



# GIREP Newsletter

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## EDITOR'S SECTION

Dear Colleagues,

We are approaching the end of the second year of renewal of GIREP as a legal organization, GIREP vzw. December is a perfect month to summarize our work and to outline the plans for the next calendar year.

The electronic GIREP newsletter is issued to inform GIREP active members as well as everybody interested in GIREP activities about ongoing work continued between GIREP seminars and meetings.

On behalf of the GIREP Committee I would like to invite you to contribute to the GIREP Newsletter. There is so much going on in your institutions and your countries concerning physics education and physics education research. Please, inform us about upcoming events, new initiatives and all other announcements that are relevant to GIREP's ideas and mission, and you would like to share with the GIREP community.

The deadline for sending information to be included in the next issue is April, 30th, 2018.

We are looking forward to a fruitful cooperation on the development of the newsletter with GIREP representatives, GIREP members and GIREP friends.

**The GIREP Committee wishes you Merry Christmas and a Happy New Year!**

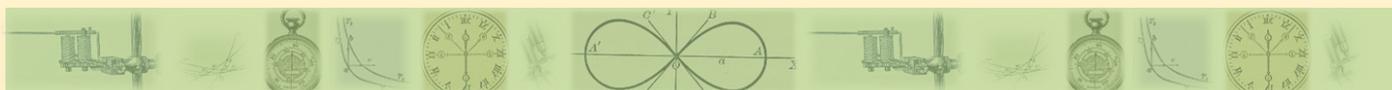
Dagmara Sokołowska

Starting from February 2013 the GIREP newsletter has been recorded permanently as online publication in the ISSN register as follows:

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## GIREP COMMITTEE ACTIVITIES

Since the last newsletter in December 2016 the GIREP Committee (GC) took part in six online meetings and additionally two in-person meetings were organized during the GIREP Conference 2017 in Dublin.

GIREP Committee members, elected in 2016, are:

- **President of GIREP, Marisa Michelini**, University of Udine, Italy
- **Vice-President of GIREP in charge of activities aimed at universities and research, Claudia Haagen-Schützenhöfer**, University of Graz, Austria
- **Vice-president of GIREP in charge of activities aimed at teachers, Wim Peeters**, PONTOn vzw, Flanders, Belgium
- **GIREP Secretary, Dagmara Sokołowska**, Jagiellonian University, Krakow, Poland
- **GIREP Treasurer, Leoš Dvořák**, Charles University in Prague, Czech republic

A **GIREP Auditor** is **Ton Ellermeijer** from Foundation CMA, Amsterdam, Netherlands

During the last year the work of the GC has focused on:

- GIREP General Assembly during the GIREP Conference 2017 in Dublin
- Proposals for organization of the future GIREP seminars and conferences (San Sebastian 2018, Budapest 2019)
- Proposal for organization of 3<sup>rd</sup> WCPE in Vietnam
- Practicalities in relation to legal status of GIREP vzw (e.g. the Annual Report for 2016, including financial report and its approval by the auditor)
- GIREP cooperation with 11 partner organizations on the basis of signed agreements and with two other organizations without a signed agreement
- GIREP representation at Physics and Science Education conferences and seminars: MPTL 2017, ESERA 2017, FFP 2017
- Development of GIREP Thematic Groups
- Involvement of GIREP national representatives
- GIREP Seminar 2016 Conference Proceedings
- GIREP books
- GIREP web site and newsletter

## ANNUAL GIREP GENERAL ASSEMBLY 2017

### Minutes

The GIREP GENERAL ASSEMBLY 2017 took place on the 6th of July, from 4:00 pm till 5:30 pm during the GIREP-ICPE-EPEC Conference in Dublin. The first call was made at 4:45 p.m. by the President, Marisa Michelini and 40 people arrived. The second call was made at 5 p.m. and altogether 54 participants arrived, among which 7 were not GIREP members. Altogether 47 GIREP members were present, including five members of the GIREP Committee (GC).

The meeting started with voting on approval of GA agenda (47 votes pro, 0 counter voices, 0 abstentions). The GIREP President, **Marisa Michelini** welcomed the general Assembly and presented her short report on GIREP Committee meetings since the last GIREP GA in September 2016, informing about the main discussed issues. Subsequently the GA voted on the minutes of the General Assembly 2016, sent to the GIREP members in the GIREP Newsletter No. 58 in December 2016 (47 votes pro, 0 counter voices, 0 abstentions).

Afterwards, **Dagmara Sokołowska**, the GIREP Secretary, presented the GIREP vzw Annual Report for year 2016.

