



IUPAP

INTERNATIONAL UNION OF PURE AND APPLIED PHYSICS

C₁₄ COMMISSION – PHYSICS EDUCATION

REPORT

2018 - 2019

PROF. DR. ROBERTO NARDI

C14 Commission Chair (2018-2020)

UNESP – State University of São Paulo, School of Sciences
Education Department - Bauru Campus

Brazilian Society of Physics (BSP)

São Paulo, Brazil, Aug/14/2019.

INTRODUCTION

This document is a report of the main activities of the C₁₄ Commission – Physics Education, from 2018-2019.

The main subjects of this report are:

1. The C₁₄ Commission and its members
2. International Conferences and events organized/sponsored by the Commission (IUPAP) held during this period
3. Presence of the ICPE chair in Physics and other Education events held during the period
4. Publication of the ICPE Newsletter
5. Looking forward
6. Other

C14: PHYSICS EDUCATION COMMISSION

<http://iupap.org/commissions/>

The C14 Commission is one of the 20 IUPAP's commissions. It was established by the IUPAP in 1960, to promote the exchange of information and views among the members of the international scientific community in Physics Education. The current officers and members (2018-2020) are:

Officers

Chair: Roberto Nardi
Brazil
Vice-Chair: Deena Naidoo
South Africa
Secretary: David Sands
U.K.

Members

Mayank Vahia
India
Eilish McLoughlin
Ireland
Jenaro Guisasola
Spain
Julio Benegas
Argentina
Naoshi Takahashi
Japan
Nathalie Lebrun
France
David R Sokoloff
U.S.A.
Manjula Sharma
Australia
Zuzana Jeskova
Slovakia
Tetyana Antimirova
Canada
Ian G. Bearden
Denmark

Associate Members 2018-2021:

Zulma Estela Gangoso
Argentina
Pornrat Wattanakasiwich
Thailand
Mohammed Usman Degereji
Nigeria

International Conferences and events

Organized/Sponsored by the IUPAP C₁₄ Commission (2018-2019)

The International Conference on Physics Education - ICPE 2018 (ICPE-SAIP-WITS), Johannesburg, South Africa, October 1-5, 2018

This ICPE 2018 took place in Johannesburg, South Africa. Deena Naidoo was the chair of this Conference
<http://events.saip.org.za/conferenceProgram.py?confId=93>

GIREP-ICPE-EPEC 2019, Budapest, Hungary, 1-5 July

The Commission agreed to endorse GIREP-ICPE-EPEC 2019 as the IUPAP supported conference.
<https://girep2019.hu/>

Conference endorsed

The commission endorsed GIREP-MPTL 2018 (July 9-11, San Sebastian, Spain) although this conference will not be financially supported by IUPAP.



The International Conference on Physics Education (ICPE-SAIP-WITS-2018)

University of Witwatersrand, Johannesburg, South Africa – October 01 to 05, 2018

<http://events.saip.org.za/conferenceDisplay.py?confId=93>

This conference was co-hosted by the South African Institute of Physics (SAIP) and the School of Physics, University of the Witwatersrand (WITS) jointly with The International Commission on Physics Education (C14) of the International Union of Pure and Applied Physics (IUPAP). The conference was held at the Misty Hills Hotel and Conference Centre, Johannesburg, located close to the Cradle of Humankind, a World Heritage Site and from the famous Pilanesberg National Park.

The main objective of the International Conference on Physics Education is to attract physics educators, postgraduate students, teachers, researchers and policy makers working in physics educational research and in physics education. Participants were from schools, colleges, universities and governments from all parts of the world.

The main theme of the conference was "Physics Education for Development: a focus on context". The scientific program comprised a diverse range of international high-level presentations consisting of plenary talks, parallel oral and poster sessions, teacher workshops/symposia and sessions for Women in Physics.

The main theme of the conference was "Physics Education for Development: a focus on context" with a wide range of subthemes that covered areas of Physics Education spanning:

Physics at University, Physics at Primary and Secondary School Level, Curriculum: Design, Development and Delivery, Teaching and Learning of Physics Concepts, Teaching and Learning of Laboratory based Physics, ICT and Multimedia Revolution in Physics Education, Assessment and Evaluation of Teaching and Learning in Physics, Teacher Education and Training in Physics, Physics and Interdisciplinary Issues, Physics in an Informal and Non-Formal Environment and International Networks and Collaboration in Physics Education.

