Report on

DISSEMINATION, PROMOTION, CONTRIBUTION TO INNOVATION – PUBLIC ACCESS RIGA PHOTONICS CENTRE – WP5

(FOTONIKA-LV FP7-REGPOT-CT-2011-285912)

Third Project year

2014

Contents

1 Public policy

Science in Latvia has been underfunded for nearly two decades. In 2009 the already meager science budget was cut by 63%. From 1990 researchers have dropped from nearly 30,000 to about 5,000 currently with a significant exodus of qualified people and poor retention of new Ph.D.s in science in Latvia. The FOTONIKA-LV project attempts to address this problem directly through the repatriation and recruitment of over 14 researchers through the project as well as through secondments of Latvian researchers to top institutions elsewhere in the EU as well as from other institutions to the laboratories within the FOTONIKA-LV association research institutes. The core problem, however, is government policy that at best has been benign neglect and at worse a hostility towards science and its importance to a modern economy.

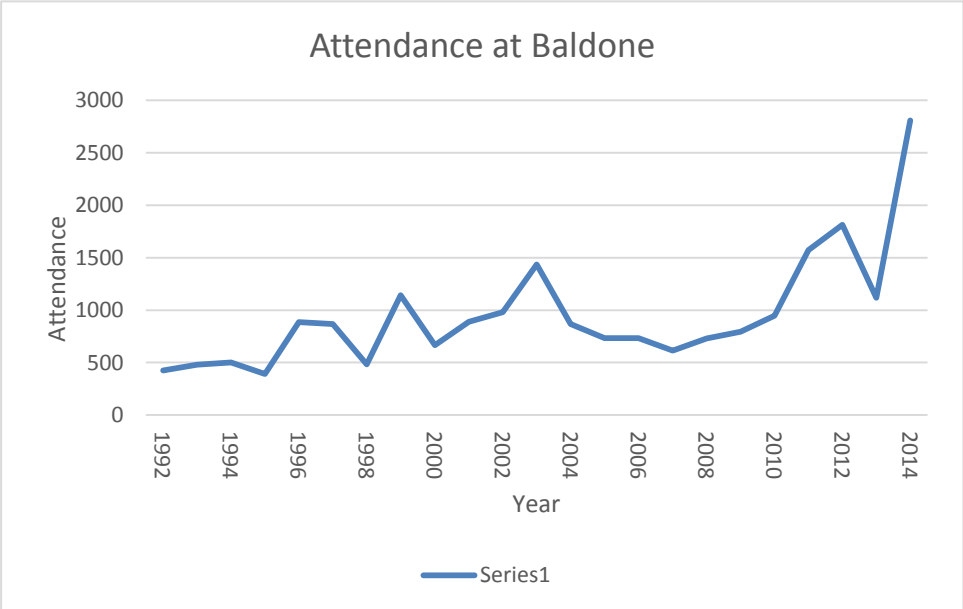
A particular issue for FOTONIKA-LV is that government policy does not include photonics among the official smart specializations guiding the economic development of the country. The importance of this issue is that unless this is changed, the progress that has achieved through the three years of effort through the FOTONIKA-LV project may be reversed insofar as future funding opportunities, particularly through the Commission's Widening Program are governed by the ex-ante conditionality that funded projects must be linked to the smart specialization strategy of the country.

Actions taken:

- Participation in the formulation of the National Development Plan (NAP 2020) emphasizing the role of science and innovation and the specific importance of photonics in Latvia's development. Multiple meetings with NAP 2020 coordinators with the Inter
- Presentation on photonics as a smart specialization for Latvia to the Cross-Sectoral Coordination Centre that functions as a think tank for the Council of Ministers.-
- Participation in the smart specialization peer review of Latvia and Estonia with comments made regarding proposed Estonian and Latvian smart specialization strategies. Peer Review workshop for National RIS3, Riga, 25-26 February. http://s3platform.jrc.ec.europa.eu/peer-review-workshop-for-national-ris3-riga-25-26-february

- Letter prepared to Prime Minister Laimdota Straujuma and the prime ministers of Estonia and Lithuania as well as to leading people in the academy of sciences, the universities and parliament presenting the case for considering photonics as a smart specialization strategy for Latvia and for the entire region of the Baltic States. See - https://fotonikalv.files.wordpress.com/2014/12/ris3-_latvia_14_10_2014.pdf
- Letter prepared to Prime Minister Laimdota Straujuma and the prime ministers of Estonia and Latvia Lithuania as well as to leading people in the academy of sciences, the universities and parliament presenting the case for making research and innovation as a high national priority but also as a high priority for pan-Baltic cooperation starting with a workshop in early 2015 framed as a foresight exercise aimed at resulting in concrete cooperative Horizon 2020 projects among institutes and companies operating in the Baltic States. See - https://fotonikalv.files.wordpress.com/2014/12/research-and-innovation-a_pan-baltic-priority-2014-10-31.pdf
- Colloquia on smart specialization and innovation.
- Presentation at the Europe House Riga to a broad audience about the key role of photonics in Latvia's future economy – 2013-08-.
- Paper on photonics as a smart specialization for Latvia
- Presentation on photonics as a smart specialization for Latvia presented to members of the Saeima (parliament). See - https://fotonikalv.files.wordpress.com/2014/12/ris-3-photonics-smart-specialization-latvia-for-saeima-2013-12-19-2.pptx

2 Astronomy Institute



The Baldone Observatory has always had visitors. In the past year there has been a dramatic growth in the number of visitors. Plans are being discussed to

form a Friends of Astronomy group and to continue to increase attendance. The growth in attendance can be largely attributed to the placement of the observatory on multiple tourism portals as well as to promote the Observatory as a destination for groups from schools throughout Latvia. It is an important facility for the popularization of science, especially astronomy and optics. Baldone utilizes a PC-based planetarium program and projects the images of star formations and other celestial phenomena on the observatories cupola ceiling. We believe significant growth in numbers is possible with the addition of more things for students to do at the Observatory, for it to become a science experience center.

The Geodynamics Observatory in the LU Botanical Garden in Riga also attracts visitors, but the facility needs considerable improvement starting with basics such as public toilets and general repairs to become a significant destination for student groups. We have received a financial commitment from a special parliamentary fund from Atis Lejins, a member of the Saeima (Parliament) for an investment to improve this facility.

3 The Photonics Prize

A Photonics Prize was established during the LU72 Conference to recognize the best poster presentation from a student. The idea of a prize is promising, but it needs to be developed to recognize broad excellence in the field and needs a larger award. Continuation of the award is under study and most likely dependent on a donor contributing the funds to make it possible.


LATVIJAS·FOTONIKAS·BALVA¶

Diāna·Hartinova¤

PAR·IZCILU·PREZENTĀCIJU¶

LATVIJAS·UNIVERSITĀTES·↵
72.·KONFERENCE·FOTONIKAS·
SEKCIJA¤

07·–·02¶
2014¶

PARAKSTS,·Arnolds·Ūbelis,·↵
FOTONIKA-LV·REGPOT·Projekta·koordinators¤

4 Preparation for the United Nations “International Year of Light”

FOTONIKA-LV is the national contact point for the UN “International Year of Light.” The “Day of Photonics” on October 21, 2014 was the first of several events and programs planned for 2015. Plans are being developed for a pan-Baltic foresight exercise aimed at resulting in

concrete Horizon 2020 projects involving institutes and firms in Estonia, Latvia and Lithuania. Other initiatives include upgrades to the Geodynamics Observatory located in the Botanical Garden for which resources (about 32,000 EUR) have been promised from a special discretionary fund distributed by members of Parliament.