Main issues reported:

- GIREP elections; platform for on-line voting starting from 2016
- The World Conference of Physics Education, WCPE Sao Paolo
- GIREP Seminar 2016
- Celebration of GIREP 50th Anniversary in 2016
- GIREP cooperation with other partner organizations
- Development of GIREP Thematic Groups
- Development of a group for Instructional practices in teaching physics at university level
- Involvement of GIREP national representatives
- Agreement with Springer on publishing GIREP Books
  
- The first GIREP Book – Gesche Pospiech (Editorial); GIREP-EPEC 2015 Wroclaw Proceedings
- GIREP financial issues, including bank account and PayPal account
- GIREP web site and Newsletter No. 57 (March 2016) and No. 58 (December 2016)
- Organization of the future GIREP conferences

The report had been made available to all GIREP members before the GA 2017 via link:

[http://girep2016.confer.uj.edu.pl/docs/GIREP\\_vzw\\_Annual\\_Report\\_2016.pdf](http://girep2016.confer.uj.edu.pl/docs/GIREP_vzw_Annual_Report_2016.pdf) .

Subsequently, the GIREP Treasurer, **Leoš Dvořak** presented an overview of the GIREP vzw Financial Report 2016, available at that time at: [http://girep2016.confer.uj.edu.pl/docs/2016\\_Jaarrekening\\_report.pdf](http://girep2016.confer.uj.edu.pl/docs/2016_Jaarrekening_report.pdf), and accompanied by the Audit Report of the GIREP vzw Financial Report in year 2016, put at GIREP members' disposal at:

[http://girep2016.confer.uj.edu.pl/docs/Report\\_Auditor\\_2016.pdf](http://girep2016.confer.uj.edu.pl/docs/Report_Auditor_2016.pdf)

After this part of presentation unanimous voting on approval of the Annual Report 2016 took place (47 votes pro, 0 counter voices, 0 abstentions) and the board was discharged in an unanimous vote.

Subsequently GIREP vzw activities in line with GIREP policy in years 2016-2017 were presented by GIREP Committee members. The President, **Marisa Michelini**, recalled agreements with 11 international bodies with focus on Science and Physics Education and Research. She appreciated high quality and autonomous work of GIREP Thematic Groups and plans for establishment of two new GTGs in the nearest future. Written agreement between GIREP and Springer Publisher for publishing Selected Paper Books and Books on Specific Content Topics was announced and the condition of peer review process requested by Springer to achieve the high quality of the publications was mentioned. Marisa Michelini informed about a few local GIREP activities (e.g. Cosmonauti, Music Science Children) and the partnership

with the HOPE network. She also mentioned establishment of the GIREP Award for the best PhD oral presentation during annual GIREP conferences that would be awarded for the first time during GIREP-ICPE-EPEC Conference 2017 in Dublin. She finished her speech by drawing a vision of the primary GIREP focus in the nearest future on Primary Teacher Education, sustainable introduction of Modern Physics into school curricula across Europe and instructional practices at the university level.

Following her presentation **Claudia Haagen-Schützenhöfer**, the Vice-president of GIREP responsible for activities aimed at universities and research, reported the initiative on instructional practices at the university level, mentioning in particular an initiative of the Round Table attached to this topic, organized during GIREP-ICPE-EPEC Conference 2017 in Dublin. Then **Wim Peeters**, the GIREP Vice-presidents responsible for activities aimed at teachers, presented the output of the meeting of the GIREP country representatives during the conference in Dublin and the correspondence sent to them prior to the conference, summing up with rather moderate results and the plans to continue and tighten the cooperation in the next year and in particular, during the next GIREP seminar in San Sebastian.

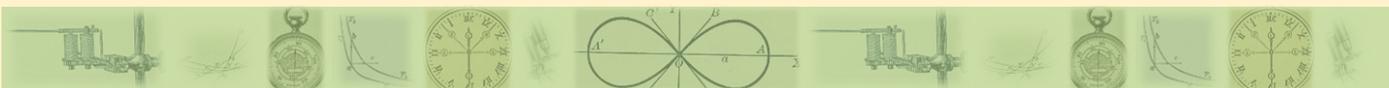
Next, the GIREP collaboration with many organizations was recalled, namely: AAPT, APS, CIAEF, EPS-PED, IACPE, iSER, IAPS, LAPEN, MPTL, PESJ (on the basis of a signed agreement) and ESERA and ICPE (without a signed agreement). The renewal of GIREP medal in 2014 was mentioned and it was recalled that in 2016 the medal was received by prof. Laurence Viennot. At this point the GIREP Committee asked for suggestions for nominations in the future. GIREP proceedings and books available were advertised

Short reports on GIREP seminar 2016 in Krakow and 2<sup>nd</sup> WCPE 2016 in Sao Paolo were presented and two nearest GIREP conferences were announced by their organizers, namely GIREP – MPTL Conference 2018 in San Sebastian, Spain, organized by Donostia Physics Education Research Group, represented by Jenaro Guisasola and Kristina Zuza, as well as GIREP – EPEC Conference 2019 in Budapest, organized by Budapest University of Technology and Economics, represented by Csaba Sukosd and Beata Jarosievitz. The organizers of both events invited the audience to the future GIREP meetings and distributed flyers.

