

ACTIVITY REPORT 2022

Presented to EPS Council, 26-27 May 2023



European Physical Society

more than ideas

ACTIVITY REPORT 2022

Presented to EPS Council, 26-27 May 2023



| President's Report | **Luc Bergé** |

INTRODUCTION FROM THE PRESIDENT

After a period of exit from the pandemic 2022 was a year to implement our projects. We saw the return to on-site conferences, the establishment of the first EPS Forum in Paris, a continuation of the activities of the working groups and the launch of new activities in the framework of the International Year of Basic Sciences for Sustainable Development (IYBSSD 2022).

Let us start with the event that brought together - and involved - all of the EPS bodies in 2022: The first Forum organised at Sorbonne University, Paris, between June 2 and June 4, 2022. Prepared for over a year with 75 representatives of the EPS Member Societies, Divisions and Groups, Associate Members and the EPS Secretariat, the Forum welcomed 487 registered participants among whom 184 students from 30 different countries, from Europe, India, South America to Singapore.

The format of the EPS Forum included a series of conferences, round tables and workshops on energy and sustainability, accelerators, high-energy particle physics, nuclear physics, quantum technologies and photonics, machine learning and artificial intelligence, biophysics, technological sequencing of biomolecules and condensed matter physics. The Forum's objective was to showcase the latest developments in

these fields, both from their links with the industry and from the most recent achievements in their fundamental aspects. The EPS Forum dedicated a day for each of these goals. Thursday June 2nd hosted the event "physics meets industry" that fostered direct exchanges between master and PhD students, postdocs and stakeholders of physics-based industrial companies. This first day was opened by a plenary conference given by Mariya Gabriel, European Commissioner for Innovation, Research, Culture, Education and Youth, about bridging the gap between science and innovation. More than 60 young researchers could present the results of their research during a long poster session. Friday June 3rd hosted a scientific colloquium highlighting the latest findings in physics. The morning session welcomed three Nobel prize laureates in Physics: Barry Barish from Caltech, USA, Serge Haroche from École Normale Supérieure & Collège de France in Paris, and Michael Kosterlitz from Brown University, USA. Throughout the day, several round tables addressed various societal topics, such as the European Research Council (ERC) and Widening Participation of Eastern and Southern States, for which Andrzej Jajszczyk, ERC Vice-President for physics, was invited to give a talk.

In parallel to these two days, three hands-on sessions and one masterclass trained students on quantum computing and scientific writing, while the patio of the Conference Center housed 25 stands that allowed fruitful exchanges with young graduates looking for job opportunities. The third day, Saturday June 4th, hosted the regular EPS Council.

In addition, the EPS Young Minds held a very successful Leadership Meeting. 25 representatives from the International Association of Physics Students (IAPS)

and 25 others from the 5 Universities of the 4Eu+ Alliance were moreover invited by the EPS to enjoy the different sessions of the Forum. More than 70 research organisations, industrial groups and learned societies financially contributed to this event. Their generous support helped the EPS to provide accommodation and meals to nearly 150 students.

Embedding this event over time is the next challenge for the EPS. A survey was sent to the participants to collect their opinions. 63% of the respondents considered the EPS Forum to be a good use of their time to attend this event. Between 56% and 60% agreed that the objectives of the Forum were met. The overall organisation of the Forum was well rated, while we were advised to hold a regular meeting every two years. Therefore, the next EPS Forum will take place at Freie Universität Berlin, Germany, between the 25th and 27th of March 2024. Stay connected to the Forum's website: www.epsforum.org!

Last year, an important work was carried out by the members of the EPS working groups dedicated, on the one hand, to attract more industrial partners and, on the other hand, to pursue our initiatives related to physics for development and with Eastern European countries.

After a significant growth in the number of our Associate Members in 2021 (+10%), the effort was focused on the attractiveness of our Society with respect to our most important members, who revised their budget as a priority after the Covid 19 crisis. CERN, a founding member of the EPS, should remain an associate member as Prestige Sponsor of the EPS. Discussions are underway to accommodate the CEA in this same category. As a follow up to the survey of a panel of physics-based companies carried out in 2020, we wanted to diversify our offers by proposing a web business platform

CONTENTS

- 02 **introduction from the President**
- 04 **Executive Committee Activities**
- 05 **Highlights from 2021**
- 08 **Financial Report 2021**
- 09 **Secretariat**
- 10 **Reports by EPS Action Committees**
- 20 **Journals Reports**
- 26 **Conferences and prizes in 2021**
- 27 **EPS Divisions and Groups**

allowing the exchange of job offers and CVs between our associate members and early career physicists and to weave a more diversified network between academic researchers and engineers in R&D. This platform is now ready and it has already aroused the interest of several of our partners. Do not hesitate to visit www.epsconnect.org and advertise this new tool to your networks.

As a contribution to IYBSSD 2022, The American Physical Society (APS), the EPS and the International Centre for Theoretical Physics (ICTP) at Trieste launched the first APS-ICTP-EPS Travel Award Fellowship Programme (ATAP) for active early career scientists from developing countries. This programme grants two-month visits for young scientists, who can conduct world-class research and establish collaborations to enhance their scientific careers, in particular by returning to the laboratories of their alma mater, using facilities they are familiar with and re-connecting with colleagues. In 2022 three laureates from Iran, Cuba and Iraq benefited from this programme. The second ATAP campaign started early 2023 and we welcomed a new partner, the APS Forum on Early Career Scientists (FECS), enabling us to propose 4 grants. A second new initiative was to support the organisation of training workshops on solar photovoltaics in Africa, which will be held in different African countries. We have also reinforced our partnerships with Eastern Europe, in particular with the Balkan Physical Union (BPU) with whom the EPS and its European Integration Committee actively contributed to the annual congress in September 2022 in Belgrade.

Unfortunately, the war in Ukraine led us to freeze all our cooperation agreements with the Russian State and all its institutes. Being regularly in touch with the Ukrainian Physical Society, a Member Society of the EPS, our Executive Committee rapidly published a statement that was approved and relayed by several other learned societies. One year after the start of the war in Ukraine, the EPS reaffirms its strong support for this country and we encourage our Ukrainian colleagues to participate in our European projects and attend the conferences sponsored by the EPS. The EPS will facilitate their participation.

Two other working groups were quite successful in their missions: one made it possible to recruit Dr. Anne Pawsey as new Secretary General of the EPS. Anne holds a PhD in physics from the University of Edinburgh, worked as a Graduate School Coordinator and Knowledge Exchange Development Manager in Scotland before moving to Germany as Teaching and E-Learning Coordinator at the University of Göttingen. Welcome, Anne, to your new home! Many thanks to David Lee, former General Secretary, who has done so much for the EPS for more than 25 years, with intelligence, kindness and diplomacy. Good luck, David. We will always be honored to receive your advices in the future!

The second working group elaborated on the transformation of the EPS Constitution and Structure. It revised the Statutes and By-laws of the EPS and update the EPS activities in order to ensure that they are consistent with modern practices of an international learned society.

The proposed modifications were presented during a recent Extra-Ordinary Council in March 2023. They will be discussed again at the EPS Council in Porto and will be put to the vote by the end of 2023. We thank the EPS bodies (Member Societies, Divisions and Groups) for their insightful advice during these discussions.

Besides, the Young Minds programme had a rich and successful year: In 2022 it established 5 new sections and approved 3 more in January 2023, reaching 92 sections in 37 countries. Each of these sections is entitled to apply an Activity Grant twice a year (up to 1000 € per section), which support activities in outreach, networking and professional development. Compared to 2021, the number of Activity Grants applications has significantly grown (72 in 2022 vs. 55 in 2021). The number of Young Minds Conference Awards applications, providing support for meetings organised by the Young Minds sections, also increased in 2022 compared with 2021. Young Minds (YM) were moreover closely involved in several EPS events: At the 10th EPS-QEOD EUROPHOTON conference organised in Hannover by the EPS Quantum Electronics and Optics

Division, Richard Zeltner held a YM Session hosting a professional development seminar on the possible paths of transition from Academia to Industry. The YM Programme moreover co-hosted its leadership meeting at the EPS Forum in Paris. This gathered 43 section delegates, from 21 different countries, as well as guests from IAPS and other young researchers. YM activities included a “From PhD to CEO” seminar with the active participation of Optica’s European office.

The EPS Historic Sites programme was also particularly fruitful in 2022 with the inauguration of 8 new historic sites (HS) thanks to the Historic Site Committee headed by Karl Grandin, namely, the Old Department of Physics at Lund, Sweden (May 2022), the Zeeman Laboratory in Amsterdam, The Netherlands (May 2022), the Theodor von Grotthuss Laboratory at Gedučiai, Lithuania (July 2022), the Aldo Pontremoli Institute of Complementary Physics in Milan, Italy (September 2022), the Meteorological Observatory of Zagreb, Croatia (September 2022), the Victor Franz Hess Messstation in Haflekarr/ Innsbruck, Austria (September 2022), the Institut d’Études Scientifiques de Cargèse, France (October 2022) and the Sodankylä Geophysical Observatory in Finland (December 2022).

Our 18 Divisions and Groups form the backbone of the EPS. I would like to thank them for their impressive work accomplished in 2022: 15 major conferences were organised in the main disciplines of physics and 8 prestigious prizes were awarded last year. Our publication activities have finally undergone new developments with, in particular for EPL, the renewal of several co-editors and the takeover by Gonzalo Muga, new Editor-in-Chief of our flagship journal.

All these accomplishments would have not been possible without the devoted work of the EPS Secretariat members in Mulhouse and our policy officer in Brussels together with the wise decisions of the members of the EPS Executive Committee, whom I thank once again here.

The European Physical Society is moving forward. Let us make it grow all together. ■

Honorary Secretary's Report | Ian Bearden |

EXECUTIVE COMMITTEE ACTIVITIES 2022

The Executive Committee of the European Physical Society (EPS) develops the EPS policy, discusses ongoing activities, financial matters, future plans, and puts in practice effective strategies to improve the visibility and impact of the EPS.

Under the Presidency of L. Bergé, the Executive Committee aims to meet in person with a hybrid option twice a year, and to meet twice by video conference. Other meetings can be organised as necessary. The EPS President, elected by the EPS Council, chairs the Executive Committee.

Over the period 2022-2023, the EPS Executive Committee met 4 times: June 4th in Paris, 29th-30th of September in Mulhouse, 30th-31st January in Brussels, 24th March online.

In 2022 the EPS and the secretariat moved back towards pre-covid practices, staff now work one day a week from home and all the EPS-organised conferences and events were held in person.

A standard annual Council Meeting was held during the EPS forum on June 4th in Paris. An Extra-Ordinary Council meeting was held virtually on March 24th 2023 to finalise the 2021 accounts and present the proposals of WG5 for changes to the Constitution and Bylaws.

The Executive Committee are involved in several working groups which continue to focus on time limited projects. One working group, WG4, concluded successfully by recruiting a new Secretary General, Dr Anne Pawsey, who started to work in November 2023.

WG1 on industrial links resulted in the beta launch of the careers web platform EPSconnect. For international development WG3 supports EPS involvement in the International Year of Basic Sciences, a fellowship programme with the APS and ICTP for scientists from low- and middle-income countries to return to their alma mater and supports the activities of the EPS Committee for European Integration. WG5 continues with its project to update the EPS statutes and bylaws. A working group on publications has been formed and its terms of reference should be defined soon.

The Executive Committee asked the EPS point of presence in Brussel to cultivate highlevel contacts within the EU policy making system, especially

EX. COM. MEMBERS	DIVISION AND GROUP, COMMITTEES, PUBLICATIONS	MEMBER SOCIETY
Bearden, Ian	Physics Education Energy Group EuroPhysicsNews	Denmark, Finland, Iceland, Norway, Sweden
van der Beek, Kees	Statistical non Linear Physics Division Division of Physics in Life Sciences Condensed Matter Division Equal Opportunities	Albania, Croatia, France, Macedonia, North Montenegro, Serbia
Bergé, Luc	President	
Caruso, Roberta	Quantum Electronics and Optics Division Atomic Molecular and Optical Physics Division Young Minds European Physics Journal	Armenia, Georgia, Moldova
Fantz, Ursel	Computational Physics Group History of Physics Group Plasma Physics Division Historic Sites	Austria, Germany
Nappi, Eugenio	High Energy and Particle Physics Division Accelerators Group	Czech Republic, Hungary, Italy, Slovakia
Palmer, Stuart	Technology and Innovation Group	United Kingdom
Peña, Teresa	Nuclear Physics Division Conference Committee e-EPS	Portugal, Spain
Rabinovici, Eliezer	Physics for Development Group	Estonia, Israel, Latvia, Lithuania, Poland
Rudolf, Petra	Vice-President	
Sakellariadou, Mairi	Joint European Solar Physics Division Gravitational Physics Division	Bulgaria, Cyprus, Greece, Romania, Turkey
Schopper, Andreas	Environmental Physics Division Forum Physics and Society	Belgium, Liechtenstein, Luxembourg, The Netherlands Switzerland
Zwicky, Gertrud	Distinctions and Awards Committee European Integration	Belarus, Russia, Ukraine

to encourage their participation in the EPS Forum.

