

Report on the IUPAP Commission on Nuclear Physics (C-12)

June 3, 2022

The International Nuclear Physics Conference (INPC 2022) will be held for the first time on the African continent, in Cape Town, South Africa from September 11-16, 2022. Former INPC conferences were in Glasgow in 2019, Adelaide in 2016, and Florence in 2013.

There was a joint meeting of C-12 and WG-9 on zoom in June 2021. There was also a zoom meeting on April 5, 2022 to discuss whether the International Nuclear Physics Conference (INPC) scheduled for September 2021 could proceed as planned due to the global Covid situation. There have been no other meetings till the present. **Working Group-9:** Angela Bracco is the chair. The group is working on an update of Report #41 on all the nuclear facilities around the world with new information about the added section on underground laboratories. The next meeting of WG-9 and C-12 will be in Washington DC at the SURA headquarters on June 14-15, 2022. The mission of WG-9 was to provide a venue for communication, discussion, and potential collaboration on international projects worldwide. The WG also provided an opportunity for the funding agency representatives of the various countries to meet and to discuss challenges and future plans.

The GA of IUPAP for 2020 was originally scheduled for Beijing, China but due to global pandemic, the meeting was postponed until **October of 2021**. Former C-12 members and leadership continued until the GA meeting in 2021. The new members of C-12 are listed below and will remain in effect 2021-2024.

Chair

Ani Aprahamian (2014) (2017) (2021)

Email: aapraham@nd.edu

Secretary

Eberhard Widmann (2017) (2021)

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Vice-Chair

Maria J. G. Borge (2017) (2021)

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Members:

Anna Mackova (2017) (2021)

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Yanlin Ye (2017) (2021)

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Fanny Farget (2017) (2021)

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Iris Dillmann (2017) (2021)

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Jin-Hee Yoon (2021)

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Mathis Wiedeking (2021)

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Tord Johansson (2021)

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The IUPAP centennial is coming in July of 2022. The Vice-Chair and Secretary of C-12 will attend.

Associate Memberships to other commissions and working groups:

C-12 members discussed broadening participation in other commissions by inviting members from other commissions to participate in our meetings. C-12 members discussed and expressed interest in the following Commissions:

C-2 Education

C-4 Astroparticle physics

C-6 Biological Physics

C-11 Particles and Fields

C-19 Astrophysics

Since C-12 can choose up to three commissions it was decided to choose **C-6, C-11, and C-19**. Biological Physics, Particles and Fields, and Astrophysics. It was noted by several members and guests of C-12 (Farget, Liu, Azaiez) that Astrophysics has the greatest relevance to Nuclear Physics now. The previous C12 chair Claes Fahlander promised to discuss the issue with other commission members to see which commissions would welcome our participation. No official action was taken yet.

IUPAP supported Conferences 2020 & 2021

The following conferences did not happen in 2020 or 2021 due to COVID-19.

Three nuclear physics conferences were supported by IUPAP in 2019 to happen in 2020:

- Hadron Physics XV: postponed until September 2021.
- NIC2020: postponed until September 2021.
- ARIS: postponed until June 2023.

One nuclear physics conference (NIC2020) was supported by IUPAP in 2020 to take place in 2021:

- NN21, 14th International Conference on Nucleus – Nucleus Collision: postponed until 2024.

Requests for IUPAP sponsorship of conferences in 2022

We heard presentations from four conferences that applied for support:

1. **SQM2022:** Strangeness in Quark Matter Presented by Professor Yoo to be held in Busan, Korea on June 13-18, 2022. Busan is on the seaside with easy access for international travelers. Expected participation is on the order of 300 attendees.
2. **INPC:** International Nuclear Physics Conference report was presented by director of iThemBa, Faical Azaiez. Conference is to be held September 11-16, 2022 in Cape Town, South Africa. This conference expects 700+ attendees.
3. **QNP2022** was presented by Prof. Schadmand to be held at Bonn in Germany on September 5-9, 2022. The expectation is of approximately 300 attendees.
4. **DREB2020** postponed to 2022. Presentation was made by Lola Cortina of the University of Santiago de Compostela. This conference is deliberately kept small.

The symposium of Latin American countries on Nuclear Physics is planned to be held in Mexico in 2022 but given the uncertainties regarding COVID-19 in Mexico and South America, no request was made for support.

Recommendations for conference sponsorship in 2022. All of them were approved by the GA.

Gender balance on organizing committees and invited talks was discussed for all conferences. The minimum requirement by IUPAP is 10% with a target of 20% for female representation. The categories for support are A (12,000 Euro), B (5, 000 Euro), C (Support and Endorsement). Claes Fahlander felt that all four should be supported. A request was made for support of all four, which was granted by the GA.

INPC at level A

SQM and QNP2022 at level B

DREB at level C

The IUPAP Young Physicist Award

The announcement for the IUPAP Young Scientist Prize in Nuclear Physics for 2022 was prepared, discussed and approved. The announcement is below. Selection is ongoing.

IUPAP YOUNG SCIENTIST PRIZE IN NUCLEAR PHYSICS FOR 2022: Announcement

The IUPAP Young Scientist Prize in Nuclear Physics was established by IUPAP in 2005 at the time of the General Assembly in Cape Town, South Africa. The purpose of the prize, which consists of 1,000 €, a medal, and a certificate citing the recipient's contributions, is: "To recognize and encourage very promising experimental or theoretical research in nuclear physics, including the advancement of methods, procedures, techniques, or devices that contribute in a significant way to nuclear physics research. Candidates for the prize must have a maximum of eight years of research experience (excluding career interruptions) following the Ph.D. (or equivalent) degree. "Nominations by one or two nominators (and distinct from the nominee) are open to applied and basic nuclear physicists in experiment and in theory. The nomination package should contain, other than the nomination letter, two additional letters of support, the curriculum vitae of the nominee containing also the list of publications. Three prizes will ordinarily be awarded at the time of the tri-annual International Nuclear Physics Conference. Nominations are due November 1, 2021. The additional letters supporting the nomination should detail the expected significance of the contributions of the nominee to nuclear physics. To underline this, additional material such as published articles can be added to the nomination package. Especially information that allows the selection committee to evaluate the nominee's contribution to and its direct impact on the field. Three prizes will be awarded at the next International Nuclear Physics Conference, INPC2022, September 11 – 16, 2022, in Cape Town, South Africa. Inquiries about the prize can be made to the Chairs of the IUPAP Commission on Nuclear Physics, the C12 Commission: Prof. Claes Fahlander, Lund University, Sweden, claes.fahlander@nuclear.lu.se, (present Chair) or Prof. Ani Aprahamian, University of Notre Dame, aapraham@nd.edu (Chair from 2022). Nominations are to be sent by email by November 1, 2021 to Prof. Ani Aprahamian, subject "IUPAP prize nomination".

Respectfully submitted,
Ani Aprahamian
C-12 Chair