

What's new January-April 2024



Dear readers of the IUPAP Newsletter

This is the first president's note since the beginning of the new calendar year. We hope you have started it in good health and with renovated energy. Despite our silence, we have been very active preparing the <u>33rd General Assembly</u> that will be held on October 10-14, 2024, in Haikou City, China. The Assembly will be run in parallel with the meeting of the Chinese Physical Society with whom we will share several special events. Among them, the Women in Physics Forum that will celebrate the 25th Anniversary of IUPAP's Working Group on Women in Physics (WG5) and the Inter-Commission, interdisciplinary Workshop, "Physics Research for a Sustainable Planet". At this inperson GA the composition of IUPAP's Commissions and Executive Council (EC) will be renovated. Liaison Committees (LCs) of IUPAP's territorial members and representatives of Corporate Associate Members (CAMs) have already been invited to submit their nominations for Commission members by June 14th. As announced in our previous newsletter, the information provided by Commission Chairs was shared with LCs to facilitate the nomination process. We have mostly received positive comments about this new procedure. After LCs and CAM representatives submit their nominations for Commissions, Commission Chairs (CCs) will be invited to submit theirs by July 24th. Nominations for members of the EC will be open through August 7th. Once all these nominations are received, the Nominations Committee formed by the past and current Presidents and the President Designate will convene to produce the first draft of the slate. This draft will be discussed by the Nominations Committee with the EC&CC before the 33rd General Assembly. The draft slate will be considered by the EC, modified if necessary, and provided to the delegates to the GA before the first day of the meeting. The renovated composition of Commissions and EC will stay in place through the 36th General Assembly that is going to be held in 2027. For more information on the Assembly, please visit the page where we will post all updates related to it.

IUPAP's external evaluation committee.

As agreed in the last GA, an external evaluation committee was appointed to produce a report on IUPAP's current activities and structures but, most

importantly, with suggestions on how to increase the Union's visibility and the impact of its actions. One of us, Silvina Ponce Dawson, was tasked with setting up this committee which had its first meeting on March 9th. The members of the committee are George Amolo, from Kenya, Mark Cesa from the US, Sang-Joon Cho from the Republic of Korea, Cathy Foley from Australia and Atlas Varsted from Denmark. Marcia Barbosa from Brazil had been appointed too, but after the first meeting decided to resign for personal reasons. We might appoint another person from Latin America in the meantime. At the first meeting, the Committee members chose Atlas as its chair. Atlas will be invited to participate in the GA to present the Committee's report. The Committee was given some guiding questions, but we made it clear that they were free to advance along the lines that they considered most relevant. The questions included:

- How can IUPAP increase its visibility among physicists, physics students and/or companies with interest in physics and what target audience should it prioritize?
- What type of organization/structure would be best to address transversal issues such as gender or physics for development and what funding sources could be available to support their related activities?
- What type of actions would be best to increase the impact of IUPAP on policy and policy makers both at the national and international levels?
- What type of actions would be best to attract the support of companies with interest in physics and reach out to physicists outside academia?
- What sources of additional funding could IUPAP apply to?
- How can the level of knowledge of IUPAP and/or the impact of its actions be measured?
- What other suggestions do you have? With this input and the internal evaluation already done and on-going we expect to introduce the necessary changes that will help the Union advance with the renovated set of aims that hopefully will positively mark the first years of a new century of existence.

Participation in the Annual Leadership Meeting of the American Physical Society

One of us, Silvina Ponce Dawson, was invited to attend the Annual Leadership Meeting of the American Physical Society, ALM, together with presidents of several national physical societies of countries of the Americas (Argentina, Brazil, Canada, Chile and Mexico), of the Ibero-American Association of Physical Societies (FEIASOFI) and the Director of ICTP-SAIFR (a "sister" institution of the Abdus Salam International Centre for Theoretical Physics located in Sao Paulo, Brazil). The invitation included a participation in the APS-Americas Physics Leaders Summit in which possible collaborations and collective activities across the Americas were discussed. The following day the invitees participated in the panel discussion "Challenges Facing Physical Societies" that was part of the ALM. The panel provided the ALM audience with insights on some of the Summit's discussions with a special focus on how the organizations that were represented could collaborate on shared interests and challenges. The panel also served to present IUPAP to representatives of the physics community in the US, many of whom only barely knew about our Union or did not know at all. The meeting also served to strengthen relations and discuss possible future avenues of cooperation. We expect that APS's President, Young-Kee Kim, who is planning to attend the CPS meeting in Haikou City in October, will also participate in some of the activities of our GA.

