

Report
on the
**First Congress of the World
Federation of Physics Competitions**

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1 Introduction

I was invited by Dr Hans Jordens of Groningen University to attend the First Congress of World Federation of Physics Competitions, WFPhC, in Bali, Indonesia, (1). The WFPhC immediately followed the 33rd International Physics Olympiad, IPhO, also in Bali. The WFPhC is open to any organization that is involved with Physics competitions, and as such I represented the Foundation for Education, Science and Technology, FEST, who had already funded my trip to attend the 33rd IPhO.

The Indonesian government funded this WFPhC congress, and in order to save some costs the congress was held some two hours drive inland at a mountain resort in Pacung. This was a stunning venue, considerably smaller than where we had been and as a result had a chance to interact more closely. Not everyone from the 33rd IPhO came here, and there were others who just came to attend this congress.

2 History

Dr Hans Jordens, founder and founding president of the WFPhC delivered the opening address as a part of the official opening. Afterwards he kindly gave me a copy that I could use in this report. It concisely outlines the creation of the WFPhC.

Dear Mr Minister (deputy Minister for Education, Republic of Indonesia), dear organisers, colleagues and friends. I would like to address special welcome to the four guest speakers: Prof. Claude COHEN-TANNOUDJI, Prof. Anthony P. FRENCH, Prof. Gunter LIND, Prof. Jan MOSTOWSKI.

Today is an important day in the history of the World Federation of Physics Competitions. Though the Federation exists since the fall of 1999 it has operated so far on a provisory basis. During this Congress the members of the Federation will have the possibility for the first time in the history of the Federation to vote a legal Executive Committee and Advisory Board. The main activity of the Federation has been to publish a journal twice a year and of course we have to expand these activities in order to reach the goals of the Federation like they are layed down in Article 2 of the proposed statutes:

- Stimulating talent for physics by means of physics competitions at secondary schools;
- Stimulating meetings and conferences where people interested in physics competitions can develop and interchange their ideas for the benefit within their home country;
- To afford the opportunity to, in particular by means of the foundation's periodical, exchanging publications in the field of teaching physics;
- To acknowledge the merits of persons who contributed greatly to the field of teaching physics, through a WFPhC award;
- To afford assistance and support to countries that wish to organize physics competitions by putting them in contact with experienced countries;
- Promoting physics and encouraging youngsters interested in physics.

But before I will tell you something about the history of the Federation let me first express my deepest feelings of gratitude towards our Indonesian hosts who offered spontaneously to organize this Congress right after the International Physics Olympiad. From my own experience I know that organizing an International Olympiad is already a major task on the expense of the work of many persons and a large budget. Let alone to organize a Congress just after that in such a fantastic place in the world. Thank you, thank you very much.

In the spring of 1999 Waldemar Gorzkowski, president of the International Physics Olympiad, approached me by e-mail and put down the idea to establish a federation for physics like there exists already for many years in mathematics. To come up with an idea is one thing, to make it happen is something else. So for some reason Waldemar thought of me to work on the realisation of this physics federation. And he was not so wrong since probably he knows that for me it is difficult to say 'no'! So since mid 1999 we have

been working on the federation and we got great help from the mathematicians who sent us some of their journals and provided us with their statutes.

Once you want something to happen it is important to make the process irreversible. The first step was the announcement of the creation of the Federation by Waldemar in Padua during the International Physics Olympiad in Italy. There was a call for articles for the first journal which appeared in December 1999: Volume 1 number 1. I wanted the journal to appear already in the last century, this happened, and therefore it is the one and only year in which there was only one journal. Some people kept asking where is volume 1 number 2? There is not!

So the creation of the journal was irreversible step number 2.

Of course we needed an Executive Committee and an Advisory Board. For that some people were approached and I was glad to see that no one declined their co-operation for the Federation. And in no time we got the committee and the board fixed; so that was step number 3.

Now we could contact lawyers to create statutes to be able to register the Federation. The final act was when I appeared in front of a lawyer on February 12, 2001 where the statutes were read out for me and signed by Mr. Kuin, the lawyer.

That was a big step. But the biggest step is to be made here and now during this Congress to make it happen that you as members of the Federation will vote for the people you trust will guide the Federation for the next couple of years and under which rules this Federation will act. But as I mentioned before: the Federation is established to reach certain goals of which I think that **'Promoting physics and encouraging youngsters interested in physics'** is the most important one. Now I am afraid that we are living in a period in which physics is in jeopardy. The problem is probably world wide and exists at least in the Western World.

I was lucky to be invited for a conference last June in Les Houches, France where a group of 35 physicists from 17 European Countries met on the topic of **Teaching Physics: a European Confrontation**. What became clear is that already for some time - although for different reasons - there is a decline in Europe in the number of students who take physics as a major subject. On top of that there are movements going on amongst the highest levels of politics that will have a dramatic impact on the position of physics on secondary schools as well as on universities. Taken into account that the demographic spread of physics teachers shows that in one decade a substantial amount of well experienced physics teachers will retire, we should be prepared for the fact that physics will either be taught by unqualified persons or simply will vanish from the curricula as a separate subject.

