



LASERLAB-EUROPE

The Integrated Initiative of European Laser Research Infrastructures III

Grant Agreement number: 284464

Work package 8 – Network of National Contact Points

Deliverable D8.2

Final report on the NCP activity

Lead Beneficiary: 11 IST

Due date: M42

Date of delivery: M42

Project webpage: www.laserlab-europe.eu

<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

The objective of this activity is to establish and strengthen the role of the “National Contact Points” (NCPs) as an information bridge between the Laserlab-Europe consortium and the national science and policy bodies in countries with emerging laser communities. In particular, the NCPs interact with relevant initiatives of the ELI project towards building and consolidating the communities of researchers in eastern member countries. They also interact with other Networking Activities involved with User Training and the development of human resources for the future needs of the European research infrastructure.

2 Activities promoted by the Networking Activity Coordination

- First General meeting of National Contact Points, 24 October 2013, Lisbon, Portugal
- Survey about the status of national laser infrastructures and activities carried out, March 2013
- Second General meeting of National Contact Points, 27 October 2015, Lund, Sweden

At the General NCP Meetings all the participating NCP representatives gave short talks describing the activities carried out under this Networking Activity. The supporting slides are available at the Laserlab-Europe internal web pages.

3 Activities carried out by the National Contact Points

3.1 Building a user community

Throughout the project, the NCP partners have informed other national institutions about the Laserlab-Europe activities and events by regular mailing lists, distributed the printed newsletter and informed about access opportunities. In some cases, new mailing list have been set-up (INFLPR, USZ, UL) or updated (CLPU, ICFO).

Partners where access is already a well-established activity have organized targeted events such as an annual User's Meeting (CLPU), or surveys to obtain feedback from researchers who participated in access (USZ). PALS, INFLPR and USZ are involved in building up the user community around the ELI infrastructures, with several workshops with national and international potential users:

In Spain, CLPU and ICFO teamed with their national user's representatives to organize a joint calendar of promotional activities. Under the advice of CLPU, Spain has established a nation-wide network of ultrafast lasers, and a platform is being created to organize laser science and technology. The goal is to bring together researchers, research teams and the industry in order to find common interests and develop collaborations. Almost 50 groups are incorporated in this platform, from all over the country. MUT has carried out a survey of the laser and optics community in Poland, identifying the key areas of expertise.

ILC and UL organized Laserlab-Europe Training Schools for Potential Users in Kosice and Trnava, Slovakia, and in Riga, Latvia, focussing on specific topics and applications, and provided extended information for potential users about the opportunities provided by Laserlab, scientific involvement and practical advice. The ELI-Beamlines International Summer Schools regularly are organized in Prague with involvement of PALS.

UL has promoted networking among laser research and academic study institutions in Baltic countries, by preparing the organization of regional training schools such as the Training School for Potential Users – Laser Applications in Spectroscopy, Industry and Medicine (April 2014), attended by 122 participants from 20 countries. These were used to inform potential users about the opportunities provided by Laserlab-Europe, scientific involvement and practical advice.

3.2 Local promotion

Seminars, workshops and public lectures constitute one of the main methods for spreading information, both at the partners' institutions and at other academic and research institutions in the country (ICFO, ILC, IST, MUT, INFLPR, PALS/ELI-Beamlines, UL, USZ). The partners' websites, Facebook pages and electronic newsletters have also been actively used for promotion. The Laserlab-Europe roll-up posters are used for promotion at related conferences on-site and other places in the country (ICFO, ILC, IST, PALS, USZ, VULRC). PALS has been featured in articles in public media and on national television. CLPU provided consulting information about Laserlab-Europe to institutions as the IFIC (Corpuscular Institute of Physics, Valencia, Spain) and to INDEA (company devoted to applications engineering).

There has been a large number of visits for students, teachers and other scientists, sometimes in the scope of science promotion events and open days (ICFO, IST, PALS), as well as public-related and outreach events, e.g. together with the local SPIE Student Chapters (ILC, UL) and training activities on lasers and imaging techniques (ICFO). In some institutions there have been initiatives towards the celebrations of the International Year of Light in 2015, such as developing common strategy programmes (ILC) and joining the national program committees (IST) together with national science popularization centres.

3.3 Outreach / education

The range of outreach and educational activities is very diverse and is one of the major strengths of this network. A few examples are given below:

ICFO has actively promoted outreach activities through its Knowledge and Technology Transfer Unit (KTT) to inspire students, teachers, fellow scientists, the general public and industry. Examples include the Corporation Liaison Program day, Science Week, Day of Light, Light of the Waves, ICFO Open Day, among others. ICFO is also coordinating GoPhoton!, a European project developed through a collaborative network, the European Centres for Outreach in Photonics (ECOP), and funded through FP7 (<http://gophoton.eu/>). Four Laserlab partners (ICFO, FVB, ILC, POLIMI) participate in this project as consortium members. ICFO is a member of LIGHT2015, a European project funded through Horizon 2020, which aims to promote the importance of photonics to young people, entrepreneurs and the general public in all Member States of the EU. ILC is a consortium member of Photonics4all, a H2020 project that is aimed to develop new promotional tools and to perform various outreach activities.