At the last point of agenda, a few questions and initiatives arose from the audience.

- A question was asked about the procedure of establishing a new GTG and Marisa Michelini informed that an application needs to be sent to the GIREP Committee, to be considered in view of GIREP policy and vision.
- Joan Borg Marx proposed organization of GIREP small seminar in Malta in 2020, the year of the 3<sup>rd</sup> WCPE held in Vietnam.
- Claudia Fracchiola raised the idea of arranging some special space in GIREP for young physics education researchers, just starting their work in the field.
- Stamatis Vokos suggested to initiate a PER graduate summer school for PhD beginners and post-docs which could help to create a closer bond within the international community of young researchers. A partnership in organization of the summer school was suggested by one of the AAPT representatives. Paula Heron admitted that there were several agents very enthusiastic about organization of such a Summer School, but the question of money remained unsolved.
- David Sands suggested to deepen cooperation between GIREP and EPS in order to support the integration of teachers.
- The need for small-scale meetings over Europe, organized under the name of GIREP in particular for primary school teachers, has been advocated.

Marisa Michelini thanked the organizers of the GIREP-ICPE-EPEC Conference in Dublin for their fantastic organization of the event and the GIREP Committee members for their voluntary work during the past year.



## GIREP THEMATIC GROUPS (GTG)

GIREP Thematic Groups (GTG) are focused communities of GIREP members interested in sharing their expertise in particular facets of physics education, from working with children, through undergraduate work, to teacher training. The aim of the GTG is to stay in touch as critical friends, exchanging thoughts, materials and findings from the varied contexts in which we work and contribute to GIREP activities on the topic of GTG. The leader of a GTG takes responsibility for involving and organising the participation of active colleagues in the GTG in the conferences: offering an activity (workshop or poster-symposium, symposium) in each Conference or Seminar of GIREP. GTGs come into existence when someone offers to run one, and applies to the GIREP Committee. If the negotiations go well the GTG is announced in the newsletter.

### GTG on Energy

- Group Leader: Paula Heron (University of Washington, USA)
- Contact: [pheron@phys.washington.edu](mailto:pheron@phys.washington.edu)

### GTG Mathematics in Physics Education

- Group Leader: Gesche Pospiech (Technical University of Dresden, Germany)
- Contact: [gesche.pospiech@tu-dresden.de](mailto:gesche.pospiech@tu-dresden.de)

### GTG Physics Education Research at University (PERU)

- Group Leader: Jenaro Guisasola (University of the Basque Country, Spain)
- Contact: [jenaro.guisasola@ehu.es](mailto:jenaro.guisasola@ehu.es)

### GTG Evaluation of Learning and Instruction (ELI)

- Group Leader: Genaro Zavala, Tecnológico de Monterrey, Mexico
- Contact: [genaro.zavala@itesm.mx](mailto:genaro.zavala@itesm.mx)

### GTG Physics Preparation of Teachers in Grades K-6

- Group Leaders: Stamatis Vokos, Seattle Pacific University, USA & Federico Corni, Università degli Studi di Modena e Reggio Emilia, Italy
- Contacts: [vokos@spu.edu](mailto:vokos@spu.edu), [federico.corni@unimore.it](mailto:federico.corni@unimore.it)

### GTG Problem Solving in Physics Textbooks

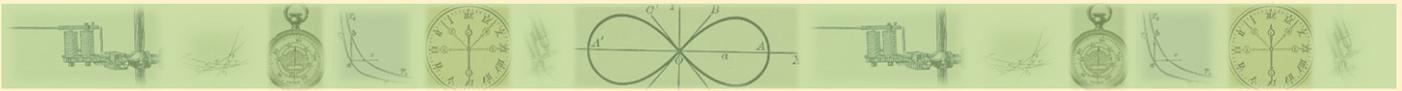
- Group Leader: Josip Slisko, Benemérita Universidad Autónoma de Puebla, Puebla, México
- Contact: [jslisko@fcfm.buap.mx](mailto:jslisko@fcfm.buap.mx)

### GTG Innovative Pedagogical Methods for University Physics

- Group Leaders: Gerald Feldman, George Washington University, USA & Guillaume Schiltz, ETH Zürich, Switzerland
- Contacts: [feldman@gwu.edu](mailto:feldman@gwu.edu), [schiltz@phys.ethz.ch](mailto:schiltz@phys.ethz.ch)