5 Seminar on Intellectual Property Rights

Seminar „Protection of Intellectual property" was organized in 15-16th April 2014 by FOTONIKA-LV. About 15 participants heard about patents and industrial models. Lectures were prepared by experts Dace Liberte, Asja Dislere and Evita Lande from Patent Office of the Republic of Latvia.

Information on a seminar in web page of Patent Office of the Republic of Latvia: http://www.lrpv.gov.lv/lv/notikumi/lekciju-cikls-rupnieciska-ipasuma-aizsardziba (in latvian)

Information about the seminar in the portal of University of Latvia: http://www.lu.lv/zinas/t/25930/ (in latvian)

6 Presentation about photonics in the window of Riga Photonics Center

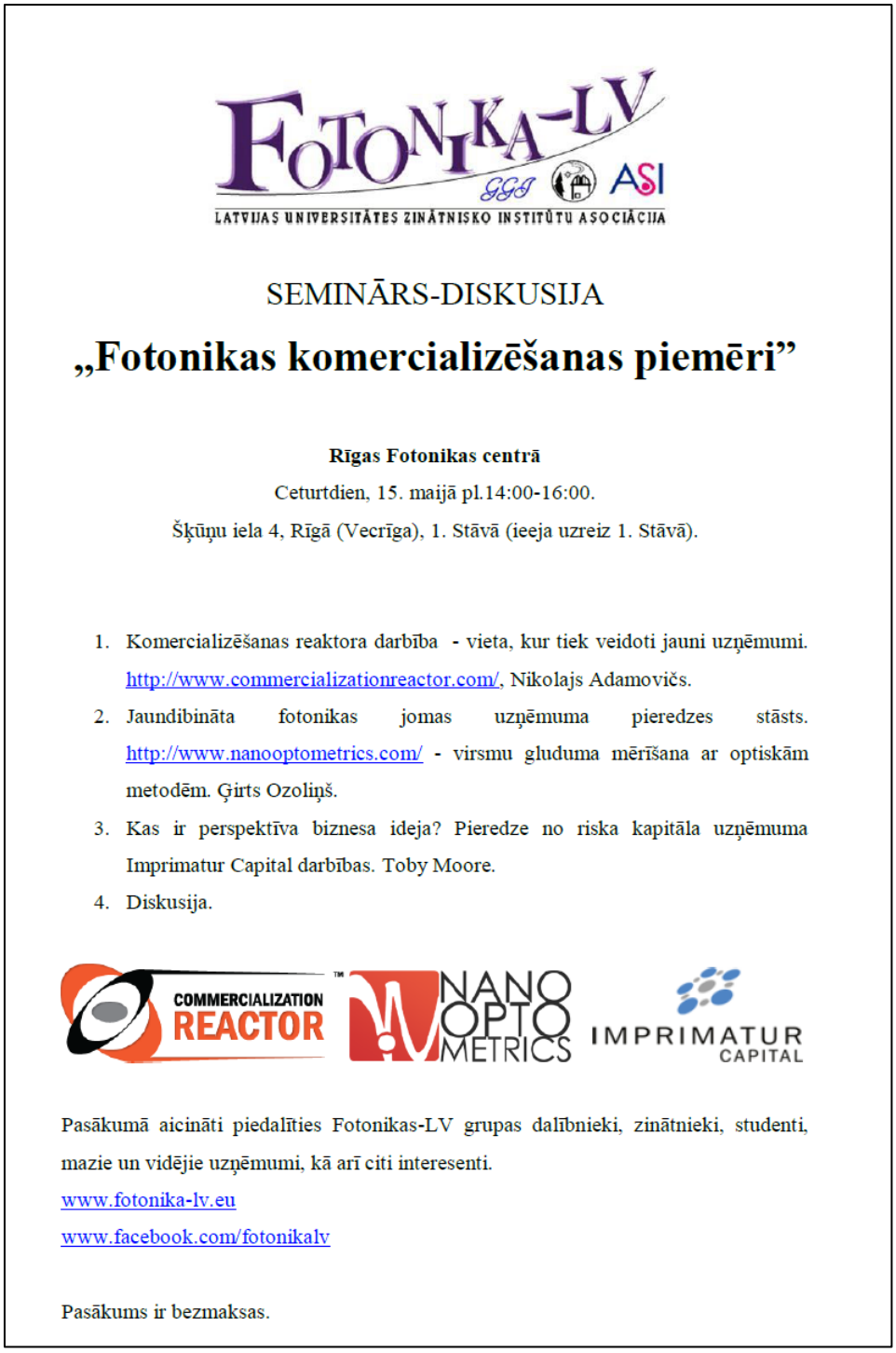
Riga Photonics center has a computer monitor at the window. In this monitor several presentation videos were played. These presentations included video on European Photonics Industry Cluster, on Photonics in Lithuania, on Horizon 2020 programm, on activities of FOTONIKA-LV.

7 Seminar about successful Photonics companies in Latvia

A seminar was organized in Riga Photonics Center on 15th May 2014.

The program was:

1) N.Adamovics. Report on the work of start-up formation within Commercialization Reactor (http://www.commercializationreactor.com/).
2) G.Ozolins. Successful start-up in Photonics – Nanooptometrics, Ltd. (http://www.commercializationreactor.com/);
3) T.Moore. The experience of "Imprimatur Capital Investment Fund" in investing in perspective start-ups.



FOTONIKA-LV

LATVIJAS UNIVERSITĀTES ZINĀTNISKO INSTITŪTU ASOCIĀCIJA

SEMINĀRS-DISKUSIJA

„Fotonikas komercializēšanas piemēri"

Rīgas Fotonikas centrā

Ceturtdien, 15. maijā pl.14:00-16:00.

Šķūņu iela 4, Rīgā (Vecrīga), 1. Stāvā (ieeja uzreiz 1. Stāvā).

1. Komercializēšanas reaktora darbība - vieta, kur tiek veidoti jauni uzņēmumi. http://www.commercializationreactor.com/, Nikolajs Adamovičs.
2. Jaundibināta fotonikas jomas uzņēmuma pieredzes stāsts. http://www.nanooptometrics.com/ - virsmu gluduma mērīšana ar optiskām metodēm. Ģirts Ozoliņš.
3. Kas ir perspektīva biznesa ideja? Pieredze no riska kapitāla uzņēmuma Imprimatur Capital darbības. Toby Moore.
4. Diskusija.

COMMERCIALIZATION REACTOR

NANO OPTO METRICS

IMPRIMATUR CAPITAL

Pasākumā aicināti piedalīties Fotonikas-LV grupas dalībnieki, zinātnieki, studenti, mazie un vidējie uzņēmumi, kā arī citi interesenti.

www.fotonika-lv.eu

www.facebook.com/fotonikalv

Pasākums ir bezmaksas.

8 Participation in a conference on Space Technologies for Africa

FOTONIKA-LV was co-organizer of the conference "International Conference on Collaboration in Space Technologies", 5th-6th June 2014, Riga, Latvia. The conference was aimed to present competencies of Latvian Companies and Research groups on Space Technologies to African Union (and to sign a Memorandum of Understanding between

African Union Commission (AUC) and Space Technology and Science Group (STSG, Finland)).

http://www.iccst.eu/

FOTONIKA-LV logo was in the conference web page

This conference allowed to obtain important contacts. For example, Space Technology of Science group (http://www.spacetsg.com/) and its CEO S.Ahmed. This lead to involvement of Latvian experts in Space technology in education and industry projects for Africa.

