ACTIVITY REPORT 2016

Presented to EPS Council, 31 March-01 April 2017

European Physical Society

more than ideas

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| President's Report | **Christophe Rossel** |

INTRODUCTION FROM THE PRESIDENT

With this Activity Report I hope that we can demonstrate how lively and active our Society is and that the recommendations made by the 2015 Strategy Review Group (SRG) have been implemented as well as possible. It was recognised at last Council in Mulhouse that the application of the strategy plan 2010+ was successful but the SRG still raised some points for improvement in communication, internal and external cooperation, Brussels presence, membership and funding and on how to measure success. In addition to some optimisation of the EPS secretariat and its staff distribution for better services, the SRG emphasised in particular the need to appoint a policy officer for its office in Brussels and to allocate the appropriate funding. The expected function of this officer is to develop an efficient network within the EU Governance community, identify opportunities for new activities, events, and position papers.

Since October 2016 Walter van Doninck, Belgian particle physicist recently retired from CERN, is in charge of our Brussels office. To help him interact with the European Commission (EC) and other stakeholders, the newly created EPS Advisory Board on Science Policy (ABSP), composed of 6 high level members has become active. A meeting was organised in December with Rolf Heuer, in his function as member of the European Science Advisory Mechanism (SAM). Also present was our new EPS president-elect Rüdiger Voss from CERN, elected during the extraordinary EPS Council that took place on 14 October 2016 in Mulhouse. Another step in the EPS engagement in Brussels is our participation to the new Open Science Policy Platform (OSPP) established to propose recommendations on Open Science Policy to the EC, following Commissioner Carlos Moedas' visions for Europe summarised by '*Open Innovation, Open Science and Open to the World*'. The OSPP working members met already twice in 2016 and once in March 2017 to discuss issues such as Altmetrics, Open Access Publishing, Open Science Cloud and Citizen Science and provide reports to the EC. Two international events INNOVEIT2016 in Budapest and ESOF2016 in Manchester gave us the opportunity to meet C. Moedas and R-J. Smits, the Director of DG Research and Technological Development at the European Commission and share views with representatives of ISE and EuroScience.

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EPS will continue its collaboration with the European Association for Chemical and Molecular Sciences (EuCheMS) and is preparing a joint workshop on '*Solar Energy for a circular Economy*' for members of the European Parliament. Recently, in January 2017, EPS submitted its contribution to the Interim Evaluation of Horizon 2020 with a specific focus on the Societal Challenge 'Clean, Safe and Efficient Energy'. Also in January, I was also invited, as EPS president, to participate in the 10th meeting of the Scientific Board of the International Basic Sciences Programme (IBSP) at the UNESCO Headquarter. The main purpose was to review the challenges and portfolio of IBSP with respect to STEM training, research and education.

The EPS has an important role to play in the European landscape as a learned society but also as the federation of its 42 Member Societies. Increasing the interaction with our Member Societies is essential, in particular to understand the problems experienced by their physics community in research, education and funding. The link with our Divisions and Groups (D&G) is also very important as they play a leading role in promoting scientific excellence with various activities. A special meeting was organised in Brussels on the 26 May 2016 to meet with the chairs of the D&G. Its purpose was to share concerns and improve communication among D&Gs, with the EPS Executive Committee and the Secretariat. Encouraged by this success the next meeting will take place in autumn 2017.

At our last Executive Committee meeting in Bucharest on 2-4 Feb. 2017 a special session was organised with the EPS Committee of European Integration of the European Physical Society (CEI-EPS). Ten Physical Societies on the periphery of the European Union or members of the Balkan Physical Union, including SEENET-MTP, the South-eastern European Network in Mathematical and Theoretical Physics, were invited to share information, identify common issues affecting physics in their respective countries. Following the presentations, a summary catalogued the potential actions by EPS.

Thus communication at different levels has thus been a priority for us in 2016.

The commitment to increase the number of Associate Members is taken very seriously. A concrete plan of action has been developed with Luc Bergé, proposing customised package of benefits with different levels of membership and sponsorship to potential institutions and industrial companies. Another of my priorities is to insure that all D&Gs remain active and fit with the most recent scientific development. For this reason a new Division on Gravitational Physics has been set up and will start its activities in the current year following approval by Council.

Other relevant activities in 2016 include the 7th EPS Forum Physics and Society successfully organised in London on 'Getting the Diversity Balance Right in Physics' under the chairmanship of Averill MacDonald. It was nevertheless decided to reevaluate the role of this Forum, which will be integrated in a new project addressing the social dimension of science and the grand challenges in Physics in the Horizon 2050, under the leadership of Carlos Hidalgo. The EPS Historic Sites programme is running very well and several new places were celebrated in 2016: the Ernst Mach House in Prague (CZ), the cabinet of Physics at the University of Coimbra (PT), the former Institute of Physics at Würzburg University (DE), the Uddmanska House in Sweden and the Institute for Advanced Study in Princeton (USA), the second joint EPS-APS historic site, after the Einstein House in Bern in 2015. The EPS Young Minds program with all its successful activities has kept growing in 2016, reaching about 40 sections in 21 countries, including one in Egypt. Worth mentioning is also the EPS Special Activity Fund aimed to finance projects on physics for development. One nice example is the assembling of solar kits for delivering light in remote areas of Morocco, a project presented at COP22 in Marrakech. Donations to this Fund are most welcome.

Another relevant issue in 2016 was the publication in EPN 47/4 of a controversial article on the collapse of the World Trade Center towers on 9/11, which generated a wave of reactions worldwide and critical letters to the editors. In addition to the response of the editors, this turmoil gave me the opportunity to write an editorial on Science Denial in the following EPN issue. An interesting experience.

To conclude let me thank again all of the people who have been committed to EPS in the past year and in particular all of the members of our EPS Secretariat in Mulhouse. In April, Rüdiger Voss will take over the presidency of EPS. Let's wish him all the best in leading the EPS to new and challenging horizons. 2018 will be an important milestone as EPS will celebrate its 50th anniversary. ■

| Honorary Secretary's Report | **Lucia di Ciaccio** |

EXECUTIVE COMMITTEE ACTIVITIES 2016

In order to accomplish its mandate of developing and implementing EPS policy, the Executive Committee meets regularly face to face, approximately every three or four months. Since the Council meeting in April 2016, three regular meetings of the Executive Committee took place. The first meeting was held in Brussels (BE) on the 26th and 27th of May, the second took place in San Sebastian (ES) 30 September – 1 October, hosted at the Donostia International Physics Center and the third was organised in Bucharest from the 2nd to the 4th of February 2017 and was accompanied by a visit to the Extreme Light Infrastructure of the Nuclear Physics Institute. Executive summaries of regular Executive Committee meetings are published on the EPS-website and are available to Individual Members.

At the April Council meeting, five new members of the Executive Committee were elected for the first time, six members were elected for a second term and, during an extraordinary Council Meeting organised in October 2016 by the Executive Committee at the EPS headquarter in Mulhouse, the election of the next EPS President-elect, Rüdiger Voss, took place.

The final document of the Strategy Review Group (SRG) appointed by the Executive Committee with the task of reviewing the EPS projects and putting forward recommendations, became available and was presented during the April Council meeting. Enhancing the visibility and the influence of the EPS in the European instances was confirmed as a priority item. Following the recommendations of the SRG, progress has been made in 2016 in establishing a point of presence in Brussels. A budget has been allocated to hire a person who will act as the EPS representative in Brussels. Consequently, the Executive Committee appointed as policy officer, Walter Van Donick with the mandate to carry on this task. W. Van Doninck started his appointment on the 1st of October and the Member Societies (MS) have offered to provide administrative staff for fixed periods of time and to help for specific projects. With the help of MS and Division and Groups (D/G), the Executive Committee has established a preliminary workplan for the EPS point of presence in Brussels. The EPS activities in Brussels will follow an iterative process, where current events will impact the EPS actions in Brussels. In parallel, a Science Policy Advisory Board has been appointed and will provide advice and support to the Executive Committee helping the EPS to have an increased visibility in the European instances of Brussels. Finally, a new location for the EPS office in Brussels is searched for, in order to allow for more flexible working hours.

The SRG recognised also that the recruitment of new Associate Members (AM) is very beneficial for EPS from several points of view and is among the priorities of the EPS strategy. In 2016, the Executive Committee has formed a working group with the mandate of developing concrete proposals to encourage new AM to join the EPS. The Executive Committee members will discuss these proposals in the next meetings and actions will be presented at the next Council.

At its meetings, the Executive Committee invites Representatives of national physical societies, Representatives from other learned societies, policy makers, Chairs of D/G and of Action Committees. In 2016, the Executive Committee invited the newly appointed Chairs of the Committee for European Integration and of the Young Minds Action Committee. They made presentations illustrating the main activities and the future projects of their Committees. Moreover, in an on-going process of strengthening the link between EPS structures, in 2016 the Executive Committee has organised a meeting with D/Group Chairs. The event was very successful and inspiring and has encouraged further common activities. Following the general consensus, the meeting will be held again in the close future.

Establishing and complying with ethics codes are fundamental duties of every scientist. Therefore in response to the invitation issued to the EPS by ALLEA (All European Academies) to review its Code of Conduct for Research Integrity, the Executive Committee made a series of comments and suggestions summarised in a short document that was sent to ALLEA.

The Executive Committee follows also very closely the evolution of the EPS publications inviting regularly at its meeting the Editors in charge. EPL is an active journal, and has a very high level of co-editors. It is attractive to some Physics Communities, in particular the superconductivity and statistical Communities. Nevertheless concerns exist on the impact factor and the number of citations in 2016. Therefore new initiatives have been launched to recover the impact factor and increase the visibility of the journal. Giorgio Benedek, the Editor in Chief (EiC) of EPL, agreed to remain on duty until the end of 2017. The call for a new EiC has been issued.

The latest changes of the EPN publication policy were successful. Recently it was felt that even though EPN is not a peer-reviewed magazine, the use of ways of checking the credentials of the authors is desirable. It was also decided that when an article is flagged as potentially controversial, a review committee should take a decision on whether to publish it. At the beginning of 2017, Jo Hermans will end his appointment as EPN Science Editor and will be replaced by Ferenc Iglói. Victor Velasco will continue to serve as Editor.

The Executive Committee discusses the policy and the names of the EPS prizes. In particular the Executive Committee decided that the new EPS prize resulting from the merging of two existing prizes (the CB Powell Memorial Medal, and the EPS Public Understanding of Physics Prize) will be named: "EPS Prize for Outreach and Engagement".

DIVISION AND GROUP	EXECUTIVE COMMITTEE MEMBERS	MEMBER SOCIETY
Condensed Matter Division, History of Physics Division	Bergé, Luc	Albania, Croatia, Macedonia, Montenegro, Serbia, Slovakia, Slovenia
Physics for Development Group	Bethke, Siggi	Austria, Germany, Liechtenstein
Accelerators Group	Bracco, Angela	Belgium, Italy, Portugal
High Energy and Particle Physics Division	di Ciaccio, Lucia	France, Luxembourg, The Netherlands
Division of Physics in Life Sciences, Statistical and Non-linear Physics Divisio`n	Friberg, Ari	Denmark, Finland, Iceland, Norway, Sweden
Physics Education Division, Plasma Physics Division	Jacquemot, Sylvie	Aremnia, Cyprus, Greece, Israel
Quantum Electronics and Optics Division, Technology and Innovation Group	Leuchs, Gerd	Belarus, Czech Rep., Georgia, Ukraine
Atomic Molecular and Optics Division	Rachlew, Elisabeth	Estonia, Latvia, Lithuania, Poland
Environmental Physics Division	Saunders, Frances	UK
Joint European Solar Physics Division, Energy Group	Tran, Minh Quang	Russia, Spain, Switzerland
Computational Physics Group, Nuclear Physics Division	Zamfir, Victor	Bulgaria, hungary, Moldavia, Romania, Turkey

Undoubtedly, Physics is necessary to understand nature and to tackle major issues affecting the lives of citizens. Therefore, concerning near future projects, in view of highlighting the strong impact of Physics on the development of the Society, the Executive Committee has started to prepare a Grand Challenge White Paper where the many contributions of Physics to Society will be discussed. Contributions from the Physics Community, in particular from MS and D/G are expected. One of the aims of the Paper is to provide inputs to the future H2050 call. The Forum Physics and Society was found as a good platform to conduct the work required to finalise this document, as well as to organise meetings around the themes developed. The effort will be lead by Carlos Hidalgo who will become the next Chairperson of the Forum. The plan is to conclude the project by end of the 2018, when a final workshop is planned.

The Executive Committee is engaged in additional on-going projects. These include the review of the EPS Conference policy (where a proposal from the SFP committee "Women in Physics" of creating a conference label "Gender Fair" will be discussed) and the planning of the celebration of the 50th anniversary in 2018.

Finally, every Executive Committee member is the direct contact person for a very small number of MS and D/G as shown in the table.

HIGHLIGHTS FROM 2016

ADVISORY BOARD ON SCIENCE POLICIES

The EPS Advisory Board on Science Policies (ABSP) provides timely, independent and high level scientific advice on specific policy issues, in particular related to physics and its role in addressing grand societal challenges. The Board is composed of a maximum of 10 members with outstanding level of scientific expertise and good understanding of the European Institutions in the field of science policy making. The main purpose of this Board is to favour the links between EPS and the European Commission by responding to requests from both sides. In particular they should be able to act as the first point of contact with EC officials and interact with the High Level Group of Scientific Advisors of the Scientific Advice Mechanism (SAM)of the European Commission. The current members of the ABSP are: Karl Friedrich-Zieghahn, Board of Directors, Head of Division 4, KIT - DE, Carlo Rizzuto, Director General ELI-DC AISBL - IT, Claudine Hermann, vice president of the European Platform of Women Scientists - FR, Sir Peter Knight FRS Senior Research Investigator Blackett Lab, Imperial College London - UK, Muhsin Harakeh, Professor Emeritus at University of Groningen - NL, Sydney Gales, Scientific Director at ELI-NP - FR

The Board has a consulting role and no decisional function within EPS. It provides information and advice to the EPS Executive Committee and the EPS President on European Science policy issues. It interacts closely with the EPS Divisions and Groups on actions related to their specific field of expertise. The first meeting of the ABSP was held at CERN, on 14 December 2016.

