IUPAP rejuvenation.

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Photo by Yuya Makino

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The aim of this talk is to give you a brief update on some of the steps we took to advance with the rejuvenation of IUPAP and other changes, particularly those approved by the IUPAP GA in October 2026.

More specifically, I will give you information on we what have done regarding the following issues:

- Standing Committees under Commissions and under VPs.
- The transformation of WG15 into C7, the Commission for Soft Matter.
- The two new Working Groups
- The creation of a Commission on Quantum Technologies.

I will then mention some other new activities.

In October 2025, the IUPAP GA approved the creation of a **new type of structure**, *Standing Committees*, with two subtypes:

- ***Standing Committees under Commissions.***
- ***Standing Committees under Vice-Presidents at-large***

It also approved the creation of two Working Groups:

- ***WG22 on new Standing Committees***
- ***WG23 on AI and Machine Learning***

And the transformation of WG15 on Soft Matter into C7, the Commission on Soft Matter.

Standing Committees under Commissions

Most SCs under Commissions were previously WGs that had existed for a long time, many of which worked in close connection with Commissions or ACs. We asked that they sent renewed ToRs. Almost all of them did.

This was the assignment approved by the GA in 2025 between SCs and Commissions:

- ICFA (former WG1) <-> C11
- ICUIL (former WG7) <-> C17, C16, C15
- ICNP (former WG9) <->C12
- GWIC (former WG11) <->C4, C19. GWIC will also keep a strong tie with the International Commission on General Relativity and Gravitation (IUPAP's AC2).

ICFA, ICUIL and ICNP sent their ToRs. ICUIL requested to simplify its liaison with the Commissions choosing only one Commission, C17 (Photonics), to oversee this work. This proposal was accepted.

GWIC has not liaised so far with any "regular" IUPAP Commission and did not send a new ToRs. GWIC made a special presentation at the EC&CC meeting to establish the framework of collaboration with the relevant Commissions. It is expected that the new ToRs will be presented to the IUPAP GA in 2027.

The 2026 IUPAP GA also approved the creation of a new SC on Major Neutron Research Facilities. Fulvia Pilat from ORNL was appointed as its Chair. She carried out conversations with relevant stakeholders and with Silvina to define the ToR which have been shared with the GA.

Standing Committees under Vice Presidents at Large

The 34th IUPAP GA approved the following transformations:

WG16 (Physics and Industry) and **WG18** (Ethics) become **Standing Committees Under VPs at-Large**:

- **WG16** becomes the ***SC on Physics outside Academia***. The position of **Vice-President at-large for Physics Outside Academia** is **created** in the IUPAP **Executive Council**, to be occupied by **Christopher Rossel** until the 2027 GA.
- **WG18** becomes the ***SC on Ethics and Collegiality***. The VP at-Large for Ethics and Outreach, will oversee this SC.

The corresponding Vice-Presidents were charged with bringing a proposal during 2026 about the Mission/Mandate and composition of these SCs,

The SC on POA continued to function as it did when it was WG16, with some changes in its composition. No proposal for its mission/mandate was submitted.

Nothing was done regarding the SC on Ethics and Collegiality and WG18 did not continue working.

The 34th GA also approved the creation of the:

Standing Committee on DEI under the corresponding VP.

Nothing was done to advance in this regard and the VP for DEI resigned.

A way forward:

Insist with VPs to advance with Mission/Mandate of the SCs they oversee.

In the case of Ethics and Collegiality: engage possible new VP on Ethics and Collegiality (to be elected by the 36th GA in 2027) to advance with setting up the SC and defining the mandate.

In the case of DEI, we expect to have a replacement for Gillian by the end of 2026 (we've already communicated with a possible candidate). This person might work during 2027 to help us set up the SC on DEI and then be replaced by someone else elected by the GA in 2027, or this person might stay and be elected by the GA in 2027.

Two new WGs created by the 34th IUPAP GA.

Working Group 22 for new IUPAP Standing Committees under Commissions

Mandate:

- to identify facilities and infrastructures of interest for the physics community not currently covered by IUPAP's existing SCs under Commissions (e.g., fusion);
- to liaise with the relevant stakeholders and analyze the feasibility of creating Standing Committees under Commissions to include some of those facilities;
- to submit the proposal for the creation of new Standing Committees under Commissions in the areas they consider would be relevant for the physics community including in the proposal a draft for the composition of SC.

Instead of choosing a Chair for WG22, we decided directly on its composition without defining a Chair. The members are 5 IUPAP officers (Michel Spiro, Sunil Gupta, Silvina Ponce Dawson, Sandro Scandolo, Stefano Fantoni) and the Chair of C16 (Ursel Fantz).