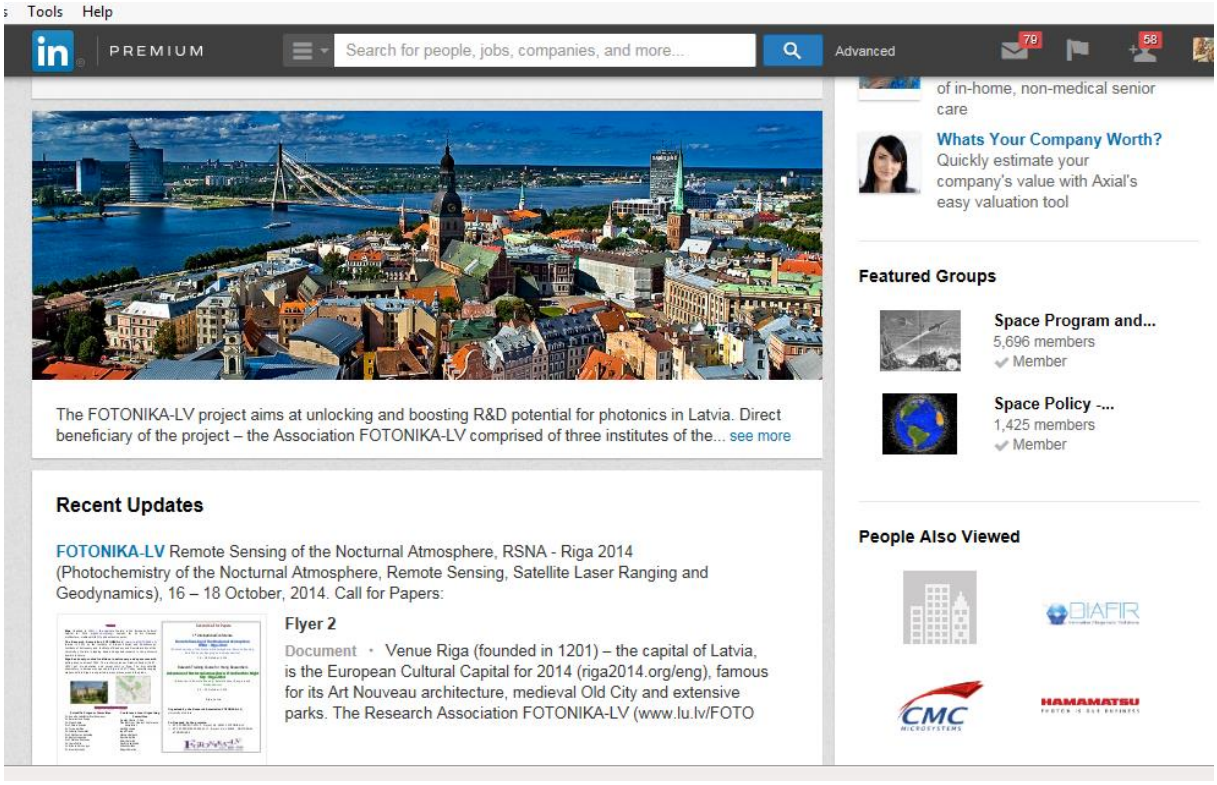
9 Facebook https://www.facebook.com/fotonikalv/

A Facebook page has been developed for FOTONIKA-LV / Riga Photonics Center on 2014-01-27. The page has received 58 likes. The typical event reaches 20 to 30 people. So far there has been no attempt to use Facebook tools to build audience, but that will be tried with

events that have a potentially broad audience. Colloquia and other meetings are announced via Facebook. See - https://www.facebook.com/fotonikalv

10 LinkedIn presence established

Linkedin is the most important professional portal on the web. The European Commission actively uses Linkedin groups as do many research centers. A Linkedin presence has been established for FOTONIKA-LV and there have been preliminary attempts to build traffic to FOTONIKA-LV using Linkedin tools such as participation in groups including Space Programs and Space Policy. The plan is to make FOTONIKA-LV visible in all groups that relate to its activities including satellite ranging, spectroscopy, infrared astronomy, atomic physics, geodesy and geodynamics, asteroids, near Earth objects, African Space policy and other categories. Also, the plan is to use Linkedin to search for partners for Horizon 2020 projects as well as to promote activities such as the UN International Year of Light.



11 Other web presence

FOTONIKA-LV as an association of institutes of the University of Latvia has a webpage on the university portal – http://www.lu.lv/fotonika-lv/. Additionally, each of the member institutes has its own website:

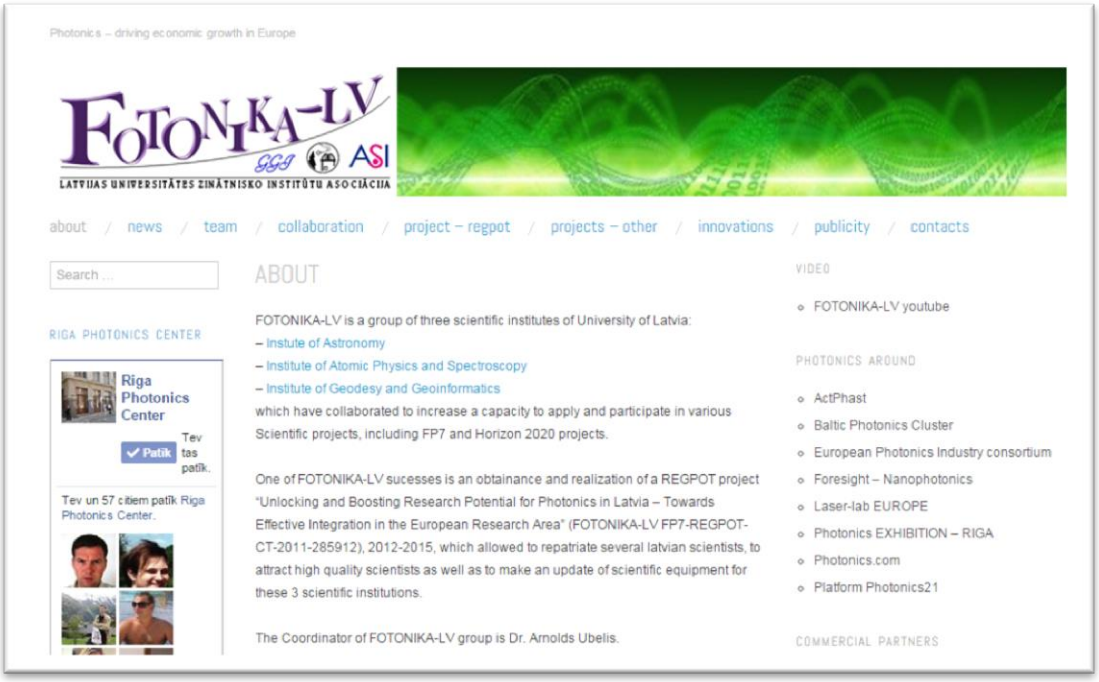
Institute of Atomic Physics and Spectroscopy – http://www.lu.lv/fotonika-lv/about-fotonika-lv/associated-institutes/institute-of-atomic-physics-and-spectroscopy/