OPEN SCIENCE POLICY PLATFORM

In 2015, the European Commission recognised that a dialogue was needed among relevant stakeholders to support the development of Open Science for the benefits of the European research system. To tackle this issue, the Directorate-General for Research and Innovation set-up the Open Science Policy Platform [OSPP].

The members of the OSPP were elected and announced in May 2016 at the Competitiveness Council. The group consists of high-level representatives of the broad constituency of European (open) science stakeholders.

The mandate of the Open Science Policy Platform is to:

1. advise the Commission on how to further develop and practically implement open science policy, in line with the priority of Commissioner Moedas to radically improve the quality and impact of European science
2. function as a dynamic, stakeholder-driven mechanism for bringing up and addressing issues of concern for the European science and research community and its representative organisations, following five broad lines for actions which are presented in the draft European Open Science Agenda
3. support policy formulation by helping to identify the issues to be addressed and providing recommendations on the policy actions required
4. support policy implementation, contributing to reviewing best practices, drawing policy guidelines and encouraging their active uptake by stakeholders
5. provide advice and recommendations on any cross-cutting issue affecting Open Science

Christophe Rossel, President of the European Physical Society (EPS), was elected to represent the Society in this new platform for a 24-months mandate. The members of the Open Science Policy Platform will advise the European Commission on how to further develop and practically implement open science policy. In support of policy formulation, the platform will help identify the issues to be addressed and provide recommendations to the Commission on the policy actions required. In support of effective policy implementation, it will contribute to reviewing best practices, drawing policy guidelines and encouraging their active uptake by stakeholders.

▸ More information on the OSPP can be found at: **http://ec.europa.eu/research/openscience/index.cfm?pg=open-science-policy-platform**

ISE WORKSHOP ON SCIENCE ADVICE IN EUROPE

inspiring SCIENCE education

The Initiative for Science in Europe held an expert workshop on science advising in Europe on 19th and 20th of January 2016 at the EMBL campus in Heidelberg, Germany. The workshop focused on important structural features of scientific advice in Europe, taking into account the need for transparency; the ecosystem of current advisory bodies; and the desire to construct reliable policies to meet global challenges.

Only issues related to Science for Policy were explored. The workshop did not explore how should a Chief Science Advisor Office be run, rather it was asked, what are all sources of possible science advice; which of these sources, if any, are useful for what types of decision-makers (including the public); and how would these various sources be synthesised and advice implemented?

The workshop aims to improve science advising particularly at the European level by identifying and discussing any gaps in the current policy debate, and anticipating discussions that may occur about science advising particularly under the next Commission presidency (*i.e.*, starting 2019).

The workshop included 24 experts representing robustly (but not comprehensively) the views of practitioners, analysts, and academics with interest in science advising in Europe. Prior to the workshop, the organisers interviewed briefly several (but not all) of the participants, and as well additional experts who could not attend the workshop. At the workshop, each major session included short expert talks or other less-for- mal interventions. A few discussions were open (*i.e.*, not structured), but most of the work was done in structured discussions. This was both to interrogate the participants to understand their views and how they evolved during the workshop discussions, and as well for the participants to conduct an exercise in drafting options for science advising in Europe. The webpage for the workshop is: **www.i-se.org/2016scienceadvice**

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H2020 MID-TERM REVIEW

The European Physical Society (EPS) submitted a contribution to the mid-term review of the Horizon 2020, the current framework programme of the European Commission for research, technology and development. The EPS response was limited to the H2020 Societal Challenge 'Clean, Safe and Efficient Energy'. EPS fully endorses the Horizon 2020 objective to aim for competitive, low carbon energy systems and reduced energy consumption to tackle the societal challenge. In this context, EPS sees merit in the activities supported so far under Horizon 2020. However, these activities seem to focus overwhelmingly on short-term, technological issues. The EPS would like to highlight that a long term approach to these issues is necessary, to explore new areas and generate new knowledge.

Notably, an efficient expansion of renewable energy sources requires solutions for intermittency and storage, which still require extensive research and development. The current philosophy of Horizon 2020's Work Programmes therefore needs to be adapted to make room for long-term, blue-sky research.

As discussed in the EPS Energy Group Position Paper 'European Energy Policy' (**http://www.eps.org/?page=policy_energy_env**), substantial CO_2 reductions imply a vast transformation of the existing power supply system into either renewable or nuclear power or some combination thereof. Already at the present level of penetration of renewable energy sources (~23% of the EU electricity production), solutions are urgently needed to adequately tackle the problem of intermittency of the energy supply. This will demand a combination of high capacity non-intermittent (*e.g.* nuclear, oil and coal fired) and flexible backup plants (*e.g.* gas, hydropower), large electrical energy storage capacities and substantial expansion of electricity distribution grids, including smart grids. The integration of this variable electricity supply is expected to become even more difficult as its percentage rises to above 30-40%. The expected substantial changes in the electricity sector present major technological issues requiring long-term perspectives and sustained investment in research and development. In this context, EPS recommends to develop and strengthen research activities in all areas of electrical energy storage, which notably encompasses thermal storage, graphene-based technologies, and Power-To-X, energy vectors.

The EPS contribution to the H2020 mid term review includes recommendations for research areas which are essential for addressing the energy challenge of our time. The EPS urges the European Commission to take into consideration these recommendations during the definition of the final Horizon 2020 Work Programme (2018-2020). Moreover, the EPS recommends that these issues be included in future framework programmes as well. The EPS and the EPS Energy Group are willing to provide further input and expertise whenever needed or appropriate.

HISTORIC SITES

C. Rossel and H. Heal before Historic Site Plaque at the IAS, Princeton, NJ

The Historic Sites Committee was created at the end of 2011 when the initiative was started by the EPS.

Current Members of the EPS HS Committee are:
Alan Chodos (representing the American Physical Society, APS), **Luisa Cifarelli** (Chair), **Martin Huber**, **Maciek Kolwas**, **Ove Poulsen**, **Peter Maria Schuster**, **Fritz Wagner**. Observer: **Enrique Sanchez** (EPS Young Minds).

In December 2016, 58 proposals of Historic Sites had been received, either spontaneous or channelled through National Member Societies. Let us recall that proposals can be made at any time from the EPS web site: **http://www.eps.org/?page=distinction_sites**

The Historic Committee examines the proposals typically three times per year.

As of December 2016, 54 proposals of EPS Historic Sites were accepted and concern the following 22 Countries (2 of them outside geographical Europe): Austria, Belgium, Bulgaria, Czech Republic, Denmark, France, Germany, Hungary, India, Ireland, Italy, Lithuania, The Netherlands, Poland, Portugal, Russia, Serbia, Spain, Sweden, Switzerland, United Kingdom, United States.

Through March 2017, 33 EPS Historic Sites have been inaugurated in 18 different Countries:

1. The Goldfish Fountain of the Physics Institute of Panisperna Street – Centro Fermi, Rome, *Italy, 20 April 2012*
2. Laboratory "Les Cosmiques", Col du Midi, Chamonix, France, *23 July 2012*
3. Hoza 69, Warsaw, Poland, *10 January 2013*
4. The Study of Bruno Pontecorvo – JINR, Dubna, Russia, *22 February 2013*
5. The Hill of Arcetri, Florence, Italy, *17 May 2013*
6. The Villa Griffone in Pontecchio Marconi, Bologna, Italy, *26 May 2013*
7. The Observatory of Tycho Brahe, Hven Island, Landskrona, Sweden, *11 September 2013*
8. The LAL-LURE Accelerator Complex, Orsay, Paris, France, *13 September 2013*
9. PTB, Formerly PTR, The National Metrology Institute, Berlin, Germany, *8 October 2013*
10. The Cathedral, Kamien Pomorski, Poland, *11 October 2013*
11. The Neutrino Experiment at MTA Atomki, Debrecen, Hungary, *25 October 2013*
12. The Niels Bohr Institute, Copenhagen, Denmark, *3 December 2013*
13. The AdA Storage Ring at the INFN Frascati National Laboratory, Frascati, Rome, Italy, *5 December 2013*
14. The European Birthplace of the Atomic Timekeeping – NPL, Teddington, UK, *31 January 2014*
15. The Blackett Laboratory, London, UK, *30 April 2014*
16. The Fabra Observatory, Barcelona, Spain, *9 May 2014*
17. The Study of Georgi Nadjakov, Sofia, Bulgaria, *23 May 2014*
18. The Synchro-Cyclotron, SC – CERN, Geneva, Switzerland, *19 June 2014*
19. The Kamerlingh Onnes Laboratory and Lorentz Institute, Leiden, The Netherlands, *9 February 2015*
20. The Fasor Lutheran Secondary School, Budapest, Hungary, *23 April 2015*
21. The Ludwig Maximilian University, Munich, Germany, *6 May 2015*
22. The Students Residence (Residencia de Estudiantes), Madrid, Spain, *13 May 2015*
23. The Mount Vesuvius Observatory, Hercolaneum, Naples, Italy, *23 May 2015*
24. The Institute for Radium Research, Vienna, Austria, *28 May 2015*
25. The Einstein House, Bern, Switzerland, as Joint APS-EPS Historic Site, *14 September 2015*

26. The Hotel Metropole, Brussels, Belgium, *24 October 2015*
27. The Ernst Mach Physics Institute, Prague, Czech Republic,*18 February 2016*
28. The Cabinet of Physics of the University of Coimbra, Coimbra, Portugal, *11 March 2016*
29. The Former Physical Institute of the University of Würzburg, Würzburg, Germany, *7 June 2016*
30. The "Piersanti Mattarella Tower of Thought" of the Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, *21 August 2016*
31. Uddamanska House, Kungälv, Sweden, *29 October 2016*
32. The Institute for Advanced Study, Princeton, NJ, USA, as Joint APS-EPS Historic Site, *9 November 2016*
33. "Les Bastions" of the University of Geneva, Geneva, Switzerland, *29 March 2017*

Already scheduled inaugurations in 2017, in 4 different countries (1 other than the above), are the following:

- The Institute of Physics of the Georg-August University of Göttingen, Göttingen, Germany, *7 June 2017*
- H.H. Wills Physics Laboratory (Royal Fort) of the University of Bristol, Bristol, UK, *13 September 2017*
- IBM Research Laboratory, Rüschlikon, Zürich, Switzerland, *26 September 2017*
- The Milan Milankovic Climate Research Centre, Belgrade, Serbia *(already declared on 3 October 2014, inauguration date t.b.d.).*

For each inauguration event, a plaque is unveiled in the presence of the local representatives and authorities. The EPS President or his representative (Past President or Member of the EPS Executive Committee or Member of the EPS HS Committee) attends the ceremony. For each ceremony, a news is published right away in the electronic newsletter e-EPS and on the EPS web site, and an extended article in published afterwards in EPN.

So far, this initiative has been a series of success stories: while stamping significant places for the history and the progress of physics, it provides visibility to physics and to the physics community and, at the same time, enhances some spirit of belonging to the EPS.

CREATIONS

How can young people's interest in science be increased? 16 partners from ten European countries want to break new ground. In CREATIONS, a project funded by the European Union, they develop creative approaches based on art for an engaging science classroom.

Art is too often perceived as being something that is opposite to science. But in CREATIONS the combination of these two areas can enhance cross-disciplinary thinking and raise student's interest in both. The partners are planning a variety of events with theatre, photography, exhibitions in which young people can experience an active and playful role within science and research.

CREATIONS has established a pan-European network of scientists, teachers, artists and students. The project was launched in October 2015 and runs for three years.

CREATIONS project unites participants from many European countries, including Norway, Sweden, Finland, United Kingdom, Germany, France, Switzerland, Spain, Serbia, Greece and Malta. All project's consortium members have outstanding expertise in engaging science education and experience in cross-cultural collaboration. This will ensure the development and implementation of the CREATIONS Framework, as well as enhance the establishment of a pan-European network of scientists, art and science teachers, artists and students. CREATIONS activities will take place in various European countries.

▸ **http://creations-project.eu/**

FORUM PHYSICS AND SOCIETY

Chair: Averil Macdonald

The VII Forum Physics and Society: Getting the diversity balance right in physics was hosted by the Institute of Physics, UK on 27 October 2016. The aim of the conference was to find out more about how different diversity in physics was across Europe, how to improve diversity in business and retain a diverse workforce, encourage under-represented groups to study physics and continue in their careers, and discuss other initiatives that could increase diversity in physics.

Professor Paul Hardaker, the Institute's Chief Executive opened the conference. The IOP had had an ambitious diversity and inclusion programme, with a heavy emphasis on girls and women in physics, for more than a decade. He was personally committed to this, and proud of the work to improve the gender balance in physics and in retaining women in physics careers. He welcomed discussions at the European level to tackle a systemic problem which was not unique to the UK. The IOP was continually striving to learn whether there was more that it could do to move the diversity agenda forward.

Professor Lucia Di Ciaccio, gave the overall picture of diversity of physics in Europe. She presented data from the SHE survey, which investigates the level of progress made towards gender equality in research & innovation (R&I) in Europe. Europe needs excellent science and innovation to tackle the grand challenges, irrespective of age and gender. Among the conclusions, the gender pay gap in scientific research & development was almost 20% (in favour of men) especially as they got older and female presence was particularly low where overall level of R&D was highest.

There are several countries such as Portugal, Italy, Spain and Ireland, where there are much higher proportions of women with a doctorate in physics than other and in some it can be as high as 45%. Although neither Germany nor Sweden have such high proportions, they have shown the fastest improvement in recent years. She also reported that a survey of research-performing organisations in Europe looked at what proportion of them had adopted gender equality plans and measures. This varied widely in different countries, from as little as 10% to more than 80% but those that had adopted gender equality plans also had the highest proportion of female PhD students.

Dr Arti Agrawal gave an overview of diversity in STEM subjects in the US and the approaches being taken there to achieve a better gender balance, diversity and inclusion. There were still very stereotyped professions in the US, as with other countries, with the largest profession in terms of females being nursing, then medicine, teaching and so on. Engineering and physics were amongst those with the least numbers of females. The pattern in the US is similar to elsewhere in that more men go into leadership positions whether in academia or industry. She mentioned several top-down initiatives from government in the US, including a grant of $3m over five years that was available to develop, implement and study innovative change strategies to foster gender equality.

