4th EPS Young Minds Leadership Meeting

29 – 30 MAY 2015
ICFO – The Institute of Photonic Sciences,
El Castelldefels, Spain

EPS Young Minds

ICFO Institut de Ciències Fotòniques

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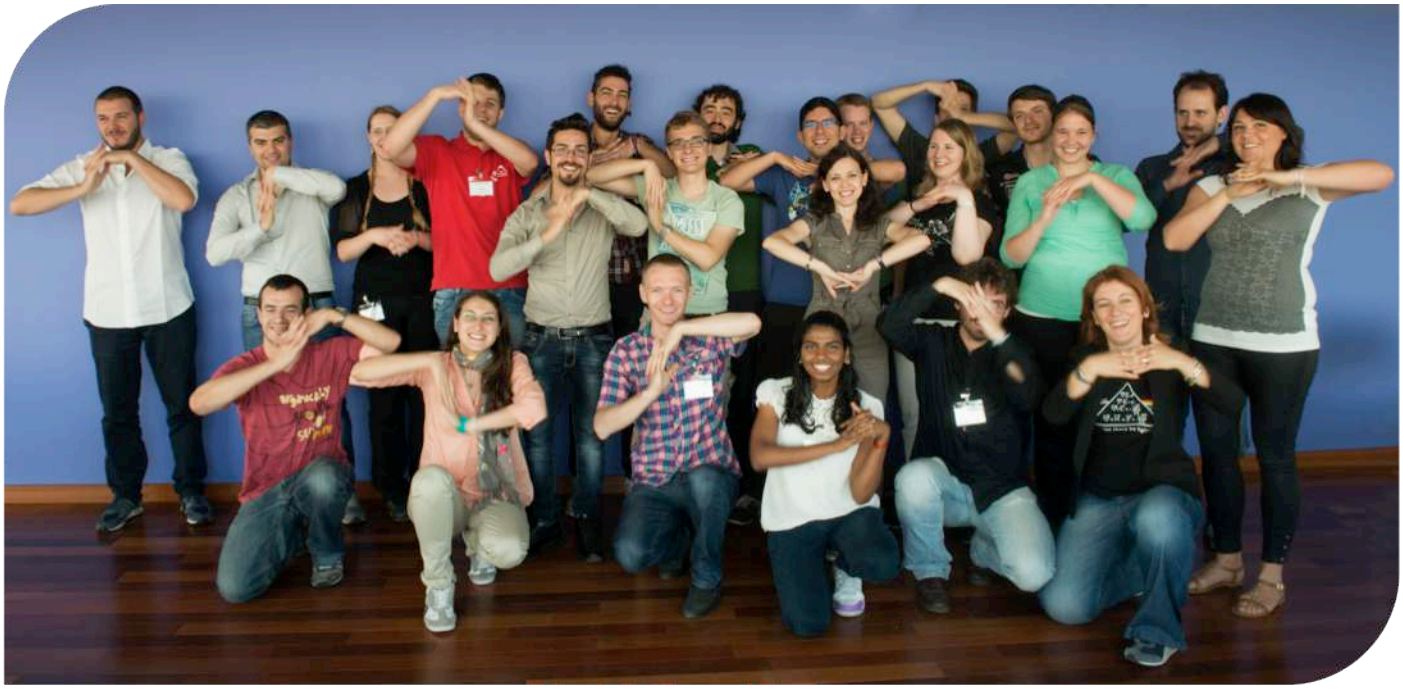

The Young Minds project by the European Physical Society started in 2010. Nowadays, it includes more than 30 sections in 18 countries.

The European Physical Society – An Overview

The European Physical Society (EPS) was created in 1968 “for physicists to make a positive contribution to European cultural unity”.

It has evolved to keep pace with changes at the European level and its mission is to promote physics in Europe, notably by providing a forum for the discussion of common issues, and through activities at the European level.

The European Physical Society actively:

- advocates physics research and its contribution to the economic, technological, social and cultural advancement in Europe;
- represents the European physics community, providing independent input into science policy issues in Europe;
- supports the role of physicists to actively engage in the design and implantation of European science policies;
- designs and implents programmes to develop the European physics community and physics research;
- provides a forum for EPS Members to discuss common issues and share best practice;
- engages in activities to reduce European fragmentation in physics research, funding and education;
- cooperates with international physical societies to promote physics, to support physicists worldwide and to foster international collaboration.

