



IPPOG Meeting, 20-22 April 2017

Hans Peter Beck: IPPOG Co-chair, Bern University
Steve Goldfarb: IPPOG Co-chair, Melbourne



International Particle Physics Outreach Group

A big **Thank You** to Pedro, Catarina and the whole LIP team to make this 13th IPPOG meeting possible in Portugal!

We are looking forward to three interesting and stimulating days in a wonderful place.

IPPOG an established Collaboration



December 19, 2016

Marks the birthday of IPPOG entering a new phase in its 20 years history from EPPOG (1997) to IPPOG (2010) and to the IPPOG Collaboration (2016).

The 10th signatory of the MoU has signed on December 19, 2016, which, according to the MoU defines the entry into force of the MoU and thus the birth of the IPPOG Collaboration.



IPPOG headlines

CERN Courier March 2017

Viewpoint Article

<http://cerncourier.com/cws/article/cern/67712>

INFN Newsletter

http://home.infn.it/newsletter-eu/pdf/NEWSLETTER_INFN_33_inglese_pag11.pdf

EPS newsletter

<http://www.epsnews.eu/2017/03/the-international-particle-physics-outreach-group-ippog/>

IPPOG Meeting #13, Lisbon, 20-22 April 2017

CERN Courier March 2017

Viewpoint

Reaching out in the era of big science

Now a formal collaboration, IPPOG provides a new force for global particle-physics outreach.



By Hans Peter Beck

Establishing and maintaining a strong link between science and society is vital, and something that has long been recognised by CERN. Writing in 1972, former Director-General Victor Weisskopf put it well when he argued that concerted effort towards the presentation and popularisation of science would "provide a potent antidote to over-specialisation, bring out clearly what is significant in current research, and make science a more integral part of the culture of today".

Forty-five years later, as we enter the so-called "post-factual world" emerging from political ideologies in a growing number of modern democracies, it is more important than ever for the science and society to maintain an open and transparent dialogue. This also becomes evident for the tools and methods currently used to support such a dialogue have not been as successful as we would have hoped. Indeed, many excellent outreach activities at research centres, universities and museums often attract only those people who are already interested and appreciate the basic and fundamental relevance of science.


Without compromising established methods, we must explore new paths to engage citizens – especially the young. Reaching out to high-school students and their teachers to convey the methods and tools used in fundamental science is a strong investment in the future. While only a fraction of young students will become scientists, and even fewer will become particle physicists, all will become ambassadors for the scientific method and evidence-based decision-making. Developing a dialogue with those who have left school early raises important challenges of its own, and requires that scientists take courageous steps. Partnering with artists, musicians and celebrities, for instance, has enormous potential to get science into the spotlight.

But it involves a delicate balance between raising curiosity and disseminating true information. The International Particle Physics Outreach Group (IPPOG) making concerted and systematic effort to present and popularise particle physics across all audiences and age groups. Established 20 years ago following the recommendations of former CERN Director-General Christopher Llewellyn-Smith, IPPOG has evolved from a European to a global network that involves countries, laboratories and scientific collaborations active in particle-physics research. It is best known for its International Masterclasses (IMC) programme, which evolved in the mid-1990s from national network efforts to the days of the LEP collider and has gone from strength to strength. Since 2005, the programme has offered high-school students the opportunity to become physicists for a day by performing a tailor-made physics analysis involving real LHC data (CERN Courier June 2014 p.7). In terms of numbers, last year's edition of the IMC included 213 institutions in 46 countries and around 12,000 students took part.

Particle physics has become a truly global activity, with experimental collaborations such as those of the LHC experiments featuring thousands of researchers from all over the world. With this trend, IPPOG is evolving further to cover more countries, laboratories and experiments spanning all aspects of collider and non-collider research, including antiprotonic physics and accelerator and detector technology. This expanding remit demands that IPPOG adopts a more formal structure to guarantee the quality and sustainability of its work.

Following the model of collaboration in experimental particle physics, on 19 December IPPOG became a formal scientific collaboration based on a memorandum of understanding. A total of 13 countries have now signed as members, with several candidate members undergoing a vetting process, and each is required to contribute a membership fee to support the collaboration. This formalisation of IPPOG as a scientific community, laboratories and even individual scientists, is a strong investment in the future. While they contribute to the expert knowledge and skills required to inspire young thinkers, CERN's formal membership, demonstrates a clear commitment to sustainable science outreach. With further countries and organisations expected to join soon, and others in the pipeline, the worldwide particle-physics community has a strong partner at hand when reaching out to wider society in diverse ways that are adapted for every target audience.

