



What's new September-December 2024



Dear readers of the IUPAP Newsletter

This is the first president's note after the 33rd General Assembly that was held on October 10-14 in Haikou, China. What an extraordinary and special Assembly in so many ways! The first in-person GA in 7 years: it was marvelous to meet again so many old and new friends, to see in person people that I had only met online. It was so good to be together, side by side, to chat without the intermediation of a digital device, to embrace one another, to look into each other's eyes. Being together is an essential part of our species; it makes us human. These in person encounters are so good, not just because they are enjoyable. They are fundamental to build trust, to strengthen collaborations across borders and cultures, despite the possible strained relations among governments. As we always say: scientific collaboration is a driver for peace; and real human encounters are a driver for science collaboration and thus, for peace!

The collaborative atmosphere that we experienced in Haikou was possible thanks to the incredible generosity and dedication of the local organizing committee chaired by Prof. Li Lu, the Chinese Physical Society and the students and professors from Hainan university. They were great not only from the organizational point of view, but most importantly, for their human quality and warmth. The lively and insightful interventions of the in-person and online participants were also an important ingredient to make this GA such an inspiring meeting. We have all gone back home with plenty new ideas on a variety of areas. The three side events of the GA largely contributed to this end as well. The IUPAP-CPS Women in Physics Forum with the participation of some of the pioneers of WG5 on its 25th anniversary, Marcia Barbosa, Bev Hartline (online), Ling-Ang Wu and Jackie Beamon-Kiene, was very moving. A great thanks to all of them and to the other participants and co-organizers of the event, Lilia Meza-Montes, Gillian Butcher, Igle Gledhill and Prajval Shastri. The Inter-Commission Symposium on Physics for a Sustainable Planet, co-chaired by Nithaya Chetty and Pietro Ubertini and co-organized by Li Lu, Xiaoyan Shen and Igle, was a huge inspiration for the future actions of IUPAP. A great thanks to all the organizers, especially to Igle who was key for the occurrence of this event that had as one of its highlights an amazing online contribution by the 2021 Nobel Laureate, Giorgio Parisi. Finally, the three Public Lectures by the Nobel Laureates Barry Barish and Takaaki Kajita (in-person) and Samuel Ting (online) in front of an audience of about 1800 people, most of them students, was the icing on

the cake of a very eventful week. We are indebted to all the speakers and to the Chinese Physical Society for its help in the organization of this activity which had such a huge impact on the new generation of physicists.

This is the first President's note with me having been formally elected as the next IUPAP President (to start on January 1st 2025). It is an incredible honor for me to occupy this position and I am very thankful to all of those who have deposited their trust and confidence in me. I will do my best to fulfill their expectations. I want to thank Bruce McKellar and Michel Spiro who approached me during the EC&CC meeting in London in 2019 when Kennedy Reed resigned as President to explore if I would be willing to become acting President Designate. I was thrilled with this completely unexpected proposal, which I accepted. This marked the beginning of a new and quite amazing part of my journey with IUPAP. I am very happy to be part of the present and the future of our Union in these exciting times in which we are defining a rejuvenation plan to increase its impact and embrace new areas.

Many of the attendants of the GA warned me that we should go slowly, that we should not destroy what works. My conviction is that in organizations like ours, changes are not imposed "from the top", they are discussed in a way that everybody takes part in the decisions. I hope we can advance in this way. Change is the condition of a living organism and yet there is an identity that persists. This is how I like to see our Union, as a living organism, that changes, but keeps its identity intact. During the GA I shared with you a poem by the Argentinian writer Jorge Luis Borges named "The Art of Poetry" which describes a river made of time and water, a river in its continuous flow, which passes and remains, that is the same and yet another. This is the way in which I like to envision our Union: as a river that flows and changes retaining its identity and its strength. As I said during the GA:

I invite you all to sail together.

Thank you.

Silvina Ponce Dawson
Incoming IUPAP President

Celebration of the 25th Anniversary of the Working Group 5 Women in Physics



Some decades ago, the low participation of women in the community became an issue and to address it the Working Group 5 Women in Physics was created in 1999, during the IUPAP 29th General Assembly. The resolutions mandated to survey the present situation, of women report to the council the findings and suggesting means to improve it.

