



Monica Pepe Altarelli
VP at large, Centenary
EC&CC and GA, Oct.2023

Centenary Symposium

- 11–13 July 2022, @ICTP, Trieste
- ~250 physicists from 70 countries (in person and online)
- Core aims of the union discussed by various expert panels:
 - e.g., how to support early career physicists; how to improve diversity; how to strengthen the ties to physicists working in industry; how to improve the quality of physics education; how to promote physics in Africa & Middle East, Latin America, Asia & Pacific
- We welcomed Ukraine as new IUPAP member with Anatoly Zagorodny, President of National Academy of Sciences of Ukraine, online connection with EPS-HEP
- Great science (Bill Phillips: The modern metric system; Donna Strickland : Optics & laser physics; Takaaki Kajita : Neutrino Physics in the last 100 years; Tim Palmer : Climate change) ; three excellent talks by winners of IUPAP Early Career prizes
- One special talk on The Increasing Peril from Nuclear Arms: and how physicists can help reduce the threat (S.Prager from Physicists Coalition for Nuclear Threat Reduction)
- Three presentations on the IUPAP history



IUPAP100: Media coverage analysis

- SISSA Medialab responsible for press office (Federica Sgorbissa from Sissa Medialab)
- Actions at local, national and international level
- ~130 press releases
- International coverage included Physics World, Physics Today, Nature Physics, CERN Courier...
- Italian coverage included Le Scienze, L'Espresso, Il Sole24ore and Wired
 - Nice article by Silvina Ponce Dawson and Gillian Butcher in the July issue of Le Scienze ("The obstacle race of female scientists" 8 pages, paper)



International coverage



[Interview with Michel on Physics World](#)

CULTURE, HISTORY AND SOCIETY | INTERVIEW
IUPAP: uniting physicists for the last 100 years
27 Jun 2022 | Laura Hiscott
Michel Spiro, president of the International Union of Pure and Applied Physics, talks to Laura Hiscott about the organization's biggest achievements, its challenges, and its future.



[Article by R.Lalli&J.Navarro on IUPAP History on Nature Reviews Physics](#)

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<https://www.nature.com/articles/s42254-022-00503-w>

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100 Years of the International Union for Pure and Applied Physics

[In depth article by Toni Feder on Physics Today](#)

IUPAP celebrates a century and strives to meet new challenges

The International Union of Pure and Applied Physics is reflecting on how to best serve and link physicists around the world.



Attendees of IUPAP's centennial symposium gathered at the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy. Credit: IUPAP

Editorial

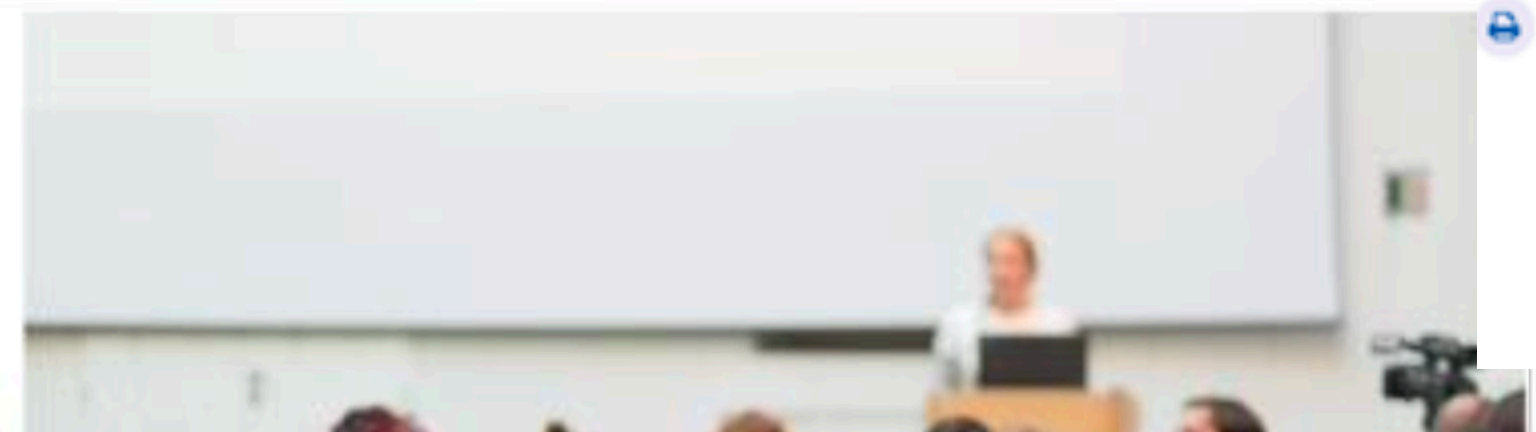
[Editorial on Nature Physics](#)



<https://doi.org/10.1038/s41567-022-0180-4>

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.