### GTG Strategies for Active Learning (SAL)

- Group Leader: Claudio Fazio, University of Palermo, Italy
- Contact: [claudio.fazio@unipa.it](mailto:claudio.fazio@unipa.it)



## INTRODUCING TWO NEW GIREP THEMATIC GROUPS

### GTG Innovative Pedagogical Methods for University Physics

**Group Leaders:** Gerald Feldman & Guillaume Schiltz

Studies of undergraduate STEM education have shown that students need to be actively engaged in the learning process in order for it to be effective. A passive lecture environment (“teaching by telling”) has been shown to be largely ineffective in developing students’ skills in critical thinking and problem solving. Yet despite the abundant data indicating the shortcomings of the conventional lecture format, this continues to be the instructional mode that is prevalent in most institutions. With the advent of this new Thematic Group, we plan to address these issues with the hope of promoting active learning as a preferred method of instruction for physics at the university level.

### Objectives

Within the framework of this GTG, we envision covering the following objectives:

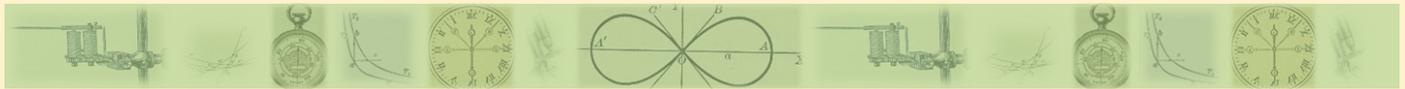
- Identify a variety of active-learning pedagogical methodologies that have been proven to be effective at the university level
- Explore specific institutional settings where such innovative techniques could be implemented with the potential for improved student learning
- Solicit participant institutions (and enthusiastic instructors) who are willing and able to investigate the efficacy of these techniques through local pilot programs
- Discuss various approaches for an in-depth assessment of these methods in order to provide semi-quantitative results
- Identify current practitioners of such innovative techniques who can serve as speakers for seminars/colloquia, or who can serve as consultants in new implementations of such methods
- Brainstorm for finding other avenues for increased dissemination of these best practices in physics teaching
- Consider issues related to scalability of these active-learning techniques with a particular focus on large enrollments and institutional infrastructure
- Recruit new members for the Thematic Group in order to achieve extensive reach for promotion of these innovative methodologies within institutions

By promoting greater innovation in university-level physics pedagogy via this GTG, we believe that there are subsidiary benefits for GIREP – this has the potential to increase the scope and reputation of GIREP throughout the broader Physics Education community. Some points are outlined below:

- Arrange focused symposia at GIREP meetings and other international conferences in order to disseminate widely the activities of this Thematic Group
- Organize hands-on workshops to demonstrate novel techniques to instructors who have a specific interest in implementing these methods in their own classrooms
- Build up a closely connected community within GIREP that shares experiences, findings and reflections
- Develop a strong reputation for GIREP as an advocate of innovative pedagogy that can have decision-making power and can exert influence

GIREP members who are interested in participating in this GTG should contact the co-organizers.

**Contacts:** [feldman@gwu.edu](mailto:feldman@gwu.edu), [schiltz@phys.ethz.ch](mailto:schiltz@phys.ethz.ch)



## GTG Strategies for Active Learning (SAL)

**Group Leader:** Claudio Fazio

As it is well known from the research literature, in order to effectively learn Physics students should do more than just listen to a lesson. They should be engaged in actively reading, writing, posing and discussing questions, gathering data from different sources, building models and in solving problems ultimately aimed at developing their knowledge, skills and attitudes. In Active Learning students are basically engaged in two aspects: doing things and reflecting about the things they are doing.

The Strategies for Active Learning (SAL) is a GIREP Thematic Group formed by teachers and researchers in Physics Education interested in promoting and deepening the understanding and use of active teaching/learning strategies in Secondary School. The main scope of SAL is to propose, compare, discuss and evaluate innovative, as well as more traditional strategies aimed at helping students to become engaged in assimilating the physics being taught in classrooms, as well as in informal settings, reflecting on their learning.

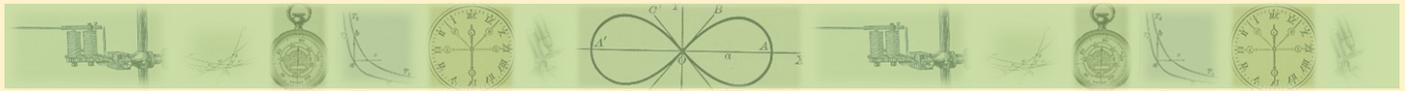
### Objectives

- To propose and discuss the planning and in-class implementation of educational approaches aimed at improving active learning by the use of innovative tools.
- To critically reflect on the role of technology tools in active learning.
- To discuss the role of laboratory and modeling activities in active learning.
- To compare active learning strategies in formal and informal education settings.
- To discuss the active learning aspects of different educational approaches well documented in Science Education Research, such as Inquiry Based Science Education, Responsible Research and Innovation, Massive Open Online Activities, etc.
- To discuss the skills a teacher needs to effectively implement active-learning strategies and its role in the student learning processes.
- To propose and discuss possible methods to evaluate the effectiveness of active-learning approaches on student understanding of Physics.