It has been 25 years from now. Since then, 8 International Conferences Women in Physics have taken place around the world where country teams present and discuss their situation, create networks and elaborate resolutions to be presented to the IUPAP General Assembly. These conferences are a source of knowledge, exchange of experiences and a generator of ideas and projects, which are embodied in 7 books published at AIP Conference Proceedings, one more is in process and all of them are open access. Two worldwide surveys and another one through the Gender Gap Global project, the latter one sponsored by the International Science Council, have elucidated the situation of women in physics, allowing to draw up strategies to improve it. These actions gave rise to gender policies and the statement of principles adopted by IUPAP, the Waterloo Charter.

All these contributions to the development of IUPAP and our working environment as well as the 25th Anniversary of the WG were celebrated in the IUPAP-CPS Women in Physics Forum, organized

during the 33rd General Assembly held on October 11th in Haikou, China which was hosted by the Chinese Physical Society (CPS). The program consisted in a panel where we heard from members of the first WG how they accomplished the mandates. A tribute was paid to them for the great momentum they created to benefit female physicists. Short talks showed regional examples of how these actions transform IUPAP and the way our community develops physics. Also, the way IUPAP is addressing diversity beyond women was presented. Finally, in the discussion session, we heard thoughts on how IUPAP can continue progressing. Two short videos and posters were prepared and presented. With renewed enthusiasm, the WG will continue contributing to IUPAP's mission. We extend warm thanks to CPS for their hospitality and support to make possible the Forum.

What is the IUPAP Working Group 5?
The impact of the WG 5 in different regions of the globe?

Lilia Meza-Montes, Silvina Ponce-Dawson

Meet our team

Sandro Scandolo

Deputy Secretary General for Administrative Affairs



- Could you please introduce yourself?

I am a theoretical condensed matter physicist with a special interest in the computer simulation of materials at extreme conditions of pressure and temperature, such as those found in the interior of planets. I've been one of the developers of "Quantum Espresso", a software for the modelling of materials at the atomistic scale which is currently used by thousands of teams worldwide. In 2002 I joined the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, where I currently serve as Head of the Research Division. I combine my research activity with initiatives to foster the development of science in the developing world. I have organized more than 40 conferences and advanced schools in Trieste as well as in Ghana, Ethiopia, Kenya, Sudan, Nigeria, Iran, Vietnam, India, Nepal, Chile, Brazil, Colombia, and many other countries.

- What is your role within the IUPAP?

Since 2021 I serve as Deputy Secretary General for Administrative Affairs. In this capacity I support Secretary General Stefano Fantoni in running the Trieste administrative office of IUPAP. In 2022 I was the local organiser of IUPAP's Centenary symposium, which took place at the ICTP. My involvement with IUPAP however started back in 2008, when I was appointed secretary of Commission C13, then vice-chair in 2011, chair in 2014, and associate member in 2018. With 16 years of continuous service, I believe I'm the longest-serving current member of the IUPAP family (but I'd be happy to be disproved!).

- What did you enjoy most in your collaboration with IUPAP?

IUPAP, like ICTP, is a home and a reference for thousands of physicists worldwide. The most enjoyable aspect of my collaboration with IUPAP has been to meet and befriend colleagues from all over the world, united by their passion for physics and for the common goal of enhancing the impact of our discipline on our respective societies. Realizing that this goal can be achieved in so many

different forms, and with so many different strategies, has been a truly enriching experience for me.

- What do you think is the greatest potential of IUPAP?

IUPAP's greatest untapped potential is to reach the entire community of physicists worldwide. Several efforts have been made recently to expand IUPAP's reach, including an expansion of the membership and a stronger presence on social media. However, a back-of-the-envelope estimate of the number of physicists worldwide is between half-a-million to one million, at least two orders of magnitude more than the number of physicists we reach through this newsletter and our social media. IUPAP's ever-more relevant goal of contributing to general international understanding through physics would benefit enormously from a greater involvement of the community of physicists. Let's work together to make IUPAP more visible and known!