We claim physics to be an important science due to which large contributions are made to the society of today. Although it is easy to give many examples of this, we have to make this manifest on many levels in the same time. What is obvious for us, is not so obvious for non-physicists. In the schools we have to make the young enthusiastic about physics to attract an increasing number of students for higher education studies. In the same time the politicians and the managers of industry need to be convinced that what is going on now will have a disastrous effect on the society of tomorrow. That is not an easy task since there is a tendency amongst them to favour short term thinking. And the problems we are dealing with now are typically something of a long term that, once gone wrong, cannot be dealt with in just a couple of years.

So I believe that the Federation can play a - hopefully important - role on the level of educational institutions and on the level of politicians.

Ladies and gentlemen it is in your hands to make this happen. I wish you a good Congress. Thank you very much.

Dr Hans Jordens.

3 The Congress

The format for this congress was entirely different from the 33rd IPhO: being a get together of physicists to discuss aspects of physics, physics education and physics competitions. All those attending (2) were given a complete bound folder (3: copy of cover) containing the programme, abstracts, papers, statutes and list of attendees.

As the programme (4) shows, the congress was in part academic and in part the formal establishment of the WFPPhC.

The academic component was of a most stimulating standard: the abstracts (5) are attached. The full presentations are available and will also appear in the proceedings of the Congress which will be published in the WFPPhC Journal, "**Physics Competitions**". The opportunity to speak to two illustrious physicists was indeed an honour. Prof. Claude Cohen-Tannoudji is the 1997 Nobel Laureate in Physics for his work on Bose-Einstein Condensates and Prof A P French is the author of several famous physics texts that are in use all over the world

Dr Hans Jordens had had a set of Statutes (6) drawn up by some legal colleagues in the Netherlands and these served as an excellent starting point. There was considerable debate and discussion on what the exact role of the WFPPhC would be and on the Statutes. These discussions were at times intense with strong feelings being expressed but were at all times conducted in a most professional and agreeable manner: everyone left as friends! All the changes to the Statutes that were agreed on will appear in the WFPPhC journal.

Many of the corrections and changes were grammatical rather than structural and were as such trivial. eg. Art. 5 2(b) talks of a Price Committee, this was actually intended as a Prize Committee! Other corrections/additions included things like a language policy (English), powers of the Executive Committee, whether decisions should be taken by an absolute or simple majority and what constitutes a quorum at a general meeting.

One issue was left open: the matter of membership fees. It was agreed that there should be some sort of voluntary contribution as is the case with the IPhO, but since it was not known what funding would be needed this was left open to the next meeting. The Journal had been funded by the Dutch Physics Olympiad and in the interim period Dr Jordens would find alternative funding to underwrite the journal, but that this was only an interim measure: the matter would need to be resolved in the near future.

At the conclusion of the discussions, nominations for those to serve on an Executive Committee were called for and the following were elected:

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|-------------------------|--------------|----------------|
| Dr Hans Jordens, | Netherlands, | President |
| Dr Waldemar Gorzkowski, | Poland | Vice President |
| Mme Zsuzsana Rajkovits, | Hungary | Vice President |
| Dr Andrzej Kotlicki | Canada | Secretary |
| Dr Gunnar Friege | Germany | Treasurer |
| Dr Jan Mostowski | Poland | PR |
| Mr Mati Rajamaki | Finland | Member |
| Dr Johannes Surya. | Indonesia | Member |
| Dr Hans-Uno Bengtsson | Sweden | Member |

In addition Dr Colin Taylor (Australia) and Dr Paul van Kampen (Ireland) were elected as journal editors

The last day was put aside for a most welcome tour of a part of Bali. We left the Pacung Mountain Resort in the morning, and whilst we were on the tour, our luggage was taken to the Bali Handara Kosaido Country Club and Golf Resort, BHK&GR. We visited several places (4) and at the end of the day we arrived at the BHK&GR: a golf resort set inside an extinct volcanic crater: a truly stunning setting. Here we had

our farewell dinner: most enjoyable and a great social occasion and a pleasant way to end the Congress. At the dinner everyone was presented with a certificate to mark their attendance, (7). It was a little sad that at the end we had to say goodbye to the many new friends who we had got to know over the last few weeks.

4 Acknowledgements

I would like to take thank the following:

- the Indonesian government for funding the First Congress of the WFPhC so generously,
- Foundation for Education, Science and Technology, FEST, for funding my trip to Bali in Indonesia to attend the Congress,
- the South African Astronomical Observatory for granting me the time to attend the Congress,
- Dr Masno Ginting for al his efforts in organizing the Congress,
- Dr Hans Jordens for inviting me to represent FEST at the First Congress of the WFPhC,

5 Appendices

- 1 Invitation to attend.
- 2 Attendance List,
- 3 Cover,
- 4 WFPhC programme,
- 5 Abstracts of Lectures presented at the WFPhC,
- 6 The Statutes of the WFPhC.
- 7 Attendance Certificate.