Project: FOTONIKA-LV

Unlocking and Boosting Research Potential for Photonics in Latvia – Towards Effective Integration in the European Research Area

Grant agreement no: 285912

Report on 2 International Conferences, Exhibition and Research Course

WP4. Knowledge Transfer and Training: Organisation of Workshops, Conferences and Research Courses

Deliverable Number: D4.12

Public

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0.4	**19 January 2015**	**S.Smalina**
0.5	**26 January 2015**	**A.Ubelis**
1.0	**30 January 2015**	**D.Berzina**

Change History

Version 0.1 – Input for Conference "Biophotonics – Riga 2013"

Version 0.2 – Input for Conference "NOCTURNAL – Riga 2014"

Version 0.3 – Draft Deliverable

Version 0.4 – approval by Project Manager

Version 0.5 – approval by Project Co-ordinator

Version 1.0 – final release

Table of Contents

1. Introduction

The mission of the FOTONIKA-LV is to become a leader in photonics innovation in Latvia and among the ones more visible in Europe by:

- recruiting outstanding people;
- arranging facilities to enable innovation;
- following IPR policies that stimulate innovation;
- acting in close ties with industry in Latvia;
- establishing partnerships with research actors on global scale;
- expressing readiness to work with industry globally.

Therefore the Association FOTONIKA-LV at the University of Latvia has taken a challenge to lead the photonics sector in Latvia and has organised series of international events in the field: research course for young scientists + conference + exhibition for high-tech SMEs – Photonics technologies & Smart manufacturing technologies (both in 2012), Biophotonics in 2013 and Remote Sensing/Laser Ranging in 2014.

Organisation of conferences, as a tool for facilitating the development and transfer of knowledge in photonics at national and international level, raising publicity and visibility of FOTONIKA-LV researchers community and becoming a recognised partner in the European Research Area are a part of the Work Package 4 "Knowledge Transfer and Training: Organisation of Workshops, Conferences and Research Courses" within FOTONIKA-LV project in particular, Tasks 4.2 - 4.5.

The implementation of Tasks 4.2 and 4.5 has been accomplished within the first reporting period and is presented in the Deliverable D4-11.

Task 4.4 "Organisation of the 1st International Conference "Bio-Photonics, Riga 2013", exhibition for high-tech SMEs - "Bio-Photonics technologies in Baltic See region - 2013" and Research training course "Bio-Photonics, RIGA 2013" for young researchers", August 2013 and Task 4.4 "Organisation of the 1st International Conference "Remote Sensing in Night Time Atmosphere and Night Time Photochemistry – Riga 2014" and linked research training course for young researchers", 2014 were implemented during the second part of the project in 2013-2014.

The goal for organising of the two conferences differs:

- ***Biophotonics - Riga 2013*** aimed at raising awareness of the RTD community in three Baltic countries in Bio-Photonics;
- ***NOCTURNAL - Riga 2014*** aimed to cover the topics where researchers in Riga and colleagues recruited by the project demonstrate unique leadership and promising findings expected to mark new technology breakthrough in remote sensing.

During the conferences round table discussions were planned to assess the success of the conference and set-up future plans for the development of the biophotonics, remote sensing technologies and research on problems of nocturnal atmosphere in Latvia, Europe and beyond.

2. Background information

2.1. International Conference, Exhibition for SMEs, Research-training course "BioPhotonics - Riga 2013"

Biophotonics has traditions in Riga since 1995. The University of Latvia currently participates as a partner at several international biophotonics activities (i.e. FP7 ERAnet BiophotonicsPlus, Biophotonics4Life Worldwide Consortium, Photonics4LIFE Innovation Forum). The project FOTONIKA-LV facilitates further progress in this challenging interdisciplinary R&D&I field.

In order to improve the conception of the event, the title was simplified "Biophotonics - Riga 2013" and associated research training course and exhibition "Biophotonic Technologies - Baltics 2013".

The goals of the Training course - Conference - Exhibition were to:

- start with Research-training course for young researchers on Biophotonic environmental and medical sensors and underpin challenging problems of biophotonics;
- continue with the conference discussing the challenging problems of biophotonics;
- run an exhibition for high-tech SMEs from Baltic countries in parallel to the conference, and
- finish on Biophotonics Round Table discussing the growing role of Biphotonics technologies and promoting the integration of researchers from various sectors into biophotonics community.

2.2. International Conference, Research Training Course "Remote Sensing in Night Time Atmosphere and Night Time Photochemistry – Riga 2014"

Riga has deeply-rooted traditions in astronomy, space research and space related technologies dating back to at least 1850. The rocketry pioneer Friedrich Zander (1887-1933) got his education and career start in Riga. The first satellite observatory in Europe was opened in Riga in 1957. Today, satellite ranging stations built in Riga are exploited in many places around the globe. The Fundamental Geodynamics Observatory at the Institute of Astronomy of the Association FOTONIKA-LV hosts one of the more advanced SLR stations - International Laser ranging Service (ILRS), network of Operational Stations, Identification Table, http://ilrs.gsfc.nasa.gov/network/stations/active/index.html. SLR station (*ILRS code name 1884 Riga*) is capable of performing day and night observations and measuring distances to the satellites in the range from 400 to 28 000 km with single shot accuracy around few cm.

Considering the new research links created in 2011-2014 by the projects implemented at the University of Latvia (specially by the Association FOTONIKA-LV), the title and the content of the conference has been slightly changed to "Nocturnal Atmosphere, Remote Sensing and Laser Ranging" and Research training course "Adventure of Nocturnal atmosphere: From Earth to Night Sky - Riga 2014" or shortly: NOCTURNAL - Riga 2014. The FP7 project "Nocturnal Atmosphere", FP7-PEOPLE-2011-IRSES, GA 294949 (01.02.2013-31.01.2017), titled "Secondary photochemical reactions and technologies for active remote sensing of nocturnal atmosphere" complementary contributed to the project inviting more participants in training course and more lecturers as well.

Unlike the previous ones, this conference was not accompanied by the Exhibition, but was linked to the International Day of Photonics; hence the initially planned dates were changed and the Conference was held in October, 2014.

The main topics of the conference were planned:

- Advances in Photochemistry of the Nocturnal Atmosphere;
- Advances in Remote Sensing;
- Challenges in Satellite Laser Ranging Technologies;
- Geodynamics, Geodesy, and Advances in Astronomy.

For insuring deeper synergies and higher outcome for the project, activities of WP1 and WP4 were combined: secondment of highly professional researchers/tutors form strategic partner institutions was arranged for the timing of the conference to involve them as key-note speakers for the conference and lecturers for the research-training courses.

3. International Conference "BioPhotonics -Riga 2013"; Exhibition for "high-tech" SMEs "BioPhotonics technologies in Baltic See region-2013"; Research course "BioPhotonics -Riga 2013" for young researchers – "Biohotonics -Riga 2013" or "BPR 2013"

3.1. Organisation and target audience

This conference was planned long in-advance and informally announced on earlier events during 2012 (in Europe and beyond) to gather broad representation of participants.

The conference web site was launched and linked to the FOTONIKA-LV project: www.lu.lv/fotonika-lv/implementedprojects/regpot-2011-1/knowledge-transfer-and-training/biophotonics-riga-2013. For ease of use – a shortcut to the web-page was established: www.lu.lv/bpr2013.

Three calls for participants (including support for young researchers and SMEs) were disseminated via several mailing lists and published on the web (Annex 1.1 – the Conference Flyer).

An open Call for Abstracts by young scientists was launched to facilitate participation of young researchers; the best ones were granted participation expenses covering travel, accommodation and subsistence. Selection was made by the Scientific Committee on the basis of the scientific profile of candidates, in accordance with principles of equal opportunities among candidates.

3.2. Training course – Conference – Exhibition Event

The Conference was organised in several blocks: plenaries, poster sessions, parallel sessions and round table discussion (Annex 2.1 – the Conference Agenda). The Conference had also a Social programme: Old City tour, Gala Night of the training course and Excursion to Ethnographic Open-Air Museum of Latvia. It started with 3-day thematic Training Course:

- 26 August - Biophotonic Environmental Sensors;
- 27 August - Biophotonic Medical Sensors;
- 28 August - Challenging Problems of Biophotonics

and similar set of topics for the Conference organised as plenary lectures in the morning part; yet in the afternoon young researchers were offered the floor for presenting their first scientific results:

- 29 August - Challenging Problems of Biophotonics; including also a Poster section on all the topics for young researchers;
- 30 August - Biophotonic Medical Sensors;
- 31 August - Biophotonic Environmental Sensors.

The Conference ended on Round-table discussion on Challenging Problems of Biophotonics.

Prior the event - the Conference Abstracts were published (Annex 4 – Cover Sheet of the Abstract book; Content of the Abstract book submitted separately).

The Conference sponsors established prizes:

- OSA – Optical society: a prize for the best poster;
- SPIE – International society for Optical engineering: a voucher for 3 free further publications in SPIE proceedings.

Conference Papers were published in Proceedings of SPIE (http://proceedings.spiedigitallibrary.org/ConferenceProceedings.aspx), Series "Progress in Biomedical Optics and Imaging", especially devoted to the Conference Biophotonics-Riga 2013 Volume 9032, (http://proceedings.spiedigitallibrary.org/volume.aspx?volumeid=16237): Editors - Janis Spigulis & Ilona Kuzmina, Published on 18 November 2013, 240 pages; 35 papers.

3.3. Outcomes

The Conference "Biophotonics - Riga 2013" discussed substantial tendencies towards future research and confirmed the growing role of Biphotonics technologies. The hottest topics of the field were reviewed by internationally recognised experts: Juergen Popp (Friedrich Schiller University Jena), David Sampson (University of Western Australia), Valery Tuchin (University of Oulu), Stefan Andersson-Engels (Lund University, Medical Laser Centre), Sune Svanberg (Lund University, Lund Laser Center; also – university of Latvia, Honorary Professor), etc.

The conference brought together 95 participants from 17 countries: established researchers and people from the private and public arena related to decisions of science policy (Annex 3.1 – List of Participants). Apart from representatives of the Baltic countries (Estonia, Latvia and Lithuania), participants from other parts of Europe and beyond (Australia, Belarus, Bulgaria, France, Germany, Greece, New Zealand, Poland, Portugal, Russia, Scotland, Slovenia, Sweden, Ukraine) were involved.

