



# IUPAP - Commission 11

## Particles and Fields

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# International Union of Pure and Applied Physics

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- IUPAP is the only International Scientific Union dedicated to all areas of physics
  - It is run by physicists from all fields and continents
  - The union is a network of networks, a network of communities
- **Mission:** To assist in the worldwide development of physics, to foster international cooperation in physics, and to help in the application of physics toward solving problems of concern to humanity
- Created in 1922 with 13 country members (Belgium, Canada, Denmark, France, Holland, Japan, Norway, Poland, Spain, Switzerland, UK, USA, South Africa), it now has about 60 territorial members representing identified physics communities from all regions

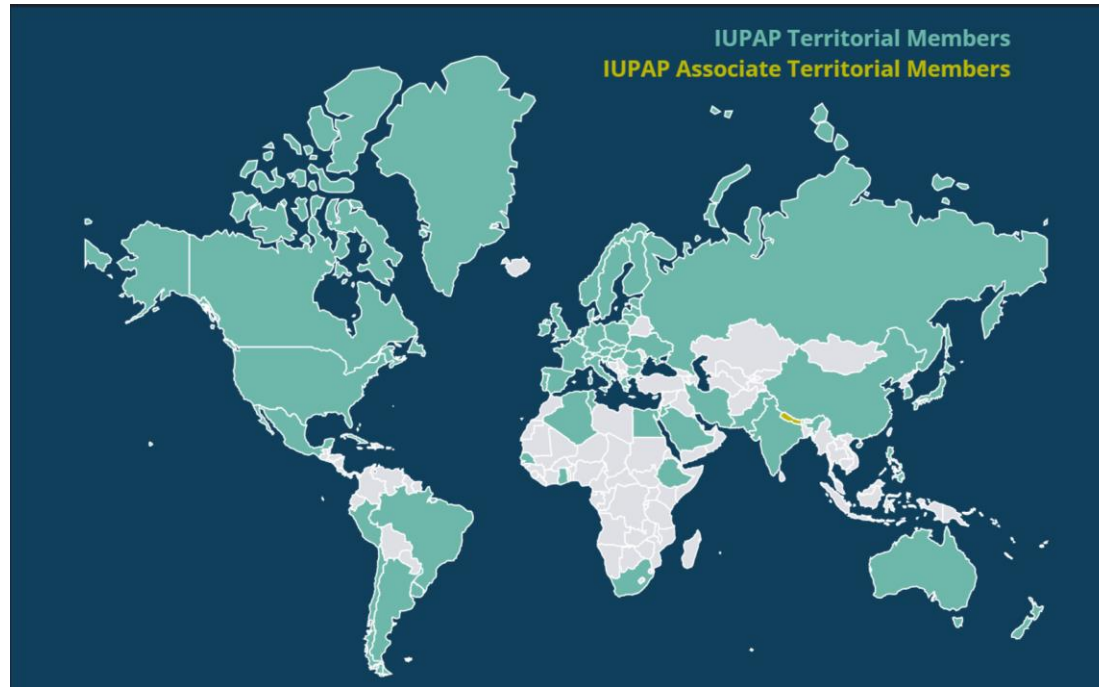
# Members

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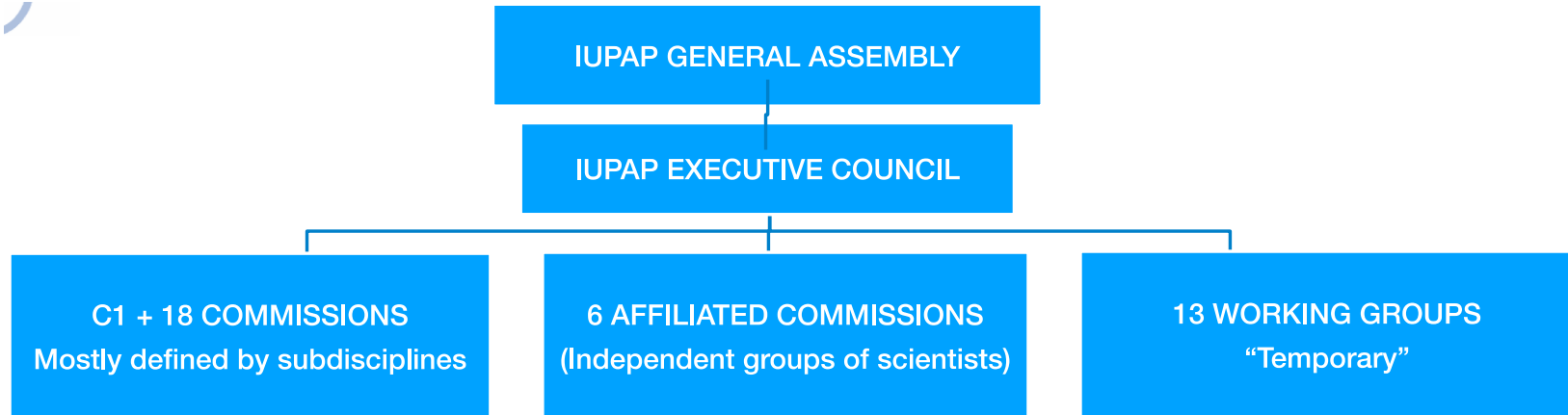


- **Territorial Members**
  - IUPAP territorial members are representatives of identified physics communities across the world. There are currently 60 territorial members.
- **Corporate Associate Members**
  - They are commercial companies or international research organizations that have a special relationship with the field of physics or scientific research
- **Associate Territorial Members**
  - Relatively small national physics communities from developing territories. This category is established to facilitate a first step towards full territorial membership. Associate Territorial Members must commit to grow its physics activities and community. IUPAP will monitor this progress over a three-year period, renewable for however long it takes to bring the territory to a level where it can realistically join IUPAP as a regular Territory Member
- **Personal Members**
  - These are Ex-Officio members comprising only the Chairs of IUPAP Commissions or Affiliated Commissions

# Members



# Internal Organization



- The Union is governed by its General Assembly which meets every three years
- The Council is its top executive body, supervising the activities of specialized International Commissions, Affiliated Commissions and Working Groups.

# General Assembly

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- Liaison Committees (representing territorial members)
  - Voting rights that depend on the number of units they pay
