

# 13th International Young Scientist conference Developments in Optics and Communications

Riga, April 6-7, 2017

## Conference Program

<b>Thursday, 6<sup>th</sup> of April</b>		
8:50 – 9:20	Registration	
9:20 – 9:30	Opening session	
9:30 – 9:40	Scientific equipment and solutions of OPTEK	
<b>9:40 – 11:24</b>	<b><u>Vision science</u></b>	
9:40 – 10:20	Straylight in the human eye	<b>Invited speaker: Harilaos Ginis</b>
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	<b>Invited speaker: Maris Ozolins</b>
11:24 – 11:44	Coffee Break	
<b>11:44 – 13:00</b>	<b><u>Optics in Communications</u></b>	
11:44 – 12:24	Towards the Scalable Cloud Platform for Non-Invasive Skin Cancer Diagnostics	<b>Invited speaker: Dmitrijs Blizņuks</b>
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 Vasychenkova
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	
<b>14:00 – 15:40</b>	<b><u>Optical Materials and Phenomena</u></b>	
14:00 – 14:40	Upconversion luminescence in rare-earth doped oxyfluoride materials	<b>Invited speaker: Anatolijs Šarakovskis</b>
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	
<b>15:50 – 17:30</b>	<b><u>Poster session:</u></b> Vision science + Optics in Communications + Optical Materials and Phenomena	
17:30 – 19:00	Tour to Old Riga	

<b>Friday, 7<sup>th</sup> of April</b>		
9:00 – 9:10	Morning session	
9:10 – 9:20	Introduction and achievements of UL SPIE	
<b>9:20 – 11:00</b>	<b>Biophotonics</b>	
9:20 – 10:00	Optical coherence tomography, and polarization sensitive OCT and self-interference fluorescence microscopy	<b>Invited speaker:</b> <b>Johannes de Boer</b>
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 LanĶe
11:00 – 11:20	Coffee break	
<b>11:20 – 13:00</b>	<b>Laser Physics and Spectroscopy</b>	
11:20 – 12:00	Level anti-crossing studies in color centers in diamond	<b>Invited speaker:</b> <b>Marcis Auziņš</b>
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	<b>Invited speaker:</b> <b>Tatjana Pladere</b>
14:30 – 15:30	Workshop for improving soft skills	
15:30 – 15:40	Short break	
<b>15:40 – 17:20</b>	<b>Poster session:</b> 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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