Institute of Astronomy – http://www.lu.lv/fotonika-lv/about-fotonika-lv/associated-institutes/institute-of-astronomy/

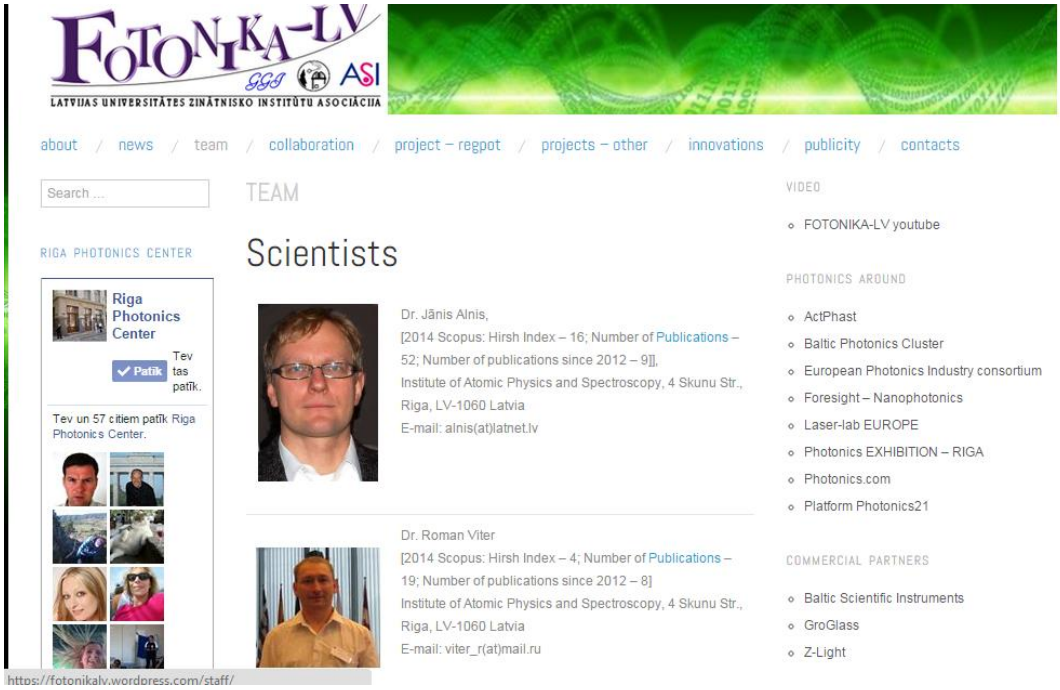
Institute of Geodesy and Geoinformatics – http://www.lu.lv/fotonika-lv/about-fotonika-lv/associated-institutes/institute-of-geodesy-and-geoinformation/

Additionally, there is a website for the Riga Photonics Center public outreach programs and also a Twitter account for fotonika-lv.

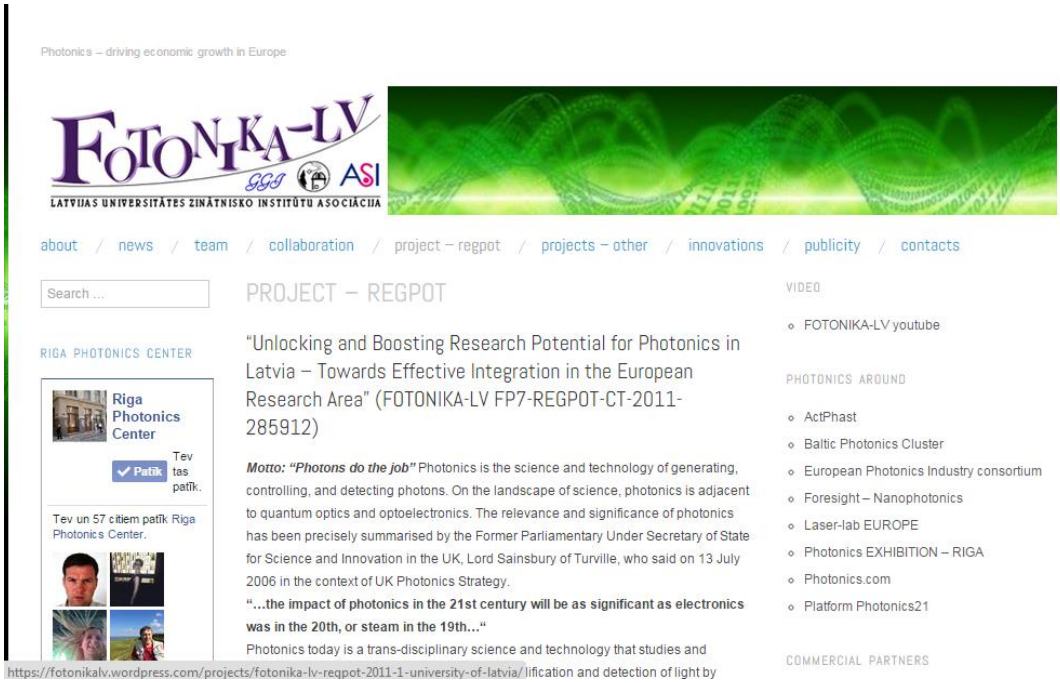
The webpage http://fotonika-lv.eu is seen as the primary website for FOTONIKA-LV insofar as the long range strategy of FOTONIKA-LV is to form a trans-university national science center that would be self-standing but affiliated with multiple universities in Latvia. Even though the domain name fotonika-lv.eu is owned by FOTONIKA-LV for technical reasons pages under the website are seen as fotonikalv.wordpress.com/.



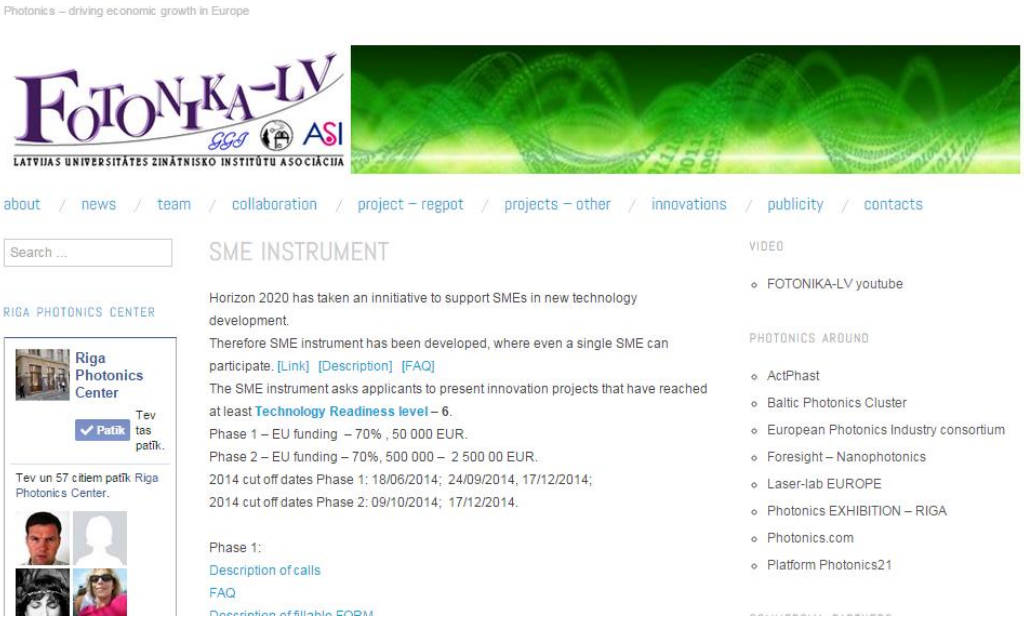
- The general section was included where general information of Association FOTONIKA-LV is presented (this association is a submitter of FOTONIKA-LV Project);



