



## PROGRAMME

### Monday, 24<sup>th</sup> of 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 – Göran Salerud**

- 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 A.Aglinska. 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 – Peter E. Andersen**

- 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  
 16:50-17:10 N.Zorina. Data processing analysis for remitted photon path length experimental measurements in human skin

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\*) *invited talk*

- 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*

## Tuesday, 25<sup>th</sup> of 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

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\*) *invited talk*