Nine stands representing SME achievements in photonics sector in the three Baltic countries were accompanied by the conference sponsor – the International society for optics and photonics stand:

- IKO Science – Estonia;
- MC Professional Ltd. – Estonia;
- Baltic Embedded – Latvia;
- Biophotonics Laboratory, IASP LU: 2 stands – Latvia;
- BurgerMetrics – Latvia;
- Optilas Ltd. – Latvia;
- Z-Light Ltd. – Latvia;
- Ekspla – Lithuania;
- SPIE – the International society for optics and photonics.

The results of the Conference were reported on the 72nd Scientific Conference of the University of Latvia (*Projekta „FOTONIKA-LV – FP7-REGPOT-CT-2011-285912" zinātniskie sasniegumi otrajā gadā*): www.lu.lv/kalendars/diena/notikums/?tx_cal_controller%5Bview%5D=event&tx_cal_controller%5Bcategory%5D%5B0%5D=53&tx_cal_controller%5Bstart_day%5D=2014-01-01&tx_cal_controller%5Bend_day%5D=2014-12-31&tx_cal_controller%5Btype%5D=tx_cal_phpicalendar&tx_cal_controller%5Buid%5D=10456&tx_cal_controller%5Byear%5D=2014&tx_cal_controller%5Bmonth%5D=02&tx_cal_controller%5Bday%5D=07&cHash=1dc56e7cac6823f12b17cc7c45b258ff.

Students' feedback collected and analysed confirm the success of 3-day training course (Annex 5 – Students' feedback) – participants expressed interest to meet again and make Biophotonics-Riga as a regular event.

The Round table discussion concluded that the reviewed knowledge has to be more disseminated, especially to young researchers and companies in the Baltic countries by help of Baltic Photonics Cluster.

4. International Conference "Nocturnal Atmosphere, Remote Sensing and Laser Ranging" and Research training course "Adventure of Nocturnal Atmosphere: From Earth to Night Sky - Riga 2014" – NOCTURNAL - Riga 2014

4.1. Organisation and target audience

The mission of the International Conference and Research training course "NOCTURNAL - Riga 2014" was to bring together researchers from West (EU) and East (Turkey, Armenia, Belarus, Russia, Ukraine) in finding topics of common interest for further research on remote sensing in nocturnal atmosphere and in geodynamics. It was held in Riga, Latvia 16-22 October 2014.

The Conference web-page, linked to the FOTONIKA-LV project has been designed: www.lu.lv/fotonika-lv/implementedprojects/regpot-2011-1/knowledge-transfer-and-training/nocturnal. For ease of use – a shortcut to the web-page was established: www.lu.lv/fotonika-lv/NOCTURNAL2014.

Three calls for participants were disseminated separately for researchers (including young scientists) and politicians via several mailing lists and published on the web (Annex 1.2 – the Conference Flyer).

An open Call for Abstracts by young scientists was launched to facilitate participation of young researchers both for the Research-training course and the Conference (www.lu.lv/fotonika-lv/implementedprojects/regpot-2011-1/knowledge-transfer-and-training/photochemistry-of-nocturnal-atmosphere-remote-sensing-satellite-laser-ranging-and-geodynamics-riga-2014/call-for-young-researchers-and-students); the best ones were granted participation expenses covering travel, accommodation and subsistence. The precondition for receiving the support was at least poster report. Selection was made by the Scientific Program Committee on the basis of the scientific profile of candidates in accordance with principles of equal opportunities among the candidates.

Day of Photonics is an annual event that promotes "photonics" towards the general public. Companies, research organisations and organisations involved in photonics reach out to their communities to raise awareness about what is photonics and why it is important. The Association FOTONIKA-LV at the University of Latvia is a member of the European Photonics Industry Consortium (EPIC, http://epic-assoc.com) and supported the EPIC initiative to organise the Photonics-open-day on October 21 (https://fotonikalv.wordpress.com/past-events). All Conference/Research-training course participants were invited to participate for the activities of the International day of Photonics Latvian events which was organised as a preparatory awareness-raising activity of the International Year of Light 2015.

4.2. Research course and the Conference Event

The Conference was organised in several blocks: plenaries, poster session and a round table discussion. It started on 16 October afternoon providing an opportunity for participants to save a night and arrive in Riga only on the starting day of the conference.

The Research-training course was organised according to the following main blocks: Advances in Remote Sensing & Challenging Problems of Satellite Laser Ranging Technologies (both 20 October), UAV Sensors & Day of Photonics (both 21 October), Geodynamics, Geodesy and

Advances in Astronomy (22 October). Established researchers from Cuba, Finland, Germany, Latvia, Russia, Sweden, Turkey and Ukraine presented up-to-date research findings over the 3+3 days of conference+training (Annex 2.2 – the Conference Agenda).

Sunday, 19 October was free for Research course participants/lecturers.

The Research-training course finished on a Round Table discussion (22 October) which brought together leading scientists from Europe and EU neighbourhood countries to discuss current status and future challenges of research on advanced Nocturnal atmosphere problems and opportunities within the EU Framework Programme HORIZON 2020. The round table discussion "Nocturnal Atmosphere – challenges for research on photochemistry and technology development" was chaired by the coordinator of the EU FP7 REGPOT project FOTONIKA-LV and above referred FP7-MCA_IRSES project. He shortly illustrated the current "state-of-the-art" and contribution of the Association FOTONIKA-LV for the University of Latvia research and project development activities. Dr. Janis Pukite (Max Planck Institute for Chemistry) remarked that advances in day time passive satellite remote sensing technologies have sophisticated tools for retrieval data on the concentrations in atmosphere vertical columns from troposphere till stratosphere using scattering of the Sun light, but at night time that is impossible. Active remote sensing technologies could be solution. Dr. Mykhailo Medvedskyy from Main Astronomical Observatory of NAS of the Ukraine and Dr. Maris Abele from the Institute of Astronomy of Association FOTONIKA-LV reminded about progress in the development of combined Laser & white light beam telescope devise and an opportunity to use satellites with relevant reflectors to get signal from the reflected white light beam back to the detectors on the Earth so avoiding the positioning of specific instrumentation on satellite platforms which is costly and time consuming. Dr. Jorge Del Pino (Cuban Satellite Tracking Station, CENAIS), Dr. Ludwig Grunwaldt (GFZ German Research Centre for Geosciences) and Janis Vjaters (Hee Photonic Labs Ltd.) contributed to the discussion with practical details.

Complementary event (World-wide International day of Photonics) focused on public outreach promoting photonics in general and activities in Latvia in particular.

4.3. Outcomes

The Conference "NOCTURNAL - Riga 2014" discussed substantial tendencies towards future research and confirmed the growing need in sophisticated use of SLR technologies in geodynamics, active remote sensing in nocturnal atmosphere and strong demand to tackle space debris and dangerous asteroids problems.

The conference brought together 59 participants from 16 countries: established researchers and people from the private arena actively performing in the field (Annex 3.2 – List of Participants). Apart from the Latvian representatives, participants from other European countries and beyond (Armenia, Belarus, Bulgaria, Cuba, Estonia, Finland, Germany, India, Latvia, Lithuania, Poland, Russia, Sweden, Switzerland, Turkey, Ukraine) shared experience and discussed urgent issues of Nocturnal Atmosphere, Remote Sensing and Laser Ranging developments thus contributing to the Conference by:

- indicating the main technologies and sectors of photonics having crucial impact for the development of Europe's leading role in research and innovation in Satellite laser ranging, geoinformation and geodynamics.
- participants' expertise in research training, basic research and applied research contributing to new advancements in the domain.

Over the three Conference days 17 Plenary lectures were delivered on five plenaries.

12 posters of young scientists on the Conference topics were exhibited on 18 October during a joint Poster Session for students/ young researchers.

5. Conclusions

All the four planned conferences within the FOTONIKA-LV project have been accomplished by Association FOTONIKA-LV - joint contribution of all the three research institutes at the University of Latvia (Institute of Atomic Physics and Spectroscopy, Institute of Astronomy and Institute of Geodesy and Geoinformation).

It could be confirmed with great satisfaction – the mission of organising the conferences (and related actions) has been achieved: the events (conferences / research-training courses / exhibitions and side-events) brought together recognised experts in the field (photonics technologies, smart manufacturing technologies, biophotonics, remote sensing and laser technologies), entrepreneurs and younger generation (students and young researchers) to share the experience and discuss the challenging problems in the field by transferring knowledge form established scientists to young researchers and setting up the research and innovation scene for development of photonics sector in Latvia (and beyond). All the interested young researchers were granted free access to plenaries, parallel sessions, exhibitions and round-table discussions hence increasing the participation and involvement of next generation in the up-to-date research achievements. The leading-motive for the Conferences was: keeping of high level academic discussion from one side and opportunity for young researchers to take part in the conference for presenting their own results from the other side. Worth mentioning: in 2013 the University of Latvia has organised in total 218 conferences, seminars, scientific discussions, summer schools etc. Among the five most significant conferences also "Biophotonics – Riga 2013" is listed (https://dspace.lu.lv/dspace/bitstream/handle/7/2547/gada_parskats_2013_internetam.pdf?sequence=1&isAllowed=y, page 12).

Many participants have expressed interest to meet again, so would be useful to make any of the conferences as a regular event held in Riga or some other Baltic country.

The Conferences contributed to:

- research training in general and particularly for young researchers;
- exchange of knowledge and testing of recent research result and advanced ideas;
- emerging of consortia for new project development.

Photonics research in Latvia certainly has benefited from the networking activities offered by the conferences: established scientists from the leading EU (and beyond: Switzerland, Australia, Canada, New-Zealand, USA, etc.) research centres attending the conferences not only shared experience with the conference participants but also strengthened existing and established new opportunities for qualitative research for the 'next stage in the development of the association' towards - the National Science Centre FOTONIKA-LV.

Summary on the conferences organised will be reported at 73rd Scientific Conference of the University of Latvia: https://fotonikalv.files.wordpress.com/2014/12/programm_06-02-2015b.pdf in February 2015.

Extension of the three project WPs till the end of April 2015 allows to organise FOTONIKA-LV Conference "Achievements and Future Prospects" – the additional summarising conference will be organised in April 23-24, 2015 targeting researchers, entrepreneurs and politicians to discuss the current challenges and capacities of the FOTONIKA-LV researchers' community in the frame of national and even Pan-Baltic smart specialisation: Photonics, Quantum Sciences and Space Sciences and Related Technologies.

Annexes

Annex 1: Conference Leaflet

1.1. BIOPHOTPNICS - RIGA 2013

The venue

Riga (founded in 1201) – the capital of Latvia, cultural and scientific centre of the Baltics, famous with its Art Nouveau architecture, medieval Old City and plenty of parks.

