

Registration: 9:00 – 10:00

Opening of the Conference: 10:00

24th of November, 10:00

K. Baršausko str. 59 Hall 2

Conference sessions 24th of November K. Baršausko str. 59 Hall 2

Section I 10:00 – 11:15
Chairperson: Y. Dekhtyar , <i>Biomedical Engineering and Nanotechnology Institute, Riga Technical University, Latvia</i>
Coffee break (11:15 – 11:30)
Section II 11:30 – 13:00
Chairperson: A. Bulatov , <i>Institute of Biological Systems and Genetics Research, Lithuanian University of Health Sciences, Lithuania</i>
Lunch time (13:00 – 14:00)
Section III 14:00 – 16:00
Chairperson: R. Liutkevičienė , <i>Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania</i>

Conference sessions 25th of November K. Baršausko str. 59 Hall 2

Section IV 10:00 – 11:15
Chairperson: A. Lukoševičius , <i>Biomedical Engineering Institute, Kaunas University of Technology, Lithuania</i>
Coffee break (11:15 – 11:30)
Section V 11:30 – 13:00
Chairperson: A. Kriščiukaitis , <i>Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania</i>
Lunch time (13:00 – 14:00)
Section VI 14:00 – 16:15
Chairperson: V. Marozas , <i>Biomedical Engineering Institute, Kaunas University of Technology, Lithuania</i>
Closing and award ceremony (16:30-17:00)
<i>Duration of presentation: 10 min. + 5 min. for questions</i>

Section I

Chairperson:

Y. Dekhtyar, *Biomedical Engineering and Nanotechnology Institute, Riga Technical University, Latvia*

PRETHRESHOLD ELECTRON EMISSION TOWARDS MEDICAL APPLICATIONS: CHARACTERIZATION OF NANOMATERIALS, GAS AND RADIATION SENSING (REVIEW OF RECENT RESULTS)

Y. Dekhtyar
Riga Technical University, Latvia

GD NANOPARTICLES' IMPACT ON LIVING CELLS IN PRESENCE OF LOW FREQUENCY EMF AND STRONG MF

D.Grauda¹, A.Kolodynski¹, I.Belogrudova¹, I.Rashal¹, L.Bumbure¹, Y.Dekhtyar², Y.Erba², V.Zemite²

¹*Institute of Biology, University of Latvia, Latvia*

²*Biomedical Engineering and Nanotechnology Institute, Riga Technical University, Latvia*

ELECTROSPUN MATERIALS FROM POLY (VINYL ALCOHOL) NANO-MICROFIBERS WITH UNDOPED AND BORON DOPED HYDROXYAPATITE PARTICLES

E. Bolskis¹, E. Adomavičiūtė¹, S. Stanys¹, V. Jankauskaitė¹, O. Albayrak²

¹*Faculty of Mechanical Engineering and Design, Kaunas University of Technology, Lithuania*

²*Department of Mechanical Engineering, Faculty of Engineering, Mersin University, Mersin, Turkey*

HYALURONIC ACID FOR TISSUE REGENERATION

R. Kutraite, J. Gaidemauskaite, L. Sciupakovaite, D. Narauskaite, A. Baltrukeviciute, O. Baniukaitiene

Department of Polymer Chemistry and Technology, Kaunas University of Technology, Lithuania

LIPOSOME LOADED DOXORUBICIN DELIVERY TO CELLS VIA SONOPORATION

M. Maciulevičius, M. Tamošiūnas, S. Šatkauskas, M. S. Venslauskas

Biophysical research group, Vytautas Magnus University, Lithuania

Coffee break (11:15 – 11:30)

Section II

24th of November, 11:30
K. Baršausko str. 59 Hall 2

Chairperson:

A. Bulatov, *Institute of Biological Systems and Genetics Research, Lithuanian University of Health Sciences, Lithuania*

DELAYED SUPPRESSION OF RECURRENT EXCITATION IN THE FROG TECTUM COLUMN BY ENDOGENOUS ACETYLCHOLINE

A. Baginskas¹, A. Kuras², A. Grigaliūnas¹

¹*Department of Physics, Lithuanian University of Health Sciences, Lithuania*

²*Lab of Neurophysiology, Lithuanian University of Health Sciences, Lithuania*

TILTING OF THE CONTEXTUAL FILLING LINE AND THE MAGNITUDE OF THE FILLED/UNFILLED ILLUSION

J. Arlauskaitė, A. Bulatov¹, T. Surkys¹, N. Bulatova, L. Mickienė

¹*Laboratory of Visual Neurophysiology, Institute of Biological Systems and Genetics Research, Lithuanian University of Health Sciences, Lithuania*

COMPLETENESS OF FILLING-UP IN THE FILLED/UNFILLED ILLUSION

I. Daugirdaitė, A. Bulatov¹, T. Surkys¹, A. Bertulis, A. Bielevičius

¹*Laboratory of Visual Neurophysiology, Institute of Biological Systems and Genetics Research, Lithuanian University of Health Sciences, Lithuania*

MÜLLER-LYER AND OPPEL-KUNDT ILLUSIONS COMPARED

P. Šimaitytė, T. Surkys, A. Bertulis, A. Bulatov, A. Bielevičius

Institute of Biological Systems and Genetic Research, Lithuanian University of Health Sciences, Lithuania

