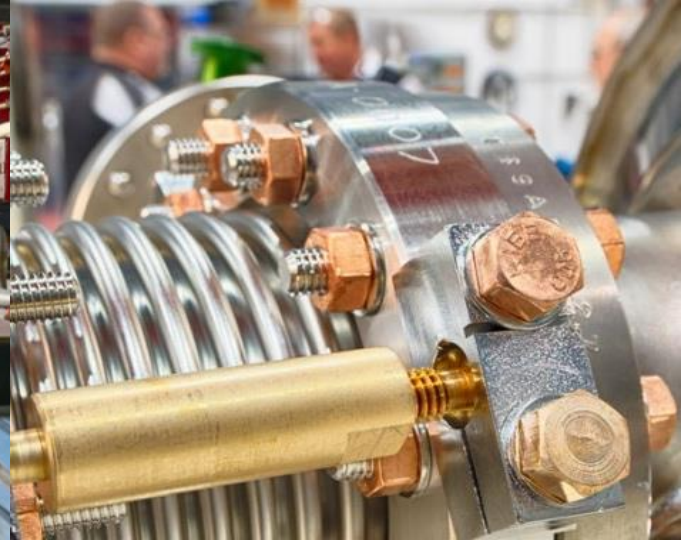


ICFA Status: a three-year lookback

November 4th, at 2026 ICFA Seminar (Toyama)

Pierluigi Campana (INFN)

Thomas Schörner (DESY)

ICFA

A Standing Committee under IUPAP

ICFA mandate & membership

ICFA is an organization, set up in 1977 under IUPAP-C11(Particles & Fields) sponsorship, on international aspects of particle physics, in particular of large future accelerators

More formally its aim, as redefined in 1985, is as follows:
• promote international collaboration in all phases of the construction and exploitation of very high energy accelerators
• organize regularly world-inclusive meetings for the exchange of information on future plans for regional facilities and for the formulation of advice on joint studies and uses
• organize workshops for the study of problems related to super high-energy accelerator complexes and their international exploitation and to foster research and development of necessary technologies

16 Members + 1 chair: Europe (CERN & member states, 3), USA (3), Japan (2), Russia (2), Canada (1), China (1), India (1), Asia/Oceania (1), Latin America (1), C11 chair (ex-officio) + Scientific Secretary

→ All major HEP Lab directors are ICFA members (CERN, DESY, FNAL, IHEP, KEK)

ICFA Panels

ICFA activity is organized in panels on specific topics concerning accelerator and particle physics, set up to facilitate international discussion and coordination: They organize schools and workshops on their specific topics and often put out bulletins, newsletters and other records of their activities

Current active panels:
- Instrument Innovation and Development
- Beam Dynamics
- Advanced and Novel Accelerators
- Sustainable Accelerators and Colliders
- Data Lifecycle (created in 2024)

- ILC International Development Team, originally *formed in 2002 to facilitate the realization of the International Linear Collider (ILC), and since 2020 with the mandate to prepare for the ILC Pre-Lab in Japan*

Panels are a tool contributing to keep experts in contact through meetings, etc., and it is beneficial to advancement in accelerator science of future large and smaller infrastructures

ICFA: role & vision

- ICFA is not expected to "*decide on which will be the next global collider*", but to discuss, follow and endorse projects having reached a high level of scientific and technical definition, consensus, and to help in getting political support

- ICFA, facing reduced resources and political complexity, considers and promotes, the set-up of smaller programs at the differents HEP labs, both in collider-based and in physics beyond collider, to preserve diversity and also education in the field, targeting especially the young generation

- ICFA meets three times per year, and a **triennial ICFA Seminar** is organised, an international exchange of information on plans for future facilities in particle physics. The seminar is attended by the directors of most of the world's major laboratories in our field, by senior particle and accelerator physicists, and government science officials from several countries, and by a group of early career researchers. ***A unique get-together opportunity***

For an historical review of ICFA activities, see R. Rubinstein, Int. J. Mod. Phys. A 31 (2016) 1630063

Expected topics of exchanges within ICFA

- Impact of project size
    - science motivation, when facing other emerging research areas
    - governance, organisation, cost and availability of funding
    - operation and maintenance of large infrastructures
    - life cycle assessment: sustainability, CO_2 footprint

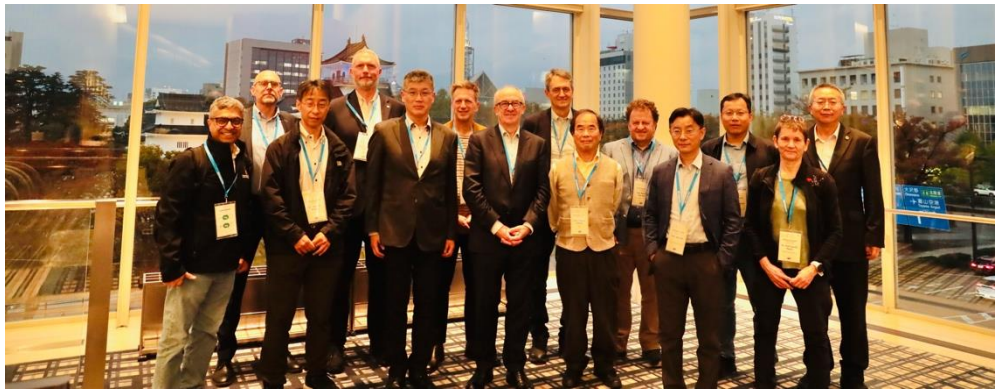
- Impact of project long time span
    - HEP sociological aspects: fewer experiments, huge collaborations
    - lack of youngs' interest in multi-decade engagement