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The International Particle Physics Outreach Group (IPPOG)
19 ePS | Published on 21 March 2017
March 2017, News, CERN, International Particle Physics Outreach Group, IPPOG, Particle Physics

The International Particle Physics Outreach Group (IPPOG) is a network of scientists, science educators and communication specialists working across the globe in informal science education and outreach for particle physics. Particle physics is the science of matter, energy, space and time. IPPOG brings new discoveries in this exciting field to young people and conveys to the public that the beauty of nature is indeed becoming understandable from the interactions of its most fundamental parts – the elementary particles.

Current members come from the 22 member states of CERN, Australia, Ireland, Slovenia, South Africa, the USA, and from the DESY (Hamburg, DE), and five of the major experiments at the Large Hadron Collider (LHC) at CERN.

Steve Goldfarb (University of Melbourne) and Hans Peter Beck (University of Bern) are both chairs of the IPPOG. The latter is currently vice-president of the Swiss Physical Society (SPS) and will start his term as president of the SPS next year. Hans Peter Beck is also Privat Dozent at the University of Bern, particle physicist at CERN and member of the ATLAS collaboration that took part to the discovery of the Higgs boson in 2012.

More info

- Viewpoint by Hans-Peter Beck in the March issue of the CERN Courier
- Website of IPPOG

Related news:

- Joint SPS-ORG Annual Meeting in Geneva, 21-25 August 2017
- ICFA Mini-Workshop on Impedances and Beam Instabilities in Particle Accelerators
- EPS Accelerator Group announces 2017 prize-winners

Popular Posts

- Kumiko Kotera: doing beautiful physics without giving up on family, art and the rest of the world
- EPS Accelerator Group announces 2017 prize-winners
- First evidence for matter-antimatter asymmetries in baryon decays by LHCb
- Editorial - Science in a fragmenting World
- Autumn-Winter 2016 Emmy Noether distinction to Patricia Bassolino
- 2017 King Faisal Prize awarded to Daniel Loiss and Laurens Molenkamp
- Editorial - European physicists
- HEP2017

Links

- AAPPS Bulletin
- CERN Bulletin
- EPS
- ELCHMS Brussels News Update
- European Journal of Physics
- European Physical Society
- Europhysics News

Categories

| | Organization | Country/Lab/Experiment | Date signed |
|----|--|------------------------|-------------------|
| 1 | NIKHEF | The Netherlands | 22 September 2016 |
| 2 | DESY for KET | Germany | 23 September 2016 |
| 3 | Physics Department of University of Oslo | Norway | 21 October 2016 |
| 4 | LIP | Portugal | 1 November 2016 |
| 5 | The Section for Elementary Particle and Astroparticle Physics of the Swedish Physical Society through the Swedish LHC Consortium | Sweden | 1 November 2016 |
| 6 | CHIPP | Switzerland | 4 November 2016 |
| 7 | Ministry of Education, Science, Research and Sport | Slovak Republic | 15 November 2016 |
| 8 | Institute of Atomic Physics | Romania | 17 November 2016 |
| 9 | Helsinki Institute of Physics | Finland | 29 November 2016 |
| 10 | FWO + F.R.S.-FNRS | Belgium | 30 November 2016 |
| 11 | CERN | CERN | 19 December 2016 |
| 12 | INFN | Italy | 21 December 2016 |
| 13 | CNRS/IN2P3 | France | 23 December 2016 |
| 14 | The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences | Poland | 29 December 2016 |
| 15 | CoEPP | Australia | 14 February 2017 |
| 16 | The University of Notre Dame on behalf of Quarknet | USA | 14 March 2017 |

IPPOG Candidate Members

IPPOG Members as of the pre-collaboration phase that have not yet signed the MoU automatically are now Candidate Members – **until 18 December 2018.**

Austria, Bulgaria, Czech Republic, Denmark, Greece, Ireland, Israel, Spain, South Africa, UK

ATLAS, ALICE, CMS, LHCb, TOTEM

DESY (as representing itself as a lab)

3.6 Current IPPOG participants shall join the IPPOG Collaboration as Members through the mechanism set out above in the course of a two-year period from the date of entry into force of this MoU. This period may be prolonged by a decision of the Collaboration Board where justified by exceptional circumstances. During this period, they shall have the status of “Candidate” with the same rights and obligations as Members, except as provided otherwise in this MoU.

3.8 Candidates shall have no voting rights and no annual membership fees shall be due.

New URL, new e-groups

CERN is a Member in IPPOG (with adequate and negotiated support to IPPOG), and not the other way round; i.e. IPPOG is a truly international body.