The Grand Challenges Book is in production, with the full text submitted to IOPP in December 2022. Given the large number of authors and topics the production is taking some time. It is hoped it will be printed in summer 2023.

At its meetings, the Executive Committee invites representatives of national physical societies, representatives from other learned societies, policy makers, and Chairs of Divisions and Groups.

The members of the Executive Committee play an important role in

establishing and maintaining contacts to Member Societies and Divisions and Groups. Every Executive Committee member is the direct contact person for a small number of Member Societies. The same principle has been introduced to establish privileged contacts with the Divisions as shown in the table. ■

HIGHLIGHTS 2022

THE EPS FORUM

The theme of 2022 was one of reconnection and in this spirit the inaugural EPS forum was organised in Paris on the 2nd to the 4th of June 2022. Combining two regular EPS meetings, the Council and the Young Minds Leadership Meeting with a three-day celebration of Physics the aim was to bring together the entire EPS community for the first time alongside scientific and industry leaders. Particular attention was paid to the participation of the upcoming generation of physicists, including the YM delegates and students from the International Association of Physics Students (IAPS).

On the first day, opened by EU commissioner Mariya Gabriel the focus was on connections between early career researchers and industry leaders. Twenty-five exhibitors were present. The second day of the forum opened with talks from three Nobel prize winners who serve as potential role models before highlighting the role of physics in society with round tables on physics training and education, mutual support for member societies of EPS and the role of the European Research Council (ERC) in Widening Participation of Eastern and Southern States in EU research programmes.

The scientific content of the forum presented in keynote and parallel sessions was organised by EPS divisions and groups and showcased the full breadth of physics. Topics included energy and sustainability, accelerators, high-energy particle physics, nuclear physics, quantum technologies and photonics, machine learning and

artificial intelligence, biophysics, technological sequencing of biomolecules and human health, condensed matter physics: from quantum materials to additive manufacturing.

The forum was made possible by the generous support of EPS member societies and industrial sponsors as well as funding from the exhibitors. This support allowed a symbolically low registration fee and for the travel and expenses of student attendees to be covered.

In the closing ceremony the much-delayed summer 2021 Emmy Noether distinction was bestowed on Dr Sara Bolognesi, Institute of Research on the Fundamental

laws of the Universe (IRFU) of the CEA-Saclay, France.

The third and final day of the forum focussed on EPS core business, with the annual Council meeting.

A second edition of the EPS Forum is planned in March 2024 at Freie Universität Berlin and invitations are already being sent out to keynote speakers. The focus will remain on early career scientists, with more opportunities for them to meet and interact with industrial representatives and established academics in formal and informal settings. The council and YM leadership meeting will continue to form an integral part of the event. ■



NEW SECRETARY GENERAL

This was a year of transition for the EPS secretariat. In November 2022 Dr Anne C. Pawsey started in the role of EPS Secretary General, working alongside the outgoing Secretary General David Lee until he retired at the end of March 2023.

Anne Pawsey joins the society from the University of Göttingen, where she coordinated the teaching and e-learning of the Max Planck School Matter to Life. Dr Pawsey is a soft matter physicist who received her PhD from the University of Edinburgh in 2014. Since then, she has worked at the interface between physics

and industry as a researcher and in research management. She coordinated the Scottish Universities Physical Alliance Graduate School and she spent the pandemic ensuring that the Matter to Life Network and the Göttingen Physics Faculty could continue to teach online and in a hybrid format with handwritten equations, and demonstration experiments viewable by all participants.

Dr Pawsey has been involved in physics societies since her undergraduate days, when she was the secretary of International Association of Physics

Students (IAPS) and one of the organisers of their annual conference ICPS.

A science communicator, she enjoys revealing the physics underlying everyday phenomena, and engaging adults who feel that physics is “not for them” by creating interactive shows designed for pubs, bars or music festivals. Given the opportunity she would be delighted to explain the surprisingly complex physics of chocolate.

After taking over the reins, her focus will initially be on EPS communications, both internally and externally, starting with an upgrade of the EPS website. ■

ACTIVITIES OF THE BRUSSELS OFFICE

The EPS Brussels office returned to its physical presence in the EU science policy ecosystem after the Covid pandemic. In-person events returned to normal in Brussels, and we conducted several meetings with key actors in the European R&D scene, including with Members of the European Parliament, policy officers of the European Commission and representatives of the EU Member States, where we continue advocating for Physics-related topics in the policy-making process. We had direct input into the EU Chips Act and associated regulations. Dr Enrique Sánchez-Bautista was invited to participate in two events at the European Parliament, which in collation with other relevant stakeholders led to the inclusion of quantum chips in the regulations.

We have continued publishing regular articles in e-EPS and in EuroPhysics News about science policy-related issues and our monthly newsletter includes information about relevant events in science policy and European funding calls. Dr Enrique Sánchez-Bautista met

with the Energy Group and the Plasma Physics Division to provide advice on how to increase the impact of their activities within the EU affairs, other interested divisions are encouraged to make use of this service.

In the past year we have enhanced our engagement with our sister societies in Brussels via the Initiative for Science in Europe (ISE) coalition. The EPS Brussels office chairs the Horizon Europe and the Widening Participation task forces, and actively participated in the Research Careers, and Open Science task forces.

As a direct result Dr Enrique Sánchez-Bautista was invited to participate in the private event “Words or action: Can the EU’s new widening and strengthening agenda make a difference?” in Prague on November 9th organized by Science|Business where high level European Commission Officials were also present. The Widening Participation task force published an interim report “Proposals for enhancing actions for Widening Participation & Spreading Excellence” handed to ERC Vice-President,

Professor Andrzej Jajszczyk, during the Widening Participation session at the EPS Forum 2022. The works on the Research Careers led to the publication of the “Manifesto for Early Career Researchers” in January 2023.

The EPS Brussels office took the lead on the involvement of the EPS in European projects, namely with the participation in Surrounded by Science, an ongoing project on formal and informal science education that brings together experts in education, science communication, science centres and museums. As part of this project EPS organised its first “EPS Citizen Science Competition”, held during September 2022 which attracted over 350 science enthusiasts who participated in two different citizen science projects using real data from CERN and EGO-Virgo facilities. The EPS Brussels office supported the preparation of the Discovery Space project on the use of AI actors to support school and university students in virtual laboratory exercises which kicked-off in January 2023. ■

HISTORIC SITES

After the obstacles created by the pandemic the Historic Sites programme returned in force in 2022. Eight historic sites were inaugurated in eight separate

countries including the first sites to be recognised in Lithuania and Finland. The new sites celebrate historical activities in atomic physics, cosmic rays, electrolysis,

geophysical observation including seismology, physics education, quantum physics and spectroscopic and radiological studies. ■

YM LEADERSHIP MEETING AT THE EPS FORUM

A key focus of the EPS forum was the connection between early career researchers and potential future employers in industry and academia. Given this focus, the Forum was a natural host of the Young Minds (YM) leadership meeting. This meeting is an annual event which brings together section delegates from the entire network for professional development and networking activities.

After the cancellation of the 2020 event and a virtual event in 2021, this was the first in person leadership meeting for three years.

The advantages of being co-located with the EPS Forum included the increase in opportunities of networking and connections. Attendees were able to listen to the talks by Nobel Laureates and benefit from the high

level of scientific content. Delegates were also able to meet industrial stakeholders and participate in discussion on the role of physics in society. A session in partnership with Optica demonstrated the possible routes “from PhD to CEO”.

Forty-three section delegates, from 21 different countries, attended the leadership meeting. They were joined by guests from the “International Association of Physics Students” and other early career researchers not yet part of EPS YM, including the 25 students of the network 4E+ Alliance of Sorbonne University. The meeting was considered a great success.

Following activities designed to break the ice between section delegates who

were often meeting for the first time there were two sessions focused on professional development. The first was a seminar on “Science Outreach and Mass Media” presented by Dr. Giuliana Galati, University of Bari, Aldo Moro, INFN who discussed the importance of sharing research results with the public and the challenges inherent in doing so. The second addressed career planning, Prof. Petra Rudolf gave an insightful talk on “The Landscape of Career Tracks for Graduates in Physics”

In a final session, the Young Minds Sections were able to present their recent activities at a poster session open to the whole conference which was a fantastic hub to exchange ideas and for mutual inspiration. ■

IYBSSD



EPS is centrally involved in the IYBSSD. We were present at the launch event in UNESCO in Paris, in July 2022, and we are represented on the steering committee of the IYBSSD by Luc Bergé and Stuart Palmer.

EPS has supported several different types of activities during the IYBSSD. We have a fellowship to support physicists from low-and-middle-income countries, developed different actions to support physics and physicists in Africa and provided support for regional physics conferences.

APS-ICTP-EPS Travel Award Fellowship Programme (ATAP) is aimed at active early career scientists from developing countries, supporting short-term research visits to laboratories in Europe and North America. In 2022 three researchers returned to their alma mater. Dr Azam KARDA, Damghan University Iran, returned to MAX IV facility

at Lund University Sweden to carry out research on tomographic acquisition using machine learning. Dr Llinersy URANGA PINA University of Havana, Cuba, returned to the University Paul Sabatier in Toulouse France to work on material science. Finally, Dr Ausama Ismael KHUDIAR, Institute of Materials Research/ Department of Sciences and Technology of the Ministry of Higher Education and Scientific Research, Republic of Iraq, returned to Eberhard Karls Universität in Tübingen, Germany, to work on gas sensors. The scheme runs again in 2023 with an additional sponsorship from the APS Forum of early career scientists.

EPS supported two regional general physics conferences, the 11th edition of the Balkan Physical Union (BPU) and the 4th Physics Conference of Portuguese Speaking Countries. We also supported the attendance of an early career researcher, Kwasi Nyandey from Ghana, at the International Conference on Laserlight and Interactions with Particles held in Warsaw, Poland, in August 2022 where he gave an excellent talk.

The 11th BPU was held 29th August to 1st of September in Belgrade, Serbia as a hybrid event with 325 onsite and 151 online participants from 31 countries. As a general physics conference there were talks on all topics

of physics as well as 5 round tables, two of which on Careers in Physics and Quantum Technologies were organised by the EPS Young Minds. The central involvement of early career researchers was also evident in the make-up of speakers and attendees, roughly one third of the attendees were students and one quarter of those presenting were also students. As the largest event in the region since the start of the COVID-19 pandemic the conference created and reinforced cooperation and exchange between researchers and professors.

EPS also supported the 4th Physics Conference of Portuguese Speaking Countries: Physics for a Sustainable Development held in Cidade da Praia, Cape Verde from 12th – 16th September 2023. Around more than 100 attendees discussed topics explicitly linked to sustainable development ranging from the physics of climate change to the applications of nanosatellites. Prof. Teresa Pena, EPS representative, served on the scientific committee and presented EPS during the conference.

In 2023, EPS will support the activities of François Piuze to run hands-on-workshops in Africa on photovoltaics. The IYBSSD will end with a Closing Ceremony which will take place at CERN, Geneva, on December 15th 2023. ■