Participation and co-organization of the Global Knowledge Dialogue for Latin America and the Caribbean of the International Science Council

IUPAP is a Category 1 Member of the International Science Council (<u>ISC</u>), the nongovernmental organization that brings together more than 250 international scientific Unions and Associations and national and regional scientific organizations and which works at the intersection of science and <u>policy</u>. Headquartered in Paris, France, it has Regional Focal Points in <u>Asia and the Pacific</u> and in <u>Latin America and the</u> <u>Caribbean</u> (LAC), and is currently analyzing the options to establish a regional presence in <u>Africa</u>. Since 2022, the ISC has been organizing Global Knowledge Dialogues (<u>GKD</u>) in different regions with ISC members and policy makers to strengthen the global voice of and for science. The latest, <u>for Latin America and the</u> <u>Caribbean</u>, took place on April 10-11 in Santiago, Chile. With the co-organization of the ISC-LAC Regional Focal Point Liaison Committee of which one of us is member, the Dialogue was preceded by three parallel events on April 9th, one on Freedoms and Responsibilities in Science in which the viewpoints of IUPAP on the matter were expressed, an Early and Mid-Career Researchers Forum and an Artificial Intelligence workshop run by the ISC <u>Centre for Science Futures</u> together with the Latin American Initiative on Open Data (ILDA). The Dialogue hosted the **First Science and Diplomacy Forum of Latin America and the Caribbean which covered** the theme "Sustainable Knowledge as a Development Tool" with the aim of redefining the conversation on the subject in the region. The Forum was followed by a presentation of the ISC and its Regional Focal Point and by sessions which covered various issues of interest. Among, them a session on "**The Future of Evaluation and Publishing in Open Science Contexts**" **took place at the end of the first day in** which the aims and activities of the ISC Committee on Data (CODATA) were described as well as the participation of IUPAP in its development.

Henri Abraham Award for long distinguished service to the IUPAP

In May 2024 we will open a new call of nominations for the Henri Abraham award. **The deadline for the nomination submissions will be August 7th, 2024 (midnight UTC).** The awards will be given during the IUPAP General Assembly of October 2024. The award recognizes those who have given distinguished and meritorious long service to the IUPAP but have not been IUPAP's President or Chair of a Commission or working group, understanding by long, more than 9 years of service and by meritorious, service that has significantly helped IUPAP to achieve and sustain its mission. For more information on the award and how to submit nominations, please visit the dedicated <u>page</u>.

Final words

We are very excited that we will have an in-person GA again, for the first time, since 2017. We are looking forward to meeting with our old and new members. We expect it will be a great event of deep impact on our future actions. We will give you more details about it in the next Newsletters. In the meantime, we momentarily say good by esending you our best wishes.

Michel Spiro, President Silvina Ponce Dawson, President Designate

IUPAP Kennedy Reed <u>Medal</u> For Outstanding Contributions To The Enhancement Of Physics In Developing Countries



Malik Maaza

"For the exemplary commitment of Prof. M. Maaza towards cementing the physical sciences in Africa & the global South, especially in terms of supervision & mentorship of the next generation of Physicists as well as strengthening Physics via several national, continental & international scientific platforms"

Malik Maaza has played a major role in helping to shape the science and technology landscape of Africa, while also making significant contributions elsewhere in the developing world. With

an h-index factor of 99, he is the most highly cited nanophysicist in Africa and has been ranked by the annual Stanford University Classification Metric among the top 2% most influential worldwide scientists since 2019. These international metrics echo the quality of the physical sciences-based knowledge production that he has generated and contributed to the global community, while doing so with limited resources compared to his peers in the North. Over his career, he has participated in the training of over 100 Masters and Doctoral students, and about 32 postdoctoral fellows. His students have been mostly from Africa, but included in that number are also students from active or former war zones and countries under embargo (Libya, DRC, Yemen, Iran). Altogether over 30% of his trainees have been women, underlining Malik's emphasis on promoting gender equity.

