Two new WGs created by the 2025 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: transformed 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.

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)
- Other suggestions?