University of Latvia (www.lu.lv) with its 13 faculties and more than 20 research institutes is always open to international collaboration, focusing on improved quality of education and research.

Biophotonics has traditions in Riga since 1995. University of Latvia now participates as a partner at several international biophotonics activities (i.e. FP7 ERAnet BiophotonicsPlus, Biophotonics4Life Worldwide Consortium, Photonics4LIFE Innovation Forum). The recently started FP7 REGPOT project FOTONIKA-LV will support the conference to facilitate further progress in this challenging interdisciplinary R&D field.

Scientific Committee

Prof. Janis Spigulis, Latvia - Chair
Dr. Janis Alnis, Latvia
Dr. Aigars Ekers, Latvia
Dr. Ricardas Rotomskis, Lithuania
Prof. Alexey Priezzhev, Russia
Prof. Goran Salerud, Sweden
Prof. Katarina Svanberg, Sweden
Dr. Arnolds Ubelis, Latvia
Dr. Roman Viter, Ukraine

Local Organising Committee

Dr. Ilona Kuzmina – Co-Chair
Prof. Janis Spigulis – Co-Chair
Dr. Ojars Balcers
MSc. Dina Berzina
Msc. Dainis Jakovels
MSc. Natalija Lesina
Dr. Uldis Rubins
MSc. Inga Saknite
MSc. Inga Shirante

Final Call

2013

Biophotonics - Riga

1st International Conference

with associated research training course and exhibition

Biophotonic Technologies - Baltics 2013

26 – 31 August 2013
Riga, Latvia

The main topics:

- Challenging problems of biophotonics
- Biophotonic medical sensors
- Biophotonic environmental sensors

www.lu.lv/bpr2013

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UNIVERSITY OF LATVIA

European Commission

FOTONIKA-LV

Co-financed by EC FP7 project Nr. 285912 FOTONIKA-LV

Confirmed speakers at the conference and training course

✓	Prof. Stefan Andersson-Engels	Lund	Sweden
✓	Dr. Saulius Bagdonas	Vilnius	Lithuania
✓	Dr. Mikhael Bechelany	Montpellier	France
✓	Dr. Igor Meglinski	Otago	New Zealand
✓	Prof. Juergen Popp	Jena	Germany
✓	Prof. Alexander Prijezzhev	Moscow	Russia
✓	Prof. Ricardas Rotomskis	Vilnius	Lithuania
✓	Prof. Arunas Ramanavicius	Vilnius	Lithuania
✓	Prof. Goran Salerud	Linkoping	Sweden
✓	Prof. Nicolay Starodub	Kiev	Ukraine
✓	Prof. Katarina Svanberg	Lund	Sweden
✓	Prof. Sune Svanberg	Lund	Sweden
✓	Prof. Valery Tuchin	Saratov	Russia
✓	Prof. Karin Wardell	Linkoping	Sweden

Travel grants for young researchers

The organizers will support a limited number of young researchers to attend the training course and the conference (with poster reports). To apply, a candidate should submit a **250-word abstract until 30 April** and (if accepted) a support **application until 31 May 2013**. Poster acceptance notifications are expected by 20 May.

According to the FP7 Programme, **young researcher** is a person who undertakes research activities either on a professional basis or in the context of a PhD/Master/Diploma course or up to 6 years after PhD.

Exhibition

Biophotonic Technologies - Baltics 2013

Companies dealing with photonic technologies are welcomed to participate. No floor charges. A limited **support for high-tech SMEs from Estonia, Latvia and Lithuania** will be provided. For more details, please visit the conference website.

Please forward this Call to all your colleagues!

Schedule

Mon 26/08	Training course "Biophotonic environmental sensors"
Tue 27/08	Training course "Biophotonic medical sensors"
Wed 28/08	Training course "Challenging problems of biophotonics"
Thu 29/08	Conference session "Challenging problems of biophotonics" Exhibition
Fri 30/08	Conference session "Biophotonic medical sensors" Exhibition
Sat 31/08	Conference session "Biophotonic environmental sensors" Exhibition

Important Deadlines

30 April 2013	250-word abstract (oral and poster presentations expected)
31 May 2013	Applications for grants (young researchers and exhibitors)
31 May 2013	Early bird registration

Registration fees:	Early bird	After 31 May
Regular	200 EUR	300 EUR
Student	100 EUR	150 EUR

More information

Conference website: **www.lu.lv/bpr2013**

Contacts: **asi@lu.lv**

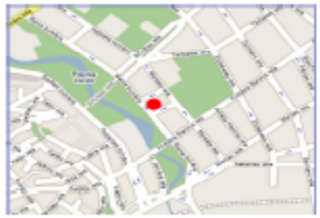
1.2. NOCTURNAL - RIGA 2014

Venue

Riga(founded in 1201) – the capital of Latvia, is the European Cultural Capital for 2014 (riga2014.org/eng), famous for its Art Nouveau architecture, medieval OldCity and extensive parks.

The Research Association FOTONIKA-LV (www.lu.lv/FOTONIKA-LV) formed in 2010 by the Institute of Atomic Physics and Spectroscopy, Institute of Astronomy and Institute of Geodesy and Geoinformatics at the University of Latvia is leading basic and applied research in the photonics domain in Latvia.

Riga has deeply-rooted traditions in astronomy and space researchdating back to at least 1850. The rocketry pioneer Friedrich Zander (1887 - 1933) got his education and career start in Riga. The first satellite observatory in Europe was opened in Riga in 1957. Today, satellite ranging stations built in Riga are exploited in many places around the globe.



Organising Committees

Scientific Program Committee

Dr. Annette Ladstätter-Weißenmayer
Dr. Amara LinnaGrapa
Dr. Maris Abele
Prof.DainisDravins
Dr. Jorge del Pino
Dr. LudwigGrunwaldt
Prof.VjacheslavKochelap
Prof.MarkkuPoutanen
Dr. Jānis Puķīte
Dr. Alfonso Saiz-Lopez
Dr. Arnolds Ubelis

Conference Local Organising Committee

ArnoldsUbelis – Chair
Dina Bērziņa – Head of Conference Secretariat
Inga Širante
AigarsApsītis
AigarsAtvars
VidvudsBeldavs
IlgmārsEglītis
KalvisSalmiņš
GunārsSilabriedis
MiķelisSvilans
Edgars Šmaliņš

Last Call for Participants

1st International Conference

Nocturnal Atmosphere, Remote Sensing and Laser Ranging:
NOCTURNAL - Riga 2014

16 – 18 October, 2014

Research Training Course for Young Researchers

Adventure of Nocturnal atmosphere:
From Earth to Night Sky- Riga 2014
(Advances in Remote Sensing, Satellite Laser Ranging and Geodynamics)

20 – 22 October, 2014

Riga, Latvia

Organised by the Research Association FOTONIKA-LV,
University of Latvia

Co-financed by the projects:

- EC FP7-REGPOT-2011-1, Project No.285912 FOTONIKA-LV
- EC FP7-PEOPLES-IRSES-2011, ProjectNo. 294949, NOCTURNAL ATMOSPHERE

FOTONIKA-LV
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Support available for Young Researchers and Students

To encourage young researcher participation in **both** the International Conference and Research Training Course, the Organising Committee is offering support for up to 30 young researchers who participate with a poster or a presentation at the conference.

To apply for the support, young researchers should submit a 1-page Abstract before 31 July 2014, indicating their desire for receiving support. Successful applicants will be notified of the acceptance of their abstract(s) and the amount of support awarded before 1 September 2014.

Please feel free to forward this Call to other colleagues.

According to the FP7 Programme, a **young researcher** is defined as a person who undertakes research activities either on a professional basis or in the context of a PhD/Master/Diploma course or up to 6 years after PhD.

Further info and inquiries: arnolds@latnet.lv or dinab@latnet.lv

The main topics:

- Advances in Photochemistry of the Nocturnal Atmosphere;
- Advances in Remote Sensing;
- ChallengesinSatellite Laser Ranging Technologies;
- Geodynamics, Geodesy, and Advances in Astronomy

Important Deadlines

Abstract (1-page for oral and poster presentations) – 30 September 2014

Award of support for travel, accommodation and subsistence (young researchers only)– 1 October 2014

Early Bird Registration before 1 September 2014–
Conference: 150€,
Conference + Training Course: 200 €

Registration fees

Conference: 200 €,
Conference + Training Course: 300 €,
Students (Conference + Training Course): 100 €

Conference website: www.lu.lv/fotonika-lv/NOCTURNAL2014

Annex 2: Agenda

2.1. BIOPHOTPNICS - RIGA 2013

Biophotonics – Riga 2013
1st International Conference

Programme
Training Course
Auditorium #13, Raina Blvd.19

Monday 26 August

08.30	Registration	
08.55	Opening of the Training course	
	Biophotonic Environmental Sensors	
09.00	Photometric Nanolabels for Biosensors and Bioassays	**M.Mak (SE)**
09.45	Actual Problems in Environmental Monitoring, Diagnostics and Agriculture: Role of Biosensors in Solving Modern Practice Tasks	**N.Starodub (UA**
10.30	*Coffee break*	**C.Nacke (EE)**
11.00	Industrial Approaches in Biosensors	
12.00	*Lunch break*	
13.30	Integration of Metal Oxide Nanotechnology for Sensor/Biosensor Applications	**M.Bechelany (FR)**
14.15	Introduction of IRSES/Metal Oxide Nanostructures for Sensors and Biosensors	**R.Viter (UA)**
15.00	*Coffee break*	
15.30	Confocal Microscopy for Biosensor Applications	**S.Balme (FR)**
16.15	Photoluminescence Spectroscopy of Photonic Semiconductor Materials as Optical Transducers for Biosensors	**V.Khranovskyy (SE)**
17.15	*Old City tour*	

Tuesday 27 August

	Biophotonic Medical Sensors	
09.00	Fluorescence Diagnostics in Medicine	**S.Andersson-Engels (SE)**
10.00	Multispectral Diffuse Reflectance Imaging of Superficial Tissue Methodology and Implementation	**G.Salerud (SE)**
11.00	*Coffee break*	
11.30	Light Scattering and Diffractometry Assessment of Biological Particles	**A.Priezzhev (RU)**
12.30	*Lunch break*	
13.30	Multidisciplinary Applications of Gas in Scattering Media Absorption Spectroscopy (GASMAS)	**S.Svanberg (SE)**
14.30	Spectroscopy of Biological Tissues In Vivo	**S.Bagdonas (LT)**