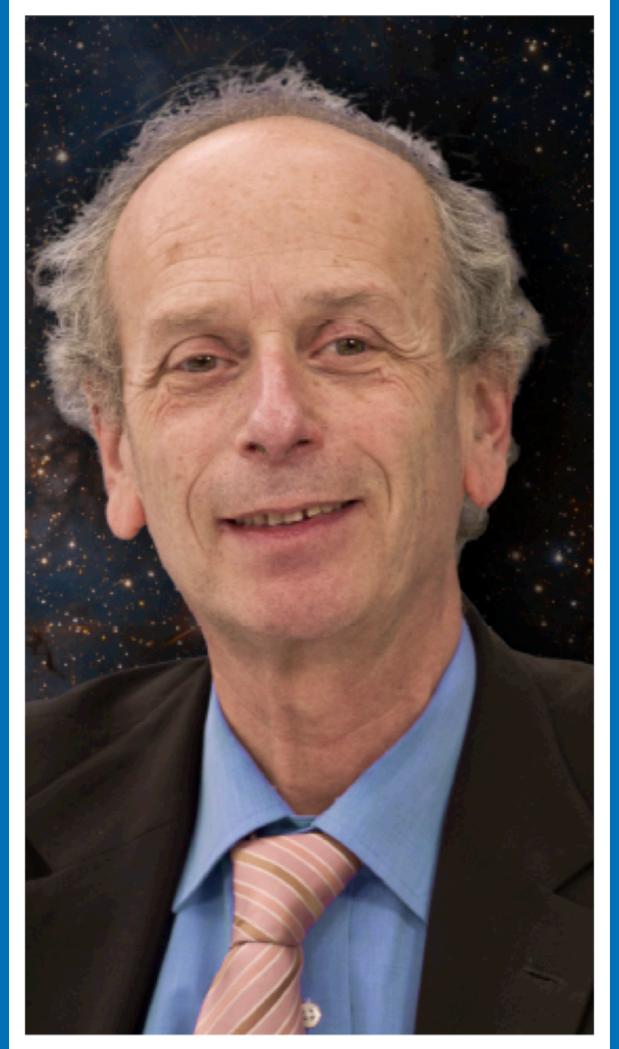
His influence goes well beyond his own scientific production, however; in particular, **Malik has contributed significantly towards the development of scientific infrastructure in Africa**. He is the founding chairman of the pan-African NANOsciences African Network (NANOAFNET), aimed primarily at enhancing the global visibility and contribution of Africa in nanosciences, as well as developing cost effective nanotechnologies to address societal challenges on the continent. Since its inception, NANOAFNET has been recognized by the African Union (AU) as a Network of Excellence. In addition, Malik played a key role in creating the African Laser Centre (ALC) of which he remains a founding member. The ALC, a flagship project of the African Ministerial Council on Science and Technology, serves as a virtual center coordinating a network of laser training and research activity throughout all of Africa and is the premier African institution of its type and focus.

Malik also holds the UNESCO-UNISA Africa Chair in Nanosciences & Nanotechnology (U2ACN2), whose mission is to foster continent -wide capacity- building in the nanosciences and nanotechnology, promote the mobility of scientists across Africa in these areas, and to promote the use of nanotechnologies in addressing challenges primarily related to clean water, energy and health. U2ACN2 has notably been involved in programs to support historically disadvantaged universities in the region.

To enhance the communication and publishing of African excellence in nanophysics, Malik initiated and implemented the Open access Journal "NANO-HORIZONS" with the support of the Royal Society-UK, Science Open international-Germany and UNISA Publishinghouse. He is the founding Editor-in-Chief.

Finally, Malik has won many awards, including the Order of Mapungubwe, the Spirit of Abdus Salam Award from UNESCO-ICTP, and the Galileo Galilei award of the International Commission for Optics (ICO). He is a Fellow of numerous Academies around the world, including the National Academy of Sciences of India, the European Academy of Sciences, the American Association for Advancement of Science, the Royal Society of Chemistry (London), the Islamic Academy of Sciences, the African Academy of Sciences.

Meet our team



Michel Spiro President

• Could you please introduce yourself?