In order to achieve these objectives the SAL GTG will promote and support activities that foster communication and exchange among teachers and researchers interested in Active Learning, including the organization of Invited Symposia and Workshops at GIREP Conferences.

GIREP members interested in participating to SAL GTG and/or sharing their ideas and proposals can contact by email

**Contact:** [claudio.fazio@unipa.it](mailto:claudio.fazio@unipa.it)



## GIREP THEMATIC GROUPS REPORTS ON RECENT ACTIVITIES

### GTG Physics Education Research at University (PERU)

We are pleased to announce the organization of the IV Symposium in the GIREPMPTL Conference 2018, in San Sebastian. This IV symposium will be titled "Teaching proposals for improving students' understanding using physics education research" and focuses on the topic of the Conference "Research and innovation in Physics Education: two sides of the same coin".

At the center of any educational research is the goal of 'improving' students' learning. There is a little reason to do educational research, unless there is a pay-off in the classroom. The Physics Education Research (PER) has developed around the fact that this goal of improvement is possible. Therefore, PER has gone beyond the identification of difficulties in student learning and the deficiencies of traditional teaching. The research has developed didactic materials and strategies that have been repeatedly tested, evaluated and redesigned. However, the difficulties to carry out research in physics teaching whose objective is to improve the practice of their teaching should not be underestimated. The design of learning sequences requires a complex process of applying the general principles of didactics to the specific contexts of teaching the subjects of the curriculum.

Nowadays, there are some shortcomings, even in the most recent approaches, and some questions without answers, as in all rigorous investigations of any discipline. In the IV Symposium GTG-PERU, we will present research based teaching proposals, which try to overcome the gap between the results of PER and the classroom practice. The purpose of this symposium is to present to teachers and researches recent research results and to discuss their ideas, work in progress and experiences.

**Jenaro Guisasola** (University of the Basque Country, Spain)

### GTG Physics Preparation of Teachers in Grades K-6

The GTG on Physics Preparation of Teachers in Grades K-6 is pleased to announce that Professor Federico Corni, Università degli Studi di Modena e Reggio Emilia, is joining the leadership of the Thematic Group. At the GIREP 2017 meeting in Dublin, the GTG sponsored a successful Workshop, "Preparing teachers (K-6) to integrate concepts with practice of physics: promising models and international challenges." The GTG leadership is exploring the possibility of editing a book on cutting-edge issues in the preparation of K-6 teachers of physics and requests your best ideas and thoughtful suggestions for specific themes.

## GIREP-ICPE-EPEC 2017 Conference report

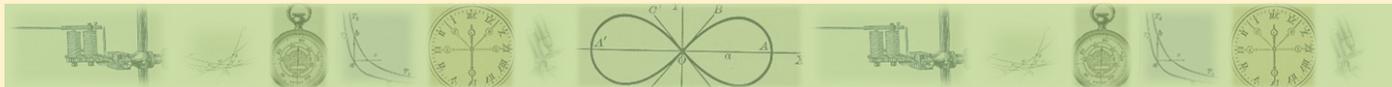


The GIREP-ICPE-EPEC 2017 international conference offered the opportunity for 270 delegates from 48 countries to come to Dublin, from 3rd-7th July, to share their knowledge and experiences under the theme of Bridging Research and Practice in Physics Teaching and Learning. The conference was organized by the Centre for the Advancement of STEM Teaching and Learning (CASTeL) at Dublin City University (Ireland) in cooperation with the Conference of International Research Group on Physics Teaching (GIREP); International Conference on Physics Education (ICPE) of the Commission C14 of the International Union of Pure and Applied Physics (IUPAP) and European Physical Society - Physics Education Division (EPS PED). The conference organizers gratefully appreciate the honorary patronage received from the Institute of Physics (IoP) in Ireland for this conference.

Altogether, there was 271 contributions - 6 plenary, 40 symposia, 12 workshops, 154 oral and 59 poster presentations - across the eleven conference topics:

- 1) Teaching physics concepts: sharing practice
- 2) Primary and secondary school physics
- 3) University physics
- 4) Laboratory activities in physics education
- 5) Physics Teacher Education
- 6) ICT and multimedia in physics education
- 7) Cross-disciplinary physics
- 8) Physics curriculum: development and implementation
- 9) Assessment and evaluation of physics teaching and learning
- 10) Physics education in informal and non-formal settings
- 11) International collaboration in physics education

53 of these contributions were from PhD students, with 39 students presenting orals, 13 with poster and 1 with a workshop presentation.