The scientific program comprised of a diverse range of international high-level presentations consisting of 8 plenary talks (5 women and 3 male), 120 single oral talks and 40 posters. The conference was attended by 125 delegates that included physics educators, postgraduate students, teachers, researchers and policy makers working in physics educational research and in physics education from all parts of the world.

The most important aspect of the conference was the easy interaction of delegates, sharing of information and ideas and networking which has led to collaborations. In summary delegates enjoyed the atmosphere of the conference venue, what South Africa has to offer ranging from food to our culture, the scientific conference programme and all the social events, which were scheduled as off-site conference events to the Origins Centre and the Evolutionary Science Institute (Wits University), Lion and Safari Park and Lesedi Village.



ICPE-SAIP-WITS 2018 Conference Group Photograph.

The following guest speakers delivered speeches at the conference: Professors Roberto Nardi (Chair IUPAP-C14), Patrick Woudt (President of the SAIP) and Zebon Vilakazi (DVC Research, WITS University).

The proceedings of the International Conference on Physics Education (ICPE2018) has been published in the Open Access **Journal of Physics: Conference Series (JPCS)**, which is part of [IOP Conference Series](#). All papers published in IOP Conference Series are fully citable and upon publication will be free to download in perpetuity.

Conference Highlights



ICPE-SAIP-WITS 2018 Main Conference Venue: Pelindaba.



Guest Speakers at ICPE-SAIP-WITS 2018: Professors Roberto Nardi (Chair IUPAP-C14), Patrick Woudt (President of the SAIP) and Zebulon Vilakazi (DVC Research, WITS University).

Visits to Wits University



*Professor Diane Grayson delivering a plenary talk in the ORIGINS Centre, WITS University.
Delegates enjoying the different sites at WITS University.*

Visit to the Lion and Safari Park and Lesedi Village



Feeding of the Lions with prime views for delegates and Lesedi Cultural Dancers.

The International Conference on Physics Education (ICPE-GIREP-EPEC-MPTL 2019) Teaching-learning contemporary physics, from research to practice

Budapest – Hungary – 1 - 5 July, 2019 <https://girep2019.hu/>



Roland Eötvös Physical Society organized this Conference

ICPE - The International Commission on Physics Education (ICPE) of the International Union of Pure and Applied Physics (IUPAP);

GIREP - Groupe International de Recherche sur l'Enseignement de la Physique;

EPS – European Physical Society and

MPTL - The International Conference on Multimedia in Physics Teaching and Learning.

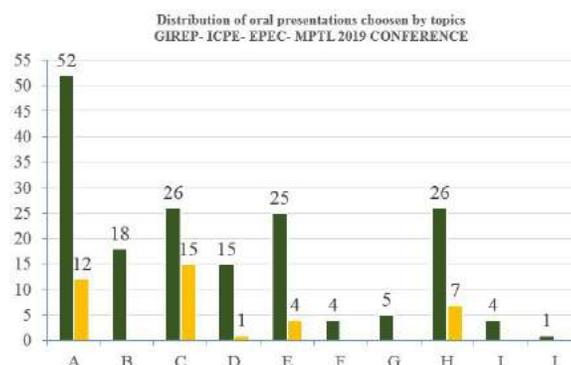
The Eötvös-Year 2019 International Conference was an opportunity not only to present the results of works, but also to communicate and discuss common research topics and best practices with colleagues.

The main theme of the conference was “*Research and practice in physics education to celebrate Eötvös centenary*”. Roland Eötvös (1848-1919) was a famous Hungarian physicist whose main achievement was to demonstrate the strict proportionality between the inertial and gravitational mass with an unprecedented precision. This result became a strong basis of the general relativity. The UNESCO has declared to be associated to commemorate the centenary of his death in 2019. That is why this conference was also associated to the Eötvös-Year.

