

Developments in Optics and Communications

Riga, April 6 - 7, 2017

<http://www.docriga.lv>

Dear participant!

Welcome to the 13th Young Scientist Conference “Developments in Optics and Communications 2017” in Riga! This info sheet will provide you with all the essential information about the conference, including both the scientific and social part of it, information about the City of Riga, how to get around etc.

Welcome to Riga

Latvia is among the few countries left in the world where natural ecosystems, largely untouched by man, still thrive in half of its territory. It is a haven for the tourist who seeks to experience a land where nature and tradition have coexisted in harmony from time immemorial. Its capital, Riga, is located along the Baltic Sea at the southern coast of the Gulf of Riga. The Riga City history is more than 800 years long.

Riga is well known for its picturesque and unique architecture. In the architecture of the historic centre of Riga you can find architectural styles from Gothic to Modernism. In some districts of Riga, for various reasons, complex wooden constructions of that time have still been preserved, and that is an amazing phenomenon in the 21st century.

Climate in Riga is influenced by its proximity to the sea; therefore it is moderately warm and humid.

As in most of nearby countries, there is still winter here, even in the beginning of April. For 6th to 7th April there will still be snow and maybe even some rain. The temperature could be around +6°C during day and around -2°C during night. So better bring warm clothes and maybe an umbrella!

Local time: Eastern European time zone GMT +2 hours.

Currency: Euro (EUR), 1 Euro = 100 cents

Conference venue

The conference venue is **the Academic Center for Natural Sciences of the University of Latvia** (located at Jelgavas Street 8, Riga, Latvia, <http://www.tornakalns.lv/eng/>). The Academic Center house hosts 1500 students from five faculties – the faculties of Biology, Geography and Earth Science, Chemistry, Medicine as well as the Department of Optometry and Vision Science department of the Faculty of Physics and Mathematics.



Conference registration will be held in Room 702.

Conference oral and poster sessions will be held in the same Room 702.

The conference fee is expected to be paid upon registration in the morning of April 6, 2017.

* if you applied before December 23, 2016 // 7.00 €

* after December 23, 2016 // 10.00 €

Registration and information

Thursday April 6, 8:30 - 17:00

Friday April 7, 9:00 - 17:30

Social events

Tour to Old Riga

Thursday April 6, 17:30-19:00

This activity is mostly for international participants (although everyone can join!) who would like to spend some time in the Old Town of Riga which is one of the must see places in Riga highly recommended by all tourist guides. Conference organizers will take you there, show around and tell the stories from Middle Age to nowadays. Afterwards, you will be able to have some nice Latvian dinner for reasonable prices, as well as drink some non-expensive Latvian beer and enjoy the evening in one of the most popular student party places right in the heart of the Old Town.

International evening for the international PARTYcipants

Friday April 7, 17:30-20:00

This is a great opportunity to get to know each other and all the cultures, countries represented in the conference.

For each participant (if she or he wishes to participate) we would kindly ask **to bring a typical treat (sweets, drinks, etc)** from his / her country. We are going to have tables with the space for each country to put something you have brought for everyone to share.

Participants, feel free to wear some traditional accessory or an outfit typical for your country.

Also, it would be very nice if you could sing a typical song/dance/poem/performance. Be creative!

We as organizers gonna prepare a presentation of Latvia with a little show too.

It is going to be so much fun. So feel free to be creative and participate!

Any questions, let us know!