The six Invited speakers were:

- Prof. Dr Claudia Haagen-Schützenhöfer
- Prof. Kevin G. McGuigan
- Prof. Marco Antonio Moreira
- Dr. David Sands
- Dr. Bethany R. Wilcox
- Prof. Paul van Kampen

The conference included six invited symposium sessions – four from the GIREP Thematic Groups and two organized through international cooperation. The Symposium on International perspectives of women in physics in was in cooperation with the IUPAP Working Group for Women in Physics and the last session of Tuesday was a live-link up symposium hosted by AAPT colleagues on Flipping the Physics Classroom. The conference programme also included a key focus on Physics in Low to Middle Income and the IoP hosted a pre-conference workshop on the first day with the aim to develop a plan of action for collaboration to tackle the wide spread problems within teaching science in these countries and the keynote speaker shared his research on Solar Water Disinfection for Rural Communities. The second day of the conference programme was dedicated to celebrating the teachers of physics and included two plenary presentations, 48 oral presentations and 9 workshops on classroom teaching ideas and practices.

The conference also provided an opportunity to recognize outstanding individuals in Physics Education – the 2017 ICPE medal was presented to Marco Antonio Moreira; three Young Researcher Grants and a Best PhD Student Poster Prize was awarded by the European Physical Society and a Best PhD Student Oral Prize was awarded by GIREP.

### Proceedings

The conference papers will be published in two formats. Keynote papers and some selected conference papers will be published in a printed form, with ISBN code by Springer. Other papers which pass the reviewing process will be published in an electronic form in the book of e-Proceedings, with ISBN code. The e-Proceedings will be available on the website. More information can be found at: <http://www.girep2017.org/>

We would like to thank all contributors, especially the Invited Speakers, symposium Leaders and all individuals without whom the organization of the conference would not have been possible.

*Eilish McLoughlin, on behalf of the local organizing Committee of the GIREP-ICPE\_EPEC 2017conference*

## GIREP-ICPE-EPEC 2017 in numbers

## Conference Details:

- **Total number of invited submissions** = 6 plenary, 30 symposia, 3 workshops
- **Total number of submissions received** = 261
- **Total number of submissions accepted** = 232  
(154 orals, 59 poster, 10 symposium, 9 workshops)
- **Programme outline**

	Monday 3rd July		Tuesday 4th July	Wednesday 5th July	Thursday 6th July	Friday 7th July
08.00 – 12:00	PreConference Workshop Physics in Africa/ 11:00 Registration Opens	09.00 – 10:00	Plenary Session (Paul van Kampen)	Plenary Session (Bethany Wilcox)	Plenary Session (Marco Antonio Moreira)	Plenary Session (David Sands)
		10.00- 10.30	REFRESHMENTS	REFRESHMENTS	REFRESHMENTS	REFRESHMENTS
		10.30 - 12.00	Parallel Sessions	Parallel Sessions	Parallel Sessions	Parallel Sessions
		12.00 - 13.00	LUNCH	LUNCH	LUNCH	Closing Ceremony
13.00 - 14.00	Opening Ceremony	13.00 - 14.30	Parallel Sessions	Parallel Sessions	Parallel Sessions	LUNCH
14.00 – 15.00	Plenary Session (Kevin McGuigan)					
15.00 – 15:30	REFRESHMENTS	14.30 – 15:00	REFRESHMENTS	Excursions	REFRESHMENTS	
15:30- 17:00	Parallel Sessions	15.00 – 16.30	Parallel Sessions		Poster Sessions	
17:00- 18:00	GIREP National Reps Meeting	16.30 - 17.30	Plenary Session (Claudia Haagen-Schützenhöfer)		GIREP General Assembly	
18:00 - 20:00	Welcome Reception	17:30- 18:00	REFRESHMENTS			
		18:00- 20:00	AAPT symposium		Conference Dinner (19:30-23:00)	

- **Number of poster sessions** = 1 with 59 posters
- **Number of parallel sessions** = 9 with combination of oral, symposium and workshop sessions (154 orals, 40 symposium, 12 workshops)
- **Number of plenary sessions** = 6 keynote presentations
- **Total number of participants/ geographical repartition** = 270/48 countries