CULTURE AND HISTORY | SYMPOSIUM
IUPAP Centenary
11–13 July 2022 | Trieste, Italy
Website: <https://indico.ictp.it/event/9874/overview>
Venue: ICTP
Organizer: ICTP
E-mail: iupap100@iupap.org

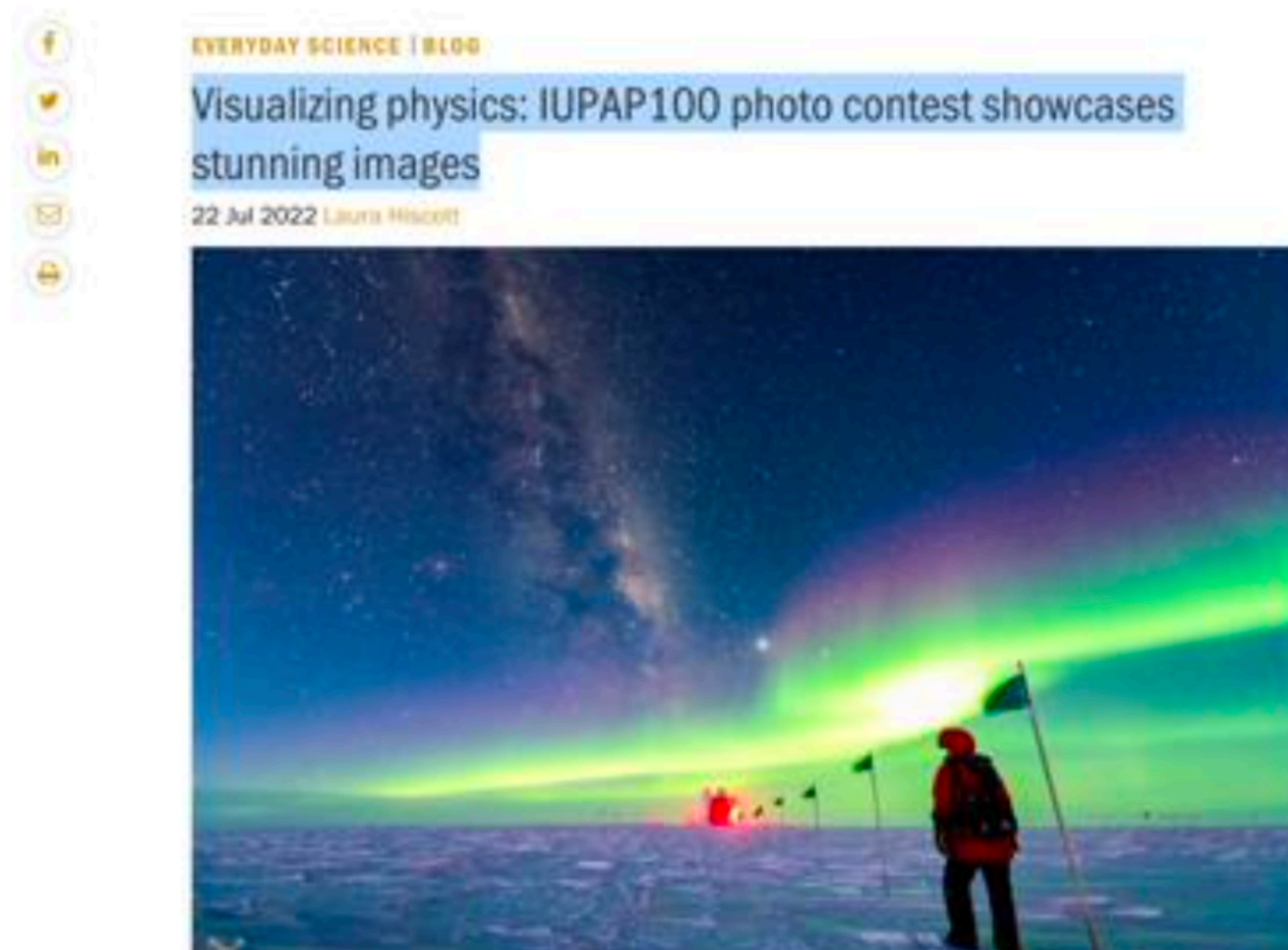
The International Union of Pure and Applied Physics (IUPAP, <https://www.iupap.org>)

Photo context



[Article on physics world](#)

Chasing Ghost Particle at the South Pole” by Yuya Makino



Videos

- Two videos produced by CERN Audiovisual Production Service
<https://videos.cern.ch/record/2297570>:
 - A short video (~1 min)
 - A longer video with interviews (~7 min)

IUPAP 100 History Project

- Digitization of all IUPAP archives (one year of work!)
- Many international researchers involved in the study of this historical material
- Workshop in San Sebastian/Donostia, Spain in Oct. 2022
- Research compiled in a book: “*Globalizing Physics: One Hundred Years of the International Union of Pure and Applied Physics*”, editors Lalli & Navarro, from the Affiliated Commission on the History and Philosophy of Physics
- **Book is finished, to be published by Oxford University Press by the end of the year (or beginning of next)**