Dr Sarah Greasley, distinguished engineer and technical director at IBM UK, spoke about the business imperative of diversity and how it underpins IBM's programmes and recruitment and retention policies. There was a clear business case for gender diversity in IBM, which has enabled a strong female representation at all levels partly with role models and partly because of the long-term focus on diversity. The IBM gender diversity scorecard does very well on female apprentices and they aim for 50:50 gender balance, but they lose women through working life cycle.

Professor Averil Macdonald presented her innovative outreach work to encourage more girls in schools to consider physics and science more generally. She said that in the UK the proportion of physics A-level students, physics undergraduates, postdocs and lecturers who are women had all stayed stubbornly at around 20% for the last 35 years, while for more senior positions the figure decreased. She became involved in a Women in Science and Engineering (WISE) study, "Not for people like me". Among its findings were science outreach as a whole often uses verbs to describe being a scientist (such as what scientists DO) rather than using adjectives (such as what scientists are LIKE).

Professor Valerie Gibson chair of the Juno Assessment Panel talked about the IOP's Project Juno and the value it brought to physics departments nationally, as well as the work they had undertaken at Cambridge to improve equality. Project Juno was established by the Institute in 2007 in response to best practice identified from the Institute's Women in University Physics Departments: a site visit scheme, which ran from 2003 to 2005. The aim of Juno is to recognise and reward departments that can demonstrate they have taken action to address the under-representation of women in university physics and to encourage better practice for both women and men. There are five principles – Organisation, appointment, promotion and progression, culture change, flexible working – covering all aspects of academic life.

V. Gibson also presented the work they had done at the Cavendish which resulted them in being the first physics department in the UK to achieve Athena SWAN Gold, the highest level of an award scheme run by the UK Equality Challenge Unit to improve gender equality in HE.

Karen Davies spoke about the importance of informal learning in engaging young people with physics. While 458,000 children from booked educational groups visited the Science Museum last year, the yet still do not attract all sections of society. They are working with BP and King's College London on research into science capital – the amount of science-related knowledge, attitudes, skills and experiences that young people have, which is affected by their school, home, everyday life and out-of-school activities – such as visits to places like the museum. Their research has found that 5% of young people have high, 58% have medium and 27% have low science capital. It is only those with at least medium but generally high science capital that then go on to study science subjects and have careers in them.

During the day delegates had many opportunities to discuss the presentations and initiatives around the world on diversity and science. Issues from primary school, gender stereotypes, early experiences all the way through to workforce activities were discussed. One of the biggest issues is not about engaging women but engaging people in the issues.

There were many different approaches to diversity across Europe but consensus that more had to be done to improve the gender balance in physics. A number of possibilities were discussed to make further progress. These were:

The EPS should:

- Run a survey to understand the diversity of its members and the community
- Monitor the gender of speakers at conferences and events
- Have more industrial representation
- Clearly articulate the business case for diversity so that businesses and R&D organisations understand this has to be mission critical and part of the strategy
- Consider an initiative like Project Juno on an EU scale
- Ensure equality and gender training and unconscious bias training is mandatory and integral at all levels
- Run a diversity session at all its conferences – not as a parallel but main session
- Facilitate best practice across Europe by finding out where the best practice in member societies is and bringing it together in one place.
- Set its own example so that there are visible women at the top and have mandatory E&D training
- Monitor the American grant scheme and how it works
- Consider implementing an EPS Careers' Fund. ■

| EPS Honorary Treasurer's Report | **Gerd Leuchs** |

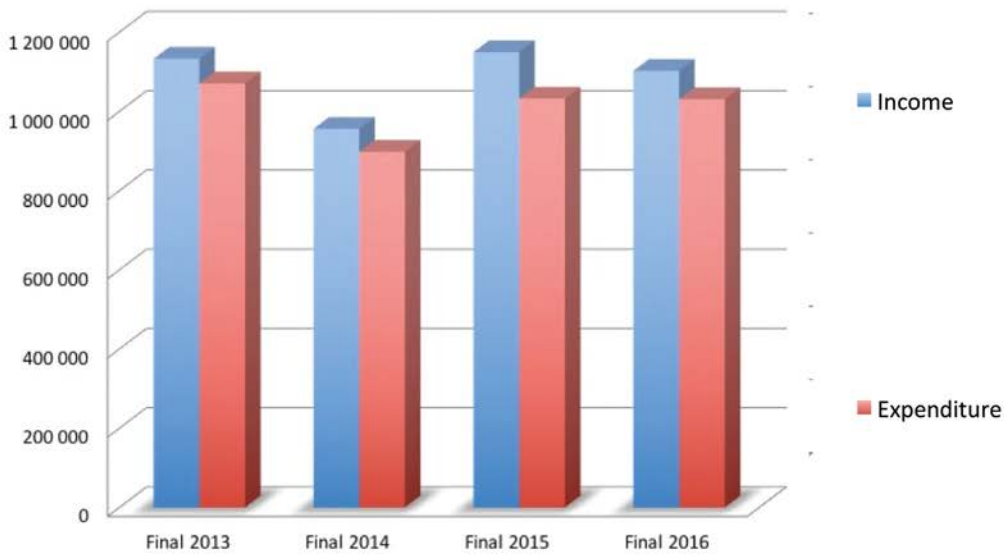
FINANCIAL REPORT 2016

The income for 2016 was Euro 1,102,394, 58% from Members, 24% from publication activities and 18% from conferences and other activities. The expenditure for 2016 was Euro 1,030,055, 35% for administration and governance, and 65% for activities. The outcome for the year was an excess of Euro 71,939.

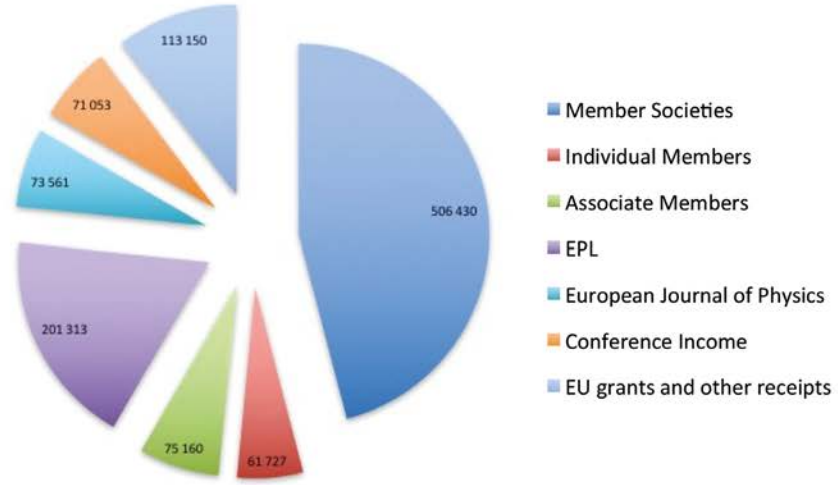
Income was 8% more than budgeted. Individual Member increased by 12% and income from Member Societies increased by 5%, compared with 2015. Income from conference services was significantly more than budgeted, due to increased activity in the Conference Services Department. Administrative expenditure was higher in 2016, due mainly to to increased salary costs and building maintenance costs. The activity expenditure increased by 2%, due in part to an extraordinary Council in October 2016, and increased costs in outreach.

Substantial work has been done in producing accounts that are more readable. This work will continue.

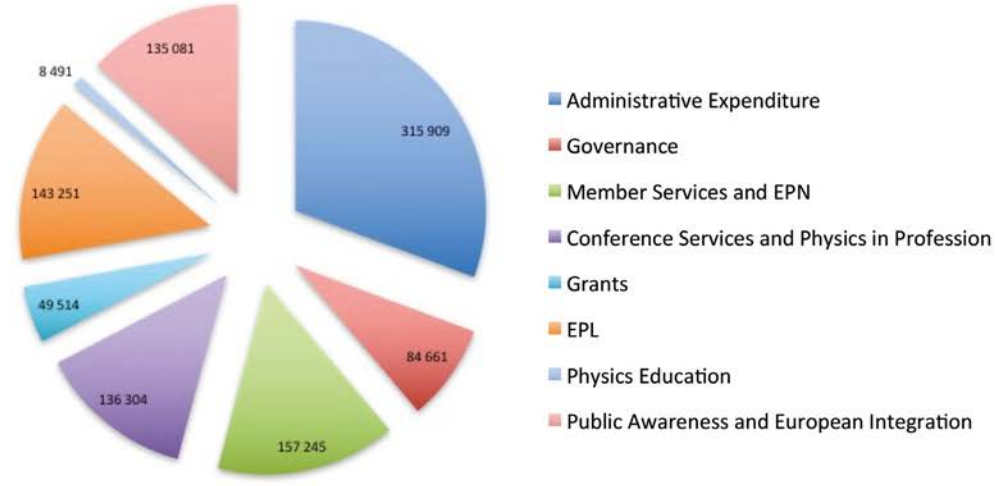
Income and Expenditure 2013 -2016 (in Euro)



Income 2016 (in Euro)



Expenditure 2016 (in Euro)



SECRETARIAT

The Secretariat of the European Physical Society is headquartered on the campus of the Université de Haute Alsace, in Mulhouse, France. Staffing fluctuated throughout the year, linked mainly to conference activity, some natural staff turnover, and the finalisation of the International Year of Light 2015 in September 2016. At the end of 2016 the EPS employed 10.9 FTE, in 3 main areas: Core Secretariat (4.9); Conference Services (3), and the EPL Editorial Office (3). In addition, the UHA has made a full time secretary available to the EPS.

The Core Secretariat provides administrative services to the EPS, including accounting, graphic design, and information technology. Among the main tasks are the preparation of Europhysics News and e-EPS, website maintenance and design, financial control, invoicing *etc.* The Secretariat also supports Divisions and Groups, and the activities of EPS Committees, and the Executive Committee. European relations, relations with other societies, communications, outreach, policy monitoring and EPS involvement in EU projects are also part of activities of the Core Secretariat.

The Conference Services department provides a full range of services for conferences organised by EPS Divisions and Groups. These include committee management, web site design and maintenance, communication, onsite logistics, online paper submission and maintenance, budgeting, *etc.* Much work was undertaken to develop a clearer method of presenting the services and the advantages of EPS Dividions and Groups to use the EPS services. Conferences organised by the EPS Conference Service Department were Europhoton, The 2nd History of Physics Conference, and the 1st Physics for Life Science Conference.

EPS headquarters in Mulhouse also houses the EPL editorial office: the staff editor, as well as 2 editorial assistants. In 2016, the EPS Editorial Office handled 1,661 manuscripts. The median submission-to-online time during 2016 remains below 100 days consistent with the previous year. ■

▼ **Top:** F. Burr, S. Loskill, D. Lee, G. Gunaratnam - **Middle:** P. Padovani, X. de Araujo, P. Helfenstein, A. Ouarab - **Bottom:** J.G. Rivero González, S. Fila, O. Fornari, K. Desse.

REPORTS BY EPS ACTION COMMITTEES

CONFERENCE COMMITTEE

Chair: Dominique Vernhet

Conferences, Workshops, and Summer Schools are essential elements in the communication of physics, the career development of physicists, the promotion of physics towards students and young scientists, and for the reputation, the credibility, and the visibility of the EPS and physics research activities. The role of the Conference Committee is to advise the EPS Executive Committee on the development of all activities and programmes in the area of such scientific events, and to administer EPS Conference grants. The committee members are Dominique Vernhet (Chair), Colin Latimer (EPS Co-Chair), Gerd Leuchs (EPS Treasurer), Ophelia Fornari (Secretary), Goran Djordjevic (Chair CEI), Jef Ongena (Chair EPS Energy Group), Marian Reiffers (former EPS Executive Committee member as of April 2016). Colin Latimer stepped down from the committee in October 2016.

The Conference Committee is responsible for the collecting and disseminating information on both Europhysics Conferences (*i.e.* conferences organised by EPS Divisions and Groups), and for evaluating applications to obtain the label of EPS Sponsored Conference. Conference organisers may also request EPS Conference patronage, which is awarded upon approval of the President and entitles the organisers to use the EPS logo and communications network to disseminate information.

Moreover, in order to increase the activity of the EPS Secretariat Conference Management, the chair, D. Vernhet, in collaboration with D. Lee and O. Fornari worked on a new communication strategy. Three different formulas are now established for our D/G, as the Basic, the Improved and the All Inclusive Option. With the new strategy, two new conferences retained the EPS conference service to organise their events: The 2nd International Conference of the History of Physics that has been held in Pöllau, Austria in 2016 with 80 participants as well as the 1st Biology for Physics conference: is there new Physics in Living Matter? That has been held in Barcelona, Spain in January 2017 with 170 participants.

On the other hand, D. Vernhet, together with D. Lee and O Fornari, launched, within the Conference Committee, a reflection and discussions on a possible new policy of the EPS to support international events. It started in Nov. 2016 and will be proposed to the EPS Executive Committee on Feb. 2017.

Conferences/scientific events

The Conference Committee received 58 applications of conferences/events for 2016-2017 (30 for 2016 and 28 for 2017). Among them, 12 Europhysics and 14 EPS Sponsored conferences have been approved for 2016, 1 International event called "International Physics Olympiads" was supported and 3 applications were rejected. The committee already received some requests for 2017. 6 of them for Europhysics and 2 EPS Sponsored are already approved. Additional 17 requests for 2017 are waiting for the EPS approval and 3 were already rejected. In 2016, the conferences organised by the EPS Conference Department were the Europhoton Conference in Vienna, Austria, with 274 participants and the 2nd International Conference on the History of Physics conference in Pöllau, Austria with 80 participants. In addition the EPS Secretariat was involved in the organisation of the 5th EPS Young Minds Leadership Meeting, in Budapest, Hungary and the VII EPS Forum Physics and Society in London, United Kingdom.

Conference Grants

The EPS makes grants available to the organisers of Europhysics conferences to allow for the participation of **Young Scientists** in their meeting. Per conference a maximum of 3 grants of 350 € each can be distributed. In 2016, grants totalling **6700 €** were distributed

IM Travel Grants: The EPS makes grants available to individual members (IMs) of the EPS to allow for the participation in an EPS recognised (Europhysics or Endorsed) meeting. Members may receive a grant of 350 € only once and may request support only in the first 3 years of their membership. 7 such grants were distributed in 2016, for a total of **2450 €**.