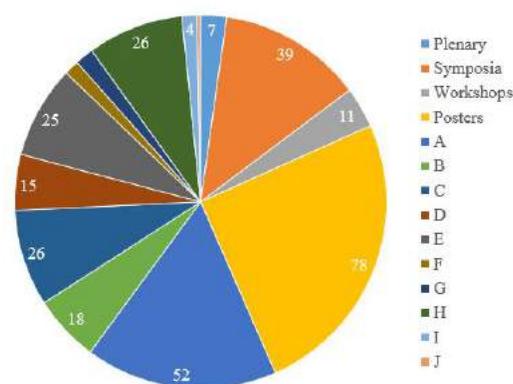
The main topics of the conference were the following:

- A. Strategies and methods to improve Physics learning and teaching
- B. Multimedia in Physics Teaching and Learning
- C. Contemporary Physics and Modern Physics in School
- D. Physics Curriculum: Development and Implementation
- E. Experiments in Physics Education
- F. Early Science Learning
- G. Environmental Physics
- H. Teacher Education and postgraduate education
- I. Informal learning and science centres
- J. Outreach of Physics

The Conference involved the following proposals: oral presentations, symposia, workshops and posters. All of them were focused on the different aspects of the essential knowledge, skills and attitudes mainly related to the topics listed above. The figure below shows the distribution of the presentations according to the topics above.



The distribution of the all accepted contributions was according to the figure below. The green colours show the number of individual oral presentations, and the yellow colours show the distribution of the topics within the symposia.



Source: <https://girep2019.hu/topics/> (Access in August 8th, 2019)

The Committees involved in the Conference, were the following:

Principal patron of the conference

- **Prof. Dr. Miklós Kásler**

Minister of Human Capacities

Patrons of the conference

- **Prof. Dr. József BÓDIS**

State Secretary for Education

- **István TARLÓS**

Mayor of Budapest, Hungary

Scientific Advisory Committee

- **Ian BEARDEN**

member of EPS-PED Board and C14 commissioner, Niels Bohr Institute, Univ. of Copenhagen, Denmark

- **Leoš DVORÁK**

GIREP and ICPE Committee member, Charles Univ. in Prague, Czech Republic

- **Ton ELLERMEIJER**

President of MPTL Board, Director of CMA Amsterdam, Netherlands

- **Raimund GIRWIDZ**

Member of MPTL Board, University Ludwig-Maximilians, Munich, Germany

- **Claudia HAAGEN-SCHÜTZENHÖFER***

GIREP Vicepresident, Univ. of Graz, Austria

- **Tomasz GRECZYLO**

University of Wrocław, Wrocław, Poland Member of MPTL Scientific Advisory Board

- **Antje KOHNLE***

Member of MPTL Advisory Board, University of St. Andrews, UK

- **Peter LÉVAI,**

Director General of Wigner Physics Research Institute, member of the Hungarian Academy of Sciences

- **Marisa MICHELINI***

GIREP President, Univ. of Udine, Italy

- **Cesar Eduardo MORA LEY**

Representing IACPE, LAPEN, IAPS, National Polytechnic Institute, Mexico

- **Roberto NARDI**

Chair IUPAP C14, Sao Paulo State University

- **Wim PEETERS**

GIREP Vice-president, Katholieke Onderwijs Vlaanderen, Belgium

- **David SANDS**

EPS-PED Chair, Univ. of Hull, UK

- **Dagmara SOKOLWSKA***

GIREP General Secretary, Jagellonian University, Cracow, Poland

- **Stamatis VOKOS**

Representative of APS, Seattle, Pacific University Seattle, USA

Local Programme Committee

- **Csaba SÜKÖSD Budapest**

Institute of Nuclear Techniques (INT) of the Budapest University of Technology and Economics (BME)

- **Tamás TÉL**

Loránd Eötvös University,

Institute for Theoretical Physics, and von Kármán Laboratory of Environmental Flows, Institute of Physics, MTA-ELTE Theoretical Physics Research Group,

- **Péter TASNÁDI**

Loránd Eötvös University,

Institute of Geography and Earth sciences Department of Meteorology

- **Sándor KATZ**

Loránd Eötvös University,

Department for Theoretical Physics

- **Zoltán TRÓCSÁNYI**

University of Debrecen,

Institute of Physics,

- **Zsuzsanna FARKAS***

University of Szeged

- **János Erostyák**

University of Pécs

Faculty of Sciences, Institute of Physics, Department of Experimental Physics

- **György Mihály**

Department of Physics

Faculty of Natural Sciences,

Budapest University of Technology and Economics (BME)