IST held a series of very successful workshops on lasers for secondary school teachers, which have raised immensely the awareness about lasers and their applications to more than 70 teachers so far. On the 2015 edition, teachers were given hands-on training on lasers and optics, and received a free optics kit. IST also organized a special edition of its annual summer school – PlasmaSurf – on the occasion of the International Year of Light 2015, with a strong emphasis on lasers and applications, which was attended by 30 students.

PALS staff were involved in a number of educational activities, such as participation of Czech and foreign PhD students at user experiments performed at PALS, and undergraduate students performing exercises in the scope of their individual training plans. Sixteen excursions with lectures for groups of domestic and foreign students from secondary schools have been organized at PALS. ELI Beamlines and HiLASE organized the one-week ELI Beamlines, HiLASE Summer School (2015) and the exhibition Light is Life, in Prague, and the conference “How does Big Science attract industry” highlighting the industrial potential of large research projects such as ELI and HiLASE. UL also targeted industrial users through several meetings and seminars.

Several partners engaged in a range of outreach events for the general public, such as Researchers Night and Week of Science (ILC, INFLPR, IST). ILC has a very active portfolio of such initiatives, such as Night of the Museums and Galleries, Festival of the Films on

Physics, and Children University. Several activities were also performed in the context of the International Year of Light 2015 by several partners, such as public exhibitions, conferences and festivals (ILC, IST).

MUT is a member of the Erasmus Mundus Joint Doctorate (EMJD) EXTATIC Programme that is directly connected to the objectives of the Laserlab project. The Laserlab Technical Workshop on Application of Laser Plasma X-ray and EUV Sources was organized as a joint initiative of the Laserlab Europe project and the EXTATIC Programme. MUT also participated in the Summer School under the European Erasmus Intensive Programme on "An Introduction to High Power Light-Matter Interactions" (HIPOLIN) organized in Crete (<http://hipolin.chania.teicrete.gr/>).

At a more direct level, several partners are involved in undergraduate and graduate training in laser physics, optics and related fields (IST, UL, CLPU). At IST the first edition of a new international PhD program in plasma science, nuclear fusion and high intensity lasers (APPLAuSE) was launched. CLPU hosted the LA3NET network's advanced School on Laser Applications at Accelerators with more than 70 participants and lecturers, covering many areas of laser applications.

3.4 Connection with other European projects / Human resources

IST's Laboratory for Intense Lasers was selected for the Portuguese roadmap for national research infrastructures (Feb. 2014), emphasizing its importance for the future Portuguese strategy for ESFRI participation. The participation of IST in Laserlab-Europe as a main contractor was highly valued in the evaluation. Following this result, the infrastructure was merged with Coimbra LaserLab (a second Laserlab participant in Portugal) to create the Laserlab-Portugal, the leading laser research infrastructure in the country.

MUT's contribution to the ELI project was selected for the Polish roadmap for national research infrastructures. This significant development is expected to contribute towards the growth of the Polish laser community. MUT participates regularly in the XFEL User's Meetings. ILC has promoted the collaboration of Laserlab Europe with the FP7 project CELIM, promoting the development of the biophotonics community in Slovakia, which resulted in a closer involvement of Laserlab partners in the EuroBioImaging ESFRI initiative.

INFLPR organized the ELI Academic Forum, where Laserlab-Europe was introduced to academia involved in ELI, and the ELI Industrial Forum, where Laserlab-Europe was presented to the SME technological cluster established at Magurele Bucharest.

3.5 Other activities

Information about Laserlab-Europe was presented by the NCPs or their representatives at the following events, via a talk or through the distribution of promotional material:

Czech Republic

- SPIE 2013 International Symposium on Optics & Optoelectronics, Prague, April 2013
- 26th Symposium on Plasma Physics and Technology, June 2014
- EPS2014 conference on Plasma Physics, June 2014
- Workshop on Biomedical Applications (ELI Beamlines), 2015
- ELI Beamlines Scientific Challenges, 2015
- SPIE Optics + Optoelectronics, 2015
- 1st HiLASE Workshop, Prague, 2015
- 9th International Workshop of HEC-DPSSL, 2015

Latvia

- Developments in Optics and Communications (DOC), 2012, 2013, 2014 and 2015

- Annual Solid State Physics Conference, 2012, 2013, 2014 and 2015
- Joint Workshop on manipulation of light by matter and matter by light, (FP7 IRSES TLL-COLIMA), Riga, July 18-19, 2012
- Biophotonics-Riga 2013, Riga, University of Latvia, August 26-31, 2013
- Developments in Optics and Communications (DOC), 2014
- The 30th Annual Solid State Physics Conference, 2014
- 47th Conference of the European Group on Atomic Systems, Riga, 2015