  - National Academies of Sciences (typical of oldest IUPAP members)
  - National Physical Societies
- Corporate Associate Members
  - No voting rights but pay units
- Chairs of Commissions and Affiliated Commissions
  - Voting rights
- Official Observers
  - Strengthen our liaisons with regional physical societies and other international scientific organizations

# Executive Council



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- An Executive Council (the Council) oversees and administers the activities of the Union between General Assembly meetings
    - It normally meets at least once per year and every three years for the General Assembly.
  - The Council is composed of the President, President-Designate, ten Vice-Presidents, the Secretary-General and the Associate Secretary-General, all elected by the General Assembly, plus the immediate Past President
    - At least one of the members shall be from a developing country
    - The term of office of Councillors normally begins and ends at the end of each General Assembly
    - Five of the Vice-Presidents shall be elected at large and five Vice-Presidents shall be elected from among the Chairs of the Commissions.

# Commissions



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- C1: Policy & Finance
  - C2: 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: 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**



# Affiliated Commissions

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- AC1: International Commission for Optics
- AC2: International Commission on General Relativity and Gravitation
- AC3: International Commission for Acoustics
- AC4: International Commission on Medical Physics
- AC5: Affiliated Commission of Physics Students
- AC6: Affiliated Commission on the History and Philosophy of Physics

# Working Groups



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- **WG1: International Committee for Future Accelerators**
  - WG5: Women in Physics
  - WG7: International Committee on UH Intensity Lasers
  - WG9: International Cooperation in Nuclear Physics
  - WG11: Gravitational Wave International Committee
  - WG13: Newtonian Constant of Gravitation
  - **WG14: Accelerator Science**
  - WG15: Soft Matter
  - WG16: Physics and Industry
  - WG17: IUPAP's Centenary
  - WG18: Ethics
  - WG19: Quantum Science and Technology
  - WG20: Open Science
  - WG21: Physics for Climate Change Action and Sustainability