Local Organising Committee

- **Beata JAROSIEVITZ*** (GIREP representative in Hungary) – **Chair**

Dennis Gabor College

- **Csaba SÜKÖSD**

Budapest University of Technology and Economics (BME) – **Co-Chair**

Institute of Nuclear Techniques (INT) ,

Conference Secretariat

- **Bernadett KOVÁCS***

ELFT Organization Secretariat (ELFT)

- **Melinda PÓNYA***

ELFT Organization Secretariat (ELFT)

IT Committee

- **Gusztáv HENCSEY**

Institute for Computer Science and Control, Hungarian Academy of Sciences (MTA SZTAKI)

- **Zsolt László MÁRKUS**

Institute for Computer Science and Control, Hungarian Academy of Sciences (MTA SZTAKI)

- **György SZÁNTÓ**

Institute for Computer Science and Control, Hungarian Academy of Sciences (MTA SZTAKI)

- **Tibor SZKALICZKI**

Institute for Computer Science and Control, Hungarian Academy of Sciences (MTA SZTAKI)

- **Miklós VERES**

Institute for Computer Science and Control, Hungarian Academy of Sciences (MTA SZTAKI)

Volunteers involved:

- **Hungarian physics teachers, students (PhD)**

Scientific Visits:

The following scientific visits were available for participants:

- **Visit 1:** Nuclear Power Plant

- **Visit 2:** Wigner Research Centre for Physics & Centre for Energy Research

- **Visit 3:** Institute of nuclear Techniques of BME & Institute for Computer Science and Control

- **Visit 4:** ELI-ALPS Research Institute (An international, high-power, short-pulse laser research institution, initiative of the European Union).

- **Visit 5:** Low and Medium level Radioactive Waste Management Site

INVITED SPEAKERS

The invited lecturers were:

Prof. Dr. Marisa MICHELINI



*Research Unit in Physics Education,
University of Udine, Italy*

Prof. Dr. Igal GALILI



*The
Hebrew University
Jerusalem*

Prof. Dr. Raimund GIRWIDZ



*Physics Education at
Ludwig-Maximilians-Universität
München, Germany*

Prof. Dr. András PATKÓS



*Institute of Physics,
Eötvös University,
Budapest, Hungary*

Prof. Dr. Manjula Devi SHARMA



*School of Physics,
University of Sydney
Australia*

Prof. Dr. David SOKOLOFF



*Department of Physics,
University of Oregon,
Eugene, U.S.A.*

Dr. Lars-Jochen THOMS



*Physics Education
Ludwig-Maximilians-Universität
München, Germany*

Prof. Dr. Dean ZOLLMAN



*Center for Research and Innovation in STEM Education &
Department of Physics, Kansas State University,
Manhattan, Kansas USA*

ICPE Medal for the year 2018 was conferred on Marisa Michelini, Professor at The Udine University, Italy.



Prof. Marisa Michelini (Italy) and Roberto Nardi (Brazil) – Chair of the C14 Commission
Left – Prof. Csaba Sukosd



Prof. Marisa Michelini (Italy) – ICPE Medal 2018 and Roberto Nardi (Brazil) – ICPE Chair, among members of the Organizing Committee (Csaba Sukosd and Beata Jarosievitz – left) and ICPE commissioners: from left: Naoshi (Japan), Zulma (Argentina,)David Sands (U.K.), Ian Bearden (Denmark), David Sokoloff (U.S.A.), Teatyana (Anada) and Dean Zolmann (U.S.A.).

About the ICPE Medal

(from the last ICPE Newsletter)

In 1979 George Marx, a Hungarian researcher in the field of physics education, proposed to institute a medal to recognise “outstanding contributions to physics teaching of a kind that transcends national boundaries”. The Commission succeeded in establishing the award of an ICPE Medal with the following two criteria:

The contributions to physics education should have extended over a considerable number of years;

The contributions should be international in their scope and influence.

The first award of the medal was made in 1980 to Professor Eric M. Roger during the Trieste Conference on Education for Physics Teaching. The list of recipients can be found at <http://iupap.org/commissions/physics-education/awards/>.