The **Young Minds project** promotes the next generation of leaders in physics. Local sections build an **international network** organizing seminars and colloquia, visit to local industries and research labs. In particular it establishes student network IONS, a great way to connect to other leading scientists from all over the world – and EPS provides financial supports through specific grants.

Programme of the meeting

FRIDAY 29 MAY 2015

09:00 – 09:30	Registration – ICFO Main Entrance
09:30 – 09:45	Welcome from Dr A. Marino, YM Chair
09:45 – 10:30	**Romain Quidant,** ICFO Group Leader (ES) **Nano-Optics : When light gets us into the nanoworld**
10:30 – 11:00	Coffee Break – sponsored by ICONS
11:00 – 11:15	**Antoine Boudet**, Strathclyde SCOPE YM Section (UK) **Enhanced optogenetics: developing micro-LED probes for specific and multi-depth stimulations**
11:15 – 11:30	**Jànos Tomàn,** Debrecen YM Section (HUN) – **Diffusion and solid-state reactions on nanoscale**
11:30 – 11:45	**Luis José Salazar-Serrano**, ICONS (ES) **Observation of spectral interference for any path difference in an interferometer**
11:45 – 12:00	Mandatory break to fulfill the Auditorium
12:00 – 13:00	**Christophe Rossel, EPS President** **PHYSICS AND SOCIETY** – ICFO Auditorium – ICFO Forum
13:00 – 14:30	LUNCH & Section **Posters Session**
14:30 – 14:42	**Luis José Salazar-Serrano** - Barcelona ICONS Section (ES)
14:42 – 14:54	**Janos Toman -** Debrecen Section (HUN)
14:54 – 15:08	**Steven Zwaan -** Leiden RINO Section (NL)
15:08 – 15:20	Group Picture
15:20 – 15:40	Coffee Break
15:40 – 16:30	**Niek van Hulst**, ICFO Group Leader; ICREA Professor; Head Academic Programs (ES) **ICFO: Light for the Future**
16:30 – 18:00	ICFO Labs visit
18:00 – 19:00	Social Friday
19:15	ICFO bus back to Barcelona
21:00	Light Dinner in the restaurant “5 Jotas”, CC Las Arenas (Plaza de Espanya)

LIGHT DINNER
"5 Jotas", CC Las Arenas
Gran Via de Les Corts Catalanes, 375-385
08015 Barcelona

"Boosting the creativity of young minds, setting up a bright, brave, creative, determined, passionate and focused initiative - this is the essence of the EPS Young Minds"

SATURDAY 30 MAY 2015

09:00 - 09:20	**David Lee,** EPS Secretary General **The European Physics Community**
09:20 - 10:05	**Lydia Sanmarti-Vila**, ICFO Knowledge and Technology Transfer Department (ES) **Bringing Photonics closer to society through collaborations**
10:05 - 10:17	**Rafael Omar Torres Mendieta** - Castello de la Plana Section (ES)
10:17 - 10:29	**Vanessa Chille** - Erlangen Section (DE)
10:29 - 10:41	**Micol de Simoni** - Roma Section (IT)
10:41 - 11:00	Coffee Break
11:00 - 11:45	**Lorenzo Giorgi & Barbara Capone, Liter of Light** **Light for development, the liter of light experience**
11:45 - 11:57	**Jonas Berzins** - Vilnius Section (LT)
11:57 - 12:09	**Oksana Dobush** - Lviv Section (UA)
12:10 - 12:25	**Best Activity Award sponsored by EPL**
12:25 - 12:40	Upgrades & Conclusions

The official sponsor of the Best Activity Award is EPL.
EPL publishes original, high quality Letters in all areas of physics, ranging from condensed matter
topics and interdisciplinary research to astrophysics, geophysics, plasma and fusion sciences, including those with application potential.
Impact Factor: 2,269

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Speakers

Antoine Boudet, University of Strathclyde, United Kingdom
Enhanced optogenetics: developing micro-LED probes for specific and multi-depth stimulations
Typical optic-fiber optogenetics remains invasive and limited to a small number of stimulation sites. Using microfabrication and soft lithography techniques, our group is developing thin neural probes incorporating both micro-LEDs and electrodes for multi-site emission and recording, which we use to investigate complex neural networks dynamics in the mouse cortex.