- Information of team members (recruited and repatriated scientists) are given;



- Information of REGPOT project is provided:



- Special section „Innovation/SME Instrument" is formed to give information to Horizon 2020 SME Instrument applicant;
- Information about New conferences of PHOTONIKA-LV is given

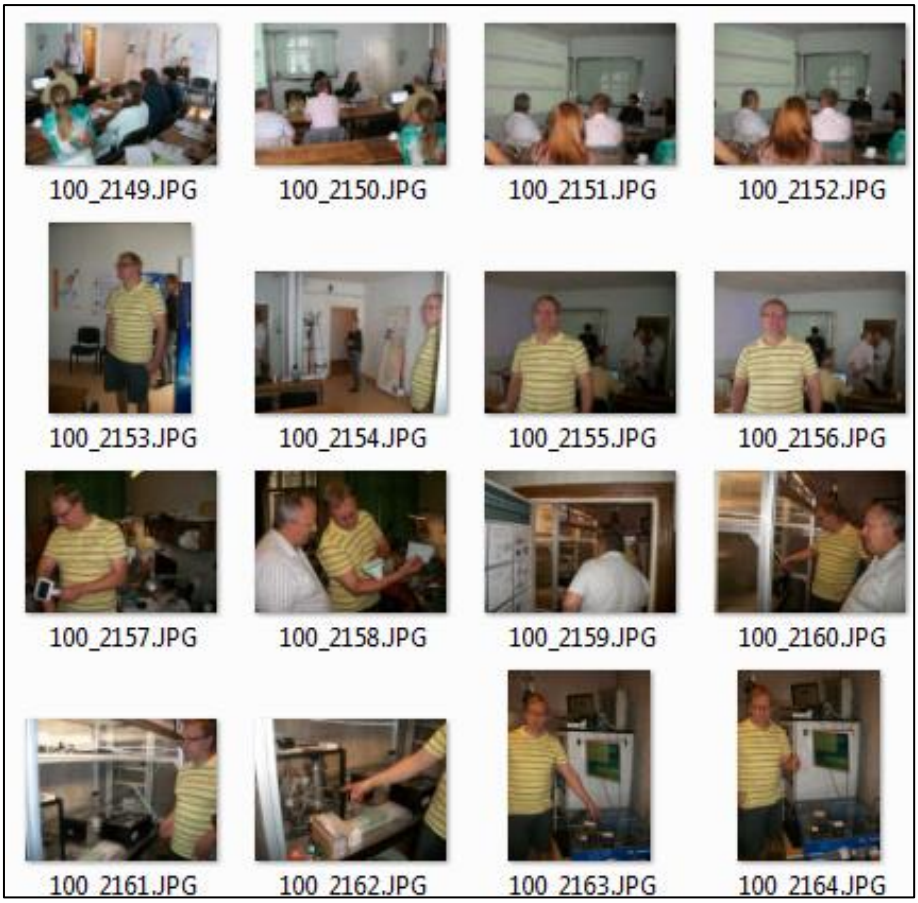
12 Video on activities of a FOTONIKA-LV center

Video on activities during June-July 2014 of a FOTONIKA-LV group was performed.

It can be seen on Youtube channel of FOTONIKA-LV: http://youtu.be/t76NGViBhFo

13 Photo collection of FOTONIKA-LV activities

Aigars Atvars made photos of various activities of FOTONIKA-LV group. This material is useful for dissemination activities of FOTONIKA-LV.

