

# Societies united



**Physics societies have a long and illustrious history. Now, a world-wide union of societies celebrates its 100th birthday with a centennial conference.**

**T**he International Union of Pure and Applied Physics (IUPAP, <https://iupap.org/>) is a society of physics societies from around the world. Its mission is to foster the development of physics research and education, and to encourage cooperation between physicists in different countries. This year, IUPAP celebrates its centenary and marked the occasion with a symposium at the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy.

Perhaps predictably, this meeting placed an important emphasis on the history of the organization. After its founding in 1922 with thirteen members, there followed two decades of relative inactivity and major disruption during World War II. Then, in 1947 it was reconstituted in its current form, and has since grown to encompass sixty national members from six continents. A major goal of this reformation was to use science as a vehicle to promote peace and international understanding, and this was a catalyst for the activities of IUPAP to increase noticeably.

Building on that desire to promote peace, one strength of an international union such as IUPAP is its convening power. Gathering the voices of its world-wide membership and feeding back directly to UNESCO lends them a helpful role in bringing physicists together and representing their interests. In particular, this applies to physicists who might otherwise be trapped by geopolitical situations, with meetings between researchers on opposite sides of the Cold War being a historical example, and the provision of assistance to physicists who are impacted by the war in Ukraine being a more contemporary one.

Another strength is the ability to coordinate on a global scale. For example, IUPAP is heavily involved in developing and promoting the International Year of Basic Sciences for Sustainable Development 2022



(<https://www.iybssd2022.org/>). The goal of this project is to facilitate and promote physics in the context of the UN's Sustainable Development Goals. As with many of the IUPAP's activities, the focus is on hosting meetings and fostering idea exchange and cooperation.

A further example of the IUPAP's ability to coordinate is the work of one of its commissions on symbols, units, and other issues related to metrology. Standardizing how we measure is foundational to quantitative enquiry, and this commission aids information exchange and publishes its 'Red Book' that details best practise. This will soon be updated to reflect the 2019 redefinition of SI units.

IUPAP also takes a strong role in trying to foster physics education and training, particularly in parts of the world where resources are more scarce. One example is its sponsorship of the X-TechLab in Benin, where young researchers are trained in X-ray techniques to approach problems in sustainability. These skilled practitioners will be vital to the success of the African Light Source when it comes online. IUPAP also sponsors numerous prizes for early-career researchers and awards travel grants and stipends for conference attendance, and fosters close links with the International Association of Physics Students.

Helping to diversify our research community in physics is also a key task for IUPAP. They have made good progress in appointing women to the various positions of influence within their own organization, and exercise strict guidelines on the diversity of conferences that they help to fund. One task at hand is to broaden this work to be more intersectional and to include more specific efforts to support other marginalized groups within physics research and industry.

At times, it can seem a little unclear what IUPAP concretely achieves with the various activities it promotes. These activities primarily manifest via a complicated structure of commissions and committees and, although the focus is very broad, the emphasis seems to remain on processes rather than outcomes. Of course, pushing change is hard and so this might be setting a high bar, but the challenge for IUPAP in the next hundred years seems to be leveraging its unique potential and 'seat at the table' to manifest meaningful progress in the future.

Nevertheless, there is undoubtedly still a place for such a union in the modern world, and much that it can achieve.

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