Country	Number				
Ireland	40	Portugal	5	Bosnia and Herzegovina	1
Italy	28	Switzerland	5	Croatia	1
United Kingdom	20	Ecuador	4	Georgia	1
United States	17	France	4	India	1
Czech Republic	12	Israel	4	Norway	1
Netherlands	12	Malta	4	Philippines	1
Mexico	10	Spain	4	Romania	1
Brazil	9	Finland	3	Saudi Arabia	1
Germany	9	Sweden	3	Scotland	1
Japan	9	Canada	2	Singapore	1
Belgium	8	Colombia	2	Slovakia	1
Poland	8	Cyprus	2	South Africa	1
Australia	6	Estonia	2	South Korea	1
Slovenia	6	New Zealand	2	Ukraine	1
Austria	5	Taiwan	2	United Arab Emirates	1
Hungary	5	Turkey	2		
		Argentina	1		

- **Number of student/non student repartition = 53/217**  
53 students = 39 students with oral, 13 with poster and 1 with workshop presentations

- **Prizes awarded with the name, contact details and short citation for each of the prize winners.**

**One EPS Invited Speaker Grant**

- ❖ Prof. Dr. Claudia Haagen-Schützenhöfer for her contribution on Design-based research: Bridging research and practice in teaching and learning optics.

**Three Young Researcher Grants supported by European Physical.**

Young Researchers Grant, worth €350 were presented to support travel and local expenses at the GIREP ICPE EPEC 2017 conference. To be eligible to apply for the grant, applicants should have received their PhD within the last 6 years, be presenting at the conference, studying or working at a European Institution and demonstrate economic need.

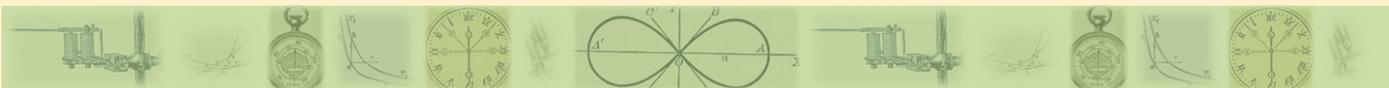
- ❖ Claudia Fracchiolla, NUI Galway, Ireland for her contribution on University students’ negotiation of physics identity in informal physics programs.
- ❖ Jesper Haglund, Uppsala University, Sweden for his contribution on The disorder metaphor for entropy – friend or foe?
- ❖ Laurens Bollen, KU Leuven, Belgium for his contribution on Research-based learning materials to improve students’ understanding of vector calculus in electrodynamics.

**Best PhD Student Poster Prize was awarded by the European Physical Society**

- ❖ Federica Minozzi, University of Camerino for his contribution on Assessment of problem solving activity on modern physics in secondary school

**Best PhD Student Oral Prize was awarded by GIREP.**

- ❖ Alessandra Landini, University of Modena and Reggio Emilia for her contribution on The role of playing in the representation of energy: A lab experience for future teachers



## GIREP and WCPE upcoming Conference Proceedings

We would like to announce that the contributions presented at the **2<sup>nd</sup> World Conference on Physics Education** in Sao Paulo in 2016 will be published in two publications. One of them are on-line Proceedings (a digital book), already available on the website: <http://www.livrosabertos.sibi.usp.br/portaldelivrosUSP/catalog/book/177>. The participants will receive an e-mail with the link to have access to the digital book. A few copies will be printed and delivered to the next GIREP-MPTL Conference in San Sebastian 2018. Concerning the special issue of selected papers, the expectation is that the volume will be finish before the end of the year.

Proceedings of the GIREP 2016 Seminar in Krakow, Poland will be published twofold. Selected papers will be gathered in a book published by Springer under a special agreement. Other papers accepted during the review process will be published on-line in an electronic form in the book of e-Proceedings, with ISBN code. The reviewing process is expected to finish in January 2018.

## GIREP – MPTL Conference 2018, San Sebastian, Spain

### *Research and Innovation in Physics Education: two sides of the same coin*



It is our great pleasure to announce the GIREP-MPTL conference 2018, to be held in Donostia-San Sebastian, Spain, the European Capital of Culture 2016.

The Conference GIREP-MPTL 2018 emphasizes both results of physics education research and good practices in teaching physics. The Conference strongly encourages practical application of emerging teaching strategies to problems of direct relevance to classroom. Consequently, both theoretical as well as applied physics education topics are of interest.