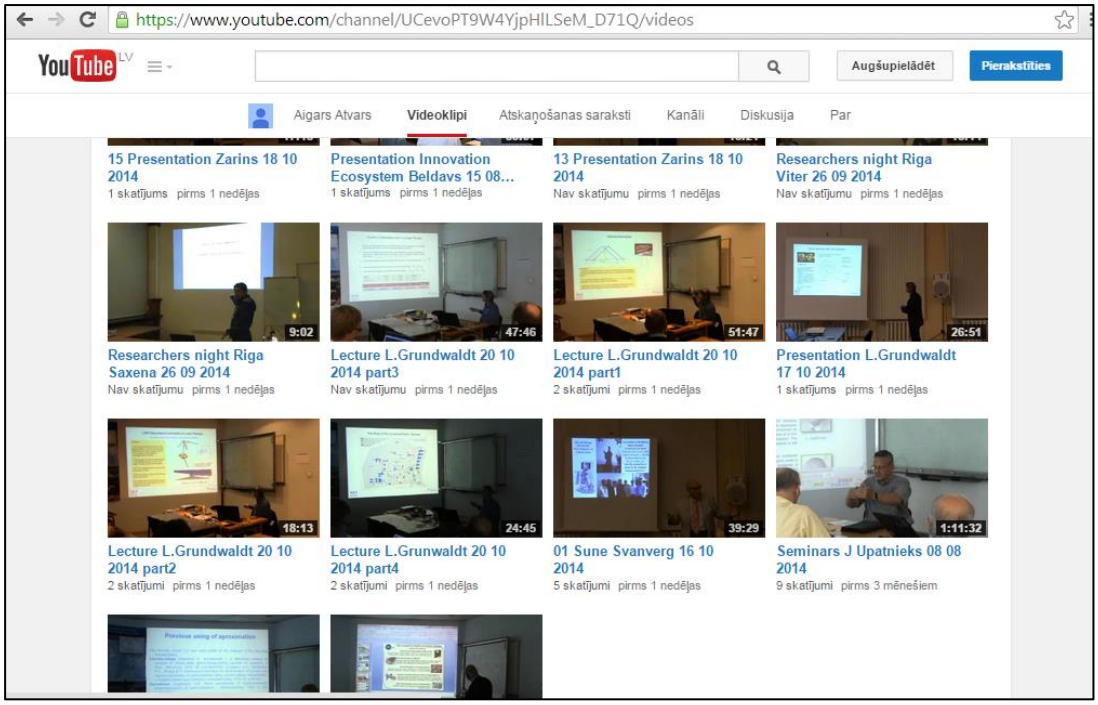


14 Youtube channel

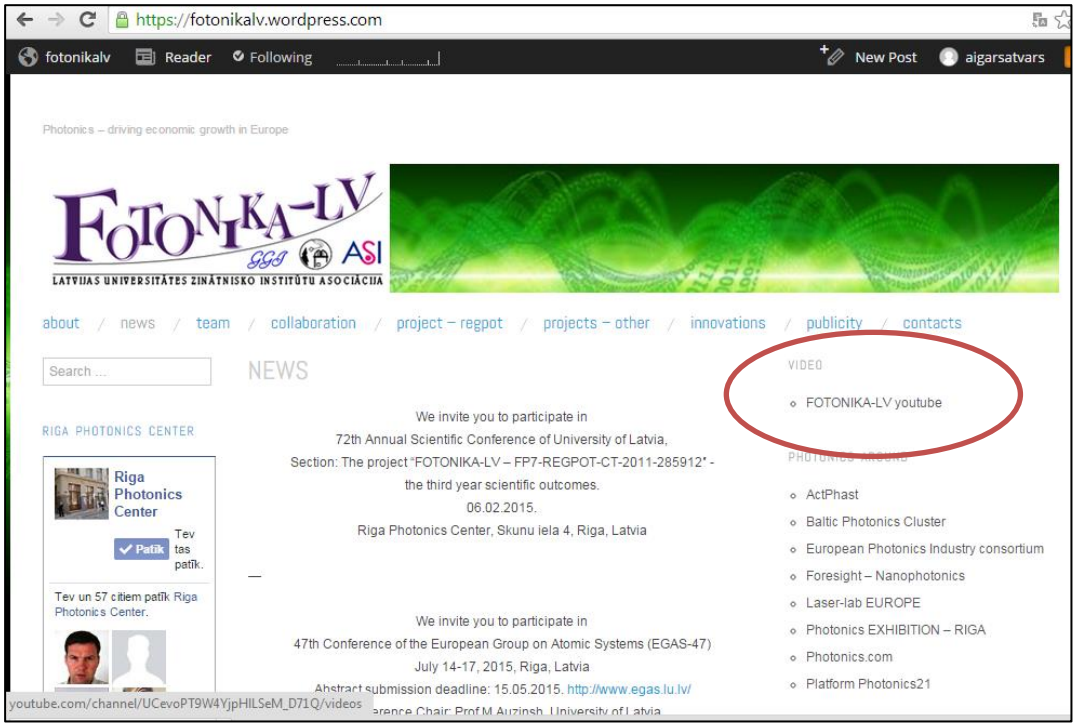
A youtube channel was created to show various seminars of FOTONIKA-LV group.

Various events performed by FOTONIKA-LV were recorded. Videos are available on youtube:

https://www.youtube.com/channel/UCevoPT9W4YjpHlLSeM_D71Q/videos



The youtube channel can be accessed from web page **http://fotonika-lv.eu** (link on the far right)



15 General meeting of association FOTONIKA-LV

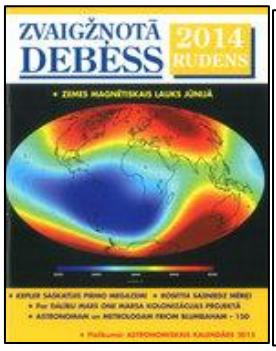
Gerenal meeting of Association FOTONIKA-LV was held in Baldone on 19th June 2014.

The program included Report on activities of Association FOTONIKA-LV presented by A.Ubelis, scientific secretary of Association.

The work on preparing an initiative for promoting “photonics, quantum sciences, space sciences and related technologies” as a smart specialization for Latvia, presented by V.Beldavs, assistant to a project manager of an Association.

16 Report about the general meeting of Association FOTONIKA-LV in a magazine Starry Sky

Gerenal meeting of Association FOTONIKA-LV was held in Baldone on 19th June 2014. The report on this event was prepared by Aigars Atvars and publicizes in a popular science Journal with specialization in Astronomy: Starry Sky (Zvaignota Debess), Autumn 2014, p.63-66.



HRONIKA

AIGARS ATVARS

ASOCIĀCIJAS *FOTONIKA-LV* PILNSAPULCE

2014. gada 19. jūnijā notika Latvijas Universitātes Zinātnisko institūtu asociācijas FOTONIKA-LV 2014. gada saulgriežu pilnsapulce. Asociācijas zinātniskais sekretārs A. Ūbelis iepazīstināja klātesošos ar aktualitātēm asociācijas darbībā – Latvijas Universitātes Senātā tiks iesniegts priekšlikums par LU cen-

king and Boosting Research Potential for Photonics in Latvia – Towards Effective Integration in the European Research Area" (FOTONIKA-LV FP7-REGPOT-CT-2011-285912), kas ļāvis iepirkt nepieciešamu zinātnisku aparatūru, piesaistīt augstas kvalitātes zinātniski pētniecisko personālu (kopskaitā 14) no ārzemēm un repatriēt vairākus latviešu zinātniekus, kā

- līdzdarboties akadēmiskā procesā LU, RTU un citās augstskolās, nodrošināt kvalitatīvu studiju darbu, t.i., treniņu zinātniskā darbībā studentiem un jaunajiem zinātniekiem, t.sk. kvalifikācijas darbu izstrādi fotonikas jomai piederošās zinātnēs un tehnoloģiju virzienos: atomu un molekulu fizikā, ķīmiskajā fizikā, kvantu optikā, astronomijā, ģeodinamikā, ģeodēzijā un ģeoinformātikā, atmosfēras pētniecībā un kosmosa tehnoloģijās, spektroskopijā un lāzeru tehnoloģijās, optikas un šķiedru optikas tehnoloģijās un citās saistītās tehnoloģijās, kā arī dabas un inženierzinātņu nozarēs;
- kļūt par publiski atzīstamu personu, lai

Zem Šmita teleskopa kupola pilnsapulces dalībnieki klausās A. Ūbeļa prezentāciju.

17 Researhers' Night

Researchers Night was organized in Latvia in 26th September 2014. Riga Photonics center also participated in this event.

Totally there were about 400 attendees, mainly secondary school pupil.

In Riga Photonics Center people could hear short lectures of recruited scientists of FOTONIKA-LV:

- Amara Graps. Presentation on Astronomy issues.
- Roman Viter. Nanocrystals. (part of presentation on youtube: http://youtu.be/MNaPN2-qjdA?list=UUevoPT9W4YjpHlLSeM_D71Q)
- Arvind Saxena. Clusters and Research in India. (part of presentation on youtube: http://youtu.be/mMP2_Yj4fok?list=UUevoPT9W4YjpHlLSeM_D71Q)
- Janis Alnis. Snowflake demonstration (see picture – demonstration on a monitor, cooling equipment is near J.Alnis).

18 Day of Photonics

On 21st October a day of Photonics was organized by Association FOTONIKA-LV.

The day was organized according to invitation on International Organizers of the Day of Photonics (http://day-of-photonics.org/).

Its program was the following:

10.00-18.00	Information dissemination stands (prototypes, posters, booklets, etc.)
11.00-11.30	Scene setting
11.30-13.00	*Science block:* Quantum sciences, space sciences and related technologies highlights in Latvia and in Baltics. J.Alnis. Photonics application from quantum optics. (http://youtu.be/KIaFtYAmlXw?list=UUevoPT9W4YjpHlLSeM_D71Q) K.Salminsh. Riga Satellite Laser Station as an exampe of Science in Photonics.
13.00-14.00	LUNCH BREAK & NETWORKING (60 minutes)

14.00-15.30	*Industry block:* Quantum sciences, space sciences and related technologies - SME success Stories in Latvia and across in Baltics. A.Atvars. SMEs of Photonics in Latvia. (http://youtu.be/9Yz5N9SNQi4?list=UUevoPT9W4YjpHlLSeM_D71Q) G.Ozolins. The success story of Evenetech, Ltd. (presentation on youtube: http://youtu.be/TVP34ViLgU8?list=UUevoPT9W4YjpHlLSeM_D71Q) K.Belasheva. The success story of Underwater optical Technologies, Ltd. (http://youtu.be/dEfOe84Yu6o?list=UUevoPT9W4YjpHlLSeM_D71Q)
15.30-16.00	COFFEE BREAK (30 minutes)
16.00-17.00	*Science policy block:* Chances for pan-Baltic smart specialisation. V.Beldavs. On smart specialization. V.Beldavs. On the exploration of Moon as an emerging market.
17.00-18.00	Summary, action items
18.00-21.00	Meeting of Start-up managers from Commercialization Reactor.

