Biophotonics – Riga 2020
3rd International Conference

PROGRAMME

Monday 24 August

	Session 1	Session chair/moderator – Janis Spigulis
9:00-9:30	J.Spigulis. Opening. Biophotonics research in Riga: recent projects and results	
9:30-10:00	P.Andersen*. Optical Coherence Tomography for improved detection of melanoma	
10:00-10:30	A.Kamshilin*. Green-light imaging photoplethysmography as a sensitive instrument to measure microcirculation response to various stimuli	
10:30-11:00	G.Salerud*. Estimating blood oxygenation at macro- and microscopic levels using hyper spectral imaging	
11:00-11:30	*Coffee break*	
	Session 2	Session chair/moderator – Peter E. Andersen
11:30-12:00	M.Aalders*. Combined spectral imaging and finite difference modelling for ageing of bruises in child abuse	
12:00-12:20	A.Lihachev. Imaging of LED excited autofluorescence for skin lesions assessment	
12:20-12:40	E.Kviesis-Kipge. Remote photoplethysmography device with adaptive illumination for skin microcirculation assessment	
12:40-13:00	M.Lange. Spectral imaging as a tool for the evaluation of skin cancer post-operative scars	
13:00-14:00	*Lunch break*	
	Session 3	Session chair/moderator – Maurice Aalders
14:00-14:20	Z.Marcinkevics. Imaging photoplethysmography for evaluation of cutaneous sensory nerve fiber function	
14:20-14:40	Z.Marcinkevics. Imaging photoplethysmography for assessment of gum inflammation	
14:40-15:00	M.Tamosiunas. Assessment of Candida albicans biofilm growth by laser speckle contrast imaging	
15:00-15:30	B.Majaron*. Quantitative characterization of human skin by combining diffuse reflectance spectroscopy and photothermal radiometry	
15:30-16:00	*Coffee break*	
	Session 4	Session chair/moderator – Gōran Salerud
16:00-16:30	M.Darvin*. Confocal Raman microspectroscopy for non-invasive in vivo determination of barrier-related parameters of the stratum corneum	
16:30-16:50	N.Verdel. Noninvasive characterization of tattoos in human skin using diffuse reflectance spectroscopy and pulsed photothermal radiometry	
17:10-17:30	N.Zorina. Study of As and Tl high-frequency electrodeless lamps for Zeeman absorption spectroscopy	
18:00-21:00	*Social event*	

*) *invited talk*

Tuesday 25 August

Session 5 — Session chair/moderator – Boris Majaron

9:00-9:30 R.Sroka*. Spectroscopy assisted point-of-care devices for clinical use
9:30-10:00 I.Meglinski*. Brain imaging with dynamic light scattering at broken ergodicity conditions
10:00-10:30 E.Borisova*. Multispectral fluorescence detection and imaging of skin tumours
10:30-11:00 R.Pini*. Alzheimer's disease biomarkers inspected through Raman-based nano strategies

11:00-11:30 *Coffee break*

Session 6 — Session chair/moderator – Igor Meglinski

11:30-12:00 V.Tuchin*. Improved biomedical imaging over a wide spectral range from UV to THz towards multimodality
12:00-12:20 I.Lihacova. Optical multimodal non-invasive diagnostics of skin cancer
12:20-12:40 D.Bliznuks. Deep learning model deploying on embedded skin cancer diagnostic device
12:40-13:00 B.Cugmas. Selection of erythema index and sampling method for the objective erythema estimation in dogs with atopic dermatitis

13:00-14:00 *Lunch break*

Session 7 — Session chair/moderator – Ronald Sroka

14:00-14:20 M.Huotari. Photoplethysmographic waves and their detailed pulse interval distribution analysis on Poincare plots before and after the sauna exposures
14:20-14:40 G.Revalde. Acetone measurements in the exhaled air by the cavity ring-down spectrometry
14:40-15:00 A.Skobelkina. Structural and photoluminescence properties of nanoparticles formed by pulsed laser ablation of silicon nanowire arrays
15:00-15:20 E.Zherebcov. Fluorescence lifetime fine-needle optical biopsy of the hepatocellular carcinoma in murine model

15:20-15:50 *Coffee break*

Session 8 — Session chair/moderator – Valery Tuchin

15:50-16:10 B.Gurevich. Choice of photodetector characteristics for acousto-optic devices for bioelectric signals processing
16:10-16:30 B.Gurevich. Endoscopes for internal organs cancer diagnostics based on television and multispectral methods of image processing
16:30-16:50 K.Zaichenko. Optimization of information presentation process by multispectral processing systems of biological objects images
16:50-17:10 K.Zaichenko. Application of acousto-optic tunable filters in the devices of skin cancer diagnostics

*) *invited talk*