# IUPAP Aims



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- 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, enhancing the participation and recognition of women and of people from underrepresented groups;
  - 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 and physics students;
  - 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

# IUPAP Aims



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- It is not possible to advance all of them equally well given our current structure and budget. This is one of the reasons why the EC decided to start a process that hopefully will lead to the rejuvenation of the Union, to increase its visibility and the impact of its actions
  - How do we relate with individual physicists?
    - This is a challenge: there might be too many layers between IUPAP and individual physicists
  - Very hard to reach out to physicists outside academic or research institutions (the Corp Associate Member category was created to increase these relations)
  - Commissions, ACs and WGs are key to relate to physicists. They mainly do it through the activities they supervise/organize: international conferences and awards. **Hopefully you will get involved in other activities as well!**

# C11 - Mission



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## Article 1

- To promote the exchange of information and views among the members of the international scientific community in the general field of Particles and Fields including:
  - The theory and experiment concerned with the nature and properties of the fundamental constituents of matter and the forces acting between these constituents;
  - The maintaining of liaison with ICFA;
  - The accelerators, detectors and techniques used in these investigations;
  - The industrial applications of relevant technologies.

## Article 2

- To recommend for Union sponsorship international conferences which qualify for support under Union regulations.
- To initiate such conferences as their need arises from the evolution of the Commission field.
- To assist in the organization of such conferences when practical. To ensure the compatibility of international conferences in its field and to discourage clashes and incompatibility of dates.

## Article 3

- To promote the free circulation of scientists; to assist conference organizers in ensuring such free circulation and in resolving potential infringements

# C11 - Mission

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## Article 4

- To organize where feasible the award of medals or other testimonials of excellence in its field.

## Article 5

- To publish where feasible newsletters, circulars, occasional books, journals or handbooks in its area.

## Article 6

- To maintain liaison with other IUPAP Commissions, with the Commissions or Committees of other Unions or of the International Council of Scientific Unions (ICSU) or other scientific organizations, with a view to collaborating and cooperating in sponsoring joint conferences and to participating in joint projects when need arises.
- In particular to maintain close liaison with the General Commissions of IUPAP (SUNAMCO, Physics Education and Development), so as to ensure suitable input from its field into these physics-wide activities.

## Article 7

- To make available to each General Assembly of the Union a summary of activities and progress in its field since the previous Assembly.

# C11 - Members



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## Officers

- Chair: Marcelo Gameiro Munhoz
- Vice–Chair: Isabell Melzer-Pellmann
- Secretary: Liangjian Wen

## Associate Members

- Deepak Kar
- Deywis Moreno
- Oliver Stelzer-Chilton

## Members

- Nicole Bell
- Barbara Clerbaux
- Jana Bielčíková
- Shaaban Khalil
- Lydia Iconomidou-Fayard
- Sandip Trivedi
- Atsuko Ichikawa
- Roman Pasechnik
- Franz Muheim
- Joel N. Butler
- Richard Lednicky

# What is expected from the people serving on the various structures of IUPAP?



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- Help the Union by carrying out the usual tasks
  - Contribute to enhance the impact and visibility of IUPAP collaborating with other efforts, e.g., outreach, communication and initiatives such as the International Year of Quantum Science and Technology and the International Decade of Sciences for Sustainable Development.
  - IUPAP has been doing a great effort to liaise with physicists outside academia and with companies. Helping with these efforts would be most valuable!
  - Contacting new possible IUPAP members or engage members that lately have been less active would be very valuable as well.
  - Nurturing/promoting the sense of community belonging is very important.
  - Participating in the processes to define the creation of new Commissions or Working Groups or redefine existing ones.
  - Helping us explore possibilities of obtaining additional funding that would allow us to expand our support staff would be very desirable.
  - Finally, bringing in new ideas or giving input to advance with the rejuvenation process is more than welcome!