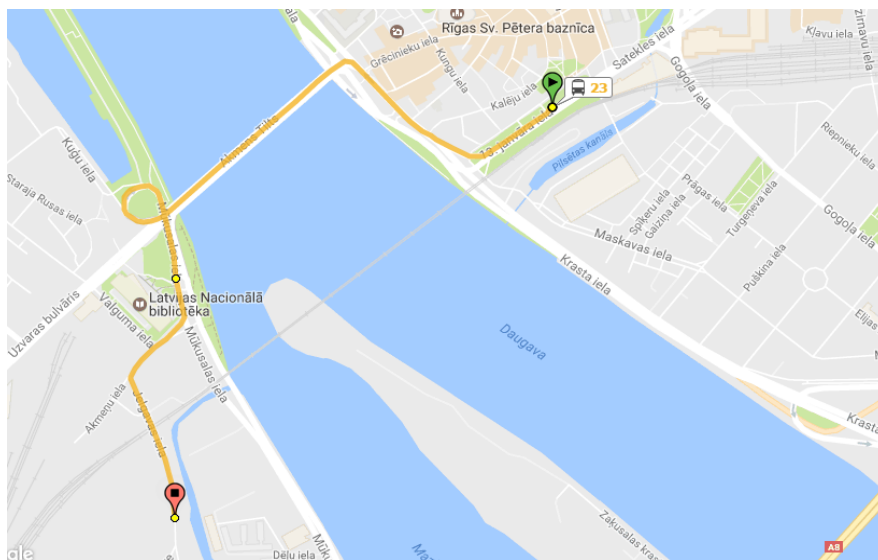
How to get around

Information about public transport in Riga and ticket prices is available here <http://www.rigassatiksme.lv/en/>

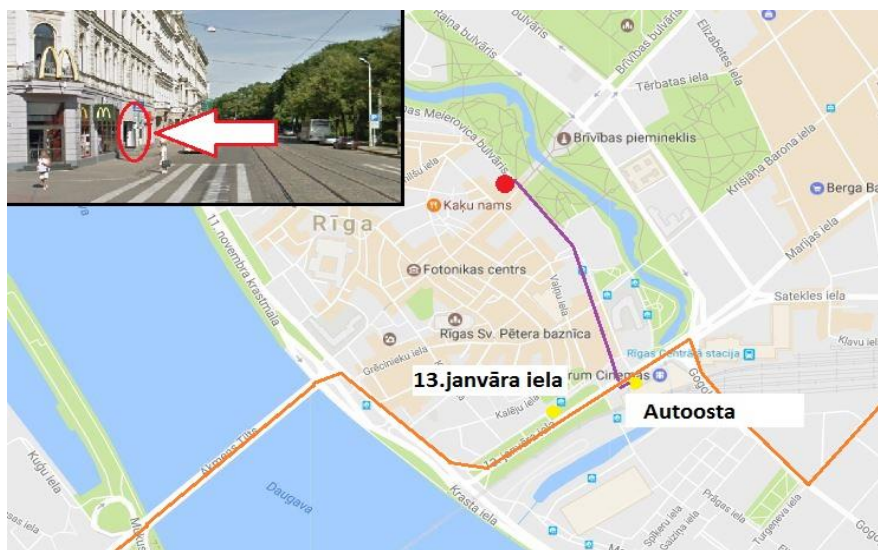
You will be given the electronic ticket “E-talons” at the registration. It will be valid for all the transports of “Rigas Satiksme”: buses, trams, trolleybuses for 3 full days, starting with the day you first validated it. Each time you enter the transport, you have to apply e-ticket to an electronic validator, in this way the trip is registered.

To get from the City centre to Conference location, at the stop “13.janvāra iela” you should take bus Nr. 23 (bus direction: Abrenes iela - Baloži) and go 7 minutes till the stop “LU Akadēmiskais centrs”.

The Centre of the City



Your hotel



Where to eat

During the conference **lunch** will be provided from 13:00 to 14:00 in Room 108. **Coffee breaks** will include tea, coffee and refreshments. The last day of the conference will end with **Goodbye party** where you will have an opportunity to enjoy refreshments, snacks and delicious cooked meat and special meal for vegetarians.

How to get to the airport

Bus No.22, which leaves from Abrenes Street, has direct services between the airport and the city centre. You will get out straight at the terminal on the nd level. To get on the bus at the airport look for bus stop located opposite the terminal behind the car park P1. Frequency 10 - 30 minutes, journey time is about 30 minutes.

Contact information

You can find all the updates and other information regarding the conference on the website www.docriga.lv

If you cannot find something there, please feel free to send an e-mail to: info@docriga.lv

If you get lost in Riga or there is some other emergency, you can call the Main Organizer **Matīss Lācis** (+371 2668 3345)

We are looking forward to see you at the conference!