The medal (below) was designed by the Hungarian artist Miklós Borsos. The face shows a symbolic picture: the interaction of human beings with forces of nature in the form of the four elements of the ancient Greek philosophers – earth, water, air and fire, the last one being symbolised by powerful rays of sunlight. The human beings capture the essence of physics education, as we seek to understand and share our understandings of nature. The back of the medal bears the text: ‘Awarded to N.N. by the International Commission on Physics Education of IUPAP for long and distinguished service to physics education’.



ICPE medal faces

Submission process for the 2019 medal were concluded recently. The next honoured with medals are Prof. Alex Mazzolini (Australia) and Pratrihba Johly (India) for their relevant work on physics education in their countries and worldwide.

The medals will be conferred at the next World Conference on Physical Education to be held in Vietnam (3rd WCPE) – Hanoi, Vietnam – 2020.

More information about the process are in the last Newsletter

The process for the 2020 medal will be during this year.

Presence of the ICPE chair in Physics and other Education events held during the period (*)

GIREP-MPTL 2018, San Sebastian, Spain, July 9-11, 2018

XVII Meeting of Research on Physics Teaching in Brazil (XVII EPEF), Campos de Jordão, São Paulo, Brazil, August 27-31, 2018.

9th National Congress of Teaching Physics and Astronomy – Bogotá, Colombia, November 7-9, 2018

XIII INTER AMERICAN CONFERENCE ON PHYSICS EDUCATION “DR. ALBERTO MAIZTEGUI”– Montevideo, Uruguay, July 8-12, 2019

<https://ciaef.edu.uy/>

(*) In these events, IUPAP and ICPE Newsletter also are shared with the delegates

GIREP-MPTL 2018, San Sebastian, Spain, July 9-11, 2018

RESEARCH AND INNOVATION IN PHYSICS EDUCATION: TWO SIDES OF THE SAME COIN



The International Conference on Research and Innovation in Physics Teaching was organized by the International Research Group on Physics Education (Groupe International de Recherche sur l'Enseignement de la Physique - GIREP) and Multimedia in Physics Teaching and Learning (Multimedia in Physics Teaching and Learning (MPTL) and endorsed by Commission 14 of the International Union of Pure and Applied Physics (IUPAP), of which I am chairman. Jenaro Guisasola and Kristina Zuza were chair and co-chair of the event.

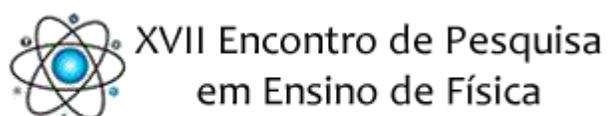
The event was held in San Sebastián, Spain, from July 9 to 13, 2018, according to the Conference Program and on the event website

<https://www.girep2018.com>

Miramar Palace held the Opening Ceremony



XVII Meeting of Research on Physics Teaching in Brazil (XVII EPEF), Campos de Jordão, São Paulo, Brazil, August 27-31, 2018.



The XVII Meeting of Research on Physics Education (EPEF)^(*) is the most important meeting on this area in Brazil, joining nearly 300 Brazilian researchers. It is one of the Brazilian Society of Physics (SBF)' main conferences.

In 2018, in its 17th edition, the Meeting was held on August 27th to 31st in Campos do Jordão, in the State of São Paulo. It covered 11 research areas, including the new one "Equity, inclusion, diversity and cultural studies on Physics Education", that was the 4th one on number of submitted papers. 280 full papers were submitted and 191 of them were approved to be presented in the Meeting.

The Meeting was organized on 2 plenary talks, 6 round tables, 30 oral sessions, and 9 poster sessions.

Besides, there were a training school for young researchers, book release, community meetings, and the MRPE assembly, in which one was discussed, among other subjects, the role of the community of Physics Education researchers in the face of the problems that affect the current Brazilian educational policy.

<http://www.sbfisica.org.br/~epef/xvii/index.php/pt/>

<https://www.facebook.com/EPEF-569625386751329/>

(*) As reported by the Organizing Committee of the MRPE 2018



XVII EPEF – Prof. Alberto Villani Lecture

9th National Congress of Teaching Physics and Astronomy – Bogota, Colombia, November 7-9, 2018

Teachers, researchers and students attended the National Congress of Teaching Physics and Astronomy, organized by the National Pedagogical University, the District University Francisco José de Caldas and the Colombian Association of Physics Teachers.