Invited Speaker Grants: The EPS makes grants, of 500 € each, available to conferences organised by EPS Divisions and Groups (Europhysics conferences) to cover costs of invited speakers. 4 grants were distributed in 2016, *i.e.* **2 000 €**.

EPS Poster Prize: Grants, of 200 € each, are available to EPS Europhysics or Endorsed conferences for a poster prize, to make an award to a student who has presented the best poster at the conference. 20 prizes were awarded in 2016, *i.e.* **4 000 €**.

Special Meetings Support

The EPS makes funds available for some special events. In 2016 the EPS supported the following events, as IONS, AYPT, and International Physics Olympiads for a total amount of **2000 €**.

In conclusion, in 2016, a total budget of **17 150 €** has been dedicated to support Conferences and Scientific Events.

Further information on EPS conferences and grants, including application procedures, is available on the EPS website.

DISTINCTIONS AND AWARD COMMITTEE

Chair: Jo Hermans, Members: Angela Bracco, Elisabeth Rachlew, Marian Reiffers

The D&A committee endorsed the following distinctions and prizes:

- The Autumn/Winter 2016 Emmy Noether distinction to **P. Bassereau**,
- The Spring/Summer 2016 Emmy Noether distinction to **E. Monroy**,

- The Gero Thomas Prize to **D. Nagy**,
- The Achievement Award to **J. Ongena** and **D. MacGregor**,
- The EPS Edison Volta Prize 2016 to **M. Orrit**,
- The 2016 Lise Meitner Prize to **Ulf-G. Meißner**,
- The EPS CMD Europhysics Prize to **P. Böni**, **A.N. Bogdanov**, **C. Pfleiderer**, **A. Rosch**, **A. Vishwanath**,
- The 2016 EPS QEOD prize in Research in Laser Science and Applications to **R. Kienberger**,
- Fellows of the EPS: **L. Bergé**, **E. Bodenschatz**, **R. Brinkmann**, **S. Galès**, **V. Malka** and **K. Meier**.

In addition, towards the end 2016 the committee agreed with the proposal from the chair of the Statistical and Nonlinear Physics Division to establish a new prize being awarded by the Statistical and Nonlinear Physics Division (SNPD) of EPS.

EQUAL OPPORTUNITIES COMMITTEE

Chair: Lucia Di Ciaccio

The Equal Opportunity Committee (EOC) was created in 2013 with the mandate of taking actions to put in place the EPS equal opportunity policy, promoting in particular a better gender balance in physics. The current members are: Martine Bosman, Lucia Di Ciaccio (Chair), Nadia Martucciello, Ana Proykova, Elisabeth Rachlew (EPS Executive Committee representative) and Enrique Sánchez (Young Minds Action Committee representative).

At present the EOC pursues two well-established programs: the attribution of the Emmy Noether distinction and the publishing in the electronic newsletter e-EPS, of short portraits with interviews of young female researchers in physics (program called "Visibility for young").

The Emmy Noether distinction aims to bring to the wider attention of the scientific community, and of the general public outstanding female physicists, identifying them as role models for the young generations of physicists. Nominations may be submitted at any time; a selection committee appointed by the EOC examines them two times per year typically in Spring and in Autumn. News about the winners is published right away in the electronic newsletter e-EPS and on the EPS website. The 2016 laureates for the Emmy Noether Distinction were:

- **Eva Monroy** from the Institute for Nanosciences and Cryogenics in Grenoble, France, for playing a key role in the field of nitride semiconductor nanostructures,
- **Patricia Bassereau** from Institute Curie in Paris, France for her important and innovative work on the studies of soft matter and in vitro biological systems at the forefront of the Physics-Biology science.

The program "Visibility for Young" started in Autumn 2015. The idea is that a young female candidate physicist (student, postdoc or young researcher) may find in the interview of a successful female physicist only few years older, positive answers to the concerns that she might have regarding the choice of pursuing a career in physics. Until now six portraits were prepared and published in e-EPS. The program benefits of a close collaboration with the Young Minds Action Committee.

In 2016, the EOC contributed to the revision of the European Code of Conduct for Research Integrity of All European Academies (ALLEA) code and gave inputs to the VII EPS Forum Physics and Society which took place in London and focussed on "Getting the Diversity Balance Right in Physics". The EOC contributed with a presentation given by the Chairperson, which dressed a picture of the present situation on the balance men-women in physics and suggested possible actions to be taken for increasing equal opportunities.

For 2017 additional actions are in consideration. One of them consists in proposing in collaboration with Member Society and Division and Groups a conference charter promoting fairness towards women attending and presenting their scientific results at national and international conferences.

COMMITTEE ON EUROPE INTEGRATION

Chair: Goran Djordjevic

Members

The Committee worked in the same composition as it was established in 2013: **Goran Djordjevic**, Serbia (chair), **Ana Proykova**, Bulgaria, **Radu Constantinescu**, Romania, **Maciej Kolwas**, Poland, **Guido Martinelli**, Italy, **Denes Lajos Nagy**, Hungary, **Sofoklis Sotiriou**, Greece. In June 2016, **R. Constaninescu** was appointed as the new chair of the Committee.

Background

In accordance with the accepted strategy proposed by EPS-CEI for the period 2013 -2016, the activity was oriented to promote Physics and the scientific cooperation across South-Eastern and Central (Central-Eastern) Europe. The strategy was structured on five action directions:

Action 1: Integrating Access to Research Infrastructures in Europe

Action 2: Training – EPS School Program - Schools for Physics students.

Action 3: Physics education and teachers training.

Action 4: Strengthening the regional cooperation among EPS member societies.

Action 5: Promotion of physics in the region(s).

Faced with limited funds, the EPS-CEI activity focused in 2016 mainly on the actions 2 - 5, and the option was to work in synergy with other organisations and structures which can assure supplementary resources. In the field of Theoretical and Mathematical Physics, the activities were significantly integrated in the SEENET-MTP Network program (**www.seenet-mtp.info**). Important cooperation was established with CERN, ICTP Trieste, UNESCO Venice Office, Balkan Physical Union.

Action 2: Training – EPS School Program - Schools for Physics students.

- An important activity aiming to train young researchers from the region and to support the integration of the physics community in SEE countries into the

ERA, was T*he Join Meeting in Quantum Fields and Nonlinear Phenomena*, organised in Sinaia, Romania, from March 9 to March 13, 2016: 49 scientists participated in the activity, 43 scientific papers were presented from which 35 oral presentations and 8 papers included in a poster session. The event also included the round table "Evolutionary models for natural systems. Biodiversity conservation and sustainable development".

- In the direction of *Student Training - Schools for Physics students*, the Committee cooperated with SEENET-MTP in implementing the PhD Training Program organised in cooperation with CERN. The third School in the CERN – SEENET-MTP PhD Program **Computational methods in Cosmology and General Relativity** was held in Timisoara, Romania. from December 11th to December 17th 2016 with 6 lecturers and 25 students mainly from SEE countries.
- Within the program "Cosmology and Strings" supported by ICTP there were 20 exchanges of researchers and students implemented in SEE-CEI countries. In the training program organised during these exchanges and training-lecture program around 100 students were involved.

Action 3: Physics Education and teachers training.

In the frame of Physics education and teachers training activities the Committee was involved in the organisation or implementation of:

- The *4th International Symposium "Position of Physics in Secondary Schools in Balkan Region"*, Aleksinac, Serbia, February 26-28, 2016. The symposium brought together over 130 participants from 10 countries. It has potential to be one of the important events in the region within framework "teachers for teachers". The EPS-CEI mission and activities were presented by the Committee chair Prof. G. Djordjevic.
- A seminar for Physics teachers was organised in Craiova, Romania, in the frame of the project Go-Lab in January 2016. It has been jointly organised with Galileo Training Teachers Program and 29 high school teachers attended it. Two other seminars were held in the same partnership in Serbia, May-June 2016, with the participation of 55 teachers.

Action 4: Strengthening the regional cooperation among EPS member societies.

For strengthening the regional cooperation among EPS member societies, the Committee has continued its involvement as many as possible national societies in its activities. The currents status can be characterised as follow:

- **Officially represented and fully included:** Union of Physicists in Bulgaria, Hellenic Physical Society, Eotvos Lorand Physical Society Hungary, Polish Physical Society, Romanian Physical Society, Serbian Physical Society.
- **Active participation of individual members:** Albanian Physical Society, Belarusian Physical Society, Croatian Physical Society, Society of Physicists of Macedonia, Moldovan Physical Society, Turkish Physical Society. Ukrainian Physical Society.
- **Contact has been established:** Society of Mathematicians, Physicists and Astronomers of Slovenia, Slovak Physical Society. Contacts with two societies in Bosnia and Herzegovina have been also established.
- **No feedback:** Armenian and Georgian Physical Societies and Physical Society of Montenegro.

Action 5: Promotion of physics in the region(s).

For promoting physics in the region(s), two meetings were held:

- A first workshop was held in parallel with the EPS Ex Com meeting in Athens, 23rd & 24th of January 2016. The participants discussed on:
  - A scheme which would improve European integration through the preparation and the implementation of projects focusing on teachers training and also targeting students and pupils.
  - An effective dissemination strategy at national and international level in order to increase the number of joint proposals.
  - Presentation of the international initiatives and programs in the Balkan Countries and EPS Committee of European Integration.
  - The pathway for the next steps in particular in 2017 (common activities and projects, competitions, workshops, national training events).
- A second working meeting initiated by S. Sotiriu devoted to the preparation of the regional and European projects was held in Marathon, Greece (July 2016) with the participation R. Constantinescu and G. Djordjevic and a group of local lecturers. Three possible directions of projects were considered; ``Mission to Mars`` within Horizon 2020, Erasmus + K2 project for teachers training and a joint regional project with UNESCO. S. Sotiriou proposed to organise a 1 week event in Montenegro in 2017 or 2018 with a programme prepared for teachers. The Committee is planning a 2 week event with a program: 1) for teachers and 2) for PhD students and young researchers in High Energy Physics. Preparation of this event is to be coordinated by G. Djordjevic
- The EPS-CEI web page was completed in spring 2016. by M. Milosevic web master of the SEENET-MTP Office Nis, under support and coordination of G. Gunaratnam and G. Djordjevic **http://www.eps.org/members/group.aspx?id=84917**
- A Committee meeting was planned to take place in Romania during autumn 2016, but it was postponed for 2017.

Budget of EPS – CEI in 2016 and 2017

Taking into account the before mentioned synergy of activities organised with other structures, there were no expenses of CEI from the EPS budget during 2016. Activities were covered by other sources or made on a voluntary base, including the creation of the Committee web page. The Committee basically proposes a similar budget as before, *i.e.* 10.000 EUR – for 2017. Bearing in mind savings in 2016 as well as the new action plan to be presented to the EPS Executive Committee, a reasonable increase of the budget would be very welcome. The Committee takes into account to enforce its activity with Member Societies from the Eastern part of Europe and to really increase their integration in the European research and education areas.

FORUM PHYSICS AND SOCIETY

Chair: Averil Macdonald

The VII Forum Physics and Society: Getting the diversity balance right in physics was hosted by the Institute of Physics, UK on 27 October 2016. The aim of the conference was to find out more about how different diversity in physics was across Europe, how to improve diversity in business and retain a diverse workforce, encourage under-represented groups to study physics and continue in their careers, and discuss other initiatives that could increase diversity in physics.

Professor Paul Hardaker, the Institute's Chief Executive opened the conference. The IOP had had an ambitious diversity and inclusion programme, with a heavy emphasis on girls and women in physics, for more than a decade. He was personally committed to this, and proud of the work to improve the gender balance in physics and in retaining women in physics careers. He welcomed discussions at the European level to tackle a systemic problem which was not unique to the UK. The IOP was continually striving to learn whether there was more that it could do to move the diversity agenda forward.

Professor **Lucia Di Ciaccio**, honorary secretary and chair of the EPS equal opportunities committee, and Professor in Physics at the University Savoie Mont Blanc, France gave the overall picture of diversity of physics in Europe. She is also a high-energy physicist working at CERN and presented data from the SHE survey, which investigates the level of progress made towards gender equality in research & innovation (R&I) in Europe. Europe needs excellent science and innovation to tackle the grand challenges, irrespective of age and gender and whilst on some measures there does appear to progress on gender equality, there has been the least progress in business and enterprise. The gender pay gap in scientific research & development was almost 20% (in favour of men) especially as they got older. Female presence was particularly low where overall level of R&D was highest. Countries where women were more likely to work part-time also had lower levels of females in research and development (R&D).

She also talked about other diversity measures, such as ethnicity, nationality, sexual orientation, disability and so on but data for this was very patch across Europe and much of it was constrained by privacy and data protection legislation.

She presented data on the ATLAS collaboration and the survey on discrimination. The ATLAS is a relatively small world of High Energy Physicists: <5000 members, <2800 authors. The fraction of women holding leadership roles and giving talks was consistently around ~20% and this is same fraction as women in ATLAS.

There are several countries such as Portugal, Italy, Spain and Ireland, where there are much higher proportions of women with a doctorate in physics than other and in some it can be as high as 45%. Whilst neither Germany nor Sweden have such high proportions, they have shown the fastest improvement in recent years. She also reported that a survey of research-performing organisations in Europe looked at what proportion of them had adopted gender equality plans and measures. This varied widely in different countries, from as little as 10% to more than 80% but those that had adopted gender equality plans also had the highest proportion of female PhD students. The most commonly adopted measures were those to improve work–life balance; the least common were those providing support for leadership development – yet this was often the support most needed by women to progress their careers once they were no longer early career researchers.

She summed up by saying that diversity has to be part of a long term strategic plan, integrating E&D to identify skill, experiences and knowledge. There was a need to fight stereotypes and to ensure gender data was gathered and discussed regularly.

Dr Arti Agrawal, a lecturer at City University with a research expertise in photonics, gave an overview of diversity in STEM subjects in the US and the approaches being taken there to achieve a better gender balance, diversity and inclusion. There were still very stereotyped professions in the US, as with other countries, with the largest profession in terms of females being nursing, then medicine, teaching and so on. Engineering and physics were amongst those with the least numbers of females. The pattern in the US is similar to elsewhere in that more men go into leadership positions whether in academia or industry.