Thursday, 6th of April		
8:50 – 9:20	Registration	
9:20 – 9:30	Opening session	
9:30 – 9:40	Scientific equipment and solutions of OPTEK	
9:40 – 11:24	<u>Vision science</u>	
9:40 – 10:20	Straylight in the human eye	Invited speaker: Harilaos Ginis
10:20 – 10:32	The impact of keratoconus apex position on visual acuity and contrast sensitivity	Sanita Liduma
10:32 – 10:44	Fixational eye movements in biological motion detection	Ilze Laicane
10:44 – 10:56	Direct write lithography for practical implementation of the method of coded diffraction patterns	Varis Karitans
10:56 – 11:24	Illusory perception using color mobile displays	Invited speaker: Maris Ozolins
11:24 – 11:44	Coffee Break	
11:44 – 13:00	<u>Optics in Communications</u>	
11:44 – 12:24	Towards the Scalable Cloud Platform for Non-Invasive Skin Cancer Diagnostics	Invited speaker: Dmitrijs Blizņuks
12:24 – 12:36	Study of thermo-optical processes by Mach-Zehnder interferometric method	Arturs Bundulis
12:36 – 12:48	Comparison of Nonlinear Fourier Transform methods performance and accuracy	Anastasiia Vasylchenkova
12:48 – 13:00	System Design and Analysis of a Novel Wavelength Reused High Speed Bidirectional ROF-WDM-PON Architecture using a M-QAM OFDM SSB Modulation Technique to Mitigate Chromatic Dispersion, Reflection and Rayleigh Backscattering over a Single Mode Fiber	Dhananjay Patel
13:00 – 14:00	Lunch	
14:00 – 15:40	<u>Optical Materials and Phenomena</u>	
14:00 – 14:40	Upconversion luminescence in rare-earth doped oxyfluoride materials	Invited speaker: Anatolijs Šarakovskis
14:40 – 14:52	Deconvolution and analysis of UV-Vis absorption spectra of sterically challenged push-pull chromophores by comparison with DFT calculations	Igors Mihailovs
14:52 – 15:04	Photoluminescence properties of dysprosium and europium co-doped oxyfluoride glasses and glass ceramics	Meldra Kemere
15:04 – 15:16	Relationship between local structure and optical properties of copper molybdate	Inga Jonane
15:16 – 15:28	Combined white light emission of europium ions in glass ceramics	Andris Antuzevics
15:28 – 15:40	Photoluminescence and amplified spontaneous emission of neat bis-DCM derivative containing thin films	Julija Pervenecka
15:40 – 15:50	Short break	
15:50 – 17:30	<u>Poster session:</u> Vision science + Optics in Communications + Optical Materials and Phenomena	
17:30 – 19:00	Tour to Old Riga	

Friday, 7th of April		
9:00 – 9:10	Morning session	
9:10 – 9:20	Introduction and achievements of UL SPIE	
9:20 – 11:00	Biophotonics	
9:20 – 10:00	Optical coherence tomography, and polarization sensitive OCT and self-interference fluorescence microscopy	Invited speaker: Johannes de Boer
10:00 – 10:12	Acetone and benzene detection using CRDS	Inga Brice
10:12 – 10:24	Modelling light propagation in healthy and pathological human skin	Gatis Tunens
10:24 – 10:36	Studying nanoparticles effect on RBCs aggregation with optical tweezers	Tatiana Avsievich
10:36 – 10:48	Control of ochratoxin-aby immune biosensor based on the surface plasmon resonance	Nelya Shpyrka
10:48 – 11:00	The use of remote photoplethysmography system for regional anesthesia monitoring in operating room	Marta Laņģe
11:00 – 11:20	Coffee break	
11:20 – 13:00	Laser Physics and Spectroscopy	
11:20 – 12:00	Level anti-crossing studies in color centers in diamond	Invited speaker: Marcis Auziņš
12:00 – 12:12	Optical vortex microscopy - object reconstruction	Mateusz Szatkowski
12:12 – 12:24	Numerical simulation of circular dichroism enhancement in gold nanorods array	Egor Gurvitz
12:24 – 12:36	Probing meat freshness by visible and near-infrared spectroscopy	Motahareh Peyvasteh
12:36 – 12:48	Estimation of Mn and Co valence states of $Sr_{1-x}Ce_xMn_{1-y}CoO_{3-\delta}$	Margarita Udintseva
12:48 – 13:00	Spectral properties of adamantane-containing compounds, promising for the development of antibacterial drugs: experimental and theoretical insights	Yuliya Mindarava
13:00 – 14:00	Lunch	
14:00 – 14:30	We have to talk: managing effective conversation	Invited speaker: Tatjana Pladere
14:30 – 15:30	Workshop for improving soft skills	
15:30 – 15:40	Short break	
15:40 – 17:20	Poster session: Biophotonics + Laser Physics and Spectroscopy	
17:20 - 17:30	Closing Session	
17:30 - 20:00	International dinner and presentations of home countries	

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