Wednesday 28 August

	Challenging Problems of Biophotonics	
09.00	Linear- and Non-linear Raman Microspectroscopy for Biomedical Analysis	**J.Popp (DE)**
10.00	Optical Coherence Tomography: How It Works, What It Can Do and Its Pitfalls	**D.Sampson (AUS)**
11.00	*Coffee break*	
11.30	Monte Carlo Modelling for the Needs of Biophotonics and Biomedical Optics	**I.Meglinski (NZ)**

12.30	Spectroscopy of Quantum Dot-biological Active Molecule Complex Formation	**R.Rotomskis (LT), R.Rudys (LT)**
13.30	*Lunch break*	
15.00	Tissue Optics and Optical Clearing	**V.Tuchin (RU)**
16.00	Publication Strategy for Young Researcher	**V.Khranovskyy (SE)**
17.00	***Conclusion of the training course and conference welcome***	

Conference

Main building of the University of Latvia, Raina Blvd.19

Thursday 29 August

08.00 Registration

08.55 Opening of the Conference

Challenging Problems of Biophotonics

09.00 – 13.30 ***Invited Presentations*** (Aula Magnum)

Session chair: G.Salerud

09.00	Raman Spectroscopy - an Essential Tool for Modern Biophotonic Research	**J.Popp (DE)**
09.40	Nanobiophotonics: Skin Protection, Diagnostics and Therapy	**V.Tuchin (RU)**
10.20	Biomedical Optics in Neurosurgery	**K.Wardell (SE)**
11.00	*Coffee break*	
	Opening of the exhibition *(next room to the Aula Magnum)*	
11.30	Polarization and Its Use for Cancer/Tissue Diagnostics	**I.Meglinski (NZ)**
12.10	Diagnostics and Treatment of Tumours Using Laser Techniques	**S.Svanberg (SE)**
12.50	Upconverting Nanoparticles as a Novel Contrast Agent in Fluorescence Diagnostics	**S.Andersson-Engels (SE)**
13.30	*Lunch break*	

14.30 – 16.00 ***Oral Presentations*** (Aula Magnum)

Session chair: R.Rotomskis

14.30	Fabrication and Characterization of a 3-D Non-Homogeneous Tissue Like Mouse Phantom for Optical Imaging	**S.Avtzi, A.Zacharopoulos, G.Zacharakis**
14.45	Modelling the Appearance of Chromatic Environment Using Hyperspectral Imaging	**S.Fomins, M.Ozolinsh**
15.00	Wide-bandwidth Photon Time of Flight Spectroscopy for Biomedical and Pharmaceutical Applications	**D.Khoptyar, A.A.Subash, M.Saleem, O.H.A.Nielsen, S.Andersson-Engels**
15.15	Application of Principal Component Analysis to Multispectral Imaging Data for Evaluation of Pigmented Skin Lesions	**D.Jakovels, I.Lihacova, I.Kuzmina, J.Spigulis**
15.30	Assessment of Hemoglobin Dynamics in Traumatic Bruises Using Temperature Depth Profiling	**L.Vidovic, M.Milanic, B.Majaron**
15.45	Accumulation of Photoluminescent MES-Capped Gold Nanoparticles in MiaPaCa-2 Cancer Cells	**M.Matulionyte, R.Marcinonyte, R. Rotomskis**
16.00	*Coffee break*	

16.30-18.00 ***Poster Session*** (Aula Magnum)

Friday 30 August

Biophotonic Medical Sensors

09.00 – 13.30 ***Invited Presentations*** (Auditorium #13)

Session chair: S.Andersson-Engels

09.00	A Microscope in Needle, and Its Applications in Medicine	**D.Sampson (AUS)**
09.40	Biophotonic Assessment of Skin Morphology, Perfusion and Oxygenation in Healthy Newborns and Premature Children	**G.Salerud (SE)**
10.20	Effect of Nanodiamonds on Blood Microrheology at *In Vitro* and *In Vivo* Administration	**A.Priezzhev (RU)**
11.00	*Coffee break*	
11.30	Optical Non-contact Skin Sensors	**J.Spigulis (LV)**

12.10	Up-converting Nanoparticles: Merits and Challenges in Cancer Diagnostic and Therapy	**R.Rotomskis (LT)**
11.50	Probing Molecules on Different Length Scales – From Environmental Monitoring to Biophotonics	**S.Svanberg (SE)**

13.30 *Lunch break*

14.30 – 17.30 ***Oral Presentations*** (Aula Magnum)

Session chair: R.Viter

14.30	Determination of the Maximal Safe Laser Radiant Exposure for Human Skin Using Pulsed Photothermal Radiometry	**B.Majaron, L.Vidovic, M.Milanic, W.Jia, J.S.Nelson**
14.45	Detection of Phase Transition of Adipose Tissue by Spectral OCT Refractive-Index Measuremen	**I.Yanina, N.A.Trunina, V.V.Tuchin**
15.00	Effect of Biological Environment on Luminescence of ZnCdS Nanoparticles	**E.Volkova, V.I.Kochubey, J.G.Konyukhova, A. A.Skaptsov**
15.15	Fluorescence Spectroscopy of Gastrointestinal Tumours – In Vitro Studies and In Vivo Clinical Applications	**L.Angelova, E.Borisova, Al.Zhelyazkova, M.Keremedchiev, B.Vladimirov**
15.30	Study of Blood Flow Behaviour in Microfluidics Device Using Spectral and Time Domain Optical Coherence Tomography	**D.Bukowska, M.Szkulmowski, M.Wojtkowski**
15.45	Change Dynamics of RBC Morphology after Injection Glucose for Diabetes by Diffraction Phase Microscope	**N.Talaykova, A.L.Kalyanov, V.V.Lychagov, V.P.Ryabukho, L.I.Malinova**

16.00 *Coffee break*

16.30 – 18.00 ***Oral Presentations*** (Aula Magnum)

Session chair: S.Bagdonas

16.30	Application of Colour Magnification Technique for Revealing Skin Microcirculation Changes under Regional Anaesthetic Input	**U.Rubins, J.Spigulis, A.Miscuks**
16.45	TiO2 Optical Sensor for Amino Acid Detection	**A.Tereshchenko, R.Viter, I.Konup, V.Smyntyna, S.Geveliuk, V.Ivanitsa**
17.00	Assessment of Conduit Artery Vasomotion Using Photoplethysmography	**K.Kanders, A.Grabovskis, Z.Marcinkevics, J.I.Aivars**
17.15	Hydrogen Peroxide and Glucose Biosensor Based on Photoluminescence Quenching of ZnO Nanoparticles	**D.Sodzel, V.Khranovskyy, E.Kolesneva, L.Dubovskaya, R.Yakimova**
17.30	Novel Combined Fluorescence/Reflectance Spectroscopy System for Guiding Brain Tumor Resections: Confirmation of Capability in Lab Experiments	**M.Mousavi**
17.45	Application of FLIM for Diagnostic Imaging of Sensitized Tissues	**R.Rudys, S.Bagdonas, G.Kirdaite, R.Rotomskis**

18.15 *Departure to Conference Dinner* (upon pre-paid invitations only) - *main entrance of the Raina Blvd.19 building*

Saturday 31 August

Biophotonic Environmental Sensors

09.00 – 13.30 ***Invited Presentations*** (Aula Magnum)

Session chair: A.Priezzhev

09.00	Spectrometry and Reflectometry of Biological Tissues for Diagnostic Purposes	**S.Bagdonas (LT)**
09.40	State of Art of Biosensors	**M.Mak (SE)**
10.20	Metal Oxide Nanostructures for Sensors and Biosensors	**R.Viter (UA)**

11.00 *Coffee break*

11.30	Confocal Microscopy for Biosensor Applications	**S.Balme (FR)**
12.10	Application of Zinc Oxide for Optical Biosensing Technologies	**V.Khranovskyy (SE)**
12.50	Optical Immune Biosensors Based on the SPR and TIRE: Problems and Perspectives of their Practical Application at the Registration of Some Biochemical Parameters	**N.Starodub (UA)**

13.30 Lunch break

15.00-16.00 ***Oral Presentations*** (Aula Magnum)

Session chair: D.Sampson

15.00	Near Real Time, Accurate, and Sensitive Microbiological Safety Monitoring Using an All-Fibre Spectroscopic Fluorescence System	**F.Vanholsbeeck, S.Swift, E.Bogomolny**
15.15	Express Control of Plants General State by Using the New Generation of the Instrumental Tools	**K.Shavanova, M.V.Taran, O.A.Marchenko, N.F.Starodub**
15.30	Structured Nano-Porous Silicon as Novel Transducer at Control of Mycotoxins in Environmental Objects	**N.Slyshyk, N.F.Starodub**
15.45	Effect of Solutions of Ferum and Zinc Nano-particles on the Plant Photosynthetic Activity	**R.Sonko, K.Lopatko, N.Starodub**
16.00	Closing remarks	

Exhibition
Biophotonic Technologies – Baltics 2013
(Auditorium #5 next to Aula Magnum, Raina Blvd.19)

Working hours:

29 August **11.00 – 18.00**

30 August **09.00 – 17.00**

31 August **09.00 – 15.00 (*optional*)**

Poster Session (Aula Magnum)