Areas identified for new SCs under Commissions:

- Fusion (there is a proposed ToR)
- Astroparticle Physics (advanced in terms of possible members)
- Advanced Light Source Facilities (planning workshop to discuss)
- Bioimaging (planning workshop to discuss)
- Physics for Sustainability (proposal: transform WG21 into an SC)

Working Group on Artificial Intelligence and Machine Learning.

Mandate

- To analyze the multiple aspects that AI and ML involve and affect,
- To make a recommendation on the aspects that IUPAP should prioritize for its future actions related to the matter and the ways in which it should address the issue.

In issuing these recommendations, special care should be taken on how to move forward without disrupting the work on these subjects that is currently done in existing IUPAP Commissions. In this regard, it is important that the WG liaise with these Commissions to achieve a sensible and feasible recommendation.

In this case we wanted to appoint a Chair, which we didn't do yet. Hopefully, we will have it by the end of 2026 so as to advance with the WG composition during 2027.

Possible names for its Chair:

- Luca Biferale (Professor, University of Rome, works on turbulence).
- David Gross (Nobel laureate, we haven't invited him, but we think it might be difficult for him to accept due to time limitations, he could be an advisor)
- Maria Spiropulu (Caltech professor experimental particle physics at CERN), Karsten Heeger (Yale German-American physicist neutrino experiments), Michael Turner (UChicago emeritus professor cosmology and particle theory, former APS president),
- Cherry Murray (National Academy of Sciences International Secretary with university, national lab, and government experience at high levels, former APS president).

Affiliated Commissions.

The “old” ACs do not seem to be very engaged with IUPAP. There were no responses to emails sent to start discussing a new relationship with IUPAP.

For AC5 and AC6 we drafted MOUs that might need minor changes, but will be signed soon.

AC5, IAPS

Proposal to treat it pretty much treated as regular Commission, but fixed allocation of funds for one Type A and one Type B conference per year, do not analyze request of conference endorsement or sponsorship, IUPAP-IAPS Outstanding Student Award

AC6, History and Philosophy of Physics

Inter-Union with DHST/IUHSPT (IUCHPP). After discussing with the current chair of AC6 we concluded that, for the time being, it is more reasonable to keep **AC6 as a Commission on the History of Physics**. We decided to advance with this option:

AC6 becomes a “real” Inter-Union Commission. IUPAP chooses 3 members to serve on IUCHP and some funds are allocated for its functioning. We will invite IUPAP members to submit nominations when they nominate members of regular Commissions. Financial support provided by IUPAP will be half of what is given to regular Commissions.

Main problem with AC6: DHST Commission members are renewed every 4 years and IUPAP’s every three. We need to agree on a formula that is good for both organizations, The idea is that IUPAP members will be renewed every 3 or 6 years.

Clusters of commissions? We might advance with designated chairs in 2027

Communications

1. Database

- IUPAP needs a grassroot level database of the broader community, analogous to membership of APS, DPG, etc, so that our voices can be heard.
- Each IUPAP conference already has its own database. A simple option would be to 1) include a consent box to receive IUPAP communications (emails, newsletter, etc), per GDRP legal requirements; 2) submit such database to IUPAP; 3) have someone at IUPAP maintain it across all Commissions and WGs; ***we've drafted a proposal in this regard but we need to agree on how this could be done while keeping the personal data protected***. 4) showcase an official IUPAP communication package at such IUPAP supported conferences, including QR codes to IUPAP website /newsletter/ social media; ***this has been done for many years now: we need CCs to monitor this*** 5) feature positive feedbacks from such conference support such as student travel awards in various communications channels. ***Not done yet.***
- Various email lists can be established and used effectively. Besides the existing ones (EC, officers, CCs, Chairs of ACs and WGs, LCs, CAM representatives), lists including all Commission/WG members, the grassroot IUPAP community, could be implemented. Certain updates and announcements could go directly to all unit members without requiring unit chairs to relay. Grassroot IUPAP community-wide communications will be used only on special occasions (not to overwhelm people's inbox). ***Not done yet.***

2. Website

Revamp: not now. Sharing editing: we started with C14 (Physics Education). It worked very well and will expand to other Commissions.

3. Social Media / Newsletter

We appointed an editor for the Newsletter: Manjit Kaur (India).

Subjects we started to discuss which will hopefully lead to proposals in 2027:

- Reorganization of IUPAP activities on Physics for (sustainable) Development
- Relationship with regional organizations (FEIASOFI, CLAF, EPS). We have advanced with CLAF and initiated discussions with FEIASOFI and EPS.
- Education: We ran a survey for national physical societies to fill out. We will have a dedicated session on physics education at the IUPAP-ICP and GA in Johannesburg in October, 2027, where we expect the ample participation of IUPAP members.
- Liaison with Presidents of Physical Societies (Presidents Forum).
- Initiatives for Early Career Physicists.