The conference is organized by:

- Groupe International de Recherche sur l'Enseignement de la Physique (GIREP)
- Multimedia in Physics Teaching and Learning (MPTL)

It will be endorsed by:

- International Commission on Physics Education (ICPE) of the Commission 14 of the International Union for Pure and Applied Physics (IUPAP)
- European Physical Society (EPS) - Physics Education Division
- Real Sociedad Española de Física (RSEF)



The Conference GIREP-MPTL 2018 will focus on physics educational innovations at Primary, Secondary and University levels. Specifically, the symposium provides a forum for exchanging ideas and discussing recent developments in such areas as:

1. **Physics teaching and learning at Primary and Secondary Education**
2. **Physics teaching and learning at University**
3. **Preservice and in service physics teachers education**
4. **Physics education in non-formal setting**
5. **Physics into STEM teaching and learning**
6. **ICT and multimedia in Physics Education**
7. **Nature of Science, gender and socio-cultural issues in physics education.**

Apart from keynotes, symposia, oral presentations and poster presentations, the organizers propose Dialogues. The idea of "Dialogue" involves two experts with a leader who gives a brief feedback on the subject and proposes to the two experts questions for the discussion. People attending the Conference will have the opportunity to propose questions posed in advance. The Dialogue leader will organize the questions to send the experts a summary of the main questions before the Conference. The leader will organize the Dialogue with the experts.

**Dialogue 1**, Tuesday, 10th July

**Primary, Secondary and University pre-service teacher education**

What science education is relevant to become physics teacher in a technological world?

**Dialogue 2**, Wednesday, 11<sup>th</sup> July

**The actual and potential impact of physics education research in students' learning.**

The complex relationship between research and practice: what can we do to reduce the gap?

**Important dates:**

Registration open and call for abstracts	11th December 2017
Abstract Submission Deadline	2nd March 2018
Notification of Acceptance	30th April 2018
Early Registration Deadline	16th May 2018
Conference Dates	9th-13th July 2017

Further information and updates can be found at the conference website:

<https://www.girep2018.com/en/home>

On behalf of the Organising Committee, we cordially invite you to Donostia-San Sebastian to attend GIREP-MPTL 2018, actively participate in its sessions, and contribute to the continued success of this conferences series.

Jenaro GUIASOLA - Chair GIREP-MPTL

Kristina ZUZA - Co-Chair GIREP-MPTL

## WHAT IS GOING ON? NEWS FLASHES FROM GIREP COUNTRIES AND PARTNERS

Emily Lewanowski-Breen is an undergraduate student, studying Science and Mathematics Education in University College Dublin. She attended the GIREP-ICPE-EPEC 2017 Conference in Dublin City University this July and has subsequently written a blog on her experience of the conference as an undergraduate student.

We invite you to her blog: <http://www.myucdblog.com/attending-international-conference/>

The blog is primarily aimed at undergraduate students; however, if you would be interested in sharing the blog in the GIREP newsletter, I would be happy to amend the piece to suit your readership (if required).

## FUTURE CONFERENCES



### **AAPT Winter Meeting 2018**

The AAPT winter Meeting will be organized 6-9 January in San Diego, California, USA

<http://aapt.org/Conferences/wm2018/>

### **GIREP-MPTL 2018**

GIREP-MPTL Conference will be held in San Sebastian, Spain on 9th -13th July 2018, organized by Jenaro Guisasola and Kristina Zuza

<https://www.girep2018.com/en/home>

## GIREP MEMBERSHIP RENEWAL & FEES

We would like to remind you that you can pay your GIREP membership fee (30 euro per year) either by bank transfer or via PayPal. Both possibilities are described in detail on the GIREP web page

<https://girep.org/information.html> available from the menu item "Info & Contact" on GIREP web pages.

After a login, you can also visit the page

[https://girep.org/member/membership\\_fees.html](https://girep.org/member/membership_fees.html) (available simply from the menu, too). You can see your membership fee payment history there. At that page, there is also a possibility to pay your GIREP membership fee using your credit card via PayPal (though this is slightly more costly than sending the fee to GIREP as "a friend" via PayPal).

Please, be aware that the address of the bank of the GIREP account is: Heuvelstraat 56, 2530 Boecheout. The account number will stay the same. The information on GIREP webpage will be updated in due time.

Last but not least: It should be reminded that according the GIREP Statutes, Art.6, §5: "Members not paying their yearly fee before the 1st of July of the current year are no longer considered as members." So, please, be so kind and pay your membership fee in time.

*Leos Dvorak, GIREP Treasurer*

## CALL FOR CONTRIBUTIONS TO THE GIREP NEWSLETTER

We would like to encourage all GIREP newsletter readers to participate in sharing news and ideas about physics teaching and learning and physics education research. Please, send contributions for the next GIREP Newsletter to GIREP Secretary, Dagmara Sokolowska [dagmara.sokolowska@uj.edu.pl](mailto:dagmara.sokolowska@uj.edu.pl) until the end of April 2018.

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As a GIREP member you have **exclusive access** to the digital proceedings of the past GIREP conferences. In addition you can get a **reduced registration fee** for GIREP conferences and for conferences of our partner organisations (see GIREP Newsletter 54).