1. ***L.Asare.*** Signal Analysis of Multi-spectral Photoplethysmograph Biosensor
2. ***A.Bekina, V.Garancis, U.Rubin, E.Zaharans, J.Zaharans, L.Elste, J.Spigulis.*** Multimodal Device for Assessment of Skin Malformations
3. ***M.A.Bezuglyi, N.V.Bezuglaja.*** Ellipsoidal Reflectors in Biomedical Diagnostic
4. ***N.V.Bezuglaya, M.A.Bezuglyi.*** Spatial Photometry of Scattered Radiation by Biological Objects
5. ***I.Brice, I.Ferulova, J.Spigulis, J.Alnis.*** Towards Skin Fluorescence Diagnostics Using Femtosecond Frequency Comb Laser
6. ***M.Canpolat, T.Denkceken, A.Akman, E.Alpsoy, R.Tuncer, M.Akyuz, M. Baykara, S.Yucel, I.Bassorgun, M.A.Ciftcioglu, G.A.Gokhan, E.Inanc Gurer, E.Pestereli, S. Karaveli.*** Elastic Light Single-Scattering Spectroscopy for Detection of Dysplastic Tissues
7. ***B.Choiński.*** A Program to Assist in Recognition of Emotional States
8. ***M.O.Eriksson, Z.N.Urgessa, J.R.Botha, K.F.Karlsson, P.Bergman, P.O.Holtz.*** Optical Properties of ZnO Nanorods Grown by Chemical Bath Deposition
9. ***S.Fomins, I.Zakutajeva, M.Ozolinsh.*** Identification of Deposits on Contactlens Surface
10. ***R.Fuksis, M.Pudzs, R.Ruskuls, T.Eglitis, D.Barkans, M.Greitans.*** Bi-Spectral Palm Image Acquisition for Person Recognition
11. ***O.A.Izotova, A.L.Kalyanov, V.V.Lychagov.*** Correlation Mapping Method of OCT for Visualization Blood Vessels in Brain
12. ***D.Jakovels, A.Lihachev, J.Spigulis, S.Satkauskas, M.Tamosiunas, C.W.Lo, W.S.Chen.*** Assessment of Efficiencies of Electroporation and Sonoporation Methods by Fluorescence RGB Imaging Method
13. ***M.Jedrzejewska-Szczerska.*** Low-coherent Measurement Method of Human Blood Hematocrit.
14. ***K.Karpienko, M.S.Wrobel.*** Reliability and Validity of Optoelectronic Method for Biophotonical Measurements
15. ***A.Kuznetsov, A.Frorip, M.Ots-Rosenberg, A.Sunter.*** Blue Autofluorescence of Biological Fluids and Carbon Nanodots and Its Eventual Use in Clinical Praxis
16. ***A.Lihachev, I.Ferulova, J.Spigulis.*** Fluorescence Lifetime Spectroscopy: Potential for In-vivo Estimation of Skin Fluorophores Changes after Low Power Laser Treatment.
17. ***A.Lihachev, M.Tamosiunas, S.Satkauskas, J.Spigulis.*** Fluorescence Spectroscopy for Estimation of Anticancer Drug Sonodestruction in Cell Culture

18. ***I.Lihacova, A.Derjabo, A.Bekina, J.Zaharans, J.Spigulis.*** Development of Multispectral Imaging Method for Skin Pathology Diagnostics
19. ***M.Mantineo, A.M.Morgado, J.P.Pinheiro.*** Methodology for Assessment of Low Level Laser Therapy (LLLT) Irradiation Parameters in Muscle Inflammation Treatment
20. ***P.Naglic, L.Vidovic, M.Milanic, L.L. Randeberg, B.Majaron.*** Applicability of Diffusion Approximation in Analysis of Diffuse Reflectance Spectra from Healthy Human Skin
21. ***I.Saknite, E.Kviesis, J.Spigulis.*** Water Detection in Skin By Dual-Band Photodiodes
22. ***A.Shaharin, E.K.Svanberg, I.Ellerstrom, A.A.Subash, D.Khoptyar, S.Andersson-Engels, J.Akeson.*** Muscle Tissue Saturation in Humans Studied with Two Non-invasive Optical Techniques: a Comparative Study
23. ***L.Surazynski, Sz.Buda, M.Jedrzejewska-Szczerska.*** Biophotonic Sensor of Small Changes in the NaCl Concentration in Aqueous Solution
24. ***M.V.Taran, N.F.Starodub, A.M.Katsev, M.Guidotti, V.D.Khranovskyy, A.A.Babanin, M.D.Melnychuk.*** Biocidal Effects of Silver and Zink Oxide Nanoparticles on the Bioluminescent Bacteria
25. ***N.Lippok, S.Murdoch, F.Vanholsbeeck.*** Micron Scale Dispersion Mapping for Tissue Recognition in Optical Coherence Tomography
26. ***K.Volceka, L.Ozolina-Moll, E.Svampe, J.Zaharans, E.Zaharans, Z.Marcinkevics.*** A Development of Multispectral Approach to Evaluate the Cardiometabolic Risk Related to Alterations in Body Composition
27. ***Z.Xie, H.Xie, M.Mousavi, M.Brydegaard, J.Axelsson, S.Andersson-Engels.*** Novel Combined Fluorescence/Reflectance Spectroscopy System for Guiding Brain Tumor Resections – Hardware Considerations
28. ***A.Zhelyazkova, E.Borisova, L.Angelova, E.Pavlova, M.Keremedchiev.*** Excitation-Emission Matrices Measurements of Human Cutaneous Lesions – Tool for Fluorescence Origins Evaluation
29. ***V.Zubkovs, F.Jamme, S.Kascakova, F.Chiappini, F.Le Naour, M.Refregiers.*** Multimodal Imaging: Combined DUV, SHG and TPEF Microscopy

2.2. NOCTURNAL - RIGA 2014

1st International Conference

Nocturnal Atmosphere, Remote Sensing and Laser Ranging:
NOCTURNAL - Riga 2014

Agenda

University of Latvia, Raina blvd.19, Museum

Thursday, 16 October, 2014	
from 12.00	Registration
13.30	Welcome and Opening Remarks: *On behalf of Local and International Scientific Boards:* ***Arnolds Ubelis, Sune Svanberg*** *On behalf of National Authorities*: ***Dana Reizniece-Ozola***, Education, Culture and Science Committee, the Parliament of Latvia (Saeima) *On behalf of FOTONIKA-LV (FP7-REGPOT-2011-1 Project):* ***Andrejs Siliņš***, Chair of the Steering Committee
13.50	First Plenary Session: *Chair Arnolds Ūbelis* ***Invited keynote speakers***
13.50-14.25	Keynote Lecture *Optical probing of the atmosphere: atoms, molecules, particles, insects and birds* ***Sune Svanberg***, Lund University, Sweden
14.25-15.00	Keynote Lecture *The Future of Space related Technologies in the Africa Continent* ***Saleh Ahmed***, Space Technology and Science Group, Finland
15.00 -15.30	COFFEE BREAK(30 minutes)
15.30	Second plenary Session: *Chair Sune Svanberg* ***Advances in Photochemistry of Nocturnal Atmosphere***
15.30-16.00	*Kinetic processes in atmospheric and burning cluster plasma* ***Alexander Starik***, P.I.Baranov Central Institute of Aviation Motors, Russia
16.00-16.30	*Technology and equipment for evaluation of individual UV irradiation sensitivity of human skin* ***Petro Smertenko,*** *V.Naumov, V.Stepanov, V.Tochin, Yu.Myagchenko,* Institute of Fundamental Problems for High Technologiesion, Ukraine
16.30-17.00	*Progress in the Development of Satellite Laser Ranging Technologies for Application in Atmosphere Research* ***Elina Rutkovska,*** *M.Abele, J.Vjaters, A.Ubelis*, University of Latvia, Latvia
17.00	COME-TOGETHER

Friday, 17 October, 2014	
9.30	Third Plenary Session: *Chair Jānis Balodis* ***Advances in Remote Sensing***
9.30-10.00	*Tomographic profiling of atmospheric trace gas distributions: concept and simulation studies* ***Jānis Puķīte,****T.Wagner,* Max Planck Institute for Chemistry, Germany
10.00-10.30	*Shoreline Detection by Using Object-Oriented Approach: Case Study of Latvia-Riga* ***Bülent Bayram,*** *I.Janpaule, J.Kaminskis, P.Petersons, T.Ozkan, Y.C.Daşkın,* Yildiz Technical University, Turkey-Latvia
10.30-11.00	*Flight control and navigation for scalable and arbitrarily dimensioned UAVs and manned multicopters* ***Jan Zwiener****, R.Jäger,* Hochschule Karlsruhe - Technik und Wirtschaft, Germany
11.00-11.30	COFFEE BREAK(30 minutes)

11.30	Fourth Plenary Session: *Chair Kalvis Salmiņš* ***Challenging Problems of Satellite Laser Ranging Technologies***
11.30-12.00	*The SLR Space Segment – Recent and Future Developments* ***Ludwig Grunwaldt***, GFZ German Research Centre for Geosciences, Germany
12.00-12.30	*Upgrading the calibration chain at Riga SLR station* ***Jorge del Pino,*** *Kalvis Salmins, Aivis Meijers,* University of Latvia, Latvia
12.30-14.00	LUNCHBREAK (90 minutes)
14.00-14.30	*Electronic shutter for photomultiplier for SLR* ***Mykhailo Medvedskyy***, Main Astronomical Observatory of the National Academy of Sciences of Ukraine, Ukraine
14.30-15.00	*Reaching new limits of accuracy for distance measurements in satellite ranging by using technology of femtosecond frequency combs* ***Jānis Alnis***, University of Latvia, Latvia
15.00-15.30	COFFEE BREAK(30 minutes)
9.00 - 18.00 Meet the Author Hour: **15.30-17.30**	**Poster Session on Conference Topics** for students/ young researchers: *Chair Aigars Atvars*
17.30	SOCIAL EVENT

	Saturday, 18 October 2014
10.00	Fifth Plenary Session: *Chair Amara Graps* ***Geodynamics, Geodesy and Advances in Astronomy***
10.00-10.30	*Research activities at the Institute of Geodesy and Geoinformatics* ***Gunārs Silabriedis,*** *J.Balodis, A.Zariņš, A.Rubans, I.Janpaule, D.Haritonova, I.Lasmane,* University of Latvia, Latvia
10.30-11.00	*Reduction of data of digitized scans of astronomical plates from Schmidt telescope* ***Ilgmārs Eglītis****, Māra Eglīte,*University of Latvia, Latvia
11.00-11.30	*Project of multi-purpose optical tracking system* ***Ansis Zariņš,*** *I.Janpaule, D.Haritonova, A.Rubans,* University of Latvia, Latvia
11.30-12.00	COFFEE BREAK
12.00-12.30	*Spectroscopy of the extremely metal-poor red giant HE0056-3022* ***Atis Klavins,*** *A.Barzdis, O.Smirnova,* University of Latvia, Latvia
12.30-13.00	*Developing the Moon the next great step for mankind* ***Vidvuds Beldavs,*** NSC FOTONIKA-LV, Latvia
13.00-13.30	***Closing remarks***
Monday 20 October – Wednesday 22 October	Research Training Course for Young Researchers: *Moderator Dārta Ūbele* Adventure of Nocturnal Atmosphere: From Earth to Night Sky - Riga 2014 *(Advances in Remote Sensing, Satellite Laser Ranging and Geodynamics)*

Conference Local Organising Committee	*Scientific Program Committee*
Arnolds Ūbelis – Chair	Dr. Annette Ladstätter-Weißenmayer
Dina Bērziņa – Head of the Conference Secretariat	Dr. Amara Graps
Dārta Ūbele – Moderator of Training course for Young Researchers	Dr. Maris Abele
Vidvuds Beldavs	Prof. Dainis Dravins
Aigars Atvars	Dr. Jorge del Pino
Aigars Apsītis	Dr. Ludwig Grunwaldt
Ilgmārs Eglītis	Prof. Vjacheslav Kochelap
Kalvis Salmiņš	Prof. Markku Poutanen
Gunārs Silabriedis	Dr. Janis Pukite
Miķelis Svilans	Dr. Alexander Starik
Edgars Šmaliņš	Dr. Alfonso Saiz-Lopez
	Dr. Arnolds Ubelis