- Analysis of HEP "enlarged environment"
    - diversity in science through smaller, shorter time scale research programs
    - access to technologies in countries with developing HEP communities
    - positive actions against gender and geographical disparities

Main activities during 2024-26 term

- ICFA life: meetings, membership, governance
- Topical discussions on HEP future programs
- Statements supporting HEP initiatives
- Follow-up of Panels operation and membership
- ICFA and the “IUPAP Rejuvenation” programme
- 2026 ICFA Seminar preparation (jointly with LOC)
- New ICFA chair & scientific secretary nomination





Meetings & Topical discussions

After COVID-19 a more systematic use of remote connections was adopted (also to reduce environmental impact)

Usually, 3 meetings per year, one in person/hybrid during summer conferences + 2 in remote (Spring/Autumn)

2024 - **Prague (ICHEP)** + 2
2025 - **Madison (LP)** + 2
2026 - **Natal (ICHEP)** + 1 + **ICFA Seminar**

- Topical discussions with outside experts have been organized during meetings on:
  - Status of large future collider programs (FCC-ee, CEPC, ILC/LCF)
  - Physics beyond colliders
  - Sustainability and lifecycle assessment in HEP future large programs

- Regional reports (at each meeting) [**P5 & ESPP**] + panel chair reports (once per year)

- Report on CERN Courier (typically once per year, in connection with Summer Conferences)

Recent ICFA Statements

"ICFA, when considered of relevance, and on the proposal of ICFA members, issues Statements supporting specific subjects, initiatives or events on topics correlated to worldwide high energy physics community"

August 2026 – Statement on European Strategy for Particle Physics

August 2025 - Statement for best practices for data preservation open science in HEP

October 2024 – (1) Statement on sustainable programs in HEP
(2) Statement on the new HEP sub-group of the Asian Committee for Future Accelerators (ACFA)

May 2024 - Statement on the importance of testbeam facilities and their availability

April 2024 - Statement on the outcome of the US P5 process

January 2024 - Statement on the new ICFA Panel on the Data Lifecycle

IUPAP, C11 and ICFA (governance)

At 2024 IUPAP General Meeting, IUPAP Presidency decided to launch a “rejuvenation procedure”, to achieve a more effective operation of IUPAP Commissions and Working Groups, and to formalize terms and operation of them

Following a request of IUPAP Presidency, ICFA prepared and approved a document describing the Terms of Reference (ToR) for the operation of the Working Group

The work consisted in a recollection of ICFA already existing rules until then based on oral tradition. Meanwhile, it was proposed that ICFA will become a **IUPAP Standing Committee under C11**

Very positive interactions on the draft document with IUPAP Presidency.
ToR final version approved within ICFA, endorsed by C11, then finally approved by IUPAP (2025)

At the same time, a vigorous refresh of membership within panels: several members on board since long time. Renewal still in progress.

Introducing new ICFA Chair and Scientific Secretary



CHAIR
Tsuyoshi Nakaya (Kyoto)



SCI. SEC.
Mingshui Chen (IHEP)

A new chair was unanimously nominated in August 2026 meeting in Natal
Our best wishes of a productive and successful term (1.1.2027 → 31.12.2029) !
Handover event during Friday morning session

Conclusion

In 2027, ICFA will be 50 years old. It has been conceived by its founding fathers as a **unique** international forum to discuss, promote and support large collider infrastructures for HEP.

We live exciting times: the no-lose theorem is no longer valid ! We must swim in open waters !
Bottom-up support represents a key element in deciding which will be the next, very large machine(s): a solid community consensus is mandatory to convince policy makers and the public

ICFA and its HEP community must be ready to facilitate and to support programs which keep vibrant and innovative our science, and to leave open a platform where different regional interests can be confronted and discussed

Despite very difficult times in which we live, we all still believe international scientific collaboration remains one relevant GLOBAL asset for helping in Universe laws deciphering and keep HEP vivid

Final personal touch: three intense and exciting years. I thank all ICFA members (past and present). A special mention to Thomas S. who helped me a lot in this endeavour !

If the physicists do decide that they need to build and operate such a large laboratory as a World Project involving all people, if they can convince their statesmen of the necessity and desirability of that, then I am confident that they will solve the problems of place and construction and use.

And if that happens, the individual nations will get more knowledge, more technology, and more opportunities for science at home, for their money and effort, than if they get mired in a morass of petty national facilities.

Even more important to the people of those nations will be the human experience in international cooperation, so necessary for survival in a precarious world.

R. R. Wilson, Toward a World Accelerator Laboratory
Fermilab TM-811, August 16, 1978



"… we (should always) stand on giants' shoulders …"
(Bernard of Chartres, 1123 & Isaac Newton, 1675)