# C11 - Proposed Organization for this mandate

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- Make sure all our responsibilities are fulfilled making them very clear
  - Definition of C11 areas of responsibility
- Assignment of a C11 member to take care of each of these responsibilities
- Administration:
  - Mailing list: [IUPAP-C11-Members@cern.ch](mailto:IUPAP-C11-Members@cern.ch)
  - Repository: <https://cernbox.cern.ch/s/ajjONueJOOFJ4wm>
- Regular meetings
  - Remote (every 3 months?)
  - Hybrid (LP-Madison in 2025, ICHEP-Brazil in 2026 and LP-Shanghai in 2027)

# C11 - Responsibilities



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- Conferences
  - Awards
  - Reports
  - Fundamental Particle Physics
    - Theory
    - Experimental
  - Instrumentation
  - Future accelerators
  - Industrial applications
  - IUPAP Commissions Liaison
  - Free Circulation
  - Communication
  - Regional Particle Physics Associations Liaisons
    - Western Europe
    - Eastern Europe
    - North America
    - Latin America
    - Sub Saharan Africa
    - Middle East and North Africa
    - East Asia
    - South and South East Asia
    - Oceania

# C11 - Responsibilities

## Conferences: Categories



Conference Type	Attendees	Conference Type Description
Type A (General)	750 - 1000	Provide broad view of entire field of commission
Type B (Topical)	300 - 600	Concentrate on broad subfield (eg Heavy Ion Physics)
Type C (Special)	50 - 200	Concentrate on specialized topics
Type D (DC Workshops)		A category introduced to meet the needs of developing regions. All type D conferences submitted through C13.

- Amount granted:
  - Type A: CHF 8,500.00
  - Type B: CHF 6,000.00

# C11 - Responsibilities

## Conferences: Selection Criteria

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- Scientific Value and Composition of Organizing Committee:
  - Justification to continue a series and, for new conferences, a clear statement of purpose on the relationship with existing conferences. Advisory and Program Committee members should be experts.
- International Character and Accessibility:
  - Only international conferences are considered for sponsorship. They must have a fairly representative international advisory committee. If a series, the conference must move amongst countries and continents. Participation should be genuinely international.
- Free Circulation of Scientists:
  - The free circulation of scientists for scientific purposes is a major piece of IUPAP policy. The principle of the Universality of Science is fundamental to scientific progress. This principle embodies freedom of movement, association, expression and communication for scientists, as well as equitable access to data, information and research materials.

# C11 - Responsibilities

## Conferences: Selection Criteria

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- Inclusion of Women:
  - It is the policy of IUPAP that all IUPAP sponsored conferences must include women on the organizing and program committees and as invited speakers. The application should include a list of the program committee with evidence that women are included, and the numbers of women invited speakers should be recorded in the conference report.
- Encourage Conferences to have Affordable Category of Registration Fee:
  - Recommended affordable registration fee for 2025: 300 CHF
- Harassment
  - IUPAP insists that all participants at IUPAP conferences should be able to enjoy the conference and its benefits free of discrimination and harassment. To emphasize this policy and to indicate that remedies are available to those who are harassed or discriminated against, all IUPAP supported conferences are required to publish the following statement on their website and in all publications related to the Conference.

# C11 - Responsibilities

## Conferences: Rules

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- IUPAP Conferences are supported either by Financial sponsorship, or through Endorsement
- To ensure that a conference is considered for IUPAP sponsorship in time, requests must be made before June 1 of the year preceding the date of the proposed conference. The request must include all required information as indicated on the application form
- Physical Locations within IUPAP member nations to be given priority as conference hosts. Online and internet-based platforms should be fairly accessible to the wider community
- IUPAP support to be given to best and most deserving conferences, previous funding not a guarantee for future support
- Conference fees should be stated, requested amount should not exceed IUPAP limit
- Travel grants should be used to support physicists from developing countries
- Presence of women on LOCs and as invited speakers a condition for IUPAP support (10% Minimum)

# C11 - Responsibilities

## Conferences: C11 (2025)

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- Type A
  - 32nd International Symposium on Lepton Photon Interactions at High Energies (ISLPIHE-2025)
- Type B
  - International Conference on Large Hadron Collider Physics (LHCP25)
- Type C
  - Higgs Hunting 2025 (Higgs-2025)
  - European Physical Society Conference on High Energy Physics (EPS-HEP-2025)