9.00 - 18.00 Meet the Author Hour: **15.30-17.30**	**Poster Session on Conference Topics** for students/ young researchers: *Chair Aigars Atvars* *3D Face Modelling from Multiple Images* – T.Ozkan, Y.C.Daskin, H.Kartal, E.M.Acar *A Concept of High-Accuracy DIY 3D Plasmotron Printer for Medical Applications* – Janis Blahins, Karlis Gross,Fedor Pliavaka, Sergey Gorbatov, Aigars Apsitis, Darta Ubele *Atmospheric photochemistry of carbon clusters* – A.K.Saxena, S.B.Banerjee, K.P.Subramanian, BhasBapat *Comparison of object-oriented based fuzzy and region growing methods for patient specific segmentation and 3D modelling of the heart chambers in CT images* – Serap Erk *Design of new Satellite Laser Ranging telescope for atmosphere research and monitoring* – Janis Vjaters, M.Abele, A.Treijs, E.Rutkovska, A.Ubelis *Determination of the spin period of Envisat by one SLR station* –ViktorPap *Differential Approach and Radiation Amplification Factor* – V.Naumov, P.Smertenko, V.Stepanov, G.Ol'khovik *Dust particle counting in ambient laboratory air* – Jāzeps Rutkis, Jānis Alnis *GNSS More Than a Tool for Navigation* – Inga Brice, JānisAlnis *High Accuracy Latvian Geoid Model for GNSS Measurements* – I.Janpaule, A.Zarins, A.Rubans, et al *High-Performance Timing System: Research, Development and Design* – Katrina Belasheva, V. Bespal'ko, E. Boole, V. Vedin, G. Ozolins *Laser beam autotracking system used for laser beam coaxial direction active stabilization in space between linked platforms* – M.Abele, J.Vjaters, E.Rutkovska, A.Treijs *Low-budget solutions in computerisation and exploitation of precious experimental equipment* – ArmanBzhishkyan, IljaFescenko, AigarsApsītis, Jānis Blahins *Optimisation of continuous wave excitation for ROFLEX-type iodine EDSLs sources* – A.Apsītis, U.Gross *Overview of advances in research in photochemistry of nocturnal atmosphere* – Kaspars Miculis *Photonics innovation ecosystem* – VidvudsBeldavs *Polish Scientific Satellites* – Tomasz Zawistowski *Project of multi-purpose optical tracking system: design and deformations of optical system's transmitting path* – D.Haritonova, A.Zarins, I.Janpaule, A.Rubans *Satellite Laser Ranging Station "Alchevsk"* – S.Horelnykov, K.Frolkov, I.Liubich, S.Melkov, V.Murga *The new edition of Borowiec SLR station* – PawelLejba, Tomasz Zawistowski *The project "Nocturnal Atmosphere", FP7-PEOPLE-2011-IRSES, G.A.294949* – Arnolds Ubelis *Use of fuzzy logic for vegetation mapping in landsat-8 satellite image* – K.Chabs, M.Cekule, B.Bayram, I.Janpaule

Training course for Young Researchers
Adventure of Nocturnal Atmosphere: From Earth to Night Sky - Riga 2014

(Advances in Remote Sensing, Satellite Laser Ranging and Geodynamics)

University of Latvia, Institute of Atomic Physics and Spectroscopy

Old Town, Šķūņu str.4, Auditorium

Monday, 20 October, 2014	
from 9.00	Registration
9.30	***Advances in Remote Sensing***
9.30-11.00	Basic Principles of LRR design ***Ludwig Grunwaldt****, GFZ German Research Centre for Geosciences, Germany*
11.30-13.00	Data extraction with similar techniques: satellite images and medical images ***Bülent Bayram****,* Yildiz Technical University, Turkey
13.00-14.30	LUNCHBREAK (90 minutes)
14.30	***Challenging Problems of Satellite Laser Ranging Technologies***
14.30-16.00	Problems of SLR System Calibration ***Ludwig Grunwaldt****, GFZ German Research Centre for Geosciences, Germany*
16.30-18.00	Modelling spectral band ranges of satellite images on blue band case with artificial neural networks& Face recognition analysis by developing feature operators in virtual reality ***Bülent Bayram****,* Yildiz Technical University, Turkey

Tuesday, 21 October, 2014	
9.30-11.00	UAV sensor fusion and control algorithms ***Jan Zwiener****,* Hochschule Karlsruhe - Technik und Wirtschaft, Germany
Continued as	***Day of Photonics - Ground floor***

Wednesday, 22 October, 2014	
10.00	***Geodynamics, Geodesy and Advances in Astronomy***
10.00-12.30	Colloquium "Advances in Satellite Ranging Technologies"
12.30	CLOSURE OF TRAINING COURSE FOR YOUNG RESEARCHERS
Tuesday, 21 October, 2014	
Day of Photonics - Šķūņu str.4, Ground floor	
DAY OF PHOTONICS is an annual event that promotes "photonics" towards the general public. Companies, research organisations, and organisations involved in photonics reach out to their communities to raise awareness about what is photonics and why it is important, and promote the role of their organisation in the photonics ecosystem and value chain. On 21 October 1983, the General Conference of Weights And Measures adopted the value of 299,792.458 km/s for the speed of light. At the occasion of the anniversary, over 100 activities will be organised over more than 20 countries in the world and encompass all kinds of demonstrations and discussions on the impact of photonics on our day-to-day life: day-of-photonics.org/activities-on-21-october-2014. The Association FOTONIKA-LV at the University of Latvia is a member of EPIC – The European Photonics Industry Consortium and is supporting the EPIC initiative to organise the Photonics-open-day on October 21.	
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
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
15.30-16.00	COFFEE BREAK (30 minutes)
16.00-17.00	*Science policy block:* Chances for pan-Baltic smart specialisation
17.00-18.00	Summary, action items

Annex 3:List of Participants

3.1. BIOPHOTPNICS - RIGA 2013

Biophotonics - Riga 2013
1st International Conference

Training Course, Conference, Exhibition
26-31 August 2013

NPK	Name	Family name		Country	Institution
1.	Jānis	Alnis	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
2.	Stefan	Andersson-Engels	*T*	*Sweden*	Department of Physics, Lund University
3.	Liliya	Angelova	*S*	*Bulgaria*	Institute of Electronics, Bulgarian Academy of Sciences
4.	Lasma	Asare	*S*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
5.	Mārcis	Auziņš	*O*	*Latvia*	University of Latvia
6.	Stella	Avtzi	*S*	*Greece*	Institute of Electronic Structure and Laser, Foundation for Research and Technology Hellas
7.	Saulius	Bagdonas	*T*	*Lithuania*	Biophotonics group of Laser Research Center, Faculty of Physics, Vilnius University
8.	Ojārs	Balcers	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
9.	Sebastien	Balme	*T*	*France*	Institut Européen des Membranes, UMR 5635, CNRS-ENSCM – Université Montpellier 2 Département Interface, Physico-chimie, Polymère – Université Montpellier 2 CC047 Montpellier
10.	Mikhael	Bechelany	*T*	*France*	Institut Européen des Membranes, UMR 5635, CNRS-ENSCM – Université Montpellier 2 Département Interface, Physico-chimie, Polymère – Université Montpellier 2 CC047 Montpellier
11.	Dina	Bērziņa	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
12.	Uldis	Bērziņš		*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
13.	Natalia	Bezuglaya	*S*	*Ukraine*	Kyiv Polytechnic Institute (Ukrainian National Technical University)
14.	Mikhail	Bezuglyi	*S*	*Ukraine*	Kyiv Polytechnic Institute (Ukrainian National Technical University)
15.	Kaspars	Blušs	*SME*	*Latvia*	Optilas Ltd.
16.	Inga	Brie		*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
17.	Danuta	Bukowska	*S*	*Poland*	Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University

NPK	***Name***	***Family name***		***Country***	***Institution***
18.	James	Burger	*SME*	*Latvia*	BurgerMetrics
19.	Murat	Canpolat		*Turkey*	Department of Biophysics, Faculty of Medicine, Akdeniz University
20.	Bartosz	Choinski		*Poland*	Polytechnical University of Gdańsk
21.	Natalja	Eikje	*SME*	*Estonia*	MCProfessional Ltd., Dept. of Skin Applications Technology: R&D
22.	Martin	Eriksson	*S*	*Sweden*	Department of Physics, Chemistry, and Biology, Linköping University
23.	Donāts	Erts		*Latvia*	University of Latvia Institute of Chemical Physics
24.	Maria	Ewerlöf		*Sweden*	Department of Biomedical Engineering, Linköping University
25.	Inesa	Ferulova	*S*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
26.	Sergejs	Fomins	*S*	*Latvia*	Institute of Solid State Physics
27.	Rihards	Fuksis		*Latvia*	Institute of Electronics and Computer Science
28.	Modris	Greitāns		*Latvia*	Institute of Electronics and Computer Science
29.	Olga	Izotova	*S*	*Russia*	Saratov State University
30.	Dainis	Jakovels	*S, O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
31.	Malgorzata	Jedrzejewska-Szczerska	*S*	*Poland*	Gdansk University of Technology, Department of Metrology and Optoelectronics
32.	Māris	Kalbergs	*SME*	*Latvia*	Baltic Embedded
33.	Karlis	Kanders	*S*	*Latvia*	Faculty of Biology, University of Latvia
34.	Katarzyna	Karpienko	*S*	*Poland*	Gdansk University of Technology, Department of Metrology and Optoelectronics
35.	Dmitry	Khoptyar		*Sweden*	Lund University
36.	Volodymyr	Khranovskyy	*T*	*Sweden*	Department of Physics, Chemistry and Biology (IFM), Linköping University
37.	Jānis	Kļaviņš		*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
38.	Jaroslav	Kodz	*SME*	*Lithuania*	
39.	Zane	Krūmiņa	*SME*	*Latvia*	
40.	Gunita	Kunakova		*Latvia*	
41.	Artur	Kuruetsov		*Estonia*	
42.	Ilona	Kuzmina	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
43.	Artur	Kuznetsov		*Estonia*	AS Ldiamon
44.	Edgars	Kviesis	*SME*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
45.	Natālija	Lesiņa	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
46.	Aleksejs	Lihachev	*S*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
47.	Ilze	Lihacova	*S*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
48.	Greg	MacDonald		*Scotland / Latvia*	
49.	Boris	Majaron		*Slovenia*	Jozef Stefan Institute
50.	Martin	Mak	*T*	*Sweden*	Department of Physics, Chemistry and Biology, Linköping University