IUPAP is seeking Expressions of Interest for hosting the General Assembly and restarting the IUPAP International Conference on Physics series in 2027



IUPAP invites all the IUPAP Member Liaisons to submit a proposal to host the IUPAP General Assembly in 2027 along with the next International Conference on Physics. To indicate the interest please send an email with subject “IUPAP GA 2027 and ICP” to secretariat@iupap.org. **The deadline for Expressions of Interest is 10 January 2025.**

Working Group 21, Physics for Climate Change Action and Sustainable Development, aims to hold a major international conference in 2027. The WG21 [invites](#) all the IUPAP Member Liaisons to submit a proposal to host this conference. The aim of the Working Group 21 and of the conference is to provide a forum for the global physics community to engage more closely with climate change action and sustainable development. It is important that this conference should attract as many physicists from around the world as possible, including from the developing world, so that they can meet, exchange information, data and ideas, and fulfil the task of identifying, promoting, engaging with, and discussing the unique role that physics is and should be playing in the challenges that face our planet now and in the coming decades.

This will be one of IUPAP's major events in the International Decade of Science for Sustainable Development declared by the United Nations. It will also contribute through the [Earth- Humanity Coalition](#).

The Executive Committee has called for expressions of interest in hosting both the in-person GA and the ICP, International Conference of Physics, in 2027. It may be possible to combine these events, offering the climate change and sustainability science conference as the ICP.

Beamline for Schools: The popular competition celebrates its 12th edition in 2025



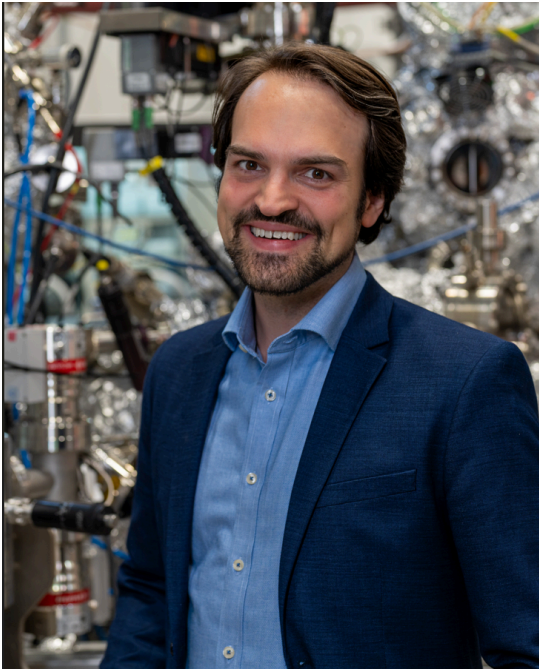
Beamline for Schools is a physics competition for high-school students from all around the world inviting them to propose an experiment that they want to perform at a particle accelerator.

Three winning teams will be selected, two of which will perform their experiments at CERN and one at DESY. There will be additional [prizes](#) for up to 70 selected teams.

All teams who preregister to the competition will have the possibility to follow several [online events](#). In these online events, the teams will learn more about Beamline for Schools and how to prepare their experiment proposal. Preregistered teams will also be invited to virtual visits to CERN and DESY.

The deadline to submit a proposal is 10 April 2025 at 23:59 CEST. Further information can be found on the [website](#). The Beamline for Schools competition is fully funded via the CERN and Society Foundation.

[C10 - IUPAP Early Career Scientist Prize 2025 in Structure and Dynamics of Condensed Matter](#)



Dr. Niels Schröter
Max Planck Institute of Microstructure
Physics, Halle, Germany

"For his pioneering discovery of chiral topological semimetals, new fermions, Weyl spin-momentum locking, and orbital angular momentum monopoles, enabling groundbreaking advancements with implications for spintronic applications and beyond."

AC1 IUPAP Early Career Scientist Prize in Plasma Physics



2020
Carlos A. Ríos
Ocampo
University of Maryland
(UMD)

"For significant contributions to to the field of Optics and Photonics"



2021
Giulia Fulvia
Mancini
Physics Department of the
University of Pavia

"For her contributions to imaging and scattering of nanostructured materials using high-harmonic soft X-ray sources and research on extreme ultraviolet imaging".



2022
Chao Zuo
*Department of Optical
Engineering at the Nanjing
University of Science and
Technology (NJUST), China*

"For his seminal contributions to computational phase imaging and metrology, particularly noninterferometric quantitative phase imaging and high-speed phase measuring profilometry".



IUPAP Open Calls

Let me have a look



IUPAP

Fondazione Internazionale Trieste per il Progresso e la Libertà delle Scienze c/o ICTP Strada
Costiera 11, 34151, Trieste

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