<http://ippog.org>

is the new URL for the IPPOG home page was
ippog.web.cern.ch before...

ippog-ct@cern.ch

IPPOG Coordination Team: Chair(s) and Scientific
Secretary

ippog-forum@cern.ch

All and everybody in IPPOG.
Use this list for lively discussions on all aspects related to
IPPOG matters.
(To my taste, this list is still too quiet...)

ippog-cb@cern.ch

Collaboration Board
(includes **Member Reps** and **Candidate Member Reps.**)

New Representative – Finland

http://ippog.org/ippog_membership

Kati Lassila-Perini has been nominated to the new Teacher and Student Forum at CERN

Panja Luukka has been appointed by HIP as the new Finish representative to IPPOG.

Panja is based in Helsinki, is very well involved in and informed of the various outreach activities taking place in Finland.



<http://ippog.org/members/finland>

Vacant Representative – Bulgaria

http://ippog.org/ippog_membership

Still no representative from Bulgaria identified.
The situation is evolving, but not yet settled. Now in contact
with Venelin Kozhuharov:

Dear IPPOG Chairs,

I'm contacting you because we are in a process of selecting the Bulgarian member of the International Particle Physics Outreach Group. Could you please tell me what should be the requirements for a member of such a group? Should he/she be connected with an organization that is currently participating in the CERN experimental programme or the position could be held by an external person?

We do have a candidate that had organized multiple events for high-school students (like Virtual Visits at CERN experiments, etc.) but the candidate is doing this on a volunteer basis. The candidate succeeded to I consider this even more important but let me know if there are some rules about the IPPOG members that I might miss.

Another question is if it is possible Bulgarian representation in the IPPOG to be shared between two persons, who are both very actively communicating CERN activities among students?

Thanks in advance and best regards
Venelin

Expressed interest – Brazil

Marcelo Gameiro Munhoz, Universidade de São Paulo, Brazil, member of the ALICE collaboration and member of the Education Committee of the Brazilian Physics Society contacted IPPOG for evaluating the possibilities for Brazil to join IPPOG.

After many discussions (face to face and e-mail), and exchange of MoU and draft addenda, Brazil has expressed their formal wish to join IPPOG formally.

IPPOG MoU

3.11 Accession to membership shall be decided by the Collaboration Board by a two-thirds majority of the votes cast on the basis of a written application to the Chairperson of the Collaboration Board (the “Chairperson”) and taking into account the principles governing eligibility to apply for membership set out above.



RENAFAE

Brazilian Application to IPPOG

*Brazilian National Network of High
Energy Physics*



Brazilian Application to IPPOG



- The Brazilian HEP community has great interest and a large involvement with particle physics outreach activities
 - For instance, Brazil has a large participation in the Masterclasses Hands On Particle Physics
- The Brazilian HEP community wishes to become part of IPPOG in order to greatly improve the dissemination of particle physics nationwide

Brazilian HEP community



- 16 institutions in 6 different Brazilian states (Brazil has 26 states in total)
- 120 faculties/researchers
- 70 graduate students
- 30 technical staff
- Participation in:
 - the four LHC large experiments and ALPHA experiment at CERN
 - Pierre Auger Observatory and Cherenkov Telescope Array
 - neutrino experiments (DUNE, Double Chooz, etc.)





Brazilian National Network of High Energy Physics

- RENAFAE (Rede Nacional de Física de Altas Energias, in Portuguese)
 - is a National Network officially created by the Brazilian Ministry of Science and Technology in 2008 in order to coordinate the national effort in High Energy Physics
 - is composed by ALL Brazilian physicists that work with High Energy Physics
- Therefore, RENAFAE is the ideal organization to represent Brazil in IPPOG





Brazilian National Network of High Energy Physics

- The Brazilian National Network of High Energy Physics (<http://mesonpi.cat.cbpf.br/renafae>) has four main objectives as part of its mission:
 - promote the scientific and technological advancement of the investigation of the properties of particles and their fundamental interaction
 - consolidate and expand research in high-energy physics, expanding scientific training and techniques needed to explore the resulting benefits of the associated developments and their technological implications
 - develop a program that mobilizes businesses in Brazil to work on the development of instrumentation of software for the area's international collaborations
 - The Scientific and Technical Committee of Renafae (CTC Renafae) will coordinate the activities of groups acting in high energy physics and in particular, activities associated with large international collaborations.