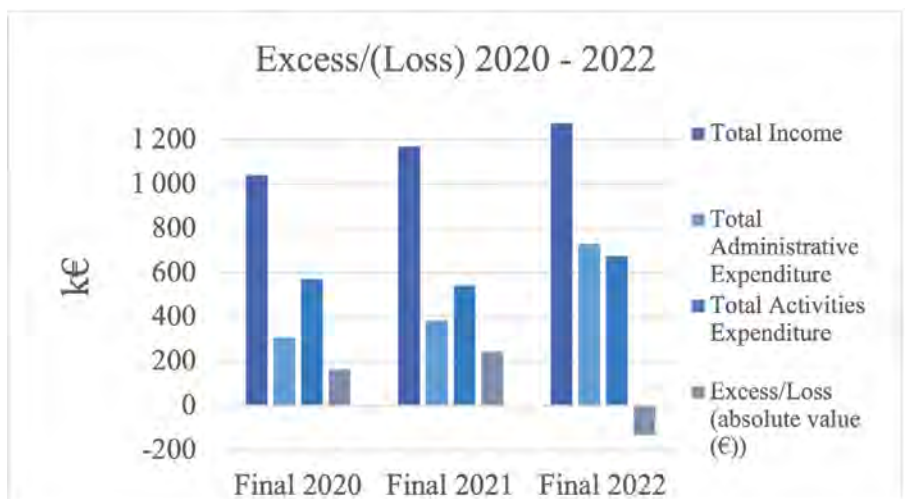
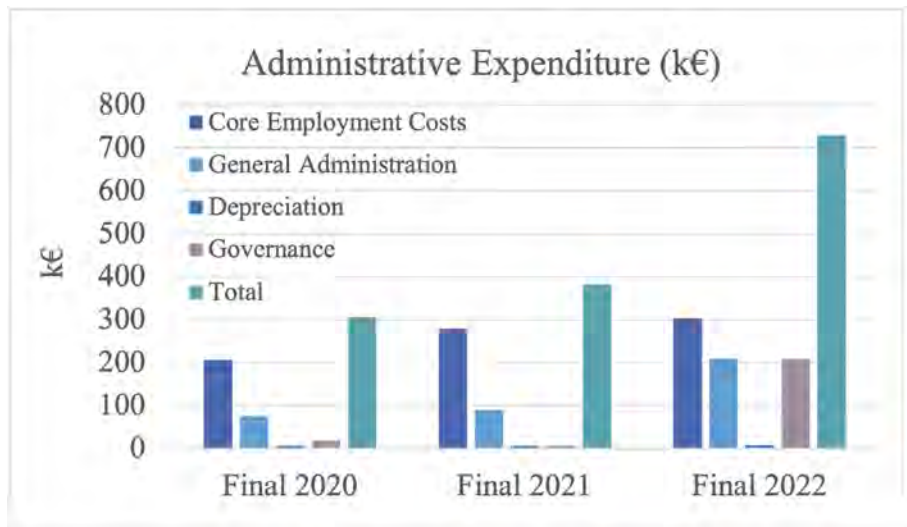
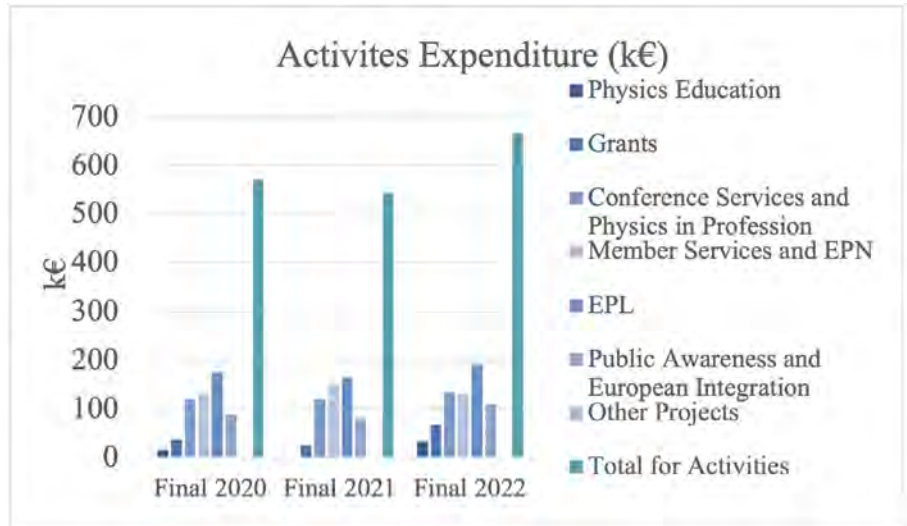
FINANCIAL REPORT 2022

The European Physical Society has brought its accounts into conformity with the new chart of accounts adopted by the French government in 2021. The figures presented below are highlights taken from the official financial report of the EPS which will be supplied separately and which has been reviewed by the auditors.

The income for 2022 was Euro **1 275 285**, with 49% from Members, 31% from publication activities and 20% from conferences and other activities. The expenditure for 2022 was Euro **1 396 503**, 52% for administration and governance, and 48% for activities. The activities of divisions and groups resulted in a net expenditure of Euro **10 320**. The outcome for the year is a loss of Euro **131 539**.

Income in 2022 was 20% more than expected, with the increase mainly due to an increased conference income reflecting the return to in person conferences. Administrative expenditure in 2022 was similar to the amount budgeted. Use of reserves was requested to allow for the recruitment and overlap of the new Secretary General, this occurred later in the year than predicted so had a lower cost. The budgeted funds were instead used to finance the services of an expert accountant to bring the EPS in conformity with the new accounting regulations. This is a one-off cost. The activity expenditure was slightly lower than budgeted (5%). Care should be taken when comparing the results to previous years which were heavily affected by the COVID-19 pandemic.

At the Council meeting in June 2022 Council approved the carry forward of Euro **241 085** received in 2021 and approved the use of Euro **100 000** from the reserves. Euro **209 546** of these funds remain unused.



SECRETARIAT

The Secretariat of the European Physical Society is headquartered on the campus of the Université de Haute Alsace, in Mulhouse, France. Over the past year the Secretariat has undergone a period of change, adapting to new leadership and to the return of in person events and ways of working.

There have been significant changes of personnel in the last year including the new Secretary General Anne Pawsey who started in November 2022, a conference assistant who joined us in March and a part time IT support officer who started in November. We also welcomed a new accountant at the end of October. There was an overlap of Secretaries General between 1st November and 31st March 2023. Averaged over 2022 the office employed 10.2 FTE in 3 main areas: Core Secretariat (5.2); Conference Services (2), and the EPL Editorial Office (3).

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. In 2022 the secretariat played a fundamental role in the organisation of the EPS Forum and in the creation of the new web platform EPS connect.

In 2023 the Secretariat will continue to work on communications both with existing EPS members and externally. An internal working group has been created and has already succeeded in enlivening the EPS social media activity and in making sure that communications from Mulhouse and Brussels are communicated to the appropriate audiences. The next projects are a renewed website and support for EPS Division and Group newsletters.

The Secretariat participates as a partner in projects. In 2022 it has reinforced its links with the Université de Haute Alsace during the year, as a partner in the project Mat-Light 4.0. EPS is also a partner in two EU projects: Surrounded by Science and Discovery Space which focus on pre-university science education in formal and informal contexts.

EPS engagement in European Projects is supported by the Brussels office, who coordinate participation in addition to their principal activity of advocating for physics and related caused in the EU policy-making

process. The office produces a monthly newsletter highlighting relevant policy developments and funding opportunities. Acting in concert with our sister learned societies through the umbrella organisation Initiative for Science in Europe (ISE) we have provided input into position papers on widening participation of southern and eastern countries in EU funding programmes, a draft of which was presented during the EPS Forum.

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.* In 2022 they returned to pre-covid levels of conference organisation, with four in-person conferences in addition to the EPS Forum. The team are now preparing CLEO/Europe-EQEC 2023 which returns in-person in Munich in June 2023.

EPS headquarters in Mulhouse also houses the EPL editorial office, with F. Burr as Staff Editor and two editorial assistants. In 2022, the EPS Editorial Office handled 1028 manuscripts. The editorial office helped to organise the first post-covid EPL Editorial Board Meeting, in Bilbao, November 2022. Over half of the co-editors were able to attend in person. ■

▼ **EPS new employees:** Anne Pawsey, Secretary General, Chahira Boudeliou, Accountant, Jean-François Kammerlocher IT Assistant, Manon Couqueberg, Conference Assistant



REPORTS BY EPS ACTION COMMITTEES

EPS HISTORIC SITES

Chair: Karl Grandin

In 2022 eight EPS Historic Sites were inaugurated. Until December 31, 2022, 105 nominations for Historic Sites have been received by the EPS HS Committee. Proposals can be made at any time from the EPS web site (see link below). Of these proposals, 69 EPS Historic Sites have been inaugurated in 24 different countries at the end of 2022.

One example from the 2022 EPS Historic Sites inaugurations took place in connection with the recurring Rydberg lectures at Lund University. This year the lecture was given by Jun Ye, JILA, National Institute of Standards and Technology and University of Colorado. He talked about “Tick Atoms in Unison” where he described how extremely accurate atomic clocks could be influenced by the gravitational shift. Prior to the lecture a large group of interested people gathered in central Lund at the old physics department to commemorate the contributions to physics by Johannes (Janne) Rydberg (1854–1919), especially his famous formula that successfully calculates spectral lines. A physical explanation was later given by Niels Bohr. The Lund inauguration was conducted by EPS President, Luc Bergé, and talks were given by physicists and by a representative from the City Council.

Current EPS Historic Sites (in reverse order):

1. Sodankylä Geophysical Observatory, Finland, 8 December 2022
2. Institut d'Études Scientifiques de Cargèse, France, 7 October 2022,
3. Victor Franz Hess Messstation Haflekar/ Innsbruck, Austria, 29 September 2022
4. Meteorological Observatory Zagreb, Croatia, 23 September 2022
5. The Aldo Pontremoli Institute of Complementary Physics, Milan, Italy, 16 September 2022
6. Theodor von Grotthuss Laboratory, Gedučiai/ Žeimelis, Lithuania 2 July 2022
7. Zeeman Laboratory, Amsterdam, The Netherlands, 25 May 2022
8. Old Department of Physics, Lund, Sweden, 10 May 2022
9. Magnus-Haus, Berlin, Germany, 15 October 2021
10. Cyclotron Hall, Louvain-La-Neuve, Belgium, 12 October 2021
11. Ampère House, Lyon (Poleymieux), France, 6 October 2021
12. J. Ångström Physics Institute, Uppsala, Sweden
13. City of Jena, Germany, 7 June 2021
14. Sonnenborgh Observatory, The Netherlands, 7 April 2021,
15. Les Houches School of Physics, Les Houches, France, 5 October 2020
16. The Physics Department at the University of Dundee, UK, 2 December 2019



▲ TEPS HS plaque mounted next to the statue of Theodor von Grotthuss in Gedučiai, Lithuania.

17. The Academy of Sciences of the Bologna Institute, Italy, 7 November 2019,
18. Institute for High Voltage Engineering, RWTH, Aachen, Germany, 30 September 2019
19. Birr Castle, Demesne, Ireland, 20 September 2019
20. Mendeleev's Museum-Archive, St Petersburg, Russia, 12 September 2019
21. The Former Physics Institute, Frankfurt am Main, 4 September 2019,
22. Holy Spirit College, Leuven, Belgium, 23 May 2019
23. Atominstitut, TU, Vienna, Austria, 21–22 May 2019
24. Institute of Physics of Archirafi Street, Palermo, Italy, 18 February 2019
25. Jungfrauoch Research Station, Switzerland, 8 February 2019,
26. Laboratorium Bergara, Basque Country, Spain, 20 October 2018
27. Old Physics Building of the Eötvös Loránd University, Budapest, Hungary, 12 October 2018
28. Laboratories of Kirchoff and Bunsen, Heidelberg, Germany, 1 October 2018
29. Halde Observatory, Alta, Norway, 26 August 2018
30. Dunsink Observatory, Dublin, Ireland, 23 June 2018
31. Institute of Spectroscopy, ISAN, Troitsk, Russia, 20 June 2018
32. Magurele Physics Campus, Magurele, Romania, 15 November 2017
33. The Curie Laboratory of the "Institut du Radium", Paris, France, 7 November 2017
34. The Philips NatLab, Eindhoven The Netherlands, 5 October 2017,
35. IBM Research Laboratory, Rüschlikon, Zürich, Switzerland, 26 September 2017
36. H H, Wills Physics Laboratory (Royal Fort) of the University of Bristol, Bristol, UK
37. "Les Bastions" of the University of Geneva, Geneva, Switzerland, 29 March 2017
38. The Institute for Advanced Study, Princeton, NJ, USA, as Joint APS-EPS Historic Site
39. The Uddmanska House, Kungälv, Sweden, 29 October 2016
40. The "Piersanti Mattarella Tower of Thought" of the Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, 21 August 2016
41. The Former Physical Institute of the University of Würzburg, Würzburg, Germany, 7 June 2016
42. The Cabinet of Physics of the University of Coimbra, Coimbra, Portugal, 11 March 2016
43. The Ernst Mach Physics Institute, Prague, Czech Republic 18-Feb-16
44. The Hotel Metropole, Brussels, Belgium, 24 October 2015
45. The Einstein House, Bern, Switzerland, as Joint APS-EPS Historic Site, 14 September 2015
46. The Institute for Radium Research, Vienna, Austria, 28 May 2015
47. The Mount Vesuvius Observatory, Herculaneum, Naples, Italy, 23 May 2015
48. The Students Residence (Residencia de Estudiantes), Madrid, Spain, 13 May 2015
49. The Ludwig Maximilian University, Munich, Germany, 6 May 2015
50. The Fasar Lutheran Secondary School, Budapest, Hungary, 23 April 2015
51. The Kamerlingh Onnes Laboratory and Lorentz Institute, Leiden, The Netherlands, 9 February 2015
52. The Synchro-Cyclotron, SC – CERN, Geneva, Switzerland, 19 June 2014
53. The Study of Georgi Nadjakov, Sofia, Bulgaria, 23 May 2014
54. The Fabra Observatory, Barcelona, Spain, 9 May 2014
55. The Blackett Laboratory, London, UK, 30 April 2014
56. The European Birthplace of the Atomic Timekeeping – NPL, Teddington, UK, 31 January 2014
57. The AdA Storage Ring at the INFN Frascati National Laboratory, Frascati, Rome, Italy, 5 December 2013
58. The Niels Bohr Institute, Copenhagen, Denmark, 3 December 2013
59. The Neutrino Experiment at MTA Atomki, Debrecen, Hungary, 25 October 2013
60. The Cathedral, Kamien Pomorski, Poland, 11 October 2013
61. PTB, Formerly PTR, The National Metrology Institute, Berlin, Germany
62. The LAL-LURE Accelerator Complex, Orsay, Paris, France, 13 September 2013
63. The Observatory of Tycho Brahe, Hven Island, Landskrona, Sweden, 11 September 2013
64. The Villa Griffone in Pontecchio Marconi, Bologna, Italy, 26 May 2013
65. The Hill of Arcetri, Florence, Italy, 17 May 2013
66. The Study of Bruno Pontecorvo – JINR, Dubna, Russia, 22 February 2013
67. Hoza 69, Warsaw, Poland, 10 January 2013
68. Laboratory "Les Cosmiques", Col du Midi, Chamonix, France, 23 July 2012
69. The Goldfish Fountain of the Physics Institute of Panisperna Street – Centro Fermi, Rome, Italy, 20 April 2012

Cf. https://www.eps.org/general/custom.asp?page=distinction_sites

The HS Committee examines the proposals typically three times per year. A couple more sites have already been approved and await inaugurations in 2023.