NPK	Name	Family name		Country	Institution
51.	Matias	Mantineo	*S*	*Portugal*	Institute for Biomedical Research on Light and Image, Faculty of Medicine, University of Coimbra
52.	Olga	Marchenko		*Ukraine*	National University of Life and Environmental Sciences of Ukraine
53.	Zbigņevs	Marcinkevičs	*S*	*Latvia*	Faculty of Biology, University of Latvia
54.	Marija	Matulionyte	*S*	*Lithuania*	Institute of Oncology, Vilnius University, Vilnius
55.	Igor	Meglinski	*T*	*New Zealand*	Department of Physics, University of Otago
56.	Monirehalsadat	Mousavi	*S*	*Sweden*	Lund University
57.	Christoph	Nacke	*T, SME*	*Estonia*	AS Ldiamon
58.	Peter	Naglic	*S*	*Slovenia*	Faculty of Mathematics and Physics, University of Ljubljana
59.	Edgars	Nikitišs	*SME*	*Latvia*	Optilas Ltd.
60.	Juergen	Popp	*T*	*Germany*	Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich-Schiller University
61.	Alexander	Priezzhev	*T*	*Russia*	Moscow State University
62.	Ricardas	Rotomskis	*T*	*Lithuania*	Biophotonics group of Laser Research Center, Faculty of Physics, Vilnius University
63.	Oskars	Rubenis	*SME*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
64.	Uldis	Rubīns	*S, O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
65.	Romualdas	Rudys	*S*	*Lithuania*	Biophotonics group of Laser Research Center, Faculty of Physics, Vilnius University
66.	Inga	Saknīte	*S, O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
67.	Göran	Salerud	*T*	*Sweden*	Department of Biomedical Engineering, Linköping University
68.	David	Sampson	*T*	*Australia*	The University of Western Australia
69.	Alfi	Shaharin	*S*	*Sweden*	Department of Physics, Lund University
70.	Kateryna	Shavanova	*S*	*Ukraine*	National University of Life and Environmental Sciences of Ukraine
71.	Inga	Šīrante	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
72.	Nelya	Slyshyk	*S*	*Ukraine*	National University of Life and Environmental Sciences
73.	Dzmitry	Sodzel	*S*	*Belarus*	Institute of Biophysics and Cell Engineering of National Academy of Sciences of Belarus, Minsk, Belarus
74.	Roman	Sonko	*S*	*Ukraine*	National University of Life and Environmental Sciences
75.	Jānis	Spīgulis	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
76.	Māris	Stafeckis	*SME*	*Latvia*	Z-Light Ltd.
77.	Nikolay	Starodub	*T*	*Ukraine*	National University of Life and Environmental Sciences of Ukraine
78.	Lukasz	Surazynski	*S*	*Poland*	Department of Metrology and Optoelectronics, Gdansk University of Technology
79.	Sune	Svanberg	*T*	*Sweden*	Department of Physics, Lund University
80.	Natalya	Talaykova	*S*	*Russia*	Saratov State University

NPK	***Name***	***Family name***		***Country***	***Institution***
81.	Maryna	Taran	*S*	*Ukraine*	National University of Life and Environmental Sciences of Ukraine,
82.	Alla	Tereshchenko	*S*	*Ukraine*	Odesa National I. I. Mechnikov University
83.	Victor	Tomashov	*SME*	*Estonia*	IKO Science
84.	Valery	Tuchin	*T*	*Russia*	SaratovState University
85.	Arnolds	Ūbelis	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
86.	Liene	Ungure	*O*	*Latvia*	Institute of Atomic Physics and Spectroscopy, University of Latvia
87.	Frederique	Vanholsbeeck		*New Zealand*	Department of Physics, The University of Auckland
88.	Roman	Viter	*T*	*Ukraine*	Odessa National I.I.Mechnikov University, Odessa
89.	Elena	Volkova	*S*	*Russia*	Saratov State University
90.	Karin	Wårdell	*T*	*Sweden*	Department of Biomedical Engineering, Linköping University
91.	Irina	Yanina	*S*	*Russia*	Saratov State University
92.	Viesturs	Zeps	*SME*	*Latvia*	Baltic Embedded
93.	Aleksandra	Zhelyazkova	*S*	*Bulgaria*	Institute of Electronics, Bulgarian Academy of Sciences
94.	Aleksandra	Zienkienwicz		*Poland*	
95.	Vitālijs	Zubkovs		*Latvia*	University of Latvia, Institute of Chemical Physics

3.2. NOCTURNAL - RIGA 2014

1st International Conference

Nocturnal Atmosphere, Remote Sensing and Laser Ranging:

NOCTURNAL - Riga 2014

	Name		Organisation	Country
1.	Ābele	Māris	University of Latvia	Latvia
2.	Āboliņš	Jānis	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
3.	Alnis	Janis	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
4.	Andreeva	Christina	University of Latvia	Bulgaria
5.	Apsītis	Aigars	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
6.	Atvars	Aigars	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
7.	Balodis	Jānis	University of Latvia, Institute of Geodesy and Geoinformatics	Latvia
8.	Bayram	Bülent	Yildiz Technical University	Turkey
9.	Belasheva	Katrina	Eventech	Latvia
10.	Beldavs	Vidvuds	FOTONIKA-LV	Latvia
11.	Bērziņa	Dina	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
12.	Blahins	Jānis	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
13.	Brice	Inga	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
14.	Bzhishkyan	Arman	Institute of Atomic Physics and Spectroscopy, University of Latvia	Armenia
15.	Čabs	Kaspars	Riga Technical University, Institute of Information Technology	Latvia
16.	Cekule	Marita	University of Latvia, Institute of Geodesy and Geoinformatics	Latvia
17.	del Pino	Jorge	Cuban Satellite Tracking Station, CENAIS	Cuba
18.	Domanskii	Vladimir	Minsk University	Belarus
19.	Eglītis	Ilgmārs	University of Latvia, Institute of Astronomy	Latvia
20.	Erk	Serap	Istanbul Technical University, Dep. of Biomedical Engineering	Turkey
21.	Feščenko	Ilja	Fotonika-LV	Switzerland
22.	Grunwaldt	Ludwig	GFZ German Research Centre for Geosciences, Potsdam	Germany
23.	Haritonova	Diana	University of Latvia, Institute of Geodesy and Geoinformatics	Latvia

	Name		Organisation	Country
24.	Janpaule	Inese	University of Latvia, Institute of Geodesy and Geoinformatics	Latvia
25.	Kārkliņš	Edgars	RTU, DITF	Latvia
26.	Kraujiņš	Pēteris	TPU	Russia
27.	Lapienis	Saulius	Lithuanian Innovation Centre	Lithuania
28.	Lätt	Silver	Estonian Research Council	Estonia
29.	Lejba	Pawel	Space Research Center of PAS	Poland
30.	Markovski	Asparuh	University of Latvia	Bulgaria
31.	Medvedskyy	Mykhailo	Main astronomical observatory of NAS of Ukraine	Ukraine
32.	Mičulis	Kaspars	University of Latvia	Latvia
33.	Ozkan	Taskin	Yildiz Technical University, Institute of Natural and Applied Sciences	Turkey
34.	Pap	Viktor	Main astronomical observatory of NAS of Ukraine	Ukraine
35.	Prokopova	Anastasia	TPU	Russia
36.	Puķīte	Jānis	Max Planck Institute for Chemistry	Germany
37.	Pundure	Irena	University of Latvia, Institute of Astronomy	Latvia
38.	Rubans	Augusts	University of Latvia, Institute of Geodesy and Geoinformatics	Latvia
39.	Rutkis	Jazeps	University of Latvia	Latvia
40.	Rutkovska	Elīna	University of Latvia	Latvia
41.	Saleh	Ahmed	Space Technology and Science Group	Finland
42.	Salmiņš	Kalvis	University of Latvia	Latvia
43.	Saxena	Arvind	Institute of Atomic Physics and Spectroscopy, University of Latvia	India
44.	Silabriedis	Gunars	Institute of Geodesy and Geoinformatics, University of Latvia	Latvia
45.	Širmane	Liana	EuroLCDs	Latvia
46.	Šmaliņa	Sandra	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
47.	Smertenko	Petro	Institute of Fundamental Problems for High Technologies, Institute of Semiconductor Physics National Academy of Sciences of Ukraine	Ukraine
48.	Starik	Alexander	P.I.Baranov Central Institute of Aviation Motors	Russia
49.	Stolz	Maria		Germany
50.	Svanberg	Sune	Lund University, Department of Physics	Sweden
51.	Treijs	Andris	HEE Photonic Labs	Latvia
52.	Ūbele	Dārta	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
53.	Ubelis	Arnolds	University of Latvia, FOTONIKA-LV	Latvia
54.	Viter	Roman	Odessa University	Ukraine
55.	Vjaters	Janis	Hee Photonic Labs Ltd	Latvia
56.	Zariņš	Ansis	University of Latvia, Institute of Geodesy and Geoinformatics	Latvia
57.	Zhaborovskyy	Vitaliy	Main astronomical observatory of NAS of Ukraine	Ukraine
58.	Ziņģe	Madara	Institute of Atomic Physics and Spectroscopy, University of Latvia	Latvia
59.	Zwiener	Jan	Hochschule Karlsruhe - Technik und Wirtschaft	Germany

