

C4 Commission on Astroparticle Physics – Activity Report

This report covers the period October 2024 – October 2025.

1) Membership of C4 in 2025

Elected members

Ralph Engel (Chair)	Germany (2017, 2021, 2025)
Christina M. S. Cohen (Vice-Chair)	USA (2017, 2021, 2025)
Carola Chinelatto (Secretary)	Brazil (2021, 2025)
Yvonne Wong	Australia (2025)
Zhiguo Yao	China(Beijing) (2021, 2025))
Rami Vainio	Finland (2025)
Pankaj Jain	India (2021, 2025)
Elena Amato	Italy (2025)
Shoichi Ogio	Japan (2025)
Sergey Troitsky	Russia (2021, 2025)
Du Toit Strauss	South Africa)
Riccardo Catena	Sweden (2025)
Yuan-Hann Chang	China(Taipei) (2021, 2025)
Subir Sarkar	UK (2021, 2025)

Associate members

Stefano Gabici	France
Hyunsu Lee	South Korea
Marica Branchesi	Italy
Samaya Nissanke	NL/Germany

Associate members as contact persons to particle physics community

Caterina Doglioni	UK
Albert de Roeck	Belgium

2) Sponsored conferences in 2025

Type A conference

(i) **39th International Cosmic Ray Conference (ICRC 2025)**

July 14–24, 2025 in Geneva, Switzerland. See <http://icrc2025.unige.ch>

The C4 members served as International Advisory Committee (IAC).

Statistics

1168 registered participants from 50 countries, 1039 on-site participants, 442 students (38%)

Intl. Scientific Program Committee: 48 members (20 female, 41%)

1504 contributions in total, 40 invited talks, 736 contributed talks (18 remote), 604 posters (18 remote)

The conference included a prize session in the opening.

In addition, during the time of the conference, the CERN/ESA/IUPAP event “STELLAR – A voyage across the Universe” was organized in the CERN Globe with several Nobel laureates and astronauts speaking in front of more than 2000 participants (plus 6200 online participants), direct interaction with the public

3) Commission meetings

During the last year, the C4 Commission met six times (4 times online and 2 times hybrid). The details of the meetings are summarized here.

November 14, 2024 (online): Discussion of associate members

January 23, 2025 (online): Initial meeting of LOC members of ICRC 225 with C4, membership in organizing committees (Int. Scientific Program Committees) of ICRC 2025, initial set of suggestions for invited presentations

February 12, 2025 (online): Update of status of conference organization, discussion of lists of invited speakers for ICRC 2025, announcement of prizes and solicitation of nominations

May 5, 2025 (online): Discussion of invited and rapporteur speakers, update of status of conference organization, selection of prize winners

July 16, 2025 (Geneva, hybrid): Status of conference after first days

July 17, 2025 (Geneva, hybrid): Discussion of proposals for venue of ICRC 2027, the site was selected in a secret ballot after the meeting

4) Prizes

The C4 commission served as a committee to select the winners of several prizes: IUPAP Early Career Scientist Prizes (2 prizes), O’Ceallaigh Medal, and IUPAP-TIFR-LOCUS Homi Bhabha Award. The winners of these prizes were discussed and selected at the C4 meeting on May 5, 2025. The prizes were awarded during the Opening Ceremony of ICRC2025, which was held on July 15, 2025.

In addition, Shakti Duggal Award and Yodh Prize were awarded during the Opening Ceremony of ICRC2023, with winners selected by independent committees but in close interaction with the chair of C4.

The winners were

Early Career Scientist Prize

Dr. Rebecca Diesing (Institute for Advanced Study & Columbia University), for her contributions in unravelling the non-thermal phenomenology of astrophysical objects such as novae, supernova remnants, and active galactic nuclei

Prof. Ali Kheirandish (University of Nevada, Las Vegas), for his theoretical insights in associating X-ray emitting active galaxies with sources of cosmic neutrinos and his direct contributions to the experimental confirmation

Shakti P. Duggal Award

Dr. Alison M. W. Mitchell (ECAP, Friedrich-Alexander-Universität Erlangen-Nürnberg), for her contributions to advances in ground-based gamma-ray astronomy and to the study of Galactic cosmic-ray accelerators

O’Ceallaigh Medal

Prof. Luke O’Connor Drury (Dublin Institute for Advanced Studies), for his fundamental contributions to the development of the theory of diffusive shock acceleration with special emphasis on the non-linear aspects

Yodh Prize

Prof. Pierre Sokolsky (University of Utah), for his fundamental role in the development of the atmospheric fluorescence technique for detecting cosmic rays at extreme energies

IUPAP-TIFR-LOCUS Homi Bhabha Award

Prof. Barry C. Barish (California Institute of Technology (Caltech)), for his pivotal leadership role in the design and development of the LIGO gravitational wave telescope and the MACRO detector in the Gran Sasso underground laboratory, and for fundamental contributions to the development of multi-messenger astrophysics

Ralph Engel

Chair, IUPAP C4 – Astroparticle Physics

October 23, 2025