Members of the EPS HS Committee during 2022 were: Karl Grandin (Chair), Luisa Cifarelli, Goran Djordjevic, Ursel Fantz, Alain Fontaine and Jim Hough. Representing the EPS Young Minds Hripsime Mkrtchyan. The chair and the communication coordinator at EPS Mulhouse, Gina Gunaratnam, have continued working on establishing a database system for the nominations.

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, some news is published right away in the electronic newsletter e-EPS and on the EPS web site, and an extended article is published afterwards in EPN.

YOUNG MINDS

Chair: **Mattia Ostinato**



Young Minds (YM) is an EPS programme launched in 2010 with the aims of bringing together students and early career researchers in physics and fostering excellence among them. This is achieved by encouraging the creation of local groups called sections and ensuring the possibility to access an annual budget to carry out student-led activities. These activities fall into three main categories: outreach, networking and professional development. Young Minds has now reached ten years of activity with 92 sections in 37 countries. Of those 92 sections, 67 are considered active, e.g. they have applied for funding or attended the leadership meeting recently.

Programme Management and Action Committee

The full Young Minds Action Committee (AC) comprises EPS President Luc Bergé, EPS Secretary General Anne Pawsey (Substituting Secretary General David Lee, retiring in March 2023), Executive Committee member Roberta Caruso,

EPS YM Programme manager Ophélie Fornari, Mattia Ostinato (chair, Spain), Mažena Mackoit Sinkevičienė (Lithuania), Tanausú Hernández Yanes (Poland), Richard Zeltner (Germany, will leave in Q1 - first quartile - 2023), Hripsime Mkrtychyan (Armenia, will leave in Q1 2023), Anna Grigoryan (Armenia), Carmen Martin (Spain) and Carlos Damian Rodriguez Fernandez (Spain).

A. Grigoryan, M. Mackoit Sinkevičienė and C. D. Rodriguez Fernandez joined the Action Committee in the first half of 2022, as a result of a recruitment process started in consideration of the significant growth of the YM network in the past years and the stronger engagement of the Action Committee in the organisation of various events. Following the departure of the long-standing committee member D. Pesyna, and in anticipation of the departure of R. Zeltner and H. Mkrtychyan, the committee considers a call for applications early in 2023. In addition, Hripsime Mkrtychyan represents YM in the Historic Sites Committee, so this call will also fulfill the purpose of incorporating new YM representatives in EPS Committees.

Each member of the Action Committee serves as direct contact point for a number of sections within the EPS YM Network. Following the nation-based approach started in 2021, the YM network is split into 6 geographical zones, and each zone assigned to an AC member. As

maintenance of this approach, the section distribution is updated to take into account both the entrance of new members in the Action Committee and the creation of new Sections.

Section Development and Grants

In 2022 the programme established 5 new sections, and it is already set to approve 3 more in January 2023, reaching the figure of 92 sections in 37 countries. Each of these sections is entitled to apply an Activity Grant twice a year, which can provide a maximum annual funding of 1000 € per section. This type of grants support activities falling in at least one of the three categories: outreach, networking and professional development. There are two deadlines per year – January 15th and July 15th. Table 1 summarizes the figures involving the 2022 Activity Grants, including the total number of applications, the number of those approved, the total amount of requested funding, and the amount granted for each deadline.

Sections are assisted during the grant submission process. Especially for the YMCA the Action Committee provides feedback and the possibility to resubmit the grant, in a sort of peer review process that helps both parties.

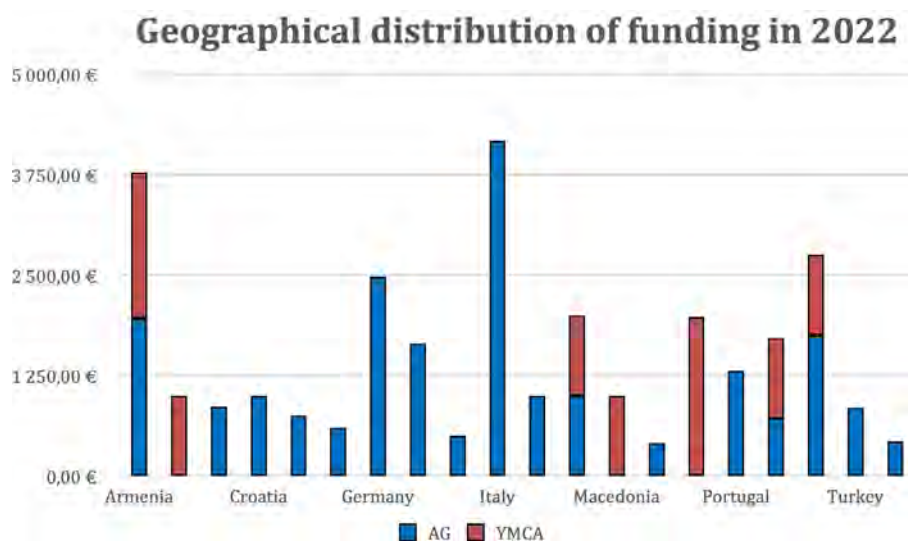
Compared to 2021, the number of Activity Grants applications has significantly grown (72 in 2022 vs. 55 in 2021) and it is closer to the number of 76 applications received in 2020. In particular, while

2022 ACTIVITY GRANTS	REQUESTS	APPROVED WITH FULL AMOUNT	APPROVED WITH REDUCED AMOUNT	TOTAL AMOUNT REQUESTED (€)	TOTAL AMOUNT GRANTED (€)
January 15 th deadline	29	21 (72 %)	8 (28 %)	13.420,40	11.588,00
January 15 th deadline	43	29 (67 %)	14 (33 %)	11.159,68	9.845,15
Total	72	50	22	24.580,08	21.433,15

▲ TABLE 1: Group picture of the participants to the Leadership Meeting in Erlangen, May 2019. Courtesy of MPL.

2022 YMCA	REQUEST	APPROVED WITH FULL AMOUNT	APPROVED WITH REDUCED AMOUNT	TOTAL AMOUNT REQUESTED (€)	TOTAL AMOUNT GRANTED (€)
January 15 th deadline	1	1 (100%)	0	1.000	1.000
April 15 th deadline	3	2 (67%)	1 (33%)	2.970	2.870
January 15 th deadline	5	5 (100%)	0	4.925	4.925
October 15 th deadline	0	0	0	0	0
Total	9	9	9	8.895	8.795

▲ TABLE 2: Summary of the 2022 Young Minds Conference Awards (YMCAs).



▲ FIG. 1: Geographical distribution of the total funding granted by the Young Minds Action Committee in 2022 to the Young Minds network. Blue bars indicate Activity Grants, orange bars indicate YMCAs.

the number of grant applications for the January deadline has remained constant (29 in both 2021 and 2022), the applications received in July has increased from 26 applications to 43. This effect might be explained by the progressive release of the restrictions due to the COVID19 pandemic enacted in the winter months of 2022, with the majority of countries represented in the EPS YM network having little to no restrictions by summer 2022. This allowed YM sections to confidently plan activities for the second half of the year. The increase in the number of applications resulted also in an overall increase of the budget, both requested (16384 in 2021 vs. 24580 in 2022) and approved (13596 vs. 21433.15), with an approval rate of 87 %, 4 percent points higher than that of the past two years.

The number of YMCA applications in 2022 also increased as compared to 2021, just as the Activity Grant funding did. Specifically, the number of applications rose from 6 to 9, and, hence, also the granted budget, which increased from 5078 € in 2021 to 8 795 € in 2022.

Taking the Activity Grant and the YMCA applications together, the Young Minds Programme has granted in 2022 a total amount of 30 228 € to sections distributed over 20 different countries, ranging from Armenia to Ukraine, as can be seen in Figure 1. While the traditionally strong cluster of long-standing and very

active sections in Italy, Spain, Germany and Portugal received about 35 % of the funding (10 706 €). It is gratifying to see that a significant amount of support went into the eastern regions of the YM network. Sections in Ukraine, Czech Republic, Macedonia, Croatia, Latvia, Lithuania, Serbia, Armenia and Poland received about 35 % of the allocated funds (10 680 €). The remaining 30 % of the funding (8 842 €) are distributed over the remaining regions within the YM network.

The following plot summarizes how the approved funding is distributed over the different countries within the YM network.

Young Minds and EPS

The organization of Young Minds sessions during EPS-sponsored and -recognised conferences started in 2018 to increase the synergy between Young Minds and other EPS Divisions and Groups. In 2022, as many conferences could again be held safely in person, the Action Committee worked towards reestablishing these collaborations, with many AC members involved in first person.

The first event along these lines was the YM session held during the 14th European Conference on Atoms Molecules and Photons (ECAMP 14), organised in Vilnius (Lithuania) in July by the EPS Atomic, Molecular and Optical Physics Division. This session was organised by the Vilnius YM Section and AC member

Mažena Mackoit Sinkevičienė and consisted of both scientific and professional development talks, covering diverse topics ranging from the role of ERC Funding in science to modern trends in optoelectronics research.

A Young Minds Session aimed at presenting the Young Minds programme was organised by Mattia Ostinato during the 2nd Biology for Physics conference “Biological evolution and nonequilibrium physics: close encounters”, set up by the EPS Division of Physics for Life Sciences in Barcelona, Spain.

During the 10th EPS-QEOD EURO-PHOTON conference, organised in Hannover, Germany, by the EPS Quantum Electronics and Optics Division, Richard Zeltner held a YM Session comprising a professional development seminar on the possible paths of transition from Academia to Industry.

A fourth Young Minds session was organized by the YM Section at the University of Santiago de Compostela (Spain) and AC Member Damian Rodriguez in the context of the 2022 European Nuclear Physics Conference (EuNPC 2022), run in October by the EPS Nuclear Physics Division in Santiago de Compostela. This session consisted in two different events: a roundtable on career development and a workshop on well-being and positive mental health in research career.

In addition to these contributions held in EPS Divisions and Groups’ conferences, Young Minds also proposed sessions during the meetings and conferences of some of the Member Societies of EPS, strengthening its ties also with National Physical Societies.

The Young Minds Section of Nis (Serbia) and the one of the National Kapodistrian University of Athens, for example, jointly organised a YM session during the 11th meeting of the Balkan Physical Union, held in August in Belgrade, Serbia. This session featured an extensive program, covering both scientific and professional development programmes and contributions from various EPS Officers, namely Vice President Prof. Dr. Petra Rudolf, Secretary General David Lee and Policy Officer Dr. Enrique Sanchez Bautista.

Another YM Session was established during the 108th congress of the Italian Physical Society by the YM Section of Milan and AC Chair Mattia Ostinato, in collaboration with the Italian Association of Physics Students. The programme of the session was mainly scientific and focused on the themes of ecology and energetic transition.

The final YM session took place during the Austrian Physical Society annual meeting, held in Leoben (Austria) in September. It was organised by the Austrian Physical Society Young Minds, with a focus on outreach aimed at high school students and with a contribution from Prof. Dr. Petra Rudolf.

In June 2022, the First EPS Forum took place at Sorbonne University in Paris, and many members of YM taking actively took part in it.

Action Committee members Richard Zeltner, Daryna Pesina and Hripsime Mkrtchyan were members of the programme committee. Richard Zeltner served as the referent for the WG3 (“Quantum Technologies and Photonics”) and as a member of WG5 (“Biophysics, technological sequencing of biomolecules and human health”). Daryna Pesina was a member of the WG4 (“Machine learning and Artificial Intelligence”) and Hripsime Mkrtchyan was a member of WG7 (“European Integration”). The 10th Young Minds Leadership Meeting was also co-located with the EPS Forum, allowing YM members to take part in a large-scale stimulating conference (see below).

10th Leadership Meeting

In 2021 Luc Bergé established the EPS Forum as a new conference format of EPS, and invited the Young Minds Programme to co-host its leadership meeting at the Forum which took place from June 2-3 at the Sorbonne University in Paris. Being integrated into a larger scientific conference, featuring high-profile speakers from both academia and industry, including 3 Nobel Laureates, the LM 2022 provided participating delegates networking and professional developments opportunities well beyond that of previous meetings.