She mentioned several top-down initiatives from government in the US, including a grant of $3m over five years that was available to develop, implement and study innovative change strategies to foster gender equality. She also talked about The Optical Society (OSA) which had focused on diversity to drive change including activities such as women in optics chapters, seminars, outreach, annual conference, skills workshops and so on.

Dr Sarah Greasley, distinguished engineer and technical director at IBM UK, spoke about the business imperative of diversity and how it underpins IBM's programmes and recruitment and retention policies. There was a clear business case for gender diversity in IBM and the IBM CEO is female, which enabled a strong female representation at all levels partly with role models and partly because of the long-term focus on diversity. She talked about the ethics of Artificial Intelligence and why there was a need for a diversity of viewpoints to do this. Technology impacts on all aspects of human cycle and therefore a huge diversity of people are needed to find out how they interact and use technology. The IBM gender diversity scorecard does very well on female apprentices and they aim for 50:50 gender balance, but they lose women through working life cycle. They run a variety of outreach – primary, secondary schools, and recruitment fairs, schools aimed at girls 15-16, new graduates, and women in technology sessions – to attract more women into tech.

Professor Averil Macdonald, Chair of the FPS Committee and Head of Diversity at SEPnet, the South East Physics Network in England, presented her innovative outreach work to encourage more girls in schools to consider physics and science more generally. She said that in the UK the proportion of physics A-level students, physics undergraduates, postdocs and lecturers who are women had all stayed stubbornly at around 20% for the last 35 years, while for more senior positions the figure decreased. She

became involved in a Women in Science and Engineering (WISE) study, "Not for people like me". Among its findings were science outreach as a whole often uses verbs to describe being a scientist (such as what scientists DO) rather than using adjectives (such as what scientists are LIKE).

She gave out copies of a WISE booklet, "People like me: learn how girls are happy and successful at work", which she used to ensure that girls understood the huge range of opportunities available to them. It had been particularly successful in working with mothers and their daughters as it gave information for mothers to encourage their daughters to pursue science. She also highlighted the importance of language in job advertising. There was now plenty of research around how some words are perceived as "masculine" or "feminine" and how the use of these words in job adverts and descriptions could put off certain groups applying. Changing the language used in advertising was a risk-free measure.

Professor Valerie Gibson, Professor in High Energy Physics at the Cavendish Laboratory, Cambridge UK and Chair of the IOP's Juno Assessment Panel talked about the IOP's Project Juno and the value it brought to physics departments nationally, as well as the work they had undertaken at Cambridge to improve equality. Project Juno was established by the Institute in 2007 in response to best practice identified from the Institute's Women in University Physics Departments: a site visit scheme, which ran from 2003 to 2005. The aim of Juno is to recognise and reward departments that can demonstrate they have taken action to address the under-representation of women in university physics and to encourage better practice for both women and men. There are five principles – Organisation, appointment, promotion and progression, culture change, flexible working – covering all aspects of academic life. There are three levels of Juno awards:

Supporter: The department starts its Juno journey by endorsing the five principles and making a commitment to work towards Practitioner and then Champion.

Practitioner: The department demonstrates that its Juno journey is well underway. Qualitative and quantitative evidence is gathered and its initial action plan demonstrates how the department aims to achieve Champion status.

Champion: The department demonstrates that the five principles are embedded throughout the department. Further evidence is gathered and its action plan demonstrates how the department will continue to further good practice.

Becoming involved in Project Juno, and signing up to become a Supporter, departments can work towards developing an equitable working culture in which all students and staff, men and women, can achieve their full potential.

V. Gibson also presented the work they had done at the Cavendish which resulted them in being the first physics department in the UK to achieve Athena SWAN Gold, the highest level of an award scheme run by the UK Equality Challenge Unit to improve gender equality in HE. They managed a 64% increase in number of women academics. Since achieving Gold, they have employed 40% more women in academic posts and all female academics eligible for promotion have been promoted at least once. The Cavendish implemented mandatory E&D training and established what is now a very active research committee. They redesigned the first year undergraduate physics course, addressing underperformance of women in the first year course. There is now mentoring pre and post maternity leave and childcare provision for interviews. And most importantly, they helped people realise that there is life beyond work.

Karen Davies, head of learning, research and resources at the Science Museum, spoke about the importance of informal learning in engaging young people with physics. 458,000 children from booked educational groups visited the Science Museum last year. They have an enormous footfall, yet still do not attract all sections of society. They run an early bird programme for autistic children as well as having special British Sign Language events.

They are working with BP and King's College London on research into science capital – the amount of science-related knowledge, attitudes, skills and experiences that young people have, which is affected by their school, home, everyday life and out-of-school activities – such as visits to places like the museum. Their research has found that 5% of young people have high, 58% have medium and 27% have low science capital. It is only those with at least medium but generally high science capital that then go on to study science subjects and have careers in them. Many students and parents from working-class and/or minority ethnic communities find museums, and in particular Science Museums, disorientating and off-putting because they do not know how to navigate them, and feel visibly and culturally different from everyone else there, and the dominant culture of science as white, male and middle-class. Addressing these barriers had to be a collaborative effort as no one person or institution could tackle them alone. She showed a short video clip that explained science capital and encouraged delegates to disseminate this to their colleagues and networks.

During the day delegates had many opportunities to discuss the presentations and initiatives around the world on diversity and science. Issues from primary school, gender stereotypes, early experiences all the way through to workforce activities were discussed. One of the biggest issues is not about engaging women but engaging people in the issues.

There were many different approaches to diversity across Europe but consensus that more had to be done to improve the gender balance in physics. A number of possibilities were discussed to make further progress. These were:

The EPS should:

- Run a survey to understand the diversity of its members and the community
- Monitor the gender of speakers at conferences and events
- Have more industrial representation
- Clearly articulate the business case for diversity so that businesses and R&D organisations understand this has to be mission critical and part of the strategy
- Consider an initiative like Project Juno on an EU scale
- Ensure equality and gender training and unconscious bias training is mandatory and integral at all levels

- Run a diversity session at all its conferences – not as a parallel but main session
- Facilitate best practice across Europe by finding out where the best practice in member societies is and bringing it together in one place.
- Set its own example so that there are visible women at the top and have mandatory E&D training
- Monitor the American grant scheme and how it works
- Consider implementing an EPS Careers' Fund

YOUNG MINDS COMMITTEE

Chair: Eva Salvador

The aim of the YM project is to encourage and support professional skills of the next generations of physicists in Europe. YMs works through local student groups, called Sections.

YM Sections, once they join the project, direct their efforts: a) to organise seminars, workshops and schools, b) to carry out educational activities for schools and in general outreach activities, c) to join and enrich the scientific community through the implementation of national and international network collaborations, between them, with the local communities and with other societies.

In 2016 the YM continued to grow. Currently, the project includes 400 young scientists from over 40 Sections in 22 countries: Spain, Italy, Russia, Germany, United Kingdom, Ukraine, France, Switzerland, Turkey, Hungary, Latvia, Lithuania, Poland, Portugal, Denmark, The Netherlands, Czech Republic, Austria, Belgium, Morocco, Finland and Egypt.

The YM project supports their activities with small grants. The main criteria for evaluating their activity grant applications are professional relevance, cultural outcome, visibility for EPS and impact per Euro. For the following years, in addition to increasing the number of sections, the visibility of activities performed should increase. This can be done using social media, and sharing the most relevant content of each section. For that reason, on July a Facebook public page was created for Young Minds: **https://www.facebook.com/EPSYM**

Since its creation the page has 190 likes and it has reached more than 1000 people with its publications. Moreover, in November it was linked with Twitter so everything is published in the two social media outlets at the same time.

In the next paragraphs the key points the project had to face in 2016 are described.

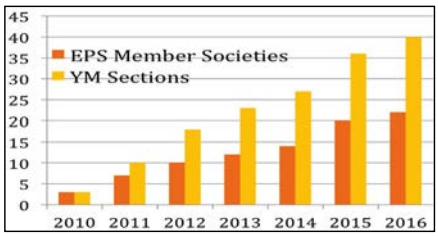


Figure 1 – YM growth from 2010 to 2016.

YM Granted Activities

Every year, sections have 2 opportunities to submit requests for funding of projects: 15th of January and the 15th of July.

In 2016, the project funded 67 activities, submitted from 29 Sections: 62% outreach activities, 28% professional development ones, and 10% networking activities.

Unfortunately 10 sections did not apply for grants, which might in part be due to grant applications rejected in 2015. A goal is to contact those sections and try to involve them again in the project. However, as the budget for Young Minds did not increase, many activities have to be rejected or accepted with less budget.

A list of the granted activities and their outcomes are reported on the YM website: **http://www.epsyoungminds.org/activities/**

YM Action Committee

The YM Action Committee is composed from senior scientists, young scientists, and people from the EPS staff. This year has been a year of changes in the Action Committee.

The senior part is composed from Christophe Rossel, EPS President, and Zsolt Fülöp, member of the ExCom. This year, Sylvie Jacquemot joined the Action Committee as representative of the ExCom while Fülöp Zsolt left. Moreover, Rüdiger Voss joined the Action Committee as the next EPS President. The EPS staff members ensure the best connection between the project and EPS: the EPS Secretary General, David Lee; and the Conference Manager assistant, Ophélia Fornari. The young scientists part this year was also modified. Antigone Marino (Italy) left Young Minds so Eva Salvador took her place as the new chair. Ulrike Ritzmann (Germany), Enrique Sanchez (Spain), Bence Godo (Hungary), Roberta Caruso (Italy) and Jonas Berzinš (Lithuania) continue in the committee. Finally, Araceli Venegas (UK) joined at the end of the year.

The action committee met twice in 2016. On July 14th in Budapest (Hungary) during the 5th YM Meeting, and on October 28th in London (UK), just after the VII Forum Physics and Society.

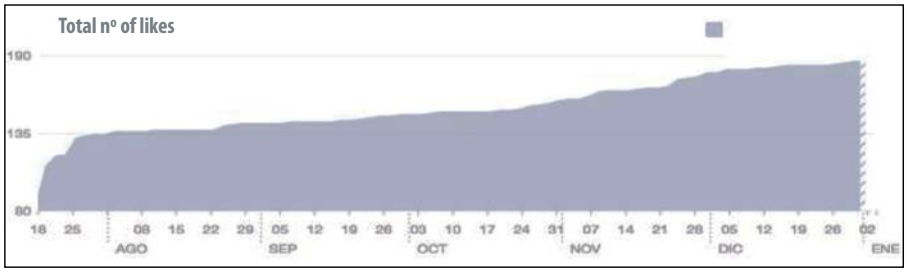
5th YM Leadership Meeting

The 5th Young Minds Meeting took place at the Eötvös Loránd University (ELTE) on 15th-16th July 2016 in Budapest, Hungary.

The European Physical Society, in collaboration with the Roland Eötvös Physical Society (ELFT) and the Institute for Nuclear Research of the Hungarian Academy of Sciences (ATOMKI), with the help of the Budapest and the Debrecen YM Sections organised the annual YM meeting, aimed to bring together the representative of each YM Section.

As in previous editions, the meeting started with a general overview of the EPS YM project, its growing success and

Figure 2 – Number of likes of YM Facebook page.



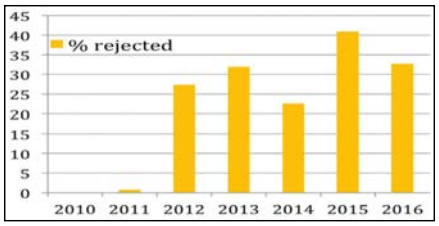


Figure 3 – Percentage rejected applications.

expansion over the past 6 years. After this, the Leadership Meeting started with the talk of Professor Imre Janosi (ELTE). Then there were two other invited speakers, Dr. István Rajta (Debrecen), and Dr. Csaba Böde (Morgan Stanley). Of course section presentations and posters were the central part of the meeting, and as a new activity this year was a a series of short scientific talks modeled on the FameLab contest. The meeting culminated with the EPL Best YM Activity 2016 award assigned to the PONYS Naples Section (Italy) and the best scientific talk given to Araceli Venegas, from SCOPE (Glasgow).

Another new elements this year was a workshop during which YM members expressed their doubts and proposed new ideas for the future of the Young Minds Project. One of their proposals was to be able to apply for the organisation of the Leadership Meeting. For that reason, the next Leadership Meeting will be organised by the winner of the 4 applications received (Naples YM section). This is also a way to involve more some sections with the YM project.

YM and EPS

In 2016 YM Chairperson, E. Salvador, was invited to attend the Executive Committee Meeting on 30 September and 1 October in San Sebastian, Spain. During the meeting there was a talk about Young Minds project aims and challenges. The importance of strengthening collaborations was highlighted and it was agreed to collaborate again with the Quantum Electronics and Optics Division (QEOD). As in 2015, limited number of travel grants for PhD Students who wish to attend CLEO®/Europe-EQEC 2017 will be made available.

YM was also invited to the EPL Editorial Board Meeting on 8th of October in Como, Italy. In this case, not only the YM project was presented but also the Section who won the best activity award was invited. Then, EPL committee could see the kind of activities organised by YM sections, as EPL is the sponsor of the award.

YM has also being co-working with the EPS Equal Opportunities Committee (EOC) for the publication in e-EPS of short portraits of young women researchers in physics. Also, Enrique Sanchez from YM joined the EOC and Historic Sites Committees.

As usual, YM published it activities in e-EPS. In addition, this year three editorials from YM action committee members were published. Finally, in the August issue of EPN, YM project wrote an article about the YM project and its challenges.

YM and Collaborations

During the second week of November 2016, the Young Minds project, in close cooperation with the associations Liter of light France, Migrations Co-developpement Alsace and the University of Beni Mellal, developed solar kits for being distributed in places where the normal usage of light is limited. This project was presented at the UN Climate Change Conference – COP22 held in Marrakech, Morocco from the 7th till 18th of November 2016, with a poster displayed throughout the conference, as well as a talk on 10th of November.

Notes

JOURNALS REPORTS 2016

EUROPHYSICS NEWS (EPN)

Editor:
V.R. Velasco

Science Editor:
L. J. F. Hermans

EPN has kept its general presentation over the year, except that the last two issues were combined into EPN 47/5&6, following the decision by the ExCom. The composition of the production team has remained unchanged.