Participants reflected on proposals, practices, new approaches, strategies and theories, centred on the educational problem of the teaching and learning of Physics and Astronomy, that are being carried out in different educational contexts in Colombia, and other countries such as Argentina, Brazil, Chile and Italy, with their own cultural diversity conditions.

The congress tried to demonstrate research directions, approaches, trends and proposals in the classroom that define and characterize the community of educators in Physics and Astronomy, based on the historical and epistemological foundations of teaching and studies in didactics of Physics and Astronomy, as well as the theoretical foundations for physics teaching, and research methodologies.

The community gathered at the Congress identified some challenges for the near future:

a) the defence of undergraduate programs to educate physics, chemistry and biology professors, given the fact that these programs are disappearing and, in return, universities offer natural science programs that do not provide adequate training for the teaching and learning of science; and

b) the need to continue rethinking the curricular proposals in teaching Physics in a way that responds to the demands of the contemporary context.

The community also undertook to reprioritise the education of teachers, and to increase research in this field, taking into account new challenges and the different situations and current problems of school environments. This also implies contributing to the development of science and education in our countries, both in the day-to-day experiences in the classrooms, and to the definition of public education policy. Researchers and professors have an ethical and political commitment in the construction of societies educated in science that take into account the particularities of our local contexts.

The ICPE Commission was represented in the event by its Chair who, besides responsible for a lecture, brought information about the IUPAP, its commissions and specifically about the C14 Commissions, the newsletter and international events sponsored by IUPAP and ICPE.



***9th National Congress on Physics and Astronomy Education – Bogotá – Colombia -2018
Congress Group Photograph.***

XIII INTER AMERICAN CONFERENCE ON PHYSICS EDUCATION "DR. ALBERTO MAIZTEGUI"– Montevideo, Uruguay, July 8-12, 2019

<https://ciaef.edu.uy/>

Inter-American Conferences on Physical Education (IACEF) are organized by the Council for Inter-American Conferences on Physical Education (CIAEF), composed of members from various countries of the Americas. They occur every three years in a South, Central or North American country and have been highly valued by physics teachers as an opportunity to gather and share experiences, contributing to building a community that aims to improve teaching of this subject.

This XIII CIAEF, or Inter-American Conference on Physics Education, was chaired by Professor. Dr. Leda Roldan Santamaría of the University of Costa Rica and as Vice-President Andrea Cabot Echevarría, of the Artigas Teachers Institute, Montevideo, Uruguay. The local committee was made up of teachers from Montevideo's physics institutes and schools.

The event was held from July 8 to 12, 2019, at the "Instituto de Perfeccionamiento y Estudios Superiores in Montevideo". It aimed to present, discuss and disseminate new ideas that favour the improvement of physics teaching at various levels and the preparation of physics teachers for basic and higher education.

Physicists from several countries, such as Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Jamaica, Mexico, Panama, Peru, United States and Venezuela, participated in the event.



XIII Inter American Conference on Physics Education Group Photograph.

Also, in this event, ICPE Commission Prof. Nardi, Chair of the ICPE was present and brought information about the IUPAP, its commissions and specifically about the C14 Commissions, the newsletter and international events sponsored by IUPAP and ICPE.

ICPE Newsletter

The C14 Commission publishes its Newsletter with regularity, primarily in electronic form. Professor Manjula Sharma (Australia) is the current editor. The Newsletter is published bimonthly. Issues back to 1995. The link to the latest edition is available at:

<https://mailchi.mp/d19ceefcf17f/icpe-newsletter-68-january-2019?e=abe1926b4b>

The sections of the last Newsletter are:

Editor's Corner
Teaching Tips: Thermal Physics Concept Inventories
Integrating Science with Society – Conference report
Active Learning in Japan
UNESCO/ICTP ALOP Workshop
Exoplanets Workshop RSEF-IOP
Science Olympiads – India
Introducing New Members of the C14 Commission

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Email: vicky.tzioumis@sydney.edu.au

Visit our website at <http://iupap-icpe.org/>

Looking forward

The last C14 Commission' Annual Meeting was held at Budapest, right after the GIREP- ICPE-EPS-MPTL Conference, on 5th of July 2017. The agenda (below) was as following. The minutes are still under construction.

