

News from IUPAP C4

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CHALMERS



Swedish
Research
Council

*Knut och Alice
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Stiftelse*

- The International Union of Pure and Applied Physics (IUPAP) was established in 1922
- It currently has 60 Territorial Members
- The aims of the Union are:
 - Assist in the worldwide development of physics and promote physics as an essential tool for **development and sustainability**;
 - Engage in the strengthening and improvement of physics **education**, particularly in developing countries;
 - Increase **diversity and inclusion** in physics;
 - Foster **international cooperation** and sponsor suitable international physics meetings;
 - Promote the **free circulation of scientists** and the **open access** to data;
 - Enhance the vital role of **early career physicists**;
 - Strengthen the links with physicists working **outside academia** and with other scientific communities;
 - Uphold **openness, honesty and integrity** in the practice, application and promotion of physics;
 - Promote international agreements on symbols, units, nomenclature and **standards**

Selected actions

- IUPAP endorses and sponsors international conferences and workshops:
 - **Type A**, or General, conference. Large general meeting of 750 -1000 attendees covering an entire field (i.e. the area covered by a Commission).
 - **Type B**, or Topical, conference. Smaller with 300 - 500 attendees on a subset of topics.
 - **Type C**, or Special, conference. 50 - 200 attendees on a specialized topic, and may be a workshop.
 - **Type D**, workshops in developing countries.
- IUPAP sponsors a number of awards for scientists at different stages of their careers
 - **Major prizes** honor the achievements of established renown physicists within the subfields of each Commission.
 - **Early Career Scientist Prizes** recognize the contributions of early career physicists within these subfields.

- The Union is governed by its General Assembly
- The Council is its top executive body, supervising the activities of specialised International Commissions, Affiliated Commissions and Working Groups
- International Commissions
 - C1: Commission on Policy and Finance
 - C2: Commission on Symbols, Units, Nomenclature, Atomic Masses and Fundamental Constants
 - C3: Statistical Physics
 - **C4: Astroparticle Physics**
 - C5: Low Temperature Physics
 - C6: Biological Physics
 - C8: Semiconductors
 - C9: Magnetism
 - C10: Structure and Dynamics of Condensed Matter
 - **C11: Particles and Fields**
 - C12: Commission on Nuclear Physics
 - C13: Physics for Development
 - C14: Physics Education
 - C15: Atomic, Molecular, and Optical Physics
 - C16: Plasma Physics
 - C17: Laser Physics and Photonics
 - C18: Mathematical Physics
 - C19: Astrophysics
 - C20: Computational Physics

C4: Astroparticle Physics

- C4 promotes the exchange of information among the members of the international scientific community in the general field of Astroparticle Physics, including
 - The nature and characteristics of the electromagnetic, particle and other radiation present in the cosmos;
 - The theory and models concerning the origin of this radiation;
 - Non-accelerator high energy physics;
 - The specialised technologies necessary in the field and their application

C4 mandate and composition

■ Mandate includes:

- Initiate and support international conferences such as ICRC, ISVHECRI, TAUP, VLVnT, IDM, and TeVPA
- Promotion of free circulation of all scientists
- Award the IUPAP Early Career Scientist Prize in Astroparticle Physics
- Award the Homi Bhabha Medal and Prize "*to an active scientist who has made distinguished contributions in the field over an extended career*"
- Award the O'Ceallaigh Medal "*to a scientist who has made distinguished contributions to Cosmic Ray Physics*"
- To maintain liaison with other IUPAP Commissions, and make available to each General Assembly of the Union a summary of activities

■ Members:

- Ralph Engel, Germany (Chair)
- Christina M. S. Cohen, United States (Vice-Chair)
- Carola Chinelatto, Brazil (Secretary)
- Yvonne Wong, Australia
- Zhiguo Yao, China(Beijing)
- Rami Vainio, Finland
- Pankaj Jain, India
- Elena Amato, Italy
- Shoichi Ogio, Japan
- Sergey Troitsky, Russian Federation
- Du Toit Strauss, South Africa
- **Riccardo Catena, Sweden**
- Yuan-Hann Chang, China (Taipei)
- Subir Sarkar, United Kingdom

- In 2024 IUPAP C4 sponsored ISVHECRI 2024; 8 - 12 July 2024, Puerto Vallarta, Mexico
- In 2024 IUPAP C4 received applications to support two conferences: **ICRC 2025** and **TAUP 2025**
- In 2024 IUPAP C4 awarded the following prizes:

1) **Early Career Scientist Prize in Astroparticle Physics**

- **Lu Lu**, PhD, University of Wisconsin - Madison, USA
For "*her contributions to the development of high energy neutrino astronomy in the PeV energy region*".
- **Andrea Caputo**, PhD, CERN - Switzerland
For "*his leading theoretical contributions to connecting beyond-Standard-model particle physics with astrophysics and cosmology*".

2) **IUPAP-TIFR Homi Bhabha Medal and Prize**

- **Samuel C. C. Ting**, MIT, USA

3) **O'Ceallaigh Medal**

- **Sunil K. Gupta**, Tata Institute of Fundamental Research, India