The size of the "Highlights" section corresponds to slightly over 20% of the available space for editorial material. Now, the maximum number of "Highlights" per issue is 14. Their total number in 2014 was 63 with 14 "Highlights" in issues 45/2 and 45/3. Their total number in 2015 was 57, with 13 "Highlights" in issues 46/2 and 46/4. Their total number in 2016 was 63, with 15 "Highlights" in EPN 47/5&6 and 14 "Highlights" in EPN 47/4

The News section is devoted to EPS statements and activities, scientific reports on EPS conferences, prize and award laureates of the Society, *etc.* This information is to be supplied by all bodies of the EPS, *i.e.*, the Executive Committee, Action Committees, Divisions, Sections and Groups. **IT IS THE DUTY OF THESE BODIES TO KEEP ALL EPS MEMBERS INFORMED OF THEIR ACTIVITIES, AND EUROPHYSICS NEWS IS MADE TO CARRY THE INFORMATION**. EPN reaches 30,000 readers and it is indespensible that EPS Members use this excellent communications tool. Almost all the EPS Historic Sites inaugurated in 2016 have been covered in EPN, an those missing will be in later editions.

The biggest novelty in 2016 has been EPN 47/5&6, the special issue devoted to Fusion and Plasma Physics. All the features were devoted to subjects related to different aspects of nuclear fusion and plasma physics. Prof. Fritz Wagner, Past President of the EPS, was the Guest Editor. We thank him for his excellent choice of authors and subjects and the smooth and timely handling of the process.

As a consequence of the reactions following the publication of the Feature article 'On the physics of highrise buildings collapses', in EPN 47/4, related to the attack on the WTC, new criteria for Feature articles publication in EPN, as outlined on the EPN webpage and in EPN 47/5&6, were adopted.

At the same time that EPN is printed, it is made accessible on the web freely and fully since a few years. This makes it available not only to all European physicists, but to everybody in the world. The statistics of the web visits look very encouraging. The web version is basically the same as the printed issue. However, it adds a new degree of freedom by giving space, when needed, to complementary documents such as videos or scientific developments related to a subject that is presented in the printed issue. So far this has only scarcely been used. Another bonus is the flip book pdf version with an html version indexed by Google. This user-friendly flip book is available for all issues (see: **http://epn.eps.org/**).

After having served for 8 years as EPN Science Editor, Prof. Jo Hermans of Leiden University has left this position on January 1st 2017. Over these 8 years, Jo has performed invaluable job for the journal, finding good authors, interesting and lively features and increasing the quality of EPN issues. Fortunately, Jo will stay on as part of the Editorial Advisory Board. We thank Jo for his tireless work, kindness and relentlessly positive attitude, with our gratitude and best wishes for his future activities.

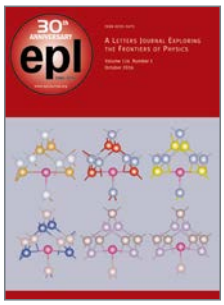
The new EPN Science Editor, effective January 1st 2017, will be **Prof. Ferenc Iglói** of the Wigner Research Centre for Physics in Budapest. Ferenc has become familiar with the 'tricks of the EPN trade', during 2016, by serving as 'Associate Science Editor'. We warmly welcome Ferenc, certain that his involvement with EPN will result in the same high quality output as for the other scientific journals he has been associated with.

The EPN Editorial Advisory Board (EAB) had to bid farewell to Martin C. Huber, Adelbert Göede and Steven Price who reached the end of their term. Christoph Keller (Leiden) and Jo Hermans join the EAB as of January 2017. The EAB continues widening the scope of Feature topics as much as possible, recruiting authors increasingly from the borders of physics and other domains. This is progressively achieved by adjusting the composition of the board, upon member replacements, giving priority to *topical* rather than *geographical* distribution. We feel that EPN must primarily be instructive and pleasant to read, rather than reporting from the cutting edge of physics research. In this spirit it was decided, as of 2014, to open a new 'Crossing Borders' column as an outreach into the public domain.

The editorial team of EPN, however small, hopes to continue to make an increasingly interesting journal, but needs the help and support of the Council in two ways:

- First, the Council can make suggestions for editorial policy and improvements.
- Second, each Council member can help by providing short information of lasting interest (preferably with pictures) at the wider European scope.

EPL



Editor in Chief:
Giorgio Benedek

Executive Editor:
Graeme Watt

Staff Editor :
Frédéric Burr

EPL publishes original, high-quality Letters in all areas of physics, ranging from condensed matter topics and interdisciplinary research to astrophysics, geophysics, plasma and fusion sciences, including those with application potential. The Journal was founded in 1986 by the European Physical Society (EPS), the Société Française de Physique (SFP) and its subsidiary EDP Sciences, the Società Italiana di Fisica (SIF) and the Institute of Physics (IOP). The new journal incorporated Lettere al Nuovo Cimento and Journal de Physique Lettres and was published by EPS, EDP Sciences, IOP Publishing and SIF for a partnership of 17 European physical societies (the EPL Association). EPL is now available in more than 3500 institutions world-wide and has an Impact Factor of 1.963.

Report of the EPL Editor-in-Chief

1.1 Thirty years of EPL

EPL celebrated in 2016 its 30th birthday with a special EPL Session at the EPS CMD Conference in Groningen and a Plenary Editorial Board Meeting in Como, October 2016. Since Volume 1, issue 1 of January 1, 1986, Europhysics Letters, then EPL from 2007, published 17,845 letters. Table I shows the number of letters published each year up to 2015 (2016 incomplete data are given below in the Executive Editor's report), together with a few significant parameters: the Hirsch index H; the average citations per letter; the number of evergreen letters among the first 20 most cited letters of the year which received in 2015 more citations than the average per year since the publication date; and the number of letters published in the year which have not been cited yet.

The percentage of evergreen papers is indicative of the contribution that the journal is making for the growth of knowledge in physics, and of a good service to the physics community. As seen in Table II, the comparison among PRL, APL and EPL shows that the numbers of evergreen papers after 22 years, chosen among the first 20 most cited paper out of similar sets of about 2700 papers published r ovealmost three decades, are about the same for PRL (13/20) and EPL (12/20), both being larger than for APL (8/20). The corresponding 2012 H-index and impact factor (IF) of PRL and APL are however substantially larger than those of EPL.

The IF of EPL, as seen in Fig. 1, after a brilliant start above 3, various oscillations and a jump up to near 3 in 2009-2010, has now decreased slightly below 2 in 2015. Notably the two peaks around 3 correspond to major breakthroughs in superconductivity (high-Tc and iron-based).

1.2 Conflicting facts

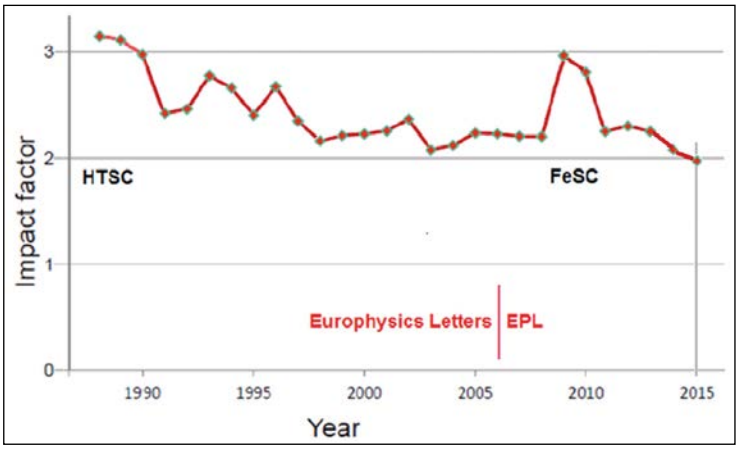
These data enucleate some conflicting facts, which may be considered as indicative of a gradual change in the scientific publishing models. On one side the high scientific and technical quality of EPL fully corresponds to the outstanding level of its Editorial Board (present mean H-index = 37) and

Table I: 30 years of EPL

YEAR	N. LETTERS	H	CITE/LETTER	EVERGREEN 0-CITE	FIRST 20
1986	242	44	32.93	6	10
1987	436	57	32.61	5	18
1988	382	49	27.29	1	14
1989	403	55	30.92	7	12
1990	376	47	25.43	5	16
1991	419	50	23.02	5	18
1992	490	59	38.80	11	22
1993	513	58	27.70	4	26
1994	458	52	31.86	8	15
1995	435	51	26.70	4	15
1996	477	52	22.66	4	30
1997	451	46	20.71	8	14
1998	468	51	22.51	9	20
1999	469	54	25.13	10	21
2000	455	53	24.38	11	14
2001	509	51	23.53	10	18
2002	571	49	19.61	11	29
2003	534	43	18.87	12	24
2004	566	48	19.31	7	26
2005	597	50	21.24	13	17
2006	648	45	16.92	11	27
2007	619	44	15.59	12	34
2008	863	49	19.29	9	36
2009	875	45	14.35	11	43
2010	847	39	11.65	17	53
2011	900	39	11.22	16	60
2012	995	28	7.95	14	90
2013	877	26	6.03	20	97
2014	796	17	3.55	20	143
2015	807	11	1.56	20	371

Journal	Time span	Number of papers	H index	IF (2012)	Evergreen papers among the first 20 most cited papers (after 22 years)
PRL	1983-1984	2769	194	7.44	13/20 (2006)
APL	1986-1987	2573	124	3.73	8/20 (2011)
EPL	**1986-1992**	**2748**	**109**	**2.26**	**12/20 (2011)**

Table II: A balanced comparison among three letter journals of evergreen papers, receiving after 22 years more citations that the average over the previous years. The comparison is made on similar sets of more than 2500 papers appeared about 3 decades ago.



► **Figure 1. The impact factor of EPL during the last 30 years**

the endeavour of its Executive, Staff and Production editors. On the other side the declining number of submissions and of the IF (the projection for 2017 EPL IF suggest a further decrease to 1.8) and the abnormal number of 0-citation papers, many of which produced by very good authors, do not correspond at all to the high scientific quality of EPL. The conclusion was that EPL almost exclusively suffers from a visibility problem. The measures to increase visibility made operative at the end of 2014 (the 2016 IF refers to the citations in 2015 of 2013-2014 EPLs) and illustrated in the previous Report at the 2016 EPS Council, may not be sufficient, though the results so far obtained by invited Perspectives during the first 2 years are quite encouraging.

In summary, the 22 Perspectives published in 2015 have so far collected 186 citations with an average of 7.75 citations/paper. The most productive areas in terms of citations are Statistical Physics with 4 Perspectives and 74 citations (18.5 cites/paper), and superconductivity with 2 Perspectives and 38 citations (19 cites/paper). The Citation Alert service offered to Perspective authors starts proving effective, having shown that one third of the citations of the most-cited Perspectives are from cited authors who have been alerted by the CA service.

The Executive Editor in his report below enumerates several other effective means to increase EPL visibility, Highlights, Compilations, EPL Awards and other promotion initiatives, as well as the very high quality and timeliness of publishing, which are largely appreciated and qualify EPL as an outstanding physics journal.

1.3 Proposed developments

Nevertheless I believe that EPL, in order to acquire the meaning of "Excellence in Physics Letters", needs for its next 30 years a robust change of strategy. A possible strong (temporary) therapy to stop the decline and trigger a recovery has been discussed at the last Board of Directors and plenary Editorial Board meeting in Como. The following measures have been suggested:

- To raise the number of invited letters to about 10% in the categories of: Perspectives (PS), Invited Research Articles (IRA), Focus issues, by inviting (a) the most cited EPL authors; (b) selected authors in the strongest EPL areas; (c) CEs and DEs; (d) visible authors in areas to expand (from narrow- to broad-band); (e) young brilliant authors (especially for Focus issues, within Horizon2020, in collaboration with EPS Young Minds).
- To adopt a more attractive format for invited letters (which might consist in page-number flexibility; graphic abstract, author's photo, *etc.*) and to extend the Citation Alert service and the temporary open access to all these forms of invited letters.
- To implement the suggestion of EPL workshops in the form of special EPL sessions at EPS Divisional Conferences similar to the very successful one organised at CMD-26 in Groningen, October 2016! This format should be adopted for the future EPS Divisional Conferences.
- To have EPL been adopted as a reference letter journal of important European projects at large facilities and organisations

All these initiatives require however an urgent redefinition of the role of Deputy Editors in connection with the incoming election of the new EiC. Despite the flood of new publications, there are always a need and favorable conditions for a top letter journal, because the number of excellent physics letters produced world-wide largely exceeds what high-impact letter journals, either general or specialised, can host. Our CEs are making an excellent job, especially through the Editor's Choice (EC) papers, in order to keep the EPL standard corresponding to the severe acceptance criteria adopted two years ago. Nevertheless the intention to reduce the acceptance rate to a formal 33% appears to be in conflict with: (a) the higher percentage of high quality manuscripts which are submitted (very often after a previous rejection by some fancy journal); (b) the need to keep the number of published papers at an acceptable level.

1.4 Conclusion

The simple fact that papers which are qualified as highly valuable by experienced scientists like our CEs do not receive adequate attention proves the serious damage that the present definition of impact factor is making to good science. It is good news that EPS is adopting measures, and hopefully putting pressure upon EU science evaluation committees, in order to protect physics journals of learned societies against metrics misuse, from unpeer-review journals, and from new OA predatory journals. There is a growing consensus, expressed through various initiatives like, *e.g.*, the San Francisco Declaration but also, and more important for us, by recent EPS documents, that

metrics misuse, unpeer-review and predatory journals are encouraging unsubstantiated claims, inaccurate research, amateurish physics, misconduct, forgery; damaging not only good science but also the careers of good and honest scientists; diverting public funds from good and useful research to as glamorous as improductive projects.

Nevertheless a journal like EPL has no power to change the rules of the game, but can certainly play a much better (and scientifically sound) game with the present rules, by amplifying, through a wide section of carefully invited letters, the good visibility that EPL deserves, and already has in a few important domains of physics.

The EiC, at the end of his term, wishes to acknowledge the extremely valuable assistance of the Executive Editor Graeme Watt, of the Staff Editor Frédéric Burr and colleagues at the Editorial Office in Mulhouse, as well as the EPLA Board of Directors, all persons involved in EPL management and production at SIF in Bologna, IoPP in Bristol, EDPS in Paris, and the entire body of EPS, notably the Secretary General David Lee and the EPS President Christophe Rossel for their excellent collaboration and encouragement.

