



IUPAP Centenary Activities

Monica Pepe Altarelli

CERN, Switzerland

IUPAP, Vice-president elected at large

iupap100@iupap.org

Several initiatives

1. The Centenary Symposium
2. IUPAP100 History Project
3. Photo contest
4. Satellite events elsewhere in the world

All organised with very limited resources (people and money)
and ... a lot of good will

The Centenary Symposium

- Mond. to Wed. **11,12, 13 July 2022** @ ICTP, in Trieste, in person but with online participation



Program based on the following ideas:

- Three 30' segments on the IUPAP history
- Remote connection with a very large C11 IUPAP type A conference on day one (ICHEP 2022, in Bologna, ~1000 people)
 1. Welcome to Ukraine as new IUPAP member with Anatoly Zagorodny, President of National Academy of Sciences of Ukraine
 2. Keynote talk by Takaaki KAJITA on Neutrino physics
- One special talk
 - The Increasing Peril from Nuclear Arms: and how physicists can help reduce the threat (S.Prager from [Physicists Coalition for Nuclear Threat Reduction](#))
- Five 1h panels on IUPAP mission statements
 1. Women and underrepresented groups
 2. Science advising policy
 3. Early career
 4. Physics for development
 5. Physics Education
- Three 1h regional panels addressing achievements in the region and expectations from IUPAP (What can IUPAP do for the region?)
 1. Latin America
 2. Asia & Pacific
 3. Africa & Middle East
- Four prestigious keynote speakers (including Kajita)
- Three brief (20') early-career keynote speakers (award winners)
- Two thematic presentations (mini 30' panels):
 1. Why it is important to be a member
 2. Focus on life outside of academia (physics and industry)

Keynote speakers

- **William Phillips** (USA) C2 – *The modern metric system*
- **Donna Strickland** (Can) C17, C15 (*Online*) – *Optics & laser physics*
- **Takaaki Kajita** (Jap, C4) – *Neutrino Physics in the last 100 years*
- **Tim Palmer** (Oxford, UK) *Climate change* (suggested by G.Parisi)

IUPAP100 History Project

From the early days of the Union, there was an idea of inclusiveness (in the context of the time) and desire to be truly international.

Research topics addressed by the project include:

- the role of IUPAP in the development of physics
- the connections between science and diplomacy in the work of IUPAP
- the internationalisation of physics through the 20th century
- the relationship between basic and applied physics

Coordination: **Roberto LALLI** (Max Planck institute for the History of Science, Berlin, Germany) & **Jaume NAVARRO** (Universidad Pais Vasco, San Sebastian/Donostia, Spain) President of the Inter-Union Commission on the History and Philosophy of Physics