Annex 4: Conference Abstracts

4.1. BIOPHOTONICS - RIGA 2013

Cover sheet, content available separately

Annex 5: Students' Feedback

5.1. BIOPHOTONICS - RIGA 2013

Which lectures you enjoyed the most?	*What did you liked the most during training course?*	*What could be improved?*
D. Sampson. OCT S. Bagdonas	1) good organisation 2) pleasant atmosphere	Reduce the duration of the lecture (max 60 minutes)
D.Sampson Optical Coherence Tomography R. Rotomskis Spectroscopy of Quantum Dot-biological Active Molecule	great organisation pleasant atmosphere	all was well
1) S.Andersson-Engels (SE). Fluorescence Diagnostics in Medicine 2) S.Bagdonas (LT). Spectroscopy of Biological Tissues In Vivo 3) Popp (DE). Linear- and Non-linear Raman Microspectroscopy for Biomedical Analysis 4) D.Sampson (AUS). Optical Coherence Tomography: How It Works, What It Can Do and Its Pitfalls	The fact that most of the presentations were really informing about biophotonics methods, their advantages and disadvantages. Most of invited guests are really active and good speakers about their working fields	Although you were impressively organized, you should not be that strict with the program. Maybe invite more speakers from other biophotonics modalities, and have smaller presentations
N.Starodub (UA) - Actual Problems in Environmental Monitoring, Diagnostics and Agriculture: Role of Biosensors in Solving Modern Practice Tasks S.Svanberg (SE) - Multidisciplinary Applications of Gas in Scattering Media Absorption Spectroscopy (GASMAS) V.Khranovskyy (SE) - Publication Strategy for Young Researchers	very nice team of organisers. Dina helped a lot with travel/administrative details	keep it running; till next conference!
I enjoyed the most lectures given by prof. J. Popp and D. Sampson	The most I liked when the lecturer was prepared from the beginning. It means that introduction - very basic information were provided.	It is important when lecturers are from different fields to make them as easy as possible. There were few lectures which were too complicated, at least in my opinion.... Also short gaps between lectures should be provided because it is not so easy to be focused more than 1 hour
Priezzhev, Bagdonas and Svanberg had interesting talks and were good at communicating their work. Khranovskyy: "Publication strategies for young researchers" - important things to know and talk about!	The training course was well organized and very interesting. I liked the city tour the first day, it was awesome! The dinner and pub visit afterwards was a good opportunity to get to know each other. It was also nice to have the lunches in a separate room. During the conference it felt like we got more spread out in the canteen and lost the chance to speak with new people.	The room where the course was held was very warm and when the windows were opened, there was a lot of noise from outside. Also, the blinds didn't work so well and it was sometimes hard to see the slides.
1. S Svanberg 2. S.Andersson-Engels 3. J Spigulis 4. J Popp	1. Synchronization of the similar types of topics. 2. Well organized program schedule. 3. Very good environment of the university campus and surroundings. 4. Great food.	Less student activity.

Which lectures you enjoyed the most?	*What did you liked the most during training course?*	*What could be improved?*
G.Salerud, S.A.Engels, S.Svanberg, D.Sampson, I.Meglinski, V.Khranovskyy	Great lectures, nice atmosphere	1) It would be nicer to have an auditorium with a conditioner or more fresh air, maybe not so loud; 2) Too many lectures during one day. It is impossible to focus to scientific knowledge during all day. It would be better if some of the lectures were not that scientific, for example, in the afternoon, there could be lectures on writing papers, presenting your work, leadership skills, something like that. Maybe some group work
The most I enjoyed lectures of these scientists: S. Svanberg S. Andersson-Engels R. Rotomskis J. Popp D. Sampson V. Khranovskyy V. Tuchin	High quality presentations of invited speakers, good conference organization.	-
Spectroscopy of biological tissues in vivo (Bagdonas) Photometric nanobelts for biosensors and bioaasays (Dr. Mak) Integration of metal oxide nanotechnology for sensor/biosensor (M. Bechelany) Metal oxide nanostructures for sensors and biosensors (R. Viter)	Very organisation of the event (inc. details such as internet, printed programs, bags etc.), and general program for free time in Riga	It would be nice if it could be possible to get a part of avio tickets price and not travel distances by ground transport...
Photometric Nanolabels for Biosensors and Bioassays. Integration of Metal Oxide Nanotechnology for Sensor/Biosensor Applications. Confocal Microscopy for Biosensor Applications. Photoluminescence Spectroscopy of Photonic Semiconductor Materials as Optical Transducers for Biosensors. Fluorescence Diagnostics in Medicine. Multispectral Diffuse Reflectance Imaging of Superficial Tissue. Methodology and Implementation. Light Scattering and Diffractometry Assessment of Biological Particles. Multidisciplinary Applications of Gas in Scattering Media Absorption Spectroscopy (GASMAS). Spectroscopy of Biological Tissues In Vivo. Linear- and Non-linear Raman Microspectroscopy for Biomedical Analysis Optical Coherence Tomography: How It Works, What It Can Do and Its Pitfalls Monte Carlo Modelling for the Needs of Biophotonics and Biomedical Optics Spectroscopy of Quantum Dot-biological Active Molecule Complex Formation Tissue Optics and Optical Clearing	Great lectures and the opportunity for discussion with the speakers. The field trip to the old town with good guides and interesting stories. The beautiful weather and beautiful city. Very nice time in Riga.	everything was great, well done. congratulations to the organizing committee

Which lectures you enjoyed the most?	*What did you liked the most during training course?*	*What could be improved?*
Photometric Nanolabels for Biosensors and Bioassays. Integration of Metal Oxide Nanotechnology for Sensor/Biosensor Applications. Confocal Microscopy for Biosensor Applications. Photoluminescence Spectroscopy of Photonic Semiconductor Materials as Optical Transducers for Biosensors. Fluorescence Diagnostics in Medicine. Multispectral Diffuse Reflectance Imaging of Superficial Tissue. Methodology and Implementation. Light Scattering and Diffractometry Assessment of Biological Particles. Multidisciplinary Applications of Gas in Scattering Media Absorption Spectroscopy (GASMAS). Spectroscopy of Biological Tissues In Vivo. Linear- and Non-linear Raman Microspectroscopy for Biomedical Analysis Optical Coherence Tomography: How It Works, What It Can Do and Its Pitfalls Monte Carlo Modelling for the Needs of Biophotonics and Biomedical Optics Spectroscopy of Quantum Dot-biological Active Molecule Complex Formation Tissue Optics and Optical Clearing	lectures, the tour of Old Riga and the weather	I cannot find any minuses
1. Light Scattering and Diffractometry Assessment of Biological Particles 2. Optical Coherence Tomography: How It Works, What It Can Do and Its Pitfalls 3. Tissue Optics and Optical Clearing	Different topics, teachers and their presentations, organisation, weather :)	

Annex 6: Photos

6.1. BIOPHOTONICS - RIGA 2013

Opening of the Conference

Research-training course

Exhibition

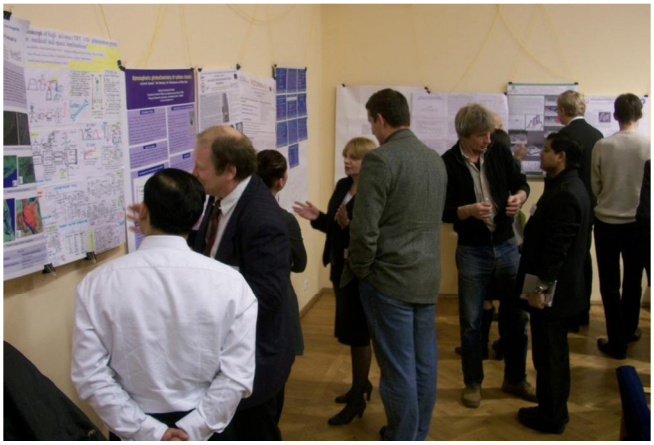
Poster section

Old City tour

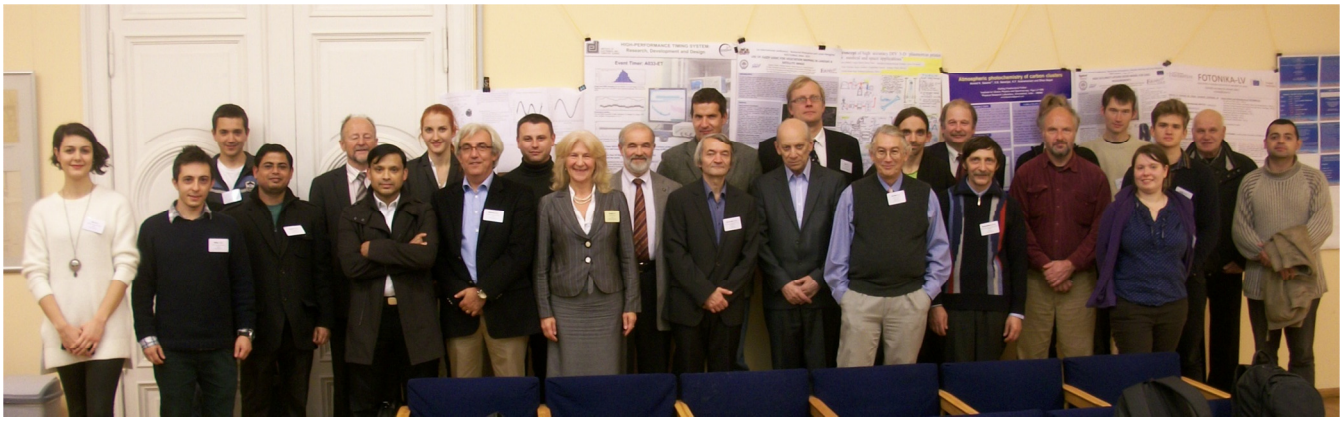
Excursion to the Open Air museum

6.2. NOCTURNAL - RIGA 2014

Opening of the Conference



Poster section



Section group

Annex 7: Abbreviations

Abbreviation	
Association FOTONIKA-LV	Association of three University of Latvia research institutes: Institute of Atomic Physics and Spectroscopy, Institute of Astronomy and Institute of Geodesy and Geoinformation
BPR 2013	Conference, Exhibition, Research-training course "Biophotonics - Riga 2013"
CENAIS	Cuban Satellite Tracking Station
D	Deliverable
EPIC	European Photonics Industry Consortium
EU	European Union
FP7	Seventh Framework Programme of the European Community for research, technological development and demonstration activities
GA	Grant Agreement
GFZ	*Geo Forschungs Zentrum* = Research Centre for Geosciences
HORIZON 2020	EU Framework Programme for Research and Innovation (2014-2020)
ILRS	International Laser Ranging Service
IPR	Intellectual Property rights
IRSES	International Research Staff Exchange Scheme
MCA	Marie Curie actions; currently Marie Skłodowska-Curie actions
NAS	National Academy of Sciences, Ukraine
NOCTURNAL – Riga 2014	Conference, Research-training course ""Remote Sensing in Night Time Atmosphere and Night Time Photochemistry - Riga 2014"
OSA	Optical society
REGPOT	Unlocking and developing the Research Potential of research entities established in the EU´s Convergence regions and Outermost regions
RTD	Research and technology development
SLR	Satellite Laser Ranging
SME	Small and medium enterprise
SPIE	International society for Optical engineering
UAV	Unmanned Aerial Vehicle
WP	Work package