Book Chapters

- **Introduction**

1. IUPAP between physics and diplomacy: an introductory essay

- **Part I: The interwar period**

2. The IUPAP and the interwar world of science

3. The “happy thirties”? Millikan’s troubled presidency of the IUPAP

- **Part II: Reshaping and reframing IUPAP’s action after World War II**

4. From diplomacy to physics and back again: The changing roles of IUPAP in the second half of the 20th century

5. Under the ICSU umbrella. The joint commission on radioactivity (1947-1955) as a case of cooperation between IUPAP and IUPAC

6. Light as an Instrument of Precision Metrology

7. Particles, Purity, and Politics: The Rise of a New Subdiscipline in the 1950s

8. Restoring Physics: IUPAP’s Commission on Education, Signature Pedagogies, and the International Politics of Science in the 1960s

- **Part III: National interests and international cooperation**

9. Repairing a Scientific Network: The International Conference of Theoretical Physics in 1953 and the Rehabilitation of the Japanese Physics Community

10. Going back and forth: Latin American countries in the IUPAP

11. Coming out of “the negative cycle in the sine curve”: The sinuous road for the Chinese Physical Society to return to the IUPAP

12. India at the International Union for Physics and Applied Physics

- **Part IV: IUPAP and the Cold War**

13. A non-existent relationship? Encounters between IUPAP and NATO during the Cold War

14. Edoardo Amaldi and the scientific collaboration with the USSR

15. National Individuals and International Unions: Gleb Wataghin’s experience with the IUPAP

16. Geneva, Dubna, and the IUPAP: Science diplomacy and international cooperation across the Iron Curtain

17. Cold War East-European Policy and International Cooperation: Czechoslovak Scientists in ICSU and IUPAP

Digitization of IUPAP archives

1. 69 volumes at IUPAP Gothenburg Secretariat, Royal Swedish Academy of Sciences, Stockholm
2. 74 folders at IUPAP sub-series of the Larkin Kerwin Fonds at the University of Laval
3. Six volumes at IUPAP Quebec Secretariat, Center for the History of Science, Royal Swedish Academy of Sciences, Stockholm
4. Three volumes at IUPAP, Transfermium, Center for the History of Science, Royal Swedish Academy of Sciences, Stockholm
5. Numerous boxes of the Amaldi, Persico, Salvini and Cabibbo Collections, Archives of physics department, University Sapienza, Rome
6. Various folders of the Weisskopf Collection, MIT Archives
7. Various boxes of the Millikan Collection, Caltech Archives

Dedicated session at APS March Meeting

- IUPAP@100 : International Science in Changing Societal and Geopolitical Landscapes - Sponsored by Forum on International Physics (FIP)
 - 100 years of existence of the International Union of Pure and Applied Physics, IUPAP (Monica Pepe Altarelli)
 - Nicholson Award Winner: Challenges and Opportunities in Physics Education for the 21st Century (Chandralekha Singh)
 - IUPAP and the Changing Landscape of Science Diplomacy (Laura Greene)
 - Increasing Perils from Nuclear Arms: How Physicists Can Help Reduce the Threat (Stewart Prager)
 - John Wheatley Award Winner: A Portrait of Physics in Africa as Painted by the African Physics Newsletter (James E. Gubernatis)
- Two more online events sponsored by FIP
 - Special IUPAP@100 forum (Nov 22) - Michel, Silvina, Laura, Monica
 - “Entering the new century of IUPAP with a renovated vision” by Prof. Silvina Ponce Dawson (May 23)

Satellite events

- Many regional and national events associate to the IUPAP's centenary celebrations, eg, in Asia, Latin America etc, see <https://iupap.org/centennial/satellite-events/>
- Two very recent examples:
 - 36th International Young Physicists' Tournament (IYPT) in Pakistan
 - International Conference on Physics of Sustainable Energy in Kathmandu, Nepal (Sept. '23)

Summary

- 100 years ago IUPAP was set up to stimulate and promote international cooperation in physics. It has expanded its actions, but is now facing more challenges, such as :
 - Addressing freedom of movement of scientists
 - Facing urgent environmental and energy problems
 - Setting standards of rational thought in the face of irrationality (eg, proliferation of fake conferences, fake journals and fake news in general)
 - Better connecting with developing countries
 - Increasing diversity and inclusion ...
- It is our task to address these and other concerns of the physics community

... and some thoughts

- We have a fantastic world-wide network, great people and potential to coordinate on a global scale... but limited resources
- How can we do better?
- How can we have a stronger impact on the physics community and on society?
- How can we liaise better with other national physical societies?
- We have a complicated structure: how can we better focus on outcomes rather than processes?
- We have started an internal reflection, trying to answer these questions