The meeting gathered 43 section delegates, coming from 21 different countries, as well as guests from the “International Association of Physics Students” and other young researchers not yet related to EPS YM.

Considering its co-location with the EPS Forum, the programme of the LM included slots for its participants to freely attend the various talks and activities taking place in the Forum, as well as a range of diverse and exciting social events and talks dedicated to YM delegates. These activities included a “From PhD to CEO” seminar by Jean-François Morizur, Co-Founder and CEO of Cailabs with moderation by Yann Amouroux from the European office of Optica, a seminar on scientific outreach by Dr. Giuliana Galati, (University of Bari, Aldo Moro, INFN) and a talk on professional development by Prof. Dr. Petra Rudolf (University of Groningen). Also, a Young Minds Poster Session took place, where delegates had the opportunity to present their sections activities, learn about those of other groups and share ideas and experiences in a friendly and welcoming environment.

During the Leadership Meeting, the Action Committee gathered for its annual meeting and elected Mattia Ostinato as new chair for the years 2022-2024.

In consideration of the large number of participants, many of them coming from outside the YM network, the great talks provided by the invited speakers, the co-location with the EPS Forum, and the lively and insightful discussions that took place over the two days, the meeting can be considered a large success. A more detailed summary of the event is given in Europhysics News 53/4, 2022, p. 4-5.

Young Minds publications in EPS Journals and Magazines

A new YM section in each issue of Europhysics News (EPN) has been established in 2020. Among the articles published in the YM section in 2022, the contributions to EPN 53-3 and EPN 53-5 are particularly noteworthy. They describe, respectively, the event organised by the YM Groningen Section for the International Day of Women and Girls in

Science and the 1st Northwestern Meeting of Young Researchers, elaborated by the YM Santiago Section and other groups of young researchers in Spain and show the importance that the young researchers in our network give to societal themes they have at heart and networking.

Furthermore, Young Minds continued in 2022 to regularly publish on e-EPS, the online magazine of EPS. In 2020 Carmen Martin succeeded Daryna Pesina as the contact person within the Action Committee for the e-EPS.

Webinars and other activities

In 2021 the Young Minds Programme joined forces with the European office of Optica to implement “From PhD to CEO”, a webinar series on European entrepreneurs from the field of optics and photonics. In each webinar one invited founder gives a talk on his or her journey, which is followed by a Q&A session. The first two editions of the series were very well received, such that Optica, EPS and EPS YM decided to implement a third edition which started in October 2022. It is still ongoing and has, up to the time this report is being written, featured speakers from Spain, Denmark, and Austria.

More details on the motivation behind the series can be found in an article by Richard Zeltner, Yann Amouroux and Claus Roll (both from the European Optica office) published in Europhysics News 52/5, 2021, p. 13-14.

Outlook to 2023

The YM Action Committee decided to assign the task of organising the 11th Leadership Meeting to one of its sections, as it was regularly done before the COVID-19 pandemic. A call for applications has been opened in winter 2022 with two sections applying: the YM Section of Beni-Mellal (Morocco) and the one of Naples (Italy). After carefully evaluating the proposals, the Action Committee unanimously decided to assign the task of organising the LM to the Naples Section. The Leadership Meeting will take place in Naples, Italy, from May 19 to May 20 and we are looking forward to it.

CONFERENCE COMMITTEE

Chair: Marian Reiffers

The Conference Committee from February 2021 consisted of the following members: Christian Beck, Patricia Helfenstein (secretary), Alice Valkárová, Els de Wolf, Teresa Peña and Marian Reiffers (chair).

The situation with organisation of conferences has improved in last year. However, it is still not at the level seen before COVID. During 2022 and the beginning of 2023 we have received in total 11 applications. We approved 10 of them. This is still one third of previous number of applications. We expect that situation will improve. The approved conferences are on the website of EPS.

Conferences, Workshops, and Summer Schools are essential elements in the personal communication of physics, the career development of physicists, the promotion of physics towards students and young scientists, and the reputation and credibility of the EPS and physics. 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.

I would like to thank all members of the conference committee who answered on communication especially Christian Beck, who has now stepped down.

DISTINCTIONS AND AWARDS COMMITTEE

Chair: Jo Hermans,

Members: Angela Bracco,

Elisabeth Rachlew, Marian Reiffers



Jo Hermans stepped down from the distinctions and awards committee during 2023. We are extremely grateful for his involvement in the EPS. During the search for a new chair the duties of the committee have been taken over by the Executive Committee.

COMMITTEE ON EUROPE INTEGRATION

Chair: Radu Constantinescu

In 2022 the Committee of European Integration (EPS-CEI) functioned in the following structure established in 2016:

Chair: Radu Constantinescu, Romania

Members: Goran Djordjevic, Serbia

Maciej Kolwas, Poland

Dénes Lajos Nagy, Hungary

Alexei Morozov, Russia

Sofoklis Sotiriou, Greece

Gertrud Zwicknagl, Germany

At the Committee meeting on September 1, 2022, the renewal of the committee was discussed. After consultations with the EPS board and with several national physical societies, the conclusion was reached to propose for the approval of the EPS Council that, starting with the year 2023, the Committee should have a new structure consisting of:

Chair: Gertrud Zwicknagl, Germany.

Members: Ekaterina Batchvarova, Bulgaria

Radu Constantinescu, Romania

Goran Djordjevic, Serbia

Danica Krtovska, North-Macedonia

Denes Lajos Nagy, Hungary

Leszek Sirko, Poland

Sofoklis Sotiriou, Greece

The strategy of the EPS-CEI

In 2022 the Committee of European Integration kept its general strategy of promoting Physics across Central, Eastern and Southern parts of Europe through activities on the following **five directions**:

1. Integrating the access to research infrastructures in Europe.
2. Student training through a School Programme supported by EPS.
3. Physics education and teacher training.
4. Strengthening the regional cooperation among EPS member societies and other regional organisations.
5. Promotion of physics in the concerned regions.

Activities in 2022

1) **The 11th Congress of the Balkan Physics Union** (<https://bpu11.info/>) was held at end of August/beginning of September in

Belgrade (Serbia) and represented the main activity on which the EPS-CEI support was focused in 2022. The support was granted, mainly but not exclusively, to physicists from the South-Eastern Europe who participate in the Congress. The activities from this context in which EPS-CEI was involved were:

- Participation of scientists from South-Eastern European countries in the scientific sessions organised under the aegis of BPU 11 Congress. The scientific sections coincided with the sections on which the EPS is structured.
- Organisation of the EPS-CEI meeting. It was a larger meeting with invited participants from DPG, CERN, ICTP and EPS. Four members of EPS-CEI attended the meeting, three of them on site (R. Constantinescu, G. Djordjevic and G. Zwicknagl) and one online (D. Nagy). Members of the BPU Executive Committee were also among the participants, discussing a joint EPS-BPU action plan to support scientists in this region.
- Organisation of the Round-table “Integration and widening participation”. The round-table was chaired by Enrique Sanchez-Bautista and Radu Constantinescu. Other two CEI members, Goran Djordjevic and Gertrud Zwicknagl, also contributed.
- Organisation of the Round-table “Models of Studying Physics in European Universities – Specificities in Balkan Countries”. It was an interesting discussion about how physics is taught at the university level, about the specializations offered in the field of physics and about the opportunities for graduates on the labour market.

The EPS-CEI support offered to these activities consisted of 7 000 Euro.

Other two important activities were also supported in 2022 from the budget offered by EPS to its Committee of European Integration.

2) **The SEENET-MTP School “Gravitation, Cosmology and Astroparticle Physics”** was held also in Belgrade, from September 4th to September 10th, 2022.

<https://www.seenet-mtp.info/events/bs2022-cern-seenet-mtp-ictp-phd-school>

It was a new edition in the PhD Schools organised by SEENET-MTP in partnership with CERN and ICTP, in a

programme started in 2015. Among the invited scientists who gave lectures were: Alexander Azatov (SISSA, Trieste), Kyriakos Papadodimas (CERN, Geneva), Marko Simonovic (CERN, Geneva), Neven Bilic (Rudjer Boskovic Institute, Zagreb), Radoslav Rashkov (University of Sofia). As in the previous case, the participation of students from Central and South-Eastern European countries was supported.

The EPS-CEI support consisted of 2 000 Euro.

3) The fourth edition of the Balkan Physics Olympiad (BPO 4) was organized in Cyprus, by the Cyprus Physicists Society. The contest, addressed to high school students, was held from October 7 to October 9, 2022. Representative teams from 14 countries participated: Albania, Bosnia-Herzegovina, Bulgaria, Cyprus, Greece, Kazakhstan, Kyrgyzstan, Moldova, Montenegro, North Macedonia, Serbia, Slovenia, and Turkmenistan.

More information: <https://balkanphysical-union.info/?p=3004>

The EPS-CEI support consisted in 2 000 Euro.

For the implementation of the entire programme in 2022, EPS-CEI provided a total support of 11 000 €, support for which the beneficiaries expressed their gratitude.

EQUAL OPPORTUNITIES COMMITTEE

Chair: K. van der Beek

On the EPS Equal Opportunities Committee

The mission of the EPS Equal Opportunities Committee (EOC) is to promote and to encourage diversity and equal access of all physicists to career and employment opportunities, professional resources in the fields of physics and physics education, regardless of gender, ethnicity, or nationality. The EOC works for fair and equal treatment of all physicists in their professional environment, including professional networks, publishing, and conferences. It combats predatory behaviour based on gender, ethnicity, or nationality.

A major part of the EOC's activities focuses on ensuring equal opportunities for female physicists or women in physics. For this, the EOC monitors participation in EPS and other events such as conferences by gender (within the scope of the Gender Fairness project). It defends, at the very least, a representative participation of women physicists on Boards and committees such as those of EPS Divisions and Groups, collaborating societies, conference committees, and other instances. The EOC organises and participates in events designed to promote awareness of the gender gap and the need for proactive measures to promote equal opportunities. It also publishes papers in EPS media and elsewhere in order to promote such awareness. Where possible, the EOC participates in surveys designed to measure the gender gap.

The EOC's mission cannot, however, be limited to the gender issue. It must also include the promotion of physics, physics education, and physics careers among members of underrepresented ethnic descent or nationality.

Composition of the EPS EOC

The EPS EOC today consists of 6 members. They are:

- **Nadia Martucciello**, CNR Spin, Italy, EPS CMD
- **Hripsime Mkrtchyan**, American University of Armenia, Erevan, Armenia
- **Daryna Pesina**, O.Ya. Usikov Institute for Radio Physics and Electronics, Ukraine
- **EPS Young Minds**
- **Petra Rudolf**, Zernike Institute of Advanced Materials, University of Groningen, the Netherlands, EPS vice-president
- **Eija Tuominen**, Helsinki Institute of Physics / University of Helsinki, Finland, EPS HEPP
- **Els de Wolf**, NIKHEF Amsterdam, the Netherlands, EPS HEPP Division, EPN Editor
- **Kees van der Beek**, CNRS, France, EPD CMD, EPS Executive Committee

During the online meeting of the EOC members on July 29th, 2022, Ana Proykova of the University of Sofia, Bulgaria, EPS NPD, stated her wish to step down. No successor has been found for the moment. Martine Bosman (EPS HEPD), Research Professor

at IAE, Barcelona, Spain, and member of the CERN – ATLAS collaboration, stepped down in 2021 and was succeeded in 2022 by Hripsime Mkrtchyan of the American University Armenia in Erevan.

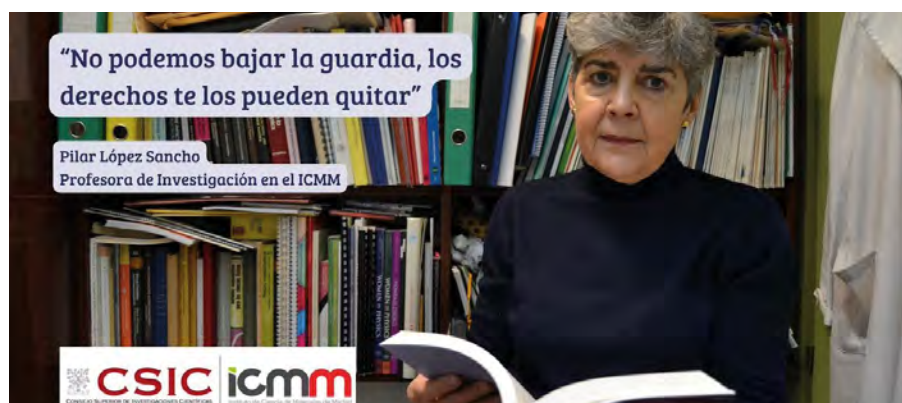
In view of his increased responsibilities at the French Centre National de la Recherche Scientifique as of 1-9-2021, and at Ecole polytechnique as of 1-2-2023, Kees van der Beek stated that he cannot properly assure the missions of the EOC and proposed to step down. An interim EOC representative on the EPS Executive committee has been found in Petra Rudolf, EPS vice-president. Nevertheless, Kees van der Beek has continued to assure responsibilities as to the Emmy Noether Award in 2021 and 2022.