In Pictures – presentation materials from photonics companies of Baltic States (left), seminar on the Day of Photonics.

Meeting of start-up managers from Commercialization Reactor in the Day of Photonics at Riga Photonics Center.

19 FOTONIKA-LV in Moon Conference

Aigars Atvars, assistant to a Project manager of FOTONIKA-LV attended a conference „The Next gigant Leap, Leveraging Lunar Assets for Sustainable Pathways to Space", Hawaii Island, November 9-13, 2014. He assisted to have a Skype lecture of V.Beldavs, assistant to a Project manager of FOTONIKA-LV.

http://2014giantleap.aerospacehawaii.info/

The Logo of FOTONIKA-LV was in a conference web page as a supporter to the conference.

20 FOTONIKA-LV at the Industrial Technology Conference

The Industrial Technology Conference was held 09-11April, 2014 in Athens, Greece. FOTONIKA-LV presented photonics research, development and industries to an audience that included companies from Europe, Russia, Saudi Arabia, the US and other countries. The

photonics booth featured three posters that summarized R&D and production of photonics products in Latvia. We also featured promotional information about Latvia that was provided by the Latvian Embassy in Athens. The Embassy prepared a press release that was released to media and also posted on the Ministry of Foreign Affairs website - http://www.mfa.gov.lv/lv/greece/zinas/2014/04-10/ . Inquiries were received from over 20 visitors to the booth requesting additional information.

LATVIJAS REPUBLIKAS VĒSTNIECĪBA GRIEĶIJĀ
ΠΡΕΣΒΕΙΑ ΤΗΣ ΔΗΜΟΚΡΑΤΙΑΣ ΤΗΣ ΛΕΤΟΝΙΑΣ ΣΤΗΝ ΕΛΛΑΔΑ
38, Vas.Konstantinou Ave., Athens, GREECE Tel: 210 729-4483, Fax: 210 729-4479,
embassy.greece@mfa.gov.lv

Atēnas, 2014. gada 10. aprīlis

FOTONIKA-LV piedalās "Industrial Technologies 2014" izstādē Atēnās

2014. gada 9.–11. aprīlī Grieķijas Eiropas Savienības Padomes prezidentūras ietvaros Atēnās notiek izstāde un konference „Industrial Technologies 2014", kurā piedalās Eiropas zināmākie inovāciju attīstības centri, augsto tehnoloģiju ražotāji un zinātnes institūti.

Latviju izstādē ar savu stendu pārstāv FOTONIKA-LV, informējot izstādes apmeklētājus par sadarbības iespējām ar Latvijas fotonikas un kvantu zinātnes un tehnoloģijas uzņēmumiem un institūtiem.

Fotonika ir atzīta par vienu no svarīgākajiem pētniecības virzieniem Latvijā, kurā šobrīd strādā vairāk nekā 700 pētnieku.

Šobrīd Latvijā fotonikas jomā darbojas vismaz 15 uzņēmumi, ražojot augstas pievienotās vērtības eksporta preces.

Tiek prognozēts, ka līdz 2020. gadam fotonikas īpatsvars Latvijas ekonomikā pārsniegs 100 miljonus EUR gadā.

Izstādes laikā ir pārrunātas sadarbības iespējas sensoru, lāzeru tehnoloģijas un ultra-precīzas metroloģijas jomās, kā arī būtiska uzmanība pievērsta fotonikas zinātnes popularizēšanai jauniešu vidū.

Vienlaikus, ar Latvijas vēstniecības Grieķijā atbalstu, Latvijas stendā tiek popularizēta Latvija kā pievilcīgs tūrisma galamērķis un Rīga kā Eiropas kultūras galvaspilsēta 2014.

Latvijas Republikas vēstniecība Grieķijā
38, Vas.Konstantinou Ave., 11635, Athens, Greece
Telefons: (30) 210 7294483
Fakss: (30) 210 7294479
e-pasts: embassy.greece@mfa.gov.lv


PHOTONICS, QUANTUM SCIENCE AND TECHNOLOGY CLUSTER
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FOTONIKA-LV RESEARCH ASSOCIATION
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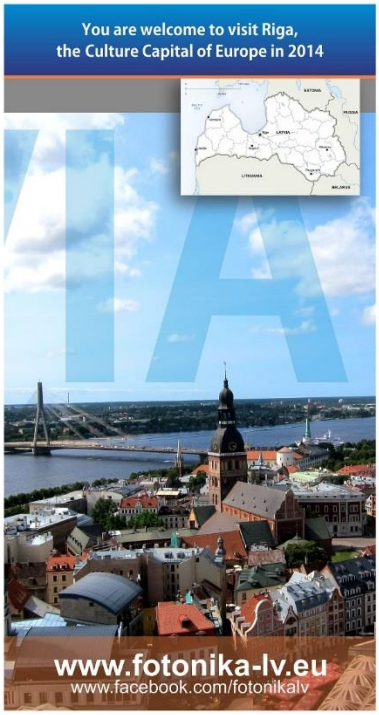
You are welcome to visit Riga, the Culture Capital of Europe in 2014
www.fotonika-lv.eu
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PHOTONICS, QUANTUM SCIENCE AND TECHNOLOGY CLUSTER
You are welcome to visit Riga, the Culture Capital of Europe in 2014

21 Colloquia of FOTONIKA-LV group

Association FOTONIKA-LV regularly organizes colloquiums on themes of their research. If scientific colleagues and guests arrive in Riga, they typically are invited to give a presentation on FOTONIKA-LV colloquium.

No. of Colloquia	Date of Colloquia	Presenter and the title
45	17.01.2014.	Dr. Amara Graps, "New project initiatives"
46	28.01.2014.	Tomas Mosteikis and Arturas Belickas, Altechna LTD, "Services and capabilities of Altechna, serving photonics research and industry throughout the Baltic region"
47	31.01.2014.	Mats Kjaer, "Stimulating innovation in Latvia: The IDEON model from Lund, Sweden".
48	05.02.2014.	Dr. Amara Graps un Pauls Irbiņš, "How to raise interest and to convince students to study Natural sciences, engineering and mathematics"
49	28.02.2014.	A.Ubelis. Welcome address, "Importance of foresight for the development of Association FOTONIKA-LV and corporate tasks of FP7 FOTONIKA-LV", Vidvuds Beldavs, „Foresight process and smart specialization", Sandra Šmaliņa, „Foresight process methodology"
50	11.04.2014.	Mikelis Svilans, "Research perspectives for silicon microphotonics in Latvia"
51	16.04.2014.	Dr. Arvind Kumar Saxena, Physical Research Laboratory Space & Atmospheric Science Division, Ahmedabad, Gujrat-India, "Study of cluster ions by mass spectrometry and optical spectroscopy"
52	25.04.201.4	Lecture by Prof. Eimuntas Paršeļiunas, (http://www.gkk.ap.vgtu.lt/media/cv/10033_EN.pdf), Vilnius Gedimina university Department of Geodesy and Cadastre
53	25.04.2014.	Prof. Dainis Draviņš (Lund Observatory), "Astronomical Imaging a Thousand Times Sharper than Hubble: Optical Interferometry with the Cherenkov Telescope Array"
54	04.06.2014.	M Banaszkiewicz. "Space Technologies in Poland". (http://youtu.be/mAPF153VOfw?list=UUevoPT9W4YjpHlLSeM_D71Q)
55	18.06.2014	Dr. Janis Kletnieks, "About Astronomy and Geodesy in 19th century"
56	09.07.2014.	Dr. Marco Delbo, Lab. Cassiopee, UMR UNS-CNRS-OCA, Observatoire de la Cote d'Azur, "Cracking up asteroids with Sun light"
57	11.07.2014.	Dr. Georg Kirchner (Space Research Institute, Austria), "Satellite Laser Ranging at Graz - present status / future plans: - performance characteristics of SLR Graz - kHz SLR - Space debris, Multi-Static Ranging etc.

