



LASERLAB-EUROPE

The Integrated Initiative of European Laser Research Infrastructures III

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Work package 5 – Human Resources Development

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Final report on coordination of HR issues with external partners

Lead Beneficiary: 1 LU

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<i>Deliverable Nature</i>	
R = Report, P = Prototype, D = Demonstrator, O = Other	R
<i>Dissemination Level</i>	
PU = Public PP = Restricted to other programme participants (incl. the Commission Services) RE = Restricted to a group specified by the consortium (incl. the Commission Services) CO = Confidential, only for members of the consortium (incl. the Commission Services)	PU

1 Introduction and objectives of WP5

This workpackage deals with the coordination of Human Resources (HR) Development for Laserlab-Europe. It includes a wide spectrum of activities, focused to enhance the efficient use of the facilities in the Transnational Access programme by attracting and educating new users, to develop the user community, and to reach new scientific sub-communities. The target groups of these activities are namely i) younger scientists at the doctoral or post-doctoral level, and ii) new research groups, e.g. from new member states within the EU or groups from scientific disciplines such as biology and medicine where the use of laser research infrastructures is not yet common practice.

The main Laserlab training objectives are:

- Developing and training of new user communities with no or little past experience in laser research, addressed by Task 1;
- Attracting and training of new users from new scientific communities (e.g. life sciences) in a multi-disciplinary perspective, addressed predominantly in Task 2;
- Coordinating externally funded activities, particularly education activities, for the development of human resources in close collaboration with other organisations, addressed by Tasks 3 and 4.

2 Short summary

- Within Task 1, three training schools have been organised: the User Training Workshop on Biophotonics, Kosice, Slovakia, 17-30 June 2013, the User Training Workshop on Laser Applications in Spectroscopy, Industry and Medicine, Riga, Latvia, 9-12 April 2014, and the User Training Workshop on Light-Based Technologies, Trnava, Slovakia, 2-4 September 2015.
- Under the scheme of Task 2: User Training in Lasers and Photonics for Biology and Health, 11 short-term training visits took place.
- In Task 3 Cooperation with existing training programmes, calls for proposals were issued and four external training programmes were selected and supported by Laserlab-Europe.
- Laserlab partners participate in the FP7 outreach projects "GoPhoton! - Photonics for everyone", "LIGHT2015" and "Photonics4all", which promote the importance of photonics and optical technologies to young people, entrepreneurs and the general public in all Member States of the EU during the International Year of Light and Light-based Technologies 2015 (IYL 2015). Within the framework of MoU's, Laserlab-Europe, FELs of Europe and the ESFRI project ELI – Extreme Light Infrastructure, jointly advertise the training events of each other within their own networks and have started to discuss joint organisation of training events.

3 Task 4: Coordination of HR issues related to external projects and organisations

Task leader: LU

The planned investment of nearly a billion Euros of structural funds in the set-up of new laser research infrastructures in three new Member States for the ESFRI roadmap project Extreme Light Infrastructure (ELI) requires substantial efforts to cope with the impending need in human resources both for these new RIs and for the already existing laser infrastructures. Laserlab-Europe helps developing such human resources through available measures within and beyond the IA instrument. The aim of this task is to build closer links and collaboration with major EU laser and photonics initiatives, professional organisations like EOS, SPIE, Photonics21 and other potential external partners of Laserlab-Europe.

Interaction with other FP7, H2020 and ESFRI projects

With the aim to gain more impact in outreach activities related to photonics, Laserlab-Europe members participate in several FP7 and H2020 projects, most of them in collaboration with the ECOP Alliance - the European Centres for Outreach in Photonics. ECOP connects nodes in European countries by building a network of photonics research groups and outreach teams that aim to strengthen links with their local communities. This is accomplished by developing tailor-made programmes and activities to address schools, universities, museums, media, industry, hospitals, etc. to communicate the impact of photonics, the latest scientific research, discoveries, and innovations. Overall, the initiative offers a place for substantial broadening of educational and outreach activities in photonics in the EU and opens new possibilities for collaborations related to Laserlab-Europe's HR-related tasks and issues.