IUPAP – ICPE - C₁₄ Commission Meeting

Friday 5, July 2019, Budapest - Hungary



Agenda

Location: KF 51 - AUD MAX – Budapest – Hungary

Time: Friday 5, July 2019, 3:00 – 6:00 p.m.

1. **Welcome and apologies**
2. **Approval of minutes from C14 October 2018 meeting, Johannesburg (Annex I)**
 - 2.1. Matters arising
3. **Chair's Report**
 - 3.1. ICPE budget
 - 3.2. IUPAP meetings
4. **Conferences**
 - 4.1. GIREP-ICPE-EPS-MPTL 2019 - Budapest
 - 4.2. 3rd WCPE 2020 – Hanoi – Vietnam
 - 4.3. Future ICPE conferences
5. **ICPE Newsletter & Homepage**
6. **ICPE Medal (Annex V)**
 - 6.1. Normal medal (2018 – 2019 – 2020)
 - 6.2. Young Scientist Medal
7. **Activities**
 - 7.1. Workshops (Júlio Banegas Proposal – **Annex II**)
 - 7.2. Physics education panorama (Rationale – **Annex III**)
 - 7.3. State of the Art Physics Book Series (Jenaro & Eilish Proposal – **Annex IV**)
 - 7.4. Others
8. **Cooperation of ICPE with other associations and bodies & financial support**
 - 8.1. Budapest, Hungary 2019 – GIREP-ICPE-MPTL
 - 8.2. Vietnam, 2020 – WCPE
 - 8.3. Future Conferences
9. **New Officers (2021-2023)**
10. **General**
11. **Date of next meeting**

LOOKING FORWARD

Agenda proposed for the next years (2019-2020)

Future conferences endorsed/supported by ICPE/IUPAP (2019-2020)

- World Conference on Physics Education (WCPE) - Vietnam- 2020
- International Conference on Physics Education - ICPE 2021 – Thailand

Participation in the C&CC - Council & Commissions Meetings

- (3rd C&CC Meeting – London, U.K. Oct - 2019)

Physics Education 'Panorama' in the world (2019-2020)

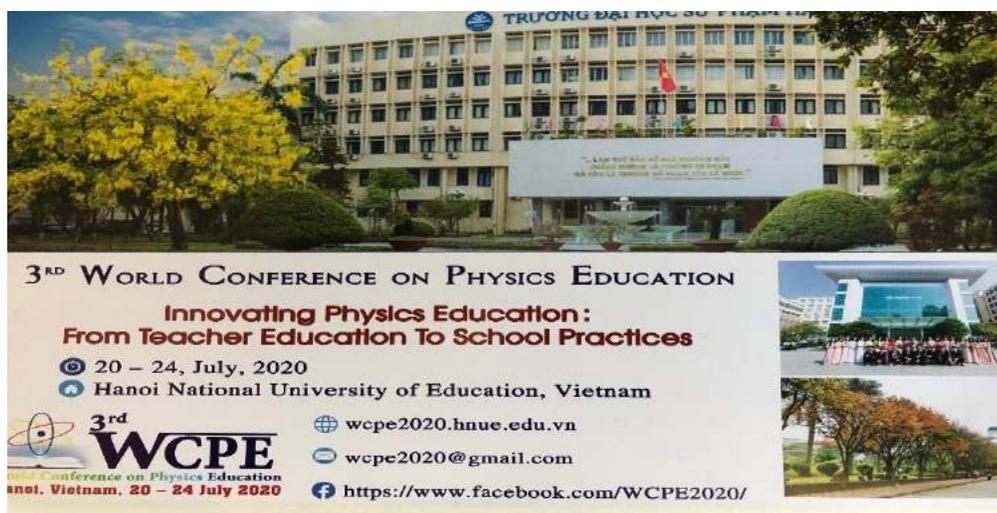
- (a survey to understand physics education in all the countries associated with IUPAP)

Preparation for the IUPAP Centenary Celebrations (2022)

- participation and suggestions of activities all over the world

ICPE Publications – Newsletters, books – Upcoming

Workshops endorsed by the International Commission on Physics Education (ICPE) – Upcoming



Roberto Nardi

C14 (ICPE) Chair

São Paulo, Aug 15th, 2019.