# C11 - Responsibilities

## Conferences: C11 (beyond 2025)

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- Type A
  - 43th International Conference on High Energy Physics (ICHEP2026), July-August, 2026, Natal, Brazil
  - 32th International Symposium on Lepton Photon Interactions at High Energies (LP2027), Shanghai, China
  - 44th International Conference on High Energy Physics (ICHEP2028), Bangkok, Thailand
  - **Start discussions about LP 2029?**
- Type B
  - International Conference on Technology and Instrumentation in Particle Physics (TIPP-2026), Mumbai, India
- Type C
  - We should encourage for applications, mainly regional Particle Physics conferences



# C11 - Responsibilities Awards

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- Early Career Scientist (former Young Scientist) Prizes
- Recognize the contributions of early career physicists within the subfields of each Commission.
- Successful candidates will have up to 8 years of research experience following Ph.D. (excluding career interruptions).
- C11 give two awards every two years
- The award consists of a certificate, medal and a monetary amount
- A presentation by the awardees will take place at an international conference sponsored through the commission
- Always aim for an inclusive process
- **We need to organize the 2026 ECSP starting this year**

# C11 - Responsibilities

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- Reports
  - Chair (with your help)
- Fundamental Particle Physics, Instrumentation and Industrial applications
  - Produce very brief reports on these subjects indicating documents that describe the nature, aim and status of these activities in Particle Physics
  - Other ideas?
- Future accelerators
  - Liaison with ICFA

# C11 - Responsibilities

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- IUPAP Commissions Liaison
  - Make sure we keep contact with relevant (for us) commissions
    - C4: Astroparticle Physics
    - C12: Nuclear Physics
    - C13: Physics for Development
    - C14: Physics Education
    - C20: Computational Physics
    - Others?
- Free Circulation
  - Watch for this aspect mainly in C11 supported conferences
  - Other ideas?

# C11 - Responsibilities

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- Communication
  - We should assume the role of IUPAP ambassadors
  - Seek for possibilities to advertise IUPAP during conferences you attend
  - Approach organizers of regional or national general conferences to include IUPAP advertisement
  - Other ideas?
- Regional Particle Physics Associations Liaisons
  - Effort to reach Particle Physicists directly (one of IUPAP challenges)
  - Appoint at least one C11 member as the contact person in each global region
  - Promote activities with regional or national organizations to improve the communication between Particle Physicists and IUPAP (C11)

# C11 - Responsibilities

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- Regional Particle Physics Associations Liaisons
  - Western Europe
  - Eastern Europe
  - North America
  - Latin America
  - Sub Saharan Africa
  - Middle East and North Africa
  - East Asia
  - South and South East Asia
  - Oceania

# C11 - First demands to discuss



- Support letter on behalf of the HEP information infrastructure for the ESPP
  - First discussion with CERN Library Service people
  - Deadline in March
  - Volunteers to help?
- Provide support for WG-1 (ICFA)
  - *It is requested that **WG1**, WG7, WG9, WG11, WG14, WG18 and WG21 consider the recommendations, considerations and suggestions included in the external and internal evaluation reports and in the supplementary material of this resolution and present by May 31st, 2025, a proposal to the Executive Council with a recommendation of how the activities of the Working Group should continue. To this end they should liaise with relevant IUPAP Commissions as needed.*

# C11 - First demands to discuss



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- Request for **endorsement** of the *International Particle Accelerator Conference* (IPAC-26) which is to be held on 17 - 22 May 2026 in Deauville France, with Dr Hanna Franberg Delahaye as the designated organizer.
    - <https://cernbox.cern.ch/s/lqnCtIsfl4EDbRT>
    - IPAC conference series is one of the conferences that are regularly supported under C11 Commission

# Final Considerations



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- IUPAP has several challenges for this mandate and it needs our help to reach its goals
  - I wish for a productive and enjoyable mandate!
  - Thank you for attending the meeting!