Lithuania

- Lithuanian National Physics Conference, Vilnius, June 2013
- Laser Precision Microfabrication (LPM 2014), June 2014, Vilnius
- Open Readings 2013-2015, Vilnius
- 11th Nordic Femtochemistry Conference, Vilnius, 2014
- 15th International Symposium on Laser Precision Microfabrication, Vilnius (2014)

Poland

- 32nd European Conference on Laser Interaction with Matter ECLIM, Warsaw Sept. 2012
- EXTATIC Welcome Week, Warsaw, Sept. 2012
- Breaking Frontiers: Submicron Structures in Physics and Biology, XLVIII Zakopane School of Physics, 20-25 May 2013, Zakopane
- 12th Int. School and Symposium on Synchrotron Radiation in Natural Science, Warsaw, June 2014
- International Conference on X-Ray Lasers, Fort Collins, U.S.A, May 2014
- 17th International Conference Laser Optics 2014, Saint Petersburg, Russia, June 2014
- Summer School HiPOLIN, Rethymnon, Greece June 2014
- XIX Polish-Slovak-Czech Optical Conference, Wojanów Palace, Sept. 2014
- CEZAMAT Interdisciplinary Seminar, Warsaw, Dec. 2013
- EXTATIC Welcome Week Workshop, Warsaw, Oct. 2014
- International Fair for Optics and Optoelectronics, Warsaw, 2015
- Polish Optical Conference, Legnica, 2015
- Polish Synchrotron Radiation Society – Conference of Synchrotron Users 2013, 2014, 2015
- 50th Zakopane School of Physics, Zakopane 2015
- Laserlab-Europe Workshop on Application of Laser-Plasma X-ray and EUV Sources in Technology and Science, Warsaw, June 2015

Portugal

- RIAO 2013 – Latin-American Optics Network, Porto, July 2013; collocated with ETOP2013 – Education and Training in Optics and Photonics
- National Physics Conference, Aveiro, September 2012
- Laserlab stand (roll-up poster, brochures and newsletters) at AOP 2014 - II International Conference on Applications of Optics and Photonics, Aveiro, May 2014
- National Physics Conference, Lisbon, September 2014
- 42nd EPS Conference on Plasma Physics, Lisbon, 2015
- Workshop on Medical Lasers, Portuguese Medical College, Lisbon, 2015
- Astronomers Association, Lisbon, 2015
- XV Advanced Laser Technologies, Faro, 2015

Romania

- National Conference on Physics – TIM 2013, Timisoara, 22 November 2013

- "Modern Laser Applications" INDLAS 2013, Bran, May 20-24
- Seminar at the Institute for Electronics Engineering and Nanotechnologies, Chisinau (Moldova), 25 November 2013
- PoliFEST, Politechnical University Bucharest. Apr. 2014
- 5th International Student Conference on Photonics ISCP 2014, Sept. 2014, Orastie, Hunedoara, Romania
- ELI Academic Forum
- ELI Industrial Forum

Slovakia

- Week of Science and Technology, exhibition centre Incheba, Bratislava, 5-11 November 2012
- 8th Annual Seminar "Fotonika", Senec, February 14-15, 2013
- Seminar "Nanotechnologies and Smart technologies", ILC, 12 December 2013
- Workshop in biophotonics, Nízke Tatry, Feb. 2014
- 9th Annual Seminar "Fotonika 2014", Senec, Feb. 2014
- Seminar Biomimetics - inspiration not only for material research, May 2014
- Week of Science and Technology, Slovak Centre of Scientific and Technical Information, Bratislava, Nov. 2014
- School of Biophotonics, Kosice, 2014
- Conference on Advanced in Electronic and Photonic Technologies - ADEPT, 2014
- 15th International Balkan Workshop on Applied Physics and Materials Science, 2015
- Advanced in Electronic and Photonic Technologies ADEPT 2015, High Tatras, 2015
- Workshop on Light-based Technologies, Trnava, 2015
- Superschool of Bratislava, Bratislava, 2015

Spain

- NLO 50 International Symposium, Barcelona, Spain, 2012
- Summer School of Ultrafast Laser Science and Applications, Mahón
- X National Optics Meeting, Zaragoza, 2012
- XXXIV Biannual Meeting of the Royal Spanish Society of Physics, Valencia, 2012
- 23rd Iberian Encounter for physics education, July 2013, Valencia
- International Symposium of Ultra-Intense Laser Science, Salamanca, 2013
- Closing meeting of the SAUUL network, Salamanca
- 3rd User Meeting of CLPU, Salamanca
- LA3NET network's advanced School on Laser Applications at Accelerators, Salamanca, Oct. 2014
- 2nd Congress of REMOA, Madrid, 2014
- 1st LightSheet Fluorescence Microscopy Int. Conference, Sitges, 2014
- 10th Spanish National Optics Meeting, Zaragoza, 2014
- Int. Conference on Photonic, Electronic and Atomic Collisions, Toledo, 2015
- 11th Spanish National Optics Meeting, Salamanca, 2015