Michel Spiro (77y), former President of CERN Council (2010-2012), former director of IN2P3 (National Institute for Nuclear Physics and Particle Physics) in CNRS (2003-2010), now Emeritus Research Director at CEA, and since 2019 President of IUPAP (International Union of Pure and Applied Physics). I was also chair of the International Year of Basic Sciences for Sustainable Development in 2022 – 2023 and one of the major promoters of the International Deacade of (all) Sciences (and all knowledge, including traditional) for Sustainable Development 2024 - 2033. In addition, I'm chair of the board of the Foundation CERN & Society. My research extended from particle physics experiments at CERN (W and Z discovery) to astroparticle physics experiments (detection of solar neutrinos and search for dark matter through microlensing).

• What is your role within the IUPAP?

I am President of IUPAP since 2019. My main role is to motivate people (IUPAP Officers, IUPAP secretariat and communication team, Executive Council Members, Commission Chairs and Working Group Chairs) to work in harmony for IUPAP developing the best strategy, the best implementation and the best actions.

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

The spirit of non profit, volunteer and inclusive collaboration.

<u>What do you think is the greatest potential of IUPAP?</u>

Develop equity, diversity and inclusion in Physics. Develop Physics for peace.

2021 ICPE Medal - Commission 14 on Physics Education

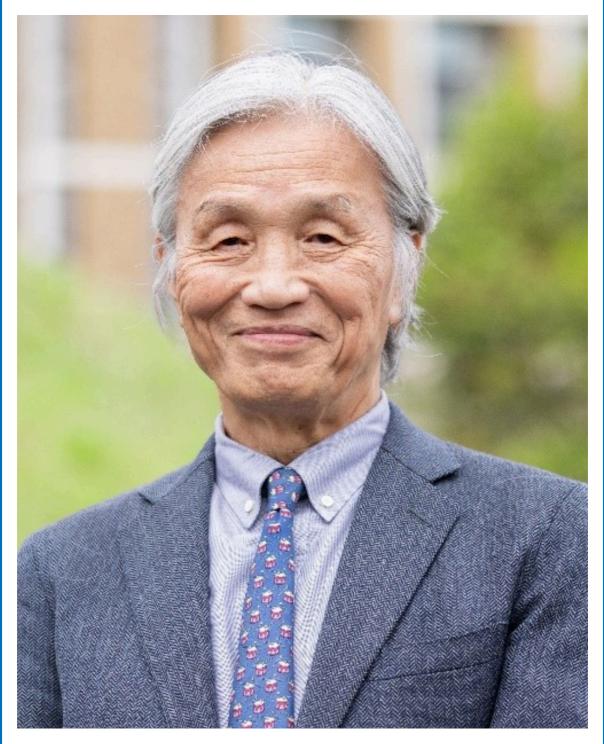


Dr. Paula Heron

Professor Paula Heron is awarded the ICPE Medal for 2021 in recognition of her sustained efforts in physics education over the past decades, both nationally and internationally. Dr. Heron's dedication to advancing the understanding of physics education has been unparalleled throughout her illustrious career as a physicist educator at the University of Washington. Her rigorous research, published in esteemed journals, conferences, and books, embodies her strong commitment to improving the teaching and learning of physics.

More

2024 IUPAP Magnetism Award and Néel Medal - Commission on Magnetism



Dr. Masato Sagawa

"For pioneering contributions to the invention and development of rare-earth-iron-boron highperformance permanent magnets."

More

IUPAP Early Career Scientist Prize



AC2 - Affiliated Commission on General Relativity and Gravitation Magnetism - 2024 Dr. Alexandru (Alex) Lupsasca

"For studies of the universal properties and observational signatures of black hole photon rings."



<u>C9 - Commission on</u> <u>Magnetism - 2024</u> Dr. Lucas Caretta, Brown University

"For outstanding contributions to the understanding of ultrafast, current-driven magnetic domain wall motion and relativistic magnetization dynamics."



<u>C8 - Commission on</u> <u>Semiconductors - 2023</u>

Dr. Yang Xu, Yang Xu, Institute of Physics (IOP), Chinese Academy of Sciences

"For pioneering experimental studies of lowdimensional quantum materials including the semiconducting and magnetic moiré materials and topological insulators"



<u>C8 - Commission on</u> <u>Semiconductors - 2023</u>

Dr. Marina Filip, Department of Physics at the University of Oxford

"For pioneering contributions to the understanding of light-matter interactions in hybrid organic-inorganic metal-halide semiconductors"

IUPAP Upcoming Sponsored Commission Conferences

Find out more



IUPAP

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