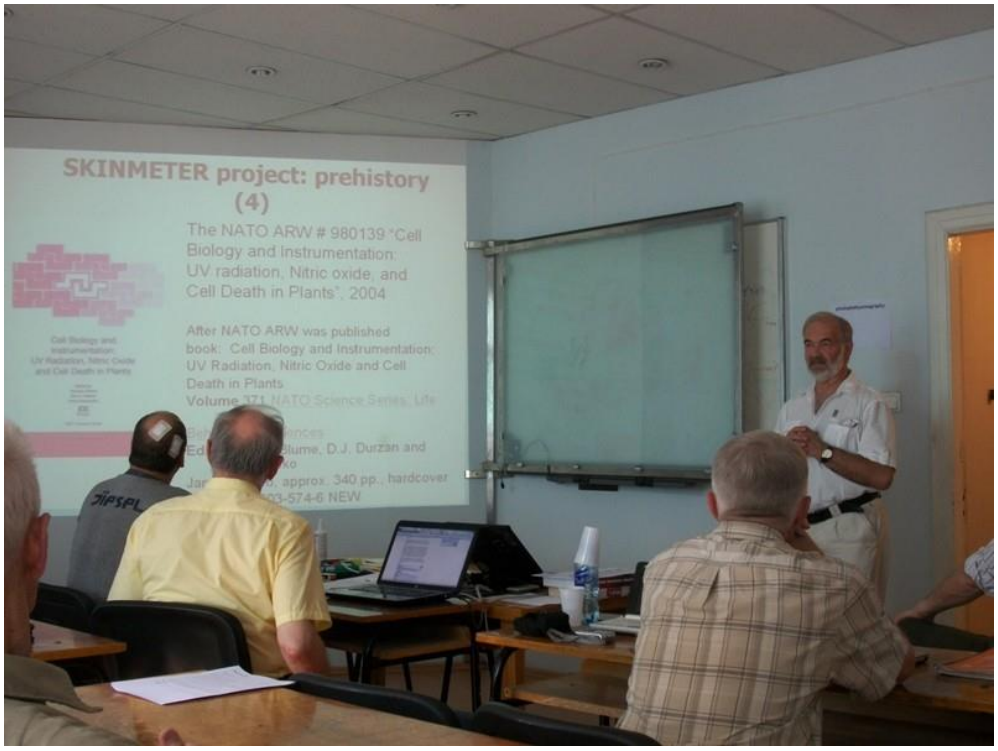
		- Satellite Spin determinations” Dr. Ludwig Grunwaldt, Germany, “Activities of GFZ Potsdam”.
58	30.07.2014.	Dr. Amara Graps, FOTONIKA-LV, Dr. Normumds Jakobsons, Ventspils Radioastronomy Center, PhD student Karina Skirmante, „Potential of Ventspils Radioastronomy facilities for research training”
59	08.08.2014.	J.Upatnieks. “Presentation on the personal history of the development of holography. Discussion” (video on FOTONIKA-LV youtube channel: http://youtu.be/gojatjqa85E?list=UUevoPT9W4YjpHlLSeM_D71Q)
60	08.08.2014.	Dr. P. S. Smertenko, Dr. V.V.Naumov, Institute for Fundamental Problems of High Tehnology, Kyiv, Ukraine “Eventual Proposal to HORIZON 2020 calls :“Skin Measurement Device for Health Care, Cosmetology and Dermatology”” (http://youtu.be/TIgblhlb9j8?list=UUevoPT9W4YjpHlLSeM_D71Q)
61	15.08.2014.	P.Smertenko, V.Beldavs, “Technology commercialization and innovation ecosystem”
62	22.10.2014.	Contributors: Dr.Jorge del Pino. Dr.Ludwig Grunwald, Dr. Bülent Bayram, Dr. Mkhailo Medvedskyy , Dr.Maris Abele, Dr.Janis Balodis Dr. Ansis Zariņš, Dr. Augusts Rubans, Janis Vjaters, Elina Rutkovska, Andris Treijs, “Advances satellite ranging technologies. Discussion”
63	24.10.2014.	Dr. A.Saxena, “Research of molecular clusters”
64	11.11.2014.	Dr. Aden Hodzic, Scientific Industrial Laison Officer , Central European Researsh Infrastructure, Consortium (CERIC) with Headqurter at Synchrotron Elettra, (Italy), “The Project 'CERIC-ERIC' 'Scientific Applications and Technology Transfer””
65	19.11.2014.	A.Atvars. “Report on the conference "The Next Giant Leap: Leveraging Lunar Assets for sustainable pathways to Space", Hawaii, USA,9.-13.11.2014”, http://2014giantleap.aerospacehawaii.info/; V.Beldavs, “International Lunar Decade”
66	21.11.2014.	Kalvis Salmiņš, Jorge Del Pino. “Report on the conference "19th International Workshop on Laser Ranging: Remembering the past and Planning for Future"”.
67	28.11.2014.	Dr. Gunars Silabriedis and others, “About scientific projects of Ministry of Defence of Latvia, projects of NATO and USA NAVY”
68	12.12.2014.	Prof. Dr. Kerim Allahverdi, TUBITAK (Turkish Scientific and Technological Research Council), MRC (Marmara Research Centre), Leader of the Lasers and Laser Technologies Lab., “Space Technologies Research Institute of TUBITAK”
69	30.12.2014.	Prof. Jumisree Sarmah Pathak, Indian Institute of Teacher Education, Grandhinagar, Gujarat, India, „Spectroscopic studies of spices, nanomaterials and clusters”
70	13.01.2015.	Dr.Irina Lyubych, Serhii Horelnykov, Vitaly Zhaborovsky "Changes in SLR system LS-105 calibration system" "PMT H6780-20 characteristics currently in use at SLR system Riga".

71	16.01.2015.	Dr.Jānis Rupkus, „Lielu investīciju tehnoloģisku projektu iespējas un realizācijas problēmas Latvijā” “Large investments in technology projects in Latvia: opportunities and problems”
72	20.01.2015.	Asparuh Markovski. Training seminar on Introduction to Matlab.
73	21.01.2015.	Dr.Natalia Naumova “Study of Transmembrane Ca2+ Transport in Mitochondria of Smooth Muscle Cells by Confocal Microscopy and Flow Cytometry using Potential- and Ca2+- Sensitive Fluorescent Biomarkers”

51th Colloquiua. Presenter - Dr. Arvind Saxena, India

Colloquia. Presenter – V.Beldavs.

59th Colloquia. Presenter – J.Uptanieks, Latvia, USA.



60th Colloquiua. Presenter – P.Smetrenko, Ukraine.