Photo contest

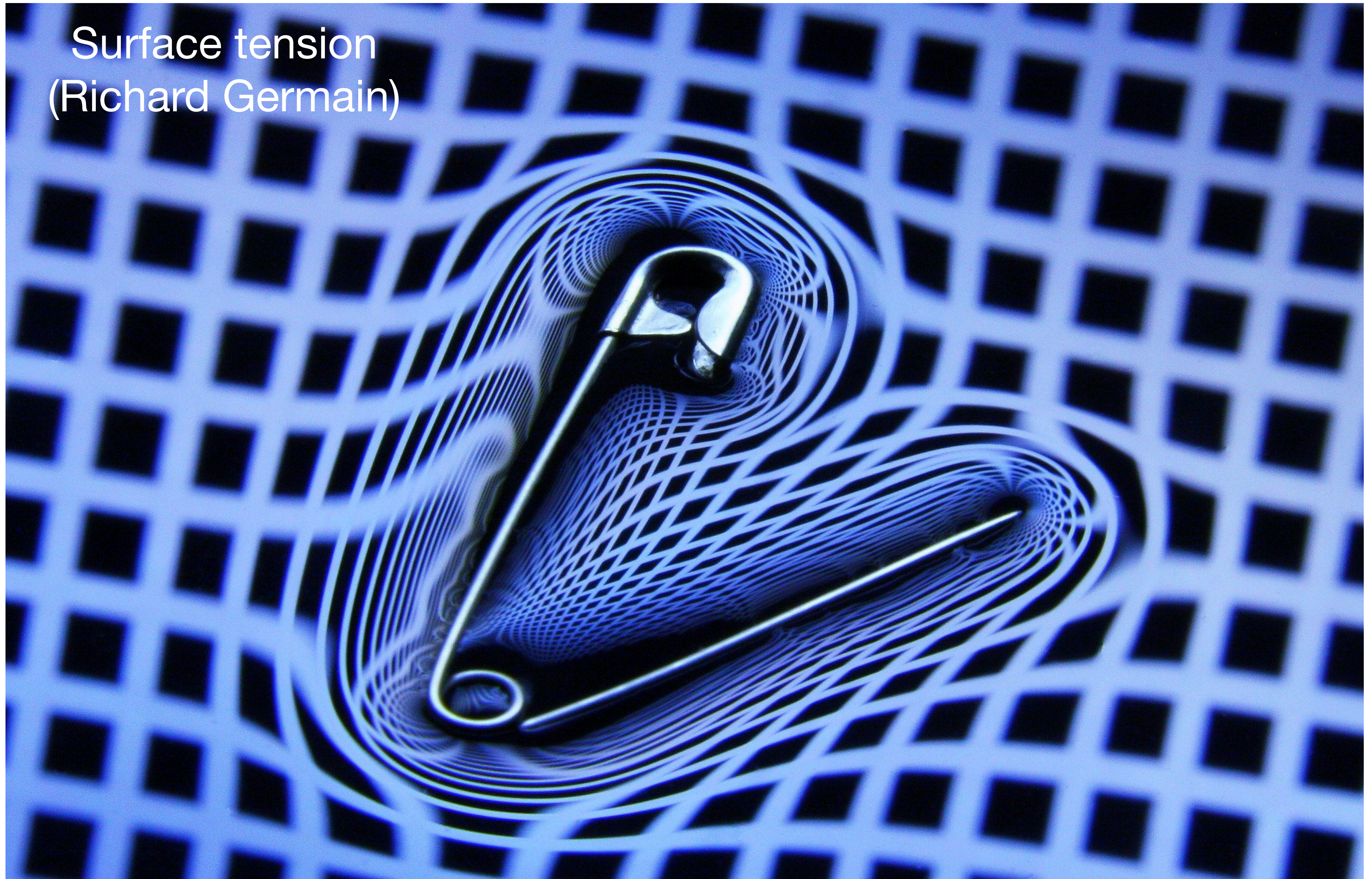
- Two categories:
 1. BEYOND OUR EYES: images that have been obtained through special scientific equipment or have been made via computer simulations of physical processes.
 2. AT A GLANCE: all other images that have been obtained with a professional, amateur or cellular camera.
- Results available at: <https://iupap.org/centennial/iupap-100-photo-contest/>

Chasing Ghost Particles at the South Pole

(Yuya Makino)



Surface tension (Richard Germain)





Foldoscope -
A revolutionary microscope
(Arpan Chowdhury)

Satellite events elsewhere in the world

- “One hundred years of the IUPAP. A workshop”, 20-22 October 2022.
- “IUPAP Centenary celebration: The Braggs' Legacy” on 3 October 2022
- “Physics for Sustainable Development” on 19 September 2022.
- “Annual Physics Conference of Iran” during 5-8 September 2022.
- “Trends in MAGnetism 2022” during 4-9 September 2022.
- “International Joint Symposium of Women in Science and Technology” organized by the Physical Society of Taiwan – TPS, Academia Sinica, and the National Taiwan University – NTU. The Symposium aims to provide a dynamic international venue for participants to share their professional achievements and discuss the progress of promoting women's involvement in physics. October 29-30, 2022.
- “XXXVIII Biennial of Physics of the Spanish Royal Physics Society” during 11-15 July 2022.
- “7th National Conference on Superconductivity and Magnetism Advances” during 6-7 July 2022.
- “Regional e-Conference on Physics” organised by the Pakistan Physical Society under the auspices of the IUPAP during 18-21 January 2022.
- “100 Years of Physics in Africa”, organised by the African Physics Community in celebration of the IUPAP Centenary. The project plans to share stories that celebrate and communicate the immense contributions that physics education and research have made to Africa's development.

Messages and lessons learned

- Important role that IUPAP has had and continues to have to bring people together and, despite political conflict. This is manifest in facilities, projects and regional networks supported by IUPAP.
- Huge impact of IUPAP's initiatives to address the gender gap in physics, particularly the actions of its Working Group on Women in Physics (WG5) (eg, creation of a very effective network in Latin America).
- Important links established with community of students and early career physicists (eg, with International Association of Physics Students).
- The industry, climate change and policy related talks all highlighted the various roles that physicists have and the need for IUPAP to support these physicists and activities. It is essential that physicists continue to engage in climate change work and also in national and international policy.