Giorgio Benedek,
EPL Editor-in-Chief
January 2017

Report of the EPL Executive Editor

2.1 Journal Production

The total number of submissions for 2016 reached only 1,661 continuing a downward trend of about 12% per year for the past few years. The total number of articles published in 2016 was also lower at 685 (compared to about 780 in recent years) although only 11 of the 12 annual issues were published in 2016. The final issue of volume 116 will be completed by the end of January with an estimated additional 50+ articles. The acceptance rate remains ~40%. Reducing the acceptance rate over the next few years is paramount regardless of the decrease in submissions.

Published articles (by first named author) continue to be dominated by China with over 150 articles although this value has decreased from the previous year. Countries with over 40 publications follow a similar pattern to previous years: France, India, USA, and Germany. Those with more than 20 publications include Russia, Brazil, Italy, UK, and Japan.

Categories that obtained the most published articles, and hence are EPL strong topics, include 'mathematical methods' & 'statistical & nonlinear physics' representing almost 14% of the total. Condensed matter sub-topics of 'electronic structure', 'low-D systems', 'quantum mechanics', 'special relativity', 'magnetism' and 'ferroelectrics' cover the next 25%. A further 10% of publications lie in 'applied and interdisciplinary' and by 'biophysical and medical physics' topics.

As a hybrid open access journal (the APC remains at €1,400) EPL is one of the cheapest available although a large take-up has not been evident. Ten articles were published in 2016 as open access (same value as for 2015), although 5 of these were published at no charge due to a co-author being a co-editor. Fast-tracking of exceptional articles is still available.

The number of printed copies of each issue has been reduced further to only 175 copies. Only 55 of these are for subscribers with the remainder for legal depositories, marketing, promotion, and back issue supply.

IOPP subscribers continue to replace pack purchases with IOPscience licences and consortia agreements. At the end of 2016 there were 3,517 institutions with direct access to EPL articles through IOPP with a further 185 standalone subscribers through EDPS. The number of standalone subscribers (through EDPS) is expected to decrease each year as institutes prefer to become part of a consortium with an IOPscience licence.

2.2 30th anniversary of EPL

An afternoon session at the EPS Condensed Matter division conference in Groningen was dedicated to EPL presentations followed by a drink+snack reception. Three excellent and interesting presentations were given (by Daniel Bonn, Fernando Luis, and Tanja Schilling) to an audience of over 100 conference participants. Speakers were offered a €300 honorarium for their services and invited to dinner after the event. All three invitees had previous published in EPL and two have already submitted new articles.

2.3 EPS Young Minds award

EPL provided the Best Activity Award (€500) at the annual EPS Young Minds event. This year the award went to the PONYS (Physics & Optics Naples Young Students) section for activities carried out in the field of outreach, professional development, and networking. The awards winners gave an enlightening presentation at the Editorial Board meeting in October.

2.4 EPS Europhysics Prize

From 2016 onwards EPL will provide sponsorship for half of this award (€5,000 every two years). This year the award went to five researchers studying a magnetic skyrmion phase in MnSi, a new state of matter. Only one of the five (Böni) has a previous EPL publication from 1998 (not on skyrmions).

2.5 Marketing & Promotion

Summaries of selected Editor's Choice articles regularly appear in issues of Europhysics News and are available online and in print in a preface to the first issue of each of the four annual volumes of EPL. 'Featured in EPL' is also included in each alternate e-EPS Newsletter issue. Printed booklets containing "Highlights of 2015" (containing Editor's Choice, open access, Perspectives, most downloaded, and some other notable articles) were available on exhibition stands at over 200 events throughout the year. An online listing is also available with full text of all these articles available for download free throughout the year. The "Highlights of 2016" booklet is complete and should be available in circulation in early March.

The total downloads for 2016 almost reached 593,000 (continuing to rise each year as new ways are found to promote material content). The median downloads per article reached 170 (rising from the 147 in 2015). Editor's Choice articles, of which 58 were published in 2016, averaged 644 downloads per article, indicative of the

high quality of these articles selected by Co-Editors. However, as there is no longer a free-to-read period from the date articles are published, the download tables are dominated by the Editor's Choice, open access and Perspective articles that are set free outside the pay-wall.

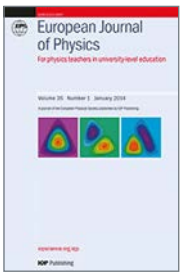
Perspectives published in 2016 averaged 1,162 downloads per articles. These highly readable articles are providing excellent promotion for the journal. These mini-review articles are selected by the Editor-in-Chief on topics of current interest. The citations record to date is progressing with at least 95 citations spread over the 27 Perspectives published from 2014-2016.

Download distribution is 16% to China and to the USA; 7% to Germany; and 4% Japan, UK, India and France. It is encouraging to see North American institutes, led by New York University and MIT in the list of top downloading institutes. Zhejiang University and Tokyo University lead this table. The number of downloads to unregistered addresses (non-institutes, mobile laptops, home networks, *etc.*) has been increasing (typical for many journals) to around 19% of the total.

Quarterly newsletters are emailed to thousands of recipients targeted for their interest in the content. The most recent issue was distributed in early January. These mailshots highlight specific published articles, sponsored award winners, short biographies of selected Co-Editors, forthcoming events where EPL may be present, and links to other items of interest. Marketing campaigns use a variety of social media resources to promote the journal. EPL has recently joined the world of Twitter. This account provides us with an excellent opportunity to increase engagement with authors and visibility of EPL content within the physics community.

Financial support/sponsorship has been reduced from the 2015 value to save costs. However, almost €14,000 was awarded at 21 events to over 50 fortunate young researchers. Support was provided either as awards to individuals for best poster/oral presentations or as general conference support to cover travel, subsistence, or registration costs. EPL visibility is strong with a logo placed on the conference website (linked to the EPL homepage) and often included on material in delegate packs. At several events, a short presentation on EPL was possible during the award ceremony.

EUROPEAN JOURNAL OF PHYSICS (EJP)



Editor in Chief:
Michael Vollmer

Associate publisher IOP Publishing:
Iain Trotter

Executive summary

IOP Publishing is very pleased to report to the council another very successful year in 2016 for European Journal of Physics (EJP). Building on the developments from 2015, this year has seen the expansion of our Review article collection, strong commissioning results in our focus issue series and further engagement with the community through events and targeted marketing. We can again report significant increases in both accepted articles and article downloads. The allocation of additional dedicated resource has enabled the expanded publishing team to consolidate the innovation of recent years, whilst also reducing processing times and improving author service. This is a firm foundation from which we can grow our high quality commissioned content, and increase engagement with target strategic areas in Asia and North America during 2017.

Editorial activity

The editorial board continues to offer invaluable support to the journal; whether acting as Guest Editors for focus issues, contributing and commissioning high quality content, and promoting the journal at events. We were very pleased to welcome Robert Lambourne, Professor of Educational Physics at the Open University, to the board, and look forward to working with him more closely in 2017.

Issue 1 of 2016 saw the formal introduction of subject sections in EJP; the headings reflect the broad topical coverage of the journal within Physics and also accommodate the growing number of interdisciplinary and Physics Education Research articles. This change will enable readers to more easily identify and access relevant content, and also allow more detailed reporting on the evolving character of journal content.

Following on from the publication of our first Review article at the end of 2015, this year EJP has published 3 more to the series – with more to come in early 2017. We have also had continued success with the new focus issue format; we are hoping to close the initial 'Focus on Advanced Optics' early in 2017 with 20 published articles. 2016 saw the launch of two new collections, Physics of Sport and the annual special section on Physics Competitions, and we have enjoyed a very good response to both. Three new issues will be launched in 2017.

The strong performance of the journal is illustrated in the submissions and acceptance figures for 2016 – again, good growth (10%) in acceptances reflects a focus from the publishing team and editorial board on commissioning high quality content, and this has been further supported by quick and efficient peer-review and production. Initial analysis attributes the drop in submissions largely to falling numbers of papers that are submitted and rejected as out of scope, due to growing journal visibility and clearer communication of EJP's educational aims.

Article download figures show another significant increase (24%) on 2015, and again validate our marketing approach of mixing large scale press releases with tailored marketing and daily social media interaction with an engaged audience. **74,768 Downloads of 2016 EJP content in 2016, 228,747 Total Downloads of all EJP content in 2016.**

	SUBMISSIONS (BY RECEIVED YEAR)						ACCEPTANCES (BY FINAL DECISION YEAR)					
Article Type	2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016
Papers	665	731	712	731	663	616	140	164	146	143	196	208
Letters	31	32	42	33	40	25	6	5	6	4	13	2
Reviews					15	14					2	2
Special Issue /Focus on	2	2	13	9	12	28	3	3	13	4	3	15
Other	25	22	11	12	14	31	17	17	7	5	9	19
Total	723	787	778	785	744	714	166	189	172	156	223	246

MARKETING ACTIVITY

2015 Highlights campaign

The annual Highlights collection is a carefully selected group of high-quality and popular articles published in EJP during the previous year. All of the articles in the collection are made free to read online until the end of the year, and promoted via email to all IOPP Education contacts, to help encourage usage and citation of this quality content. In addition to this, certificates were created and sent to the featured authors in PDF format, to encourage them to submit future work to the journal.

The Highlights can be found online at: **http://iopscience.iop.org/journal/0143-0807/page/Highlights-of-2015**

Special collections in 2016

Following on from the success of the International Year of Light collection in 2015, bespoke collections of EJP articles were created throughout the year to highlight the journal across a series of events. These included 'AAPT Winter Meeting 2016','Statistical Physics' for the MECO41 conference and 'Physics Education Research' for the AAPT summer meeting. Printed A4 abstract brochures were printed and distributed to the events to support editorial board member attendance, and the full collections were available free-to-read from dedicated landing pages online. An example can be found here: **http://iopscience.iop.org/journal/0143-0807/page/Statistical-Physics-special-collection**

Press and media activity

In 2016 our PR team carried out a number of press releases for EJP including…

More to rainbows than meets the eye (26 Aug 2016)
http://ioppublishing.org/news/more-to-rainbows-than-meets-the-eye/

This review article from EJP, "Rainbows in nature: recent advances in observation and theory", was picked up by 11 news outlets and received various mentions on blogs, Twitter and Facebook. This article has now reached an amazing 4845 downloads. For the full media report see the Altmetrics summary at **https://iop.altmetric.com/details/10835126**

Physicists make it possible to 3D print your own baby universe (28 Oct 2016)
http://ioppublishing.org/news/physicists-make-it-possible-to-3d-print-your-own-baby-universe/

IOP Publishing worked with the Imperial College London on a combined effort to promote their researchers article, "Cosmic sculpture: a new way to visualise the cosmic microwave background". This article was picked up by 28 news outlets and 3 blogs and various social media mentions on Twitter, Facebook and Google+. This article has now reached an impressive 3923 downloads. For the full media report see the Altmetrics summary at **https://iop.altmetric.com/details/13094297**

Can you bounce water balloons off a bed of nails? Yes, says new study (14 Dec 2016)
http://ioppublishing.org/news/can-you-bounce-water-balloons-off-a-bed-of-nails-yes-says-new-study/

This press release to support EJPs article, "The macroscopic pancake bounce", was picked up by 10 news outlets and has reached 719 downloads in just over a

ARTICLE TITLE	VOLUME	ISSUE	ONLINE DATE	DOWNLOADS
The fluid dynamics of the chocolate fountain	37	1	24/11/2015	16,440
Rainbows in nature: recent advances in observation and theory [REVIEW]	37	6	25/08/2016	4,429
The symmetry and simplicity of the laws of physics and the Higgs boson	37	1	12/11/2015	4,052
A physically motivated quantization of the electromagnetic field	37	1	30/10/2015	3,761
The young centre of the Earth	37	3	08/04/2016	3,703
Interactive tutorial to improve student understanding of single photon experiments involving a Mach–Zehnder interferometer	37	2	02/02/2016	1,817
Hysteresis in the phase transition of chocolate	37	1	10/12/2015	1,541
Quantum optical dipole radiation fields	37	3	26/02/2016	1,231
Classical noise, quantum noise and secure communication [REVIEW]	37	1	19/11/2015	877
The biomechanics of solids and fluids: the physics of life [REVIEW]	37	5	20/07/2016	816

month. For the full media report see the Altmetrics summary at: **https://iop.altmetric.com/details/14721594.**

In addition to these press released articles another article from Denmark was received an unusual (but good!) amount of attention from the media. Published in April 2016 the article, "The young centre of the Earth", was picked up by 20 news outlets (including New Scientist) and 4 blogs, plus 125 mentions on Twitter, and further coverage across Facebook, Google+, Reddit and even Wikipedia. This article has now reached 3896 downloads. For the full media report see the Altmetrics summary at: **https://iop.altmetric.com/details/6824772**

Content from EJP has also featured in many of IOP Publishing's other marketing campaigns such as the Physics World "physics of food" campaign (612 downloads) and the monthly Education newsletter (149 downloads from the March edition), resulting in over 1,500 article downloads.

As a journal, we attend conferences and events in order to engage with the physics education community as potential readers, authors and reviewers. One main aim is to raise awareness and visibility of the journal in order to drive downloads and submissions, and this is achieved with editorial staff presence at exhibition booths and running sessions on publishing. Another aim is commissioning new content, through editorial board and staff interaction with target authors.

In conclusion

With the solid foundation of an expanded publishing team, the European Journal of Physics is ready to capitalise on the steady growth and format developments of the previous two years. With support from a committed editorial board, and clear development goals, we will be able to increase the impact of our quality, commissioned content by building awareness and driving usage in strategic areas.