2022 and the EOC

The main activity of the EOC in 2022 concerned the Emmy Noether distinction. A special session on equal opportunities and inclusivity was organised during the 29th General conference of the EPS Condensed Matter Division, CMD29, on August 24th, 2022, in Manchester, UK.

Emmy Noether Distinction

In order to promote the visibility of women physicists, The EOC proposes the laureate for the EPS Emmy Noether distinction for women in physics, on the criteria of the nominee's contributions to physics, of her leadership capacity as a principal investigator, on her involvement in research administration, committees, and editorial activities, on her involvement in teaching and educational programmes, and on her action in favour of the community, be it in the promotion of equal opportunities, or in a wider sense within the scope of learned societies and the like. The Emmy Noether Distinction was, until 2021, awarded in two campaigns, a "summer" campaign aimed at early- and mid-career women physicists, and a "winter" campaign for more advanced candidates or full career awards. The separation in two campaigns constituted a time consuming process occupying most of the activities of the Equal Opportunities Committee, resulting in consistently late action and late award of the Distinction. It was also a continuous source of confusion for nominators and nominees alike. The distinction



between early / mid-career and advanced researchers is often blurred, and the Emmy Noether Distinction jury always found itself with a mix of candidates of both categories, regardless of the campaign at stake.

It was therefore proposed to align the award of the Emmy Noether Distinction with a general calendar for EPS awards, with a single yearly general call in autumn (September or October), with the designation of one early / mid-career laureate as well as one advanced / full career laureate in the following winter. The distinctions could then be awarded in the spring / summer during the conference season. These new principles were approved by the EPS Executive committee on September 29th, 2022; the 2022 Emmy Noether Distinction was the first to function following new rules, with a January 15th, 2023 deadline for nominations that coincided with the calls for new EPS Fellows, EPS Honorary Members, the Gero Thomas medal, and the EPS Early Career prize.

The Equal Opportunities Committee awarded one last “winter” distinction – the winter 2021 distinction in 2022, to **María Pilar López Sancho**, CSIC research professor at ICMM (the Institute of Materials Science of Madrid, CSIC - Universidad Autónoma de Madrid, Spain). María Pilar López Sancho was selected among 16 candidates¹. The Distinction was awarded during a special ceremony at ICMM, organised

by ICMM director José Ángel Martín Gago and deputy directors Jesús Ricote and Pilar Aranda on November 21st, 2022². The event was held in the presence of CSIC President Eloísa del Pino Matute, the President of the Royal Spanish Physical Society RSEF Luis Viña, the chair of the Specialized Group for Women in Physics GEMF of the RSEF Pascuala García-Martínez, and Kees van der Beek, who travelled to Madrid for the occasion. The event was extremely well attended, with more than 150 colleagues filling the ICMM auditorium, providing unprecedented positive publicity for the EPS and for the Emmy Noether Distinction³. In particular, the audience honoured **María Pilar López Sancho** with a minutes-long standing ovation.

Kees van der Beek also travelled to Barcelona to present the Winter 2020 Emmy Noether Distinction diploma and medal to **María García-Parajo** on Monday March 28th, 2022, while the Summer 2021 Emmy Noether Distinction was awarded to laureate **Sara Bolognesi** at the EPS Forum in Paris on June 2nd, 2022.

Publications

Emmy Noether Distinction laureate **María Pilar López Sancho** was interviewed for e-EPS⁴ as well as for Europhysics News. The interview appeared in the recent EPN Issue 54-1 (2023).

Event organisation and participation in Events

A special session on equal opportunities and inclusivity was organised during the 29th General conference of the EPS Condensed Matter Division, CMD29, on August 24th, 2022, in Manchester, UK. Its format was that of a forum and round table. The speakers were Prof. Helen Gleeson (*Cavendish Professor / head of the Soft Matter Physics Group, school of Physics and Astronomy, University of Leeds*), IOP representative on Diversity and Inclusion; Prof. Judith Hillier (*University of Oxford Department of Education, Kellogg college, Oxford, UK*), IOP Marie Curie Sklodowska Medal and Prize winner 2021, Dr. Jessica Wade of the *Blackett Laboratory at Imperial College London, UK*, and Kees van der Beek for the *EPS EOC*.

FORUM PHYSICS AND SOCIETY

Chair: Carlos Hidalgo

EuroPhysics News (EPN) has devoted the December 2022 special issue to the EPS Grand Challenges for Physics. This EPN special issue provides a glimpse of the EPS Grand Challenges in the Horizon 2050 project addressing world’s physics agenda to solve in science and technology. Together with the all coordinators of the project an overview is given of the seven chapters in the Project: Physics bridging the infinities, Physics of matter and waves, Physics for understanding life, Physics for health, Physics for environment and sustainable development, Physics for secure and efficient societies and Physics for Society.

The EPS Grand Challenges essays, prepared by a panel of more than 70 leading scientists, are based on detailed and in-depth analyses to illustrate the strong links between basic research and its social impact. Reports are expected to reach a broad audience that is willing to explore a future shaped by science. The resulting book will be published by IOPP under the umbrella of the EPS in 2023. (<https://www.eps.org/general/page/GrandChallengesInPhysics>).

¹ See <https://www.eps.org/blogpost/751263/477758/The-Winter-2021-EPS-Emmy-Noether-Distinction-for-Women-in-Physics-is-awarded-to-Maria-Pilar-Lopez-Sancho>.

² See <https://www.icmm.csic.es/en/noticia.php?num=18> ; <https://www.youtube.com/watch?v=BMzIJAdi1vk>

³ See <https://www.eps.org/blogpost/751263/477758/The-Winter-2021-EPS-Emmy-Noether-Distinction-for-Women-in-Physics-is-awarded-to-Maria-Pilar-Lopez-Sancho>. See <https://www.icmm.csic.es/en/noticia.php?num=18> ; <https://www.youtube.com/watch?v=BMzIJAdi1vk>

⁴ See <https://www.eps.org/blogpost/751263/482323/An-interview-with-Pilar-Lopez--In-helping-women-I-help-science?tag=Spain>

JOURNALS REPORTS 2022

EUROPHYSICS NEWS (EPN)



Editor:
Els de Wolf

Science Editor:
Ferenc Iglói

Europhysics News – EPN – is the magazine of the EPS. It is a quarterly magazine with a Special Issue at the end of the year. It is produced in cooperation with scientific publisher EDP Sciences. Printed copies are distributed to all Individual Members of EPS and many institutional subscribers. Most European national societies receive EPN for further distribution. Digital versions are stored by EDP Sciences on europhysicsnew.org. On epn.eps.org a digital repository of the magazine is maintained by EPS. About 25% of EPN-pages comprise commercial advertisements from acquisitions by EDP Sciences.

The magazine of EPS

In this magazine, communication about the EPS activities is established at several levels. Every EPN issue is opened in the EPS Editorial by the EPS President highlighting important EPS policies and statements.

The EPS Young Minds have their own section in EPN to report about activities

in their Europe network. They maintain the section autonomously.

In the section ‘EPS NEWS’ the Secretary General and the editor of e-EPS report about what is going on within, with and around EPS. Typically, the news items can be an in-depth extension of shorter items in e-EPS.

A double-thick Special Issue is published in November, edited by one or more invited guest editors. This issue also contains the EPS directory with the credentials of the members, the various committees and boards of Divisions and Groups, a list of laureates of the EPS-awards and a list of the EPS historic sites that were inaugurated.

In 2022, about 15% of all EPN-pages were dedicated to EPS related issues.

The physics magazine

EPN is made for physicists by physicists. Both the authors and the editors are volunteers – typical for a magazine of a foundation. It forms a platform for exchange among peers in the physics community. Invited authors enjoy presenting their projects and ideas to their colleagues in the wider physics community. It gives the youngest the opportunity to introduce themselves and gain visibility for their research, while the more senior physicists like to present science-policy or science-diplomacy issues. The most senior authors often are keen on writing

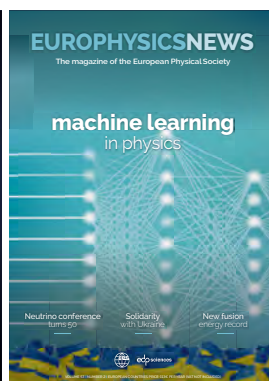
about the history of physics. All authors, but in particular the younger ones, highly appreciate the DOI that is provided by EDP Sciences. In a sense, EPN offers them a playground in publishing. In total in 2022, 83 authors published in the section Features. The unknown factor is how our readers appreciate EPN. It could be useful to start a survey to get a feedback from our readership.

The mini-themes

In 2022 the mini-themes of the regular issues were ‘Modelling of complex systems’, ‘Machine learning in physics’, ‘Medical physics’ and ‘Quantum technology’. Choosing the mini-themes in an early stage offers editors the opportunity to approach authors early and for EDP Sciences it eases the acquisition of dedicated advertisements. The European journals EPL and EPJ are given the opportunity to promote an article or special issue in the field of the mini-theme.

The EPS Grand challenges in the Special Issue

The Special Issue of 2022 was even more special than in other years. The project will culminate in a book, that will be published by IOPP in 2023. The EPN Special Issue gave an excellent peek review. Carlos Hidalgo - driver of the project – and Secretary General David Lee were the eminent guest editors. We are grateful for their excellent work.





The editors team

In 2022 the EPN-editors team comprised Ferenc Igloi, science editor, Xavier de Araujo, graphical designer, David Lee, executive editor and Els de Wolf, general editor. Unfortunately, after many years on the team in various roles, Jo Hermans decided after the summer to step down as special editor. We will dearly miss his enthusiasm and are very grateful for his many contributions to EPN for so long.

The External Advisory Board

The editors team is supported by an External Advisory Board of renown specialists, which suggests authors and is available for review of the featured articles.



‘(..) As EPS President, my thoughts go first to the suffering Ukrainian people and in priority to our colleagues of the Ukrainian Physical Society, which is a member of the EPS. We stand by their side and will do all what we can to help them preserve their lives and their democracy. We also sympathise with the Russian and Belarusian physicists who refuse the participation of their respective governments in this war. The EPS will regularly report their petitions on its media channels’

In EPN 53/4, Ukrainian physicists showed their endurance and their trust in the future of physics in Ukraine. Yuriy Holovatch, Alexander Kordyuk and Ihor Mryglod, renown physicists in the field of condensed matter and superconductivity and full members of the National Academy of Sciences in Ukraine ended their article with:

‘(...)But the victory (as Ukraine imagines victory) is possible only when the international community helps Ukraine to endure. This is the way to lasting peace in Europe and the world, this is the way when physics (like other sciences) will have a future in Ukraine. And every citizen of the world can contribute to this process, or be a passive observer, and therefore an active opponent of such a scenario. This is an answer without guile to the question about the future of physics in Ukraine.’





Chairman of the Board of Directors: Petra Rudolf (EPS Groningen)

Editor in Chief (2022): J. Gonzalo Muga (Bilbao)

Executive Editor:

Anne Ruimy (EDP-Sciences Les Ulis)

Staff Editor: Frédéric Burr (EPS Mulhouse)

Production Editor:

Barbara Ancarani (SIF Bologna)

Business Manager:

David Lee (EPS Mulhouse)

Product Manager:

Zoe Anderson (IOPP Bristol)

Deputy Editors (2022):

David Guéry-Odelin (France), Alessandra Lanotte (Italy), Xiaojie Chen (China)

Data and Statistics

The Journal Impact Factor JIF (Web of science) evolution is: 2018: 1.89; 2019: 1.96; 2020: 1.95; 2021: 1.96. EPL's position in "Physics, Multidisciplinary" has been in these four years 37/81, 42/85, 47/86, and 50/86. We are currently in Q3 (third quartile) which leads to a vicious circle of fewer submissions to lower JIF to fewer submissions. Improvements needed in all aspects as well as support from learned societies and researchers.

The number of manuscripts received continues a slow decay, see Fig. 1. More Perspectives and Focus Issues could mitigate the decay but this is surely not sufficient.

Geographical origin: the tendency, as in previous years, is to receive more papers from Asia (62%), with China being the dominant country, see Fig. 2. This strong dependence may be risky due to possible policy changes in China.

Of the **referees** contacted in 2022 we got 43% of reports. There is a slow decay in time (48%, 46% and 45% the previous three years), but the numbers are actually quite good compared to other Journals according to Antonia Seymour (Chief executive of IOPP).

The submission-to-acceptance times have

been very stable even in pandemic years, near 80 days since 2018 to 2022. However, the acceptance-to-online-publication time suffered a bad increase due to change in protocols and workflow at SIF due to COVID (around 60 days during 2022). Thanks to big efforts at Bologna the numbers are back to normal (13 days in the latest 2023 volumes). **Coeditor (CE) changes:** In March 2022 13 CE left the board and 12 were substituted (from April 2022 total of 61 CE, 25F+35M). See <https://www.epleters.net/4dcgi/> We may have fewer CE as there are also fewer submissions. In November and December 2022 new proposed substitutions have been worked out for 19 CE leaving the board in March 2023 (17 replacements sent to EPS in Jan 2023).