Further interests

- Turkey** – Bilge Demirkos is coordinating and running Masterclasses in Turkey, and is interested to make Turkey a Member in IPPOG.
- GSI/FAIR** – Yiota Foka is with us here in Lisbon, well known to IPPOG through the ALICE Masterclass program, and is interested to bring GSI/FAIR closer to IPPOG.
- Belle II** – Toru Iijima and Zdenek Dolezal have been joining the previous IPPOG meeting at CERN in November 2016. They are waiting for the final addenda to the MoU, explaining the modalities for Collaborations to join.
- DUNE** – Mark Thomson, Spokesperson of DUNE, invited the IPPOG CT to a brownbag lunch at CERN, when DUNE has its Collaboration meeting in January 2017. DUNE is highly interested in Outreach and IPPOG, but still in an early phase.



INTERNATIONAL PARTICLE PHYSICS OUTREACH
GROUP

MEMORANDUM OF UNDERSTANDING

Establishing

The International Particle Physics Outreach Group (IPPOG) Collaboration

PREAMBLE

IPPOG is a network of scientists, researchers, science educators, explainers and communication specialists active across the globe in outreach for particle physics;

IPPOG's mission is to maximise the impact of education and outreach efforts related to particle physics;

The European Strategy for Particle Physics, as adopted and updated regularly by the CERN Council, acknowledges the important role played by IPPOG in the promotion of particle physics;

The IPPOG stakeholders recognise the need to create a formal legal structure permitting IPPOG to increase the scope and quality of its work;

This Memorandum of Understanding (the "MoU") creates the IPPOG Collaboration and sets out its governance and the rights and obligations of participants.

ARTICLE 1 PURPOSE OF THIS MOU

- 1.1 This MoU creates the IPPOG Collaboration and sets out its governance and the rights and obligations of participants.
- 1.2 This MoU is not legally binding, but its signatories recognise that the long-term success of the IPPOG Collaboration depends on their adherence to the provisions of this MoU.

- Will clarify in the **upcoming CB** meeting remaining points and questions raised.
- Addenda to MoU** clarify the expectations we have for Members
 - Countries
 - Scientific Collaborations
 - Laboratories
- A provisional Budget has been distributed
- Addenda and Budget will be discussed and put forward for a vote.**

IPPOG MoU – 1st CB meeting

6.5 The first meeting of the Collaboration Board shall be convened by the incumbent IPPOG co-chairs.

6.6 The Collaboration Board shall, by a two-thirds majority of the votes cast, elect the Chairperson for a term of office of three years maximum, renewable once by three years maximum. Election shall normally be from among the Representatives, except where so decided by the Collaboration Board by two-thirds majority of the votes cast, from among the Candidate Representatives and the conveners of, or participants in, Working Groups and Activities, it being understood that the candidate(s) for this position shall have an existing affiliation with a Member or a Candidate Member. The Chairperson shall be elected by a two-thirds majority of the votes cast.

Playing strictly to these words, Steve and HP are the ‘incumbent IPPOG co-chairs’

The Chair(s) need to be elected in the CB meeting – which is on Saturday.

IPPOG MoU – 1st CB meeting

3.3 Members (the “Member(s)”) shall appoint a single representative (“Representative”) to serve on the Collaboration Board. Where a Representative is elected as the Chairperson, the Member concerned shall appoint a new Representative.

Playing strictly to these words, if HP and Steve shall be confirmed on Saturday, then HP can no longer represent Switzerland, and a new person representing Switzerland will need to be found.

3.5 Members shall cover the cost of travel, accommodation and other expenses incurred in relation to membership, and in general with their participation in the IPPOG Collaboration, and shall not receive financial support from the IPPOG Collaboration, except by a decision of the Collaboration Board where justified by exceptional circumstances.

6.3 Each Member, through its Representative, shall have one vote in the Collaboration Board. The Chairperson shall have no vote.

6.9 The cost of travel, accommodation and other expenses necessarily incurred by the Chairperson in the execution of his or her mandate shall be covered by the IPPOG Collaboration.