Lorenzo Giorgi & Barbara Capone, Liter of Light
Light for development, the liter of light experience

LITER OF LIGHT is a global “open source” movement with the aim of providing ecologically sustainable illumination. We are in 18 countries and we’ve installed 450.000 solar lamps. Liter of Light teaches skills, to create illumination that can be built and repaired by human hands, but especially that can create micro enterprises. Training young people, women and men in developing countries to own their future.
IS TIME FOR A SOLAR REVOLUTION.THIS IS THE WAY TO DO IT.

David Lee, EPS Secretary General, France
The European Physics Community

The role of scientific learned societies is changing, which means that what the members expect and what the volunteers do will also change. This talk will discuss how changes in expectations impact the role of the EPS

Romain Quidant, ICFO, Castelldefels (Barcelona), Spain
Nano-Optics : When light gets us into the nanoworld
In this talk, I’ll share my personal experience as a middle age ICFO group leader in nano-optics. I’ll first give a brief overview of my research field and present our main contributions from both the fundamental and applied viewpoints. OIn parallel, I’ll go through the main steps of my professional trajectory, from my PhD to my tenure at ICFO and compile some personal advices for the youngest interested in a research carrer.

Christophe Rossel, EPS President, Mulhouse, France
Physics and Society: a personal perspective

The European Physical Society EPS was established 47 years ago as a professional interest organization by physicists for physicists, at a time, where fundamental physics (and science) was in high societal regard. After the cold war focus was put on science as an innovation mover and incubator of key technologies as derived from basic research. The EU framework programs are the clearest expression of this shift in policy. Economic concepts like investing in science and education for economical growth entered science policy making. Today, Science is seen not just as a key industrial support, but rather as a central element in the development of our societies based on knowledge communities, educational excellence and scientific responsibility. Energy, environment and transport are just few examples of themes, professional physicists must relate to. Moreover the tremendous progress in semiconductor technology but also now in nano-science and -technology is fully changing our living behaviour in a fully interconnected world, as illustrated by the Internet of Things (IoT). I shall develop these ideas from my own perspective as an 'industrial' physicist but also from the point of view of a learned society's member.

Luis José Salazar Serrano, ICONS, Spain
Observation of spectral interference for any path difference in an interfermometer, regardless of the relationship between the temporal path difference and the spectral width of an input pulse, by using a weak value amplification scheme.

Lydia Sanmarti-Vila, ICFO, Castelldefels (Barcelona), Spain
Bringing Photonics closer to society through collaborations

The impact that photonics has in the everyday, in the economy or in employment, is not reflected in how it is perceived by society. To effectively increase the visibility of this KET, collaborative approaches at the European level have to be taken. This talk will focus on GoPhoton! and LIGHT2015, two of the ongoing EU photonics outreach projects, and how local expertise can be shared, increased and replicated internationally through such colaborations.

Niek van Hulst, ICFO, Castelldefels (Barcelona), Spain

In this talk I will touch on the development of ICFO and its various photonic activities. ICFO is a landmark institute in the Barcelona area. Since its launch in 2002, ICFO has avidly developed into the largest photonic reasearch centre in the south of Europe. To date 23 research groups work on quantum-optics, solar energy, nanophotonics, graphene, nanoscopy, biomedical optics, nanoantennas, cold atoms, optical trapping, atttosecond lasers, etc. The research targets the global forefront of photonics with direct impact on Energy, Health, Information, safety and Environment. As such ICFO develops solar cells, graphene displays screens, tunable light sources, secure quantum communication, graphene based detectors, entangled photon sources, non invasive monitoring, plasmon biosensors and super-resolution imaging for virology, neuroscience, immunology, etc. Clearly light is the perfect tool for the future.

NOTES

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