position has also been consistently reaffirmed in previous annual reports.

5. Evaluation of Italians' attendance and how to improve interest and involvement

Although Italian researchers have always participated to IAVCEI's activities with qualified contributions, we must note that Italy's presence in the leadership teams of Commissions and Networks could surely be empowered (see below, point 6). Italy has a consolidated tradition in research in the field of volcanology, which is demonstrated by the acquisition of high-quality monitoring data, and their analysis to both determine the physical processes that govern volcano dynamics, and support the civil protection system for risk evaluation and crisis management. Therefore, the contribution of Italian scientists to IAVCEI could go well beyond the attendance to meetings and conferences. Building an important and more continuous link between IAVCEI and the Italian scientific community is recognized as a primary task, which could be pursued by consolidating the relationships with the related national associations (e.g., the Italian Association for Volcanology).

6. Italian experts with important roles within the Union or within related Commissions and Programs (if known)

Within IAVCEI's Executive Committee, two of the Councilors are from Italy:

- ✓ Alessandro Aiuppa, Università di Palermo, Dipartimento DiSTeM
- ✓ Alessandro Bonforte, INGV– Osservatorio Etneo

IAVCEI is structured according to 18 Commissions, 4 Networks, and 7 Joint Commissions. Italian experts with a leading role in those bodies are detailed in the following:

Volcanic Lakes:	co-leader Jacopo Cabassi (CNR-IGG)
Volcanic Geology:	outreach Coordinator: Matteo Roverato (UNIBO)
Volcanogenic sediments:	leader Andrea di Capua (CNR-IGAG)

Networks:

World Organization of Volcanological Observatories (WOVO) - Executive Leadership Team
Laura Sandri (INGV-Bologna)
Alessandro Bonforte (INGV– Osservatorio Etneo)

Joint commissions:

Joint IAGA /IASPEI / IAVCEI Commission on Electromagnetic Studies on Earthquake and Volcanoes

Vice-chair Valerio Tramutoli (Università della Basilicata)

Joint IASPEI / IAVCEI Commission on volcano seismology and acoustics

co-chair Roberto Carniel University of Udine

7. If Union with CNR Commission, short summary about the 2024 CNR Commission activities

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8. Notes (if any)

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9. Conclusions

I confirm the importance of strengthening the links between the Italian volcanological community and IAVCEI, in particular by coordinating the efforts and promoting the linkage with national organizations. In this regard, a meeting between the national representatives and the executive committee is already planned, to be held during the next 2025 Scientific Assembly in Geneva. This will be the occasion to identify potential synergies, and to sharpen the profile of national representatives to promote the mission of IAVCEI while serving individual's national institutions.

Pisa, 22/5/2025



(Gilberto Saccorotti)