E-EPS

Editor: A. Bracco - **Technical Editor :** G. Gunaratnam

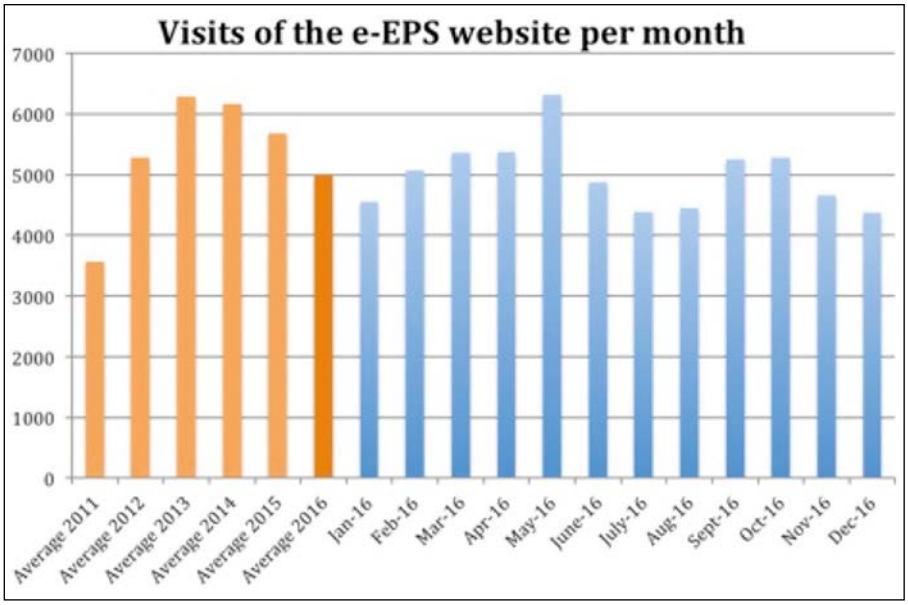
Results of the newsletter e-EPS in 2016

Overview since the creation in May 2011

	2011	2012	2013	2014	2015	2016
visits on the website	32 031	63 530	75 370	73 934	68 009	59 876
subscribers	*	38160	35433	33732	33501	33471
articles published	160**	244	240	209	216	206
comments	15	44	53	91	7	7***

*** unknown statistics ** newsletter started in May 2011 *** comments deactivated in September 2016**

Statistics of the 2016 issues



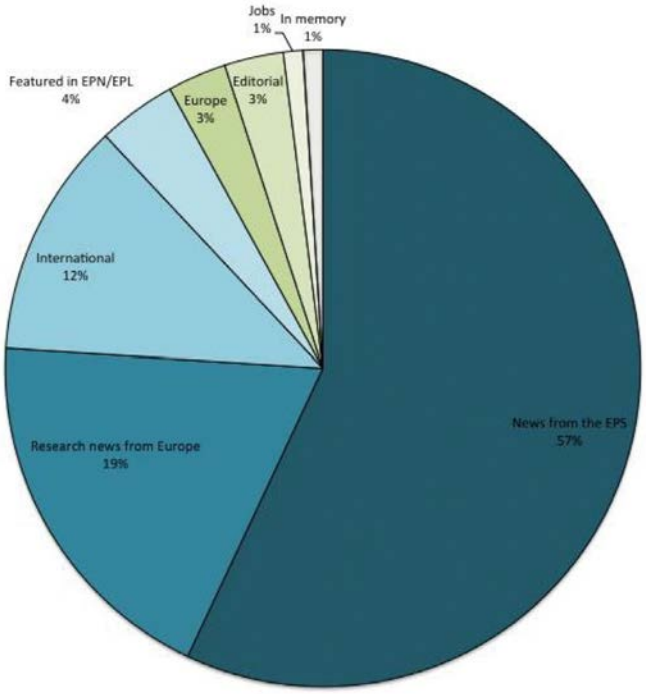
MONTH	VISITS OF THE E-EPS WEBSITE PER MONTH
Average 2011	3559
Average 2012	5278
Average 2013	6281
Average 2014	6161
Average 2015	5667
Average 2016	4990
Jan-16	4551
Feb-16	5059
Mar-16	5358
Apr-16	5371
May-16	6314
June-16	4872
July-16	4375
Aug-16	4438
Sept-16	5246
Oct-16	5273
Nov-16	4656
Dec-16	4363

Most read articles in 2016 (>600 visits)

TITLE	VIEWS
Portrait of Barbara Capone: when dreams come true	1,384
Editorial – the impact of BREXIT on physics from a UK perspective	926
Editorial – Pulling together after Brexit	848
Editorial – The wave of the century	804
Editorial – BREXIT: What's next?	770
EPS Emmy Noether Distinction: nominate an outstanding physicist	763
Important step in understanding of light scattering	758
The Nobel Prize in Physics 2016	735
Physicists peer into hydrogen atom using quantum microscope	669
Nine scientific pioneers receive the 2016 Kavli prizes	658
2016 EPS CMD Europhysics Prize	640
Editorial – The recipe of communication in science	616
Ulf-G. Meißner wins the 2016 EPS Lise Meitner Prize	603

Notes

Distribution of visits per category of articles in the most viewed articles (> 100 visits)



CATEGORY	VIEWS	%
NEWS FROM THE EPS	19090	57%
Research news Europe	6273	19%
International	3912	12%
Featured in EPN/EPL	1438	4%
Editorial	1129	3%
Europe	1014	3%
In memory	284	1%
Jobs	218	1%

NEWS FROM THE EPS	VIEWS	%
Awards	5297	27,75%
Women in Physics	4583	24,01%
Events	2894	15,16%
Historic Sites	1812	9,49%
Young Minds	1571	8,23%
Policy	1159	6,07%
IYL2015	845	4,43%
Phys for dev	699	3,66%
Services	230	1,2%

CONFERENCES ORGANISED IN 2016

CONFERENCE	PLACE	PARTICIPANTS	DIVISION/GROUP
ECAMP-12	Frankfurt, Germany	440	Atomic, Molecular and Optical Physics
EGAS-48	Frankfurt, Germany	300	Atomic, Molecular and Optical Physics
ECAMPIG-23	Bratislava, Slovakia	300	Atomic, Molecular and Optical Physics
CMD 26	Groningen, The Netherlands	700	Condensed Matter Division
Quantum Fluids and Solids	Prague, Czech Republic	200	Condensed Matter Division
Crycourse 2016	Helsinki, Finland	100	Condensed Matter Division
Summer School on Soft Matter Science	Mittelwihr, France	100	Condensed Matter Division
EURISOL-DF 2016	Leuven, Belgium	130	Nuclear Physics Division
43rd EPS Conference on Plasma Physics	Leuven, Belgium	648	Plasma Physics Division
EUROPHOTON	Vienna, Austria	274	Quantum Electronics and Optics
Workshops at ISSI	Bern, Switzerland	100	European Solar Physics Division
Dynamics of Complex Systems	Warwick, UK	120	Statistical & Nonlinear Physics Division
Dynamics Days	Corfu, Greece	200	Statistical & Nonlinear Physics Division
Statphys26	Lyon, France	1300	Statistical & Nonlinear Physics Division
IPAC16	Busan, Korea	1200	Accelerator Group
2nd International Conference on the History of Physics	Pöllau, Austria	70	History of Physics

PRIZES AWARDED IN 2016

PRIZE	LAUREATE	DIVISION
EPS Young Scientist Prize in Atomic and Molecular and Optical Physics.	Christian Brand	Atomic Molecular and Optical Physics Division
2016 EPS CMD Europhysics Prize	Peter Böni, Alexei N. Bogdanov, Christian Pfleiderer, Achim Rosch, and Ashvin Vishwanath	Condensed Matter Division
Lise Meitner Prize	**Ulf G. Meisner**	Nuclear Physics Division
Alvén Prize	Hartmut Zohm, Sergui Bulyanov	Plasma Physics Division
Landau-Spitzer Prize	John Berkery, Steven Sabbagh, Yueqiang Liu and Holger Reimerdes	Plasma Physics Division
Innovation Prize	Klaus-Dieter Weltmann and Thomas von Woedtke	Plasma Physics Division
PhD Research Award	Bastien Bruneau, Arnaud Colaitis Natasha Jeffrey	Plasma Physics Division
Itoh PhD Project Prize	Anna Medvedeva	Plasma Physics Division
PPD Poster Prizes	**Arkaprava Bokshi, Mark Coughlan, Hannah Willett**	Plasma Physics Division
EPS-QEOD **Prize for Research in Laser Science and Applications**	**Reinhard Kienberger**	Quantum Optics & Optics Division
PhysicsEstoire	Helge Kragh	History of Physics
EPS Achievement Award	Douglas MacGregor	EPS
EPS Achievement Award	Jozef Ongena	EPS
Gero Thomas Medal	Denes Nagy	EPS
The Spring/Summer 2016 Emmy Noether distinction	P. Bassereau	EPS
The Autumn/Winter 2016 Emmy Noether distinction	E. Monroy	EPS

EPS DIVISIONS

Atomic Molecular and Optical Physics Division

Chair
- Joachim Burgdörfer

Sections
- Electronic and Atomic Collisions
- Chemical and Molecular Physics
- European Group on Atomic Systems

Conferences
- European Conference Atomic and Molecular Physics (ECAMP)
- European Group on Atomic Systems Conference (EGAS)

Prizes
- EPS Young Scientist Prize in Atomic Molecular and Optical Physics

Website
- www.eps.org/eps-amopd

Condensed Matter Division

Chair
- Kees van de Beek

Sections
- Liquids, Macromolecular Physics, Magnetism, Structural and Dynamical Properties of Solids
- Semiconductors and Insulators, Surfaces and Interfaces

Conferences
- CMD General Conference
- Liquid Matter Conference
- EDM Macromolecular Physics
- Joint European Magnetism Symposium
- ECOSS

Prize
- EPS CMD Europhysics Prize

Website
- www.eps.org/eps-CMD

Environmental Physics Division

Chair
- Herbert Fischer

Prize
- In the area « Environmental Physics » a large number of international and national prizes are already defined and are awarded regularly. As a consequence it is difficult to find a sponsor for a new prize

High Energy And Particle Physics Division

Chair
- Yves Sirois

Conference
- HEP General Conference

Prizes
- High Energy and Particle Physics Prize
- Young experimental Physicist Prize
- Gribov Medal
- Outreach Prize
- Giuseppe and Vanna Cocconi Prize

Website
- http://eps-hepp.web.cern.ch/eps-hepp/

Nuclear Physics Division

Chair
- Faiçal Azaiez

Conferences
- EPS Nuclear Physics Division Conference
- Nuclear Physics in Astrophysics

Prizes
- IBA Europhysics Prize (Applied Nuclear Science and Nuclear Methods in Medicine)
- PhD Prize in Nuclear Physics
- Lise Meitner Prize (Nuclear Science)

Website
- http://www.eps.org/group/NPD

Plasma Physics Division

Chair
- Richard Dendy

Sections
- Beam Plasma and Inertial Fusion Section
- Dusty and Low Temperature

Conference
- EPS Plasma Physics Division Conference

Prizes
- EPS-PPD Hannes Alfvén Prize
- EPS-PPD PhD Research Award
- EPS-PPD Innovation Prize

Website
- http://plasma.ciemat.es/eps/

Physics Education Division

Chair
- David Sands

Conference
- European Physics Education Conference (GIREP-EPEC)

Prize
- EPS PED Secondary Teaching Award

Website
- www.eps.org/group/PED

Physics Education Division

Chair
- Felix Ritort

Conference
- Organisation of the next conference in 2017

Conference
- Organisation of DPL Young prize set for next year 2017

Website
- www.eps.org/group/DPL

Quantum Electronics And Optics Division

Chair
- Luc Bergé

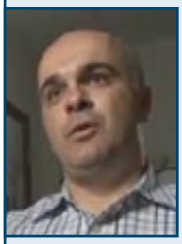
Conferences
- CLEO/Europe – EQEC
- Nanometa
- Europhoton

Prizes
- EPS Quantum Electronics Prize
- Fresnel Prize
- 4 QEOD Thesis Prizes
- Research in Laser Science and Applications Prizes
- Research into the Science of Light Prizes

Website
- http://qeod.epsdivisions.org/

More about EPS divisons: http://www.eps.org/members/group_select.asp?type=8719

Solar Physics Division



Chair
- Manolis Georgoulis

The JSPD is a joint Division with the European Astronomical Society (EAS) and the European Physical Society (EPS)

Conference
- European Solar Physics Conference

Prizes
- Senior Prize for distinguished, world-renowned solar physicists
- Young Scientist / Postdoc Prize
- PhD Student Prize

Website
- www.eps.org/group/ESPD

Statistical And Nonlinear Physics Division

Chair
- Christian Beck

Conferences
- Applications of Physics in Financial Analysis
- International Conference on Statistical Physics

Conferences
- Senior world-leading scientist (or a team up to three) working in Statistical Physics, Nonlinear Physics, or Complex Systems
- Early career researcher

Website
- www.eps.org/group/SNPD

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EPS GROUPS

Accelerators Group

Chair
- Gianluigi Arduini

Conference
- International Particle Accelerator Conference

Prizes
- EPS Accelerator Rolf Widerøe
- Prize for outstanding work
- in the accelerator field
- EPS Accelerator Gersh Budker Prize for recent significant contributions
- EPS Accelerator Frank Sacherer Prize for an individual early career researcher for recent significant contributions
- EPS Accelerator Prize for PhD
- or equivalent for the quality
- of their work
- EPS Accelerator Prize
- for student poster

Website
- http://www.eps.org/group/EPS-AG

Computational Physics Group

Chair
- Alex Hansen

Conferences
- Conference on Computational Physics
- Biennial Granad Seminars in Computational Physics

Prize
- Berni Alder CECAM prize
- 2014 Young Scientist Prize

Website
- http://phycomp.technion.ac.il/~EPS-CPG/

Energy Group

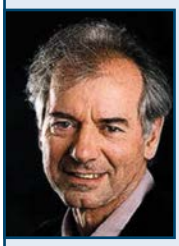
Chair
- Jozef Ongenar

Conference
- National Energy Group Seminar
- European Energy Conference

Prize
- Nihil

Website
- http://epsenergygroup.eu/frontend/index.php

History Of Physics Group



Chairman
- Peter Maria Schuster

Conference
- International Conference for the History of Science

Prizes
- PhysicsEstoire

Website
- http://www.ehphysg.eu/

Physics For Development Group

Chairman
- Ernst van Groningen

Conference
- Examining proposal to create a European Conference on Science and Development

Prize
- Examining proposal to create Instrumentation Award for African Scientists

Website
- http://www.physdev.org

Technology and Innovation Group

Chairman
- Markus Nordberg

Conference
- Technology and Innovation Workshop

Website
- Under construction

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European Physical Society

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