IPPOG Working Groups discussions

In parallel with

Science March Strategy & Poster Making Workshop

Thursday 12:30 – 15:00 (Fingerfood Lunch)

□ Explaining hot PP topics to lay audience

Angelos Alexopoulos, Barbora Bruant Gulejova, Beatrice Bressan, Catarina Espirito Santo, Celso Martinez Rivero, **Dirk Ryckbosch**, **Farid Ould-Saada**, Gabriel Stoicea, Hans Peter Beck, Ivan Melo, Jiri Rames, Jon-Ivar Skullerud, Panja Luukka, Peter Watkins, Rasmus Mackeprang, Steven Goldfarb

□ Masterclasses in new countries

Angelos Alexopoulos, Beatrice Bressan, Catarina Espirito Santo, Celso Martinez Rivero, Gabriel Stoicea, **Kate Shaw**, **Kenneth William Cecire**, Marzena Lapka, Natascha Krammer, Pedro Abreu, Rasmus Mackeprang, Steven Goldfarb, **Uta Bilow**

□ Publications and Speakers Committee

Angelos Alexopoulos, Beatrice Bressan, Celso Martinez Rivero, Christine Kourkoumelis, Despina Hatzifotiadou, **Farid Ould-Saada**, Gabriel Stoicea, Ivan Melo, Marge Bardeen, Panja Luukka, **Pedro Abreu**, Peter Watkins, Rasmus Mackeprang, Steven Goldfarb, Yiota Foka

Panel Preparations

Friday 11:00-13:00

□ 11:00-12:00 Exhibitions and Event Highlights

Angelos Alexopoulos, Catarina Espirito Santo, **Catia Peduto**, Celso Martinez Rivero, Charles Timmermans, Christine Kourkouvelis, Despina Hatzifotiadou, Katarina Anthony, Kenneth William Cecire, Marge Bardeen, **Nicolas Arnaud**, Panja Luukka, Peter Watkins

□ 11:00-12:00 Impact of Science on Society

Barbora Bruant Gulejova, Beatrice Bressan, Dirk Ryckbosch, Farid Ould-Saada, Gabriel Stoicea, Hans Peter Beck, **Ivan Melo**, Jon-Ivar Skullerud, Kate Shaw, Marzena Lapka, Natascha Krammer, **Pedro Abreu**, Rasmus Mackeprang, Steven Goldfarb, Uta Bilow, Yiota Foka

□ 12:00-13:00 Reaching to New Audiences / Non-conventional Methods

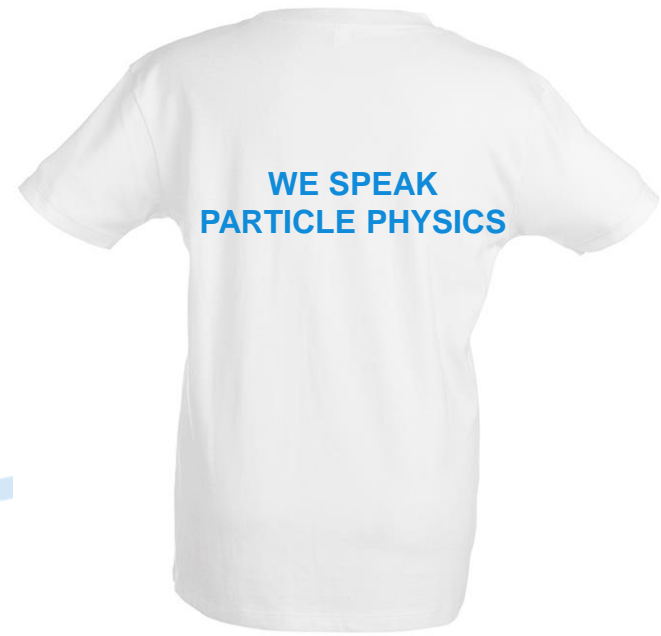
Angelos Alexopoulos, Beatrice Bressan, Catia Peduto, Dirk Ryckbosch, Gabriel Stoicea, Hans Peter Beck, **Jon-Ivar Skullerud**, Kate Shaw, Marzena Lapka, Pedro Abreu, Steven Goldfarb, Yiota Foka

□ 12:00- 13:00 Impact on Educational Programs for Students and Teachers

Barbora Bruant Gulejova, Catarina Espirito Santo, Celso Martinez Rivero, Charles Timmermans, Christine Kourkouvelis, Despina Hatzifotiadou, Farid Ould-Saada, Ivan Melo, Katarina Anthony, Kenneth William Cecire, **Marge Bardeen**, Nicolas Arnaud, Panja Luukka, Peter Watkins, **Rasmus Mackeprang**, Uta Bilow

March for Science

- Saturday Afternoon, Marches for Science will be organized in many cities around the globe.
- IPPOG is supporting the March and participates in the local March here in Lisbon.



Friday Evening

18:00-19:30

Exhibition on "Challenges in Particle Physics for the Next decades"

20:00

IPPOG Dinner

IPPOG

International Particle Physics Outreach Group

an example for concerted and systematic effort for outreach

Enabling Outreach Globally

as a Collaboration in a collaborative effort