J. Gonzalo Muga is the **new Editor in Chief** since January 2022, after a four-year training as Deputy Editor. There is also a new team of Deputy Editors starting their terms in 2022. They are performing well according to the set commissioning goals.

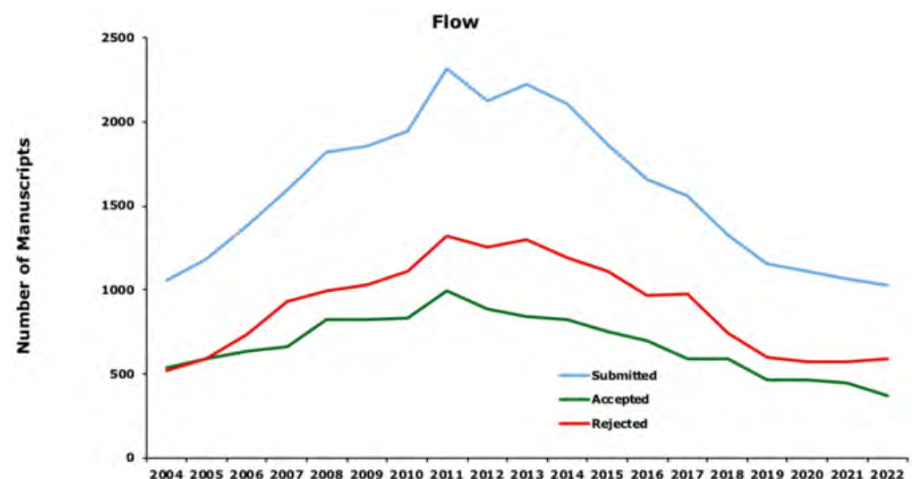
Meetings in Bilbao (November)

We had a successful coeditors meeting in Bilbao complemented by a technical "Mancom" meeting and a Board of Directors meeting hosting 33 participants. 38% of the Coed attended. The CE meeting had 3 thematic units of about 90 minutes each: i) Global perspective of STM Publishing (Antonia Seymour); ii) EPL today: facts, programmes, questions (Gonzalo Muga); iii) What makes a good letter? (Anne Ruimy).

Editorial developments

In 2022, we continue the implementation of editorial developments that contribute to the modernization of the functioning and image of EPL. They include:

- **New website for the editorial office.** The website at <https://www.epleters.net/> has been restructured and modernized, and was relaunched in 2022.
- **New sections.** As of January 2022, a new list of sections was implemented for EPL. This completes the project undertaken several years ago to discontinue the use of PACS in EPL. The new sections are loosely based on the PhySH system of APS, the successor of PACS. The new sections are more representative of EPL content, and of new developments in physics. They contribute to repositioning EPL in its strong areas, such as Statistical physics and networks, Mathematical Mathematical and interdisciplinary physics, or Quantum information.
- **Transformative agreements.** Following a decision of the Board, EPL entered the transformative open access agreements negotiated by IOP in 2021. This allows publication in open access in EPL for authors of a number of institutions and consortia, free of charge. This resulted in a steady increase in the number of articles published in open access: from 16 in 2020, to 33 in 2021, to 45 in 2022, contributing to the dissemination of EPL content.
- With EPL participating in transformative agreements, it is also compliant with the



▲ FIG. 1: Submissions, accepted and rejected

requirements of funders (as part of Plan S in particular)

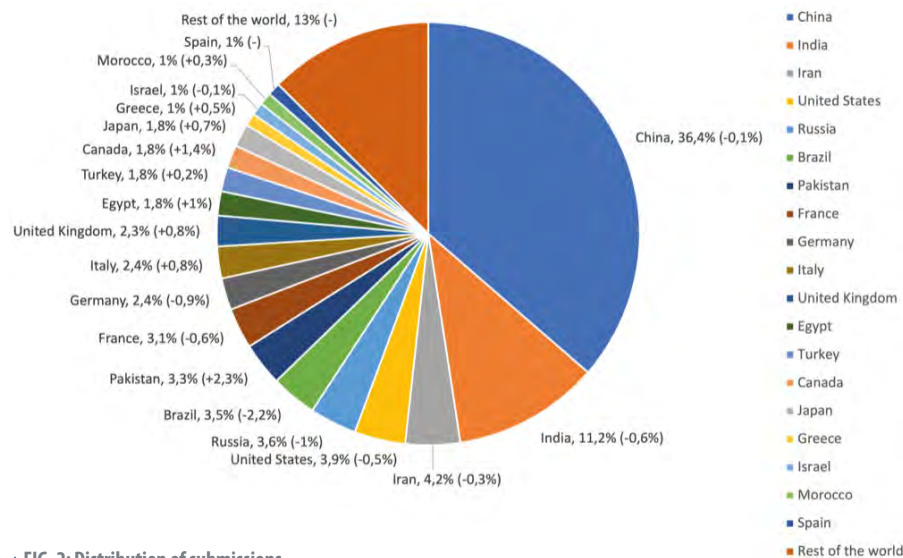
- **Marketing campaigns.** Email campaign promoting articles from 2021; Google advert promoting the 2022 Perspectives collection. With S1 integrated with the IOP production system, accepted manuscripts are now published online as soon as they are accepted. This is the version of the article that has been peer-reviewed and is accepted for publication. The accepted manuscript is attributed a DOI and is citable prior to final publication.

Editorial strategy: content commissioning

In the last couple of years, we have put in action the editorial strategy decided by the Board of Directors at the end of 2019. The strategy aims to increase the impact factor and thus reverse the decline in the number of high-quality articles submitted and published in the journal. It is based on increasing efforts in commissioning potentially high impact articles and collections of articles. Commissioning targets were set based on analyses of citations. A commissioning workflow was formalized, involving the Deputy Editors who send personalized invitations, and the staff Editor who prepares lists of potential authors and monitors the invitations. Supporting the editorial strategy is at the center of the yearly marketing plans.

- **Perspectives.** Perspective articles are short reviews, with the same length as regular Letters, and written for a broader audience. Perspectives aim to highlight the significance, impact, progress and wider implications of emerging research areas. They attract 2 or 3 times more citations per article than regular articles. Setting ambitious targets for the publication of Perspectives (45 was the goal for 2022 and 50 were actually commissioned) is thus expected to contribute to growing the impact factor. 24 Perspectives were published in 2022.
- **Focus Issues (FIs).** FIs are collections of articles in areas of interest identified by the Editorial Board. FIs contain mainly invited papers and are edited by a team of Guest Editors including a member of the Editorial Board. While the first FIs published in 2017-18 were not more cited than

Geographical repartition of submissions



▲ FIG. 2: Distribution of submissions

regular articles, this is very dependent on the thematic, and recent collections have been more popular. The Board recently recommended a gradual increase in the number of FIs in potentially high impact fields, to a minimum of 2-3 per year. We are currently finalizing a FI on active colloids and one on networks is in preparation.

The new Editor in Chief starting in 2022, wrote two Editorials in January and February to explain and support these new directions for EPL. Until now, this has not yet been translated to an increase in impact factor, although it may have contributed to the stabilization of the volume of articles and their average citations.

Community engagement

- **EPL-supported conferences.** A programme of EPL-supported conferences was put in place several years ago, and was active until the pandemic, supporting on the order of 10 conferences every year. EPL conference support generally takes the form of “EPL poster prizes” with cash prizes, certificates and free OA publication vouchers in EPL. The presence of an EPL Editor is required to hand out the prizes and promote EPL. After the 2 years of the pandemic, the programme of conference support resumed in 2022, with EPL poster prizes handed out at the Conference on Nonlinear Systems and Dynamics in Pune, India (see

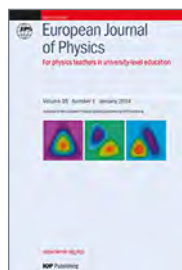
<https://iopscience.iop.org/journal/0295-5075/page/Awards2022>) in the presence of EPL Co-Editor Mahendra K. Verma.

- **Masterclasses.** In June 2022, the Editor in Chief and Executive Editor participated in the EPS Forum 2022 and gave a masterclass on scientific writing (see <https://epsforum.org/handsonsessions/>). During the EPS Forum, EPL was also promoted at the EPS stand with goodies: postcards and pens.
- **“EPL investment group”.** In June 2022, the EPL Board of Directors decided to explore ways to invest some of the excess capital of EPL to support the editorial development of EPL. The strategy that has been adopted is to look at investing in “community engagement through supporting young researchers”. The working group has been mandated to explore various support and mentoring schemes, and the expected impact on EPL.

To do list (EiC) 2023

- Highlights 2022. Selection
- New Editorial(s)
- Meeting with new Coeditors in April (online)
- Continue work on possible investment
- Set New Focus Issue(s)
- Maintain Perspectives Goals: 45 new (accepted) invitations in 2023
- Fine tune new collaboration with EPN based on selected topics.

EUROPEAN JOURNAL OF PHYSICS (EJP)



Editor in Chief:
Mojca Čepič

**Publisher,
IOP Publishing:**
Jessica MacDonald

Executive summary

IOP Publishing is pleased to report to Council a successful year for European Journal of Physics (EJP). The journal continues to deliver on its dual aims of supporting the growing field of physics education research and providing valuable resources for in-service educators – actively helping to foster improved collaboration where these two facets meet.

IOP Publishing is also delighted to report a substantial increase in the financial contribution to the European Physical Society, to €141,683.

We hold a steady position with both Western Europe and the US community and have seen greater engagement from communities in Eastern Europe. Original submissions were down ~25% in 2022, however this is due to an effort made to decrease the number of received submissions that were out of scope, redundant, or trivial. Mojca Čepič [Editor-in-Chief] and Cedric Linder [Editor, PER], with input from the Editorial Board, reviewed and improved the journal scope. As a result, submissions received in 2022 have been more appropriate for EJP.

The updated EJP scope can be found here: <https://publishingsupport.iopscience.iop.org/journals/european-journal-of-physics/about-european-journal-physics/#scope>

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 conferences. We did not add to the editorial board in 2022 but aim to recruit new members in 2023, specifically those with specialties in astronomy, astrophysics,

materials, quantum physics, and quantum mechanics.

We continued to publish articles in our ongoing Focus On Physics Competitions, Guest Edited by Angela Fösel, and hope that these articles will increase the awareness of the value of physics competitions in attracting young students to science.

In 2023 we will pursue further contributions to the collection Focus on Physics in Nature: Guest Editors Joseph A Shaw and Michael Vollmer, jointly published by Physics Education and European Journal of Physics. These contributions will help shape the teaching of physics in nature at high-school (Physics Education) and higher education level (Eur. J. Phys.) and serve as a scholarly resource for physics teachers of any kind.

EJP also published one review article in 2022: Leidenfrost drop dynamics: a forgotten past and modern day rediscoveries (Seán M Stewart). The commissioning of reviews continues to be an area of focus for the editorial board, and we hope to see the same high levels of submissions of this article type.

2022 article downloads figures decreased slightly (~3%) versus 2021 overall.

In 2022: 42,836 Downloads of 2022 EJP content and 326,493 Total Downloads of all EJP content.

We saw a number of articles performing particularly well (see tables).

Our highest performing articles were all published on an open access basis. In 2022, 18% of articles were published OA (across IOPP, 41% of all articles were published OA on IOPScience). IOP has reached agreements, sometimes known as transformative agreements with 500 institutions in 24 countries. These agreements help authors manage the cost of article publication charges (APCs) for open access publishing. These typically enable authors to publish on an open access basis at no cost to themselves. IOPP research shows that OA content is downloaded 80% more than paywalled content and cited 30% more, demonstrating the substantial benefits to publishing OA.

We know that researchers do not have equal access to funds for OA publishing and, as journals continue to transition further towards open access, this economic barrier will be felt especially by authors in lower-income countries. In recognition of this, IOPP recently updated our APC waivers and discounts policy to provide additional support for authors from many countries with historically low levels of financial support, including lower-middle income economies, as categorised by the World Bank.

Geographic region	ORIGINAL SUBMISSIONS (BY RECEIVED YEAR)					ACCEPTANCES (BY FINAL DECISION YEAR)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Africa	46	65	47	53	43	1	3	2	3	0
Asia	229	247	364	291	254	25	23	53	45	17
Austral Asia	18	29	27	28	18	12	12	13	14	6
Cent/s. America	62	55	62	70	42	16	15	26	25	8
E. Europe	75	75	72	55	61	29	22	17	19	15
Middle East	78	84	97	85	61	12	8	10	10	7
N. America	141	106	132	124	99	60	33	67	41	41
UK	19	19	27	25	25	10	8	20	8	4
W. Europe	159	111	168	137	143	72	12	73	52	43

Article type	ORIGINAL SUBMISSIONS (BY RECEIVED YEAR)					ACCEPTANCES (BY FINAL DECISION YEAR)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Papers	774	754	941	823	708	200	156	247	203	131
Letters	17	5	0	0	N/A	0	0	0	0	N/A
Review	10	17	29	23	33	4	3	4	3	0
Special Issue / Focus on	17	9	9	10	3	19	4	9	2	2
Other	19	15	36	12	14	14	6	21	9	8
Total	837	800	1,015	868	746	237	169	281	217	141

Marketing activity

European Journal of Physics has been marketed through a variety of channels over the last 12 months including email marketing, Targeted Google ads, and through the 'Education' portfolio. Over 3,600 site visits to EJP content came directly from marketing campaign links in 2022.