GoPhoton! – Photonics for everyone was launched in January 2014 in collaboration with ECOP. It aims to bring photonics closer to society and to inform the general public at large on the ubiquitous and pervasive nature of Photonics in our lives. The goal is to make Photonics a household word, gaining recognition and support for the amazing opportunities and growth potential that Photonics represents for society (<http://gophoton.eu>). The highlights of the project are the organisation of many different activities concentrated in a "PhotonicSplash". These PhotonicSplashes last several days and happen across Europe travelling from city to city throughout 2015, The Year of Light. Four Laserlab partners, ICFO, FVB, ILC and POLIMI, participate in this project as consortium members.

LIGHT2015 is a Horizon 2020 project that aims to promote the importance of photonics to young people, entrepreneurs and the general public in all Member States of the EU during the International Year of Light and Light-based Technologies 2015 (IYL 2015). LIGHT2015 activities include LIGHTtalks, a series of inspirational events, which take place throughout the European Union in different cities at different times for the whole duration of the project in order to bring photonics closer to students and entrepreneurs. A specific series of events targeted to local industry and entrepreneurs took place during the period 25-28 September 2015 to take advantage of the international "100 Hours / Weekend of Light" of the global IYL 2015 programme. A highlight of LIGHT2015 will be a community experiment on smartphone photonics where thousands of participants from throughout the EU will carry out optical measurements of the sky to yield information related to air pollution. To aid teachers and to inspire student, Photonics kits will be distributed to schools around Europe to support the scientific education at secondary schools. Laserlab-Europe members ICFO and POLIMI participate in this project.

ILC is also a consortium member of a H2020 project related to outreach - Photonics 4 all, which was launched in January 2015 and is aimed to develop new promotional tools and to perform various outreach activities, mainly to improve the public image of photonics and increase the public awareness of its importance. Broad European collaborations (European cluster activities) will increase the interest of young people, entrepreneurs, and the general public, thereby supporting the fulfillment of future needs for a qualified workforce and young academics, more innovative applications, and an increased awareness of photonics.

Memoranda of Understanding were signed during the second reporting period with FELs of Europe and the ESFRI project ELI – Extreme Light Infrastructure with its three pillars in the Czech Republic, Hungary and Romania with the aim to facilitate cooperation for the establishment of programmes of exchange and collaboration in areas of mutual interest and benefit and to explore synergies and avoid duplication of efforts. In particular, Laserlab-Europe, ELI and FELs of Europe advertise the training events of each other within their own networks and encourage the participants to send their young scientists to these events. A meeting was held in June 2015 with representatives of ELI, FELs OF EUROPE and Laserlab-Europe to discuss and make plans for common actions and strategies. An outcome is that co-organisation of workshops and trainings of the different communities is planned,

first with a session on laser-based science, to be co-organised by the laser community, at the workshop “Science at FELs 2016” in Trieste, Italy.

The Laserlab-Europe National Contact Points (NCPs) played an important role in interacting with relevant initiatives of the large-scale European projects towards building and consolidating the communities of researchers in Eastern European member countries. For example, PALS organized the first ELI-Beamlines International Summer School in June 2013. Collaboration of Laserlab-Europe with the FP7 project CELIM further helped to develop the biophotonics community in Slovakia and resulted in closer involvement of Laserlab partners in the EuroBioImaging ESFRI initiative.

Collaboration with the International Laser Centre SPIE Student Chapter

Laserlab-Europe partners are involved in several SPIE student chapters for affiliated student groups who are studying optics and photonics at universities around the world. The ILC SPIE student chapter was inaugurated March 2012. Chapter advisor Dr. Chorvatova is a core member of the Laserlab-Europe team, thus close cooperation between SPIE chapter events and Laserlab presence is maintained and highly appreciated. Other SPIE student chapters have been founded at Laserlab-Europe partners University of Latvia, Lund University Sweden, Vilnius University Lithuania, Ecole Polytechnique France, Université de Bordeaux France, ICFO Spain.