

Asia Europe Physics Summit
Wroclaw (PL)
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(Version 1)

The second ASEPS meeting in Wroclaw, Poland brought together scientists and policy makers from Europe and Asia to learn about and discuss issues relating to improving collaboration in physics between scientists, institutions and funding bodies in Asia and Europe.

In addition to exciting and informative plenary presentations, ASEPS participants were invited to join in Working Groups. Each of them discussed specific questions and drafted a series of recommendations. These recommendations are presented in this document.

Working Group 1: Joint large scale programs & networks: crisis creates opportunities, Chairmen: Tohru Motobayashi, Eugenio Coccia

ASEPS recognizes the benefits in creating a sensible balance, at the international level, among the chain of small laboratories and large facilities. This requires further consideration in the context of Asia-Europe collaboration.

The ASEPS Task Force should be strongly encouraged to invite physicists from ~~other~~ Asian countries other than those here represented to take part and actively contribute in the future ASEPS meetings.

ASEPS supports and encourages Asia-wide efforts to develop platforms of collaboration in several sub-fields of physics, including the ones from a division structure in AAPPS, which will be basis for cooperation with European frameworks.

Working Group 2: Physics at frontier of grand challenges: Energy and sustainable development, alternative energy resources, Chairmen: Gui Lu Long, Karlheinz Meier

ASEPS identifies the following basic points:

Understanding and applying physics is a prerequisite for a stable, environment aware and safe energy supply of the world.

Substantially increased investment for research in energy conversion and storage technologies is urgently needed for the future well being of our world. This research needs to keep all viable options open without imposing ideological barriers.

The very diverse geographical and climate related boundary conditions, especially in Asian and European countries, call for a broad and unbiased approach. Strong physics-based research and existing collaboration models provide an ideal basis for increasing research cooperation between these parts of the world.

The long-term nature of energy-related physics research calls for a continued high-quality physics education with the same requirements of diversity and open-mindedness as for the research itself. Asian and European students need to exchange and join their knowledge of physics and of the specific energy needs in

their countries.

ASEPS needs to foster the collaboration process on energy-related physics research by encouraging appropriate measures like exchange programmes and joint Asia-Europe summer schools.

ASEPS should establish working groups to explore further the points described above and prepare a draft position paper and proposals to activities at the next ASEPS meeting.

ASEPS should organise a student discussion session on the subject of energy and sustainable development at the next ASEPS meeting. Students should represent the Asian and the European perspective and receive the draft report as a basis for discussion.

Working Group 3: Education is a must: needs of more and better educated people from science and industry, Chairmen: Swan Kim, Hendrik Ferdinande

Regular Europe-Asia physics education forums should be jointly organized between EPS and AAPPS, possibly during the ASEPS meetings.

Active exchange of students, teachers, and scientists between Europe and Asia should be promoted, in particular, through initiating exchange programmes for students (both undergraduate and graduate) between European and Asian universities based on multilateral agreements and academic recognition with attention to balance.

ASEPS should promote joint European-Asian activities between research centers in Asia and Europe (APCTP, KIAS, Kavli@Beijing, IAS@ NTU, Surya, YTIP, RIKEN, etc; Max Planck, ICTP, Newton CNRS, etc) especially for outreach activities in physics education.

ASEPS should find effective ways to nurture a large pool of talented students and encourage their exchange between Europe and Asia-Pacific countries, in particular by supporting the organization of joint schools on physics education between Europe and Asia-Pacific countries.

ASEPS should help planning a joint Physics Education Project (PEP) especially for primary and secondary school physics teachers.

Working Group 4: Mobility of scientists, exchange programs, obstacles, scholarships versus hiring people, Chairmen: Ling-An Wu, Martial Ducloy

The informal bottom-up approach has been most effective in establishing collaboration between individuals and research groups in the past, but the top-down approach should be strengthened, e.g. through ASEPS, to explore wider structural support for cooperation, especially with respect to funding, information dissemination, and linking

people.

Language is a major obstacle that must be resolved for mutual communication, understanding of cultural differences, and successful cooperation. Effective language training during initial studies could be an effective approach.

Obstacles due to gender, minority, sect, or geography must be addressed, both within the European Union and within Asia, so that physicists in all regions may equally enjoy the benefits of mutual collaboration.

Efforts should be made to establish a basis of equality and reciprocity in exchanges at all levels, to amend the one-way brain drain from Asia to Europe.

Attention should be paid to equality between the sub-disciplines of physics. That is, ASEPS should benefit not only large-scale physics but also small-scale physics, both experimental and theoretical.

Working Group 5: Industry versus Academia: cooperate or die, Chairmen: Mitsuaki Nozaki, Tadeusz Luty

To encourage careers in industrial research, and to encourage academic researchers to more actively engage in industry-oriented research, patents and industrial implementations should be accepted as valid criteria of scientific performance.

Industry representatives should be encouraged to participate in various academic boards to strengthen industry and university relations.

The mobility of scientific staff between academia and industry and back should be encouraged and simplified.

Doctoral subjects formulated by industrial partners should be largely introduced, and industrial partners should be encouraged to act at all stages of graduate and post-graduate training, including peer review.

High-ranking prizes should be established and public recognition of individuals for outstanding applications of science in industry should be encouraged.

The process of patent application should be simplified and made cheaper by publishing patents in English only.