Education subject collection page

In 2020 we launched the 'Education' subject collection page to showcase the leading international journals supporting the physics education community, by assisting in improving the standard of taught physics at all levels, from schools through to universities. EJP is a leading journal on the page and content is updated throughout the year. Users are directed by social media, email, and advertising. In 2022 the page received over 3,078 views.

The subject collection can be found online at <https://iopscience.iop.org/page/education>

2021 Highlights campaign (2022)

Our annual Highlights collection returned in 2022 and featured outstanding papers from 2021. All 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.

The 2021 Highlights can be found online at: <https://iopscience.iop.org/journal/0143-0807/page/Highlights-of-2021>

Conferences and events in 2022

In engaging with the community and interacting with target authors, we

can maintain relationships, build confidence in researchers, and work on improving the journal profile. This interaction with the community is vital and plays a major role in our marketing plans and activities. In the second half of

2022 we resumed attendance to in-person conferences. In 2023, we are focusing efforts on a list of selected conferences we will attend to have a bigger presence and impact, including APS March, DPG/German Physical Association, and MRS Fall among others.

In conclusion

From the solid base of a high functioning publishing team, the European Journal of Physics continues to increase the impact of our quality and capitalize on steady growth. With the support of the editorial board and our Editor-in-Chief we hope to increase the commissioned content of 2023 and beyond, exploring topics that continue to raise the journals profile and drive growth.

TOP DOWNLOADED OF ALL EJP CONTENT IN 2022

ARTICLE TITLE	VOLUME	OA	ONLINE DATE	DOWNLOADS
Beyond velocity and acceleration: jerk, snap and higher derivatives	37.6	yes	13/10/2016	21,015
Stability of democracies: a complex systems perspective	40.1	yes	27/11/2018	7,626
'The concept of information in physics': an interdisciplinary topical lecture	36.1	yes	19/11/2014	3,822
Maxwell's displacement current and the magnetic field between capacitor electrodes	43.6	yes	23/09/2022	3,298
How online learning modules can improve the representational fluency and conceptual understanding of university physics students	36.4	yes	10/06/2015	3,116
A simple model for the falling cat problem	39.3	yes	28/03/2018	2,686

TOP DOWNLOADED OF 2022 CONTENT

ARTICLE TITLE	VOLUME	OA	ONLINE DATE	DOWNLOADS
Derivation of Jacobian formula with Dirac delta function	43.6	yes	23/09/2022	3,298
Ball bouncing down rounded edge stairs: chaotic but tricky	43.3	yes	02/03/2022	1,878
Natural number dynamics: reconstructing physics from generalized atomicity	43.5	yes	07/07/2022	1,229
Three-body inertia tensor	43.5	yes	24/05/2022	1,006
An extremely simplified optics laboratory for teaching the fundamentals of Fourier analysis	43.4	yes	24/05/2022	967

E-EPS



Overview for 2022

The list of subscribers to the newsletter are EPS members. The newsletter issues started to be sent out with a new mailing system in June 2022. Before that date, the newsletter was publicised on the social media and on the EPS website only (changes due to GDPR since 2018 and pandemic in 2020). The subscribe and unsubscribe links are almost equally visited. However, the unsubscription rate remains low. To fulfil our commitment to spread news from our members towards our community, we regularly contact our members:

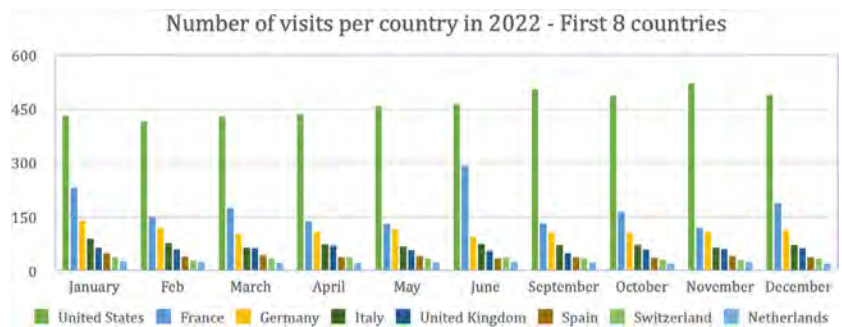
- EPS National Member Societies
 - EPS Associate Members
 - EPS Divisions and Groups chairs
- through our list of contacts for each member.

From these more than 100 contacts in our online directory, we, unfortunately, get very little feedback, which might need further analysis and action.

Our most read articles concern the activities of the EPS and its members, especially EPS Divisions and Groups.

The average time spent reading is more than 2 min: People are reading the EPS news! So, thank you for your contributions!

Details for each month in 2022



Editor: A. Bracco

Technical Editor : G. Gunaratnam

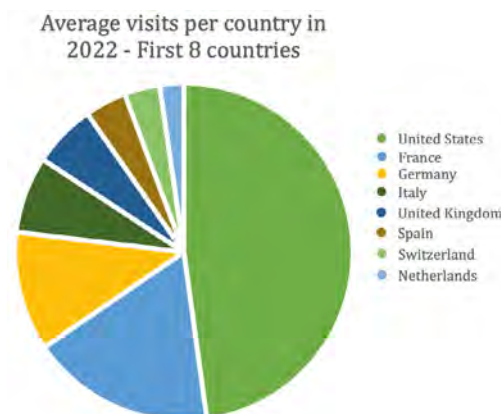
Overview since the creation in May 2011

The newsletter was created in May 2011. Since 2018, there is one issue less in summer. In 2022, there were no issues in July and August.

In 2020, the EPS newsletter changed its format and switched from a separate website (epsnews.eu) to the main EPS website (eps.org).

Most articles for e-EPS are published in the "Activities" blog, a few in the "Publications" blog and in the "News" blog. The rest of the e-EPS content comes from external websites.

Distribution of visits per country



Most visited links to articles in 2022 via email (more than 200 visits)

TITLE	VIEWS
EPS website	2854
May issue of e-EPS	755
EPS on LinkedIn	685
EPS on Twitter	509
EPS on Facebook	495
The old Physics Department of Lund University inaugurated as an EPS Historic Site	384
The EPS Forum 2022	373
The First EPS Forum has been held at Sorbonne University, Paris	340
Luisa Cifarelli awarded the EPS Gero Thomas Medal 2021	338
June issue of e-EPS	308
Call for nominations for the EPS Early Career Prizes 2022	294
Subscribe to e-EPS	278
The latest issue of e-EPS is out!	266
Victor Franz Hess observatory distinguished as EPS Historic Site	255
EPS Executive Committee and Staff activities in 2022	248
EPS Plasma Physics Division news	237
EPS Condensed Matter Division: CMD29 abstract submission	209
Astronomers reveal first image of the black hole at the heart of our galaxy	201
Annual Meeting 2022 of the Austrian Physical Society	200

Total of views for EPS social media: 1689

Conferences Organised in 2022

CONFERENCE	PLACE	PARTICIPANTS	DIVISION/GROUP
The EPS Forum	02-04 June 2022, Paris, France	450	All
ECAMP22	27 June – 01 July 2022, Vilnius, Lithuania	Ca 350	Atomic Molecular Optics Division
Joint conference IOP-EPS “Advances in the Casimir force and heat transfer phenomena”	March 2022, Online	639	Condensed Matter Division
EPS General CMD29	August, 21-26, 2022	600	Condensed Matter Division
EPS Structural Dynamics Afternoons	Online	60	Condensed Matter Division
European School on Magnetism	Saarbrücken, Germany	No N°	Condensed Matter Division
2 nd BioforPhys conference	03-07 July 2022 Barcelona, Spain	100	Division of Life Sciences
3 rd EPS Conference on Gravitation	23-25 May 2022, Nice, France	70	Gravitational Physics Division
4 th biannual International Meeting	08-10 June 2022	40	History of Physics
Nuclear Physics in Astrophysics	September 2022, CERN, Switzerland	189	Nuclear Physics Division
European Nuclear Physics Conference (EuNPC)	October 2022, Santiago de Compostela	205	Nuclear Physics Division
48 th EPS Conference on Plasma Physics	27 June – 01 July 2022, online	573	Plasma Physics Division
10 th EPS-QEOD Europhoton conference on solid-state, fibre, and waveguide coherent light sources	28 August – 2 September 2022, Hannover, Germany	186	Quantum Electronics & Optics Division
NANOMETA 2022	28-31 March 2022, Seefeld in Tyrol, Austria	140	Quantum Electronics & Optics Division
CLEO®/Europe Focus Meeting	18-22 September 2022, Basel, Switzerland	-	Quantum Electronics & Optics Division
Dynamics Days	August 2022, Aberdeen	300	Statistical and Nonlinear Division

Prizes Awarded in 2021

PRIZE	LAUREATE	DIVISION
Young Scientist Prize	Jordi Tura (Leiden University)	Atomic Molecular Optics Division
EPS Europhysics Prize	Profs Agnès Barthélémy and Dr. Manuel Bibes (CNRS/Thales laboratory of University Paris-Saclay); Prof. Ramamoorthy Ramesh (UC Berkeley) and Prof. Nicola Spaldin (ETH Zurich)	Condensed Matter Division
Lise Meitner Prize	Phil Walker (University of Surrey, UK)	Nuclear Physics Division
EPS Hannes Alfvén Prize 2022	Xavier Garbet (CEA/IRFM, Cadarache, France)	
EPS Plasma Physics Division Innovation Prize 2022	Ane Aanesland, Dmytro Rafalskyi and Javier Martínez (ThrustMe, Verrières-le-Buisson, France)	
Landau-Spitzer Award 2022 (joined with APS)	Christopher Chen (Queen Mary University London), Gregory Howes (University of Iowa) and Kristopher Klein (University of Arizona)	Plasma Physics Division
EPS Plasma Physics Division PhD Research Awards 2022	Plamen Ivanov (Oxford University, UK); Alexis Marret (Sorbonne University and Observatoire de Paris-PSL, France); Valeria Perseo (Greifswald University, Germany); Martina Salvadori (University of Rome “La Sapienza”, Italy)	
Best talk Prize as a female researcher	Inga Kottlarz, Germany	Statistical and Nonlinear Physics Division

Atomic Molecular and Optical Physics Division



Chair: Alicia Palacios

Sections

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

Conferences

- ECAMP22

Prizes

- Young Scientist Prize

Website

- www.eps.org/eps-amopd

High Energy And Particle Physics Division



Chair:

Mauro Mezzetto

Conference

- No conference in 2022

Prizes

- None

Website

- <http://eps-hepp.web.cern.ch/eps-hepp/>

Condensed Matter Division



Chair: José María De Teresa

Sections

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

Conferences

- JC IOP-EPS “Advances in the Casimir force and heat transfer phenomena”
- EPS General CMD29
- EPS Structural Dynamics Afternoons
- European School on Magnetism

Prize

- EPS-CMD Liquid Matter Prize

Website

- www.eps.org/eps-CMD

Nuclear Physics Division



Chair: Alison Bruce

Conferences

- Nuclear Physics in Astrophysics
- European Nuclear Physics Conference (EuNPC)

Prizes

- Lise Meitner Prize (Nuclear Science)

Website

- www.eps.org/group/NPD

Plasma Physics Division



Chair:

Kristel Crombé

Sections

- Beam Plasma and Inertial Fusion, Dusty and Low Temperature

Conference

- 48th Annual Conference postponed

Prizes

- EPS Alfvén Prize 2022
- PhD Research Award
- EPS Plasma Physics Division Innovation Prize 2022
- Landau-Spitzer Award 2022 (joined with APS)

Website

- <http://plasma.ciemat.es/eps/>

Environmental Physics Division



Chair: Johannes Orphal

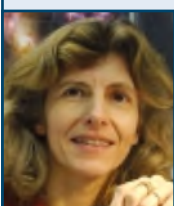
Conferences

- No conference organised in 2022

Website

- www.eps.org/group/EPD

Gravitational Physics Division



Chair: Mairi Sakellariadou

Conference

- 3rd EPS Conference on Gravitation

Website

- www.eps.org/group/GPD

Physics Education Division



Chair: David Sands

Conference

- No conference in 2022

Prizes

- None

Website

- www.eps.org/group/PED



European Physical Society

6, rue des Frères Lumière · 68200 Mulhouse · France
tel: +33 389 32 94 40 · fax: +33 389 32 94 49
website: www.eps.org