THE MAXIMUM COLOR CONTRAST SENSITIVITY TEST FOR DETECTING EARLY CHANGES IN PITUITARY ADENOMAS

B. Glebauskienė¹, R. Mazetytė², R. Liutkevičienė^{1,3}, R. Knispelis⁴, D. Žaliūnienė¹

¹*Ophthalmology Department, Lithuanian University of Health Sciences, Lithuania*

²*Medical Academy, Lithuanian University of Health Sciences, Lithuania*

³*Neuroscience Institute, Lithuanian University of Health Sciences, Medical Academy, Lithuania*

⁴*Endocrinology Department, Lithuanian University of Health Sciences, Lithuania*

MAXIMUM COLOUR CONTRAST SENSITIVITY ASSESSMENT IN MONOZYGOTIC AND DIZYGOTIC TWINS

R. Mikalauskaitė⁴, I. Sakalauskaitė⁴, R. Šakienė¹, E. Kuncevičienė¹, B. Būdienė², A. Smalinskienė², R. Liutkevičienė^{2,3}, D. Žaliūnienė²

¹*Institute of Biological Systems and Genetics Research, Lithuanian University of Health Sciences, Lithuania*

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³*Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

⁴*Lithuanian University of Health Sciences, Lithuania*

Section III

24th of November, 14:00
K. Baršausko str. 59 Hall 2

Chairperson:

R. Liutkevičienė, *Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

COLOUR CONTRAST SENSITIVITY ASSESSMENT IN MONOZYGOTIC AND DIZYGOTIC TWINS

A. Petrauskaitė¹, R. Sukiene², E. Kuncevičienė³, A. Vilkevičiūtė⁴, B. Būdienė², A. Smalinskienė³, R. Liutkevičienė^{2,4}

¹*Medical Academy, Lithuanian University of Health Sciences, Lithuania*

²*Department of Ophthalmology, Lithuanian University of Health Sciences, Lithuania*

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⁴*Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

VISUAL ACUITY VARIATIONS UNDER DIFFERENT CONTRAST CONDITIONS IN AGE-RELATED MACULAR DEGENERATION PATIENTS USING FREIBURG VISUAL ACUITY TEST

R. Mikalauskaitė³, I. Sakalauskaitė³, B. Būdienė¹, D. Stanislovaitienė¹,

R. Liutkevičienė^{1,2}, D. Žaliūnienė¹

¹*Eye Clinic, Lithuanian University of Health Sciences, Lithuania*

²*Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

³*Lithuanian University of Health Sciences, Lithuania*

ULTRASOUND ASSESSMENT OF RETINA IN PATIENTS WITH NONEXUDATIVE AND EXUDATIVE ARM D

I. Sakalauskaitė¹, R. Mikalauskaitė¹, D. Stanislovaitienė², B. Būdienė²,

J. Trumpaitis²

¹*Medical Academy, Lithuanian University of Health Sciences, Lithuania*

²*Department of Ophthalmology, Lithuanian University of Health Sciences, Lithuania*

FARNSWORTH – MUNSELL 100 HUE TEST ASSOCIATIONS WITH RECURRENT PITUITARY ADENOMAS

B. Glebauskienė¹, D. Simonavičiūtė², R. Liutkevičienė^{1,4}, L. Kriaučiušienė^{2,3},

K. Šinkūnas³, D. Žaliūnienė¹

¹*Ophthalmology Department, Lithuanian University of Health Sciences, Lithuania*

²*Medical Academy, Lithuanian University of Health Sciences, Lithuania*

³*Neurosurgery Department, Lithuanian University of Health Sciences, Lithuania*

Lunch time (13:00 – 14:00)

RETINAL NERVE FIBER LAYER MEASUREMENT IN PATIENTS WITH OPTIC NEURITIS BY OPTICAL COHERENT TOMOGRAPHY

M. Banevicius¹, L. Kriauciuniene^{1,2}, R. Liutkeviciene^{1,2}, B. Glebauskienė¹, R. Zemaitiene¹

¹*Ophthalmology Department, Lithuanian University of Health Sciences, Lithuania*

²*Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

MACULAR PIGMENT OPTICAL DENSITY ASSESSMENT IN MONOZYGOTIC AND DIZYGOTIC TWINS

E. Kuncevičienė¹, R. Sakienė², A. Petrauskaitė², B. Budiene², A. Smalinskiene¹, R. Liutkeviciene^{2,3}

¹*Institute of Biological Systems and Genetics Research, Lithuanian University of Health Sciences, Lithuania*

²*Department of Ophthalmology, Lithuanian University of Health Sciences, Lithuania*

³*Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

SWEPT-SOURCE OPTICAL COHERENCE TOMOGRAPHY: CHOROIDAL ANALYSIS IN HEALTHY EYES

G. Gudauskienė¹, I. Matulevičiūtė¹, D. Žaliūnienė¹

¹*Department of Ophthalmology, Lithuanian University of Health Sciences, Lithuania*

RELATIONSHIP OF AGE-RELATED MACULAR DEGENERATION AND RISK FACTORS OF CARDIOVASCULAR DISEASES

K. Adamonyte¹, V. Ruceviciute⁴, B. Budiene², O. Gustiene¹, L. Buda³, R. Zvirblyte¹

¹*Department of Cardiology, Lithuanian University of Health Sciences, Lithuania*

²*Department of Ophthalmology, Lithuanian University of Health Sciences, Lithuania*

³*Faculty of Pharmacy, Lithuanian University of Health Sciences, Lithuania*

⁴*Department of Family Medicine, Lithuanian University of Health Sciences, Lithuania*

Section IV

25th of November, 10:00

K. Baršausko str. 59 Hall 2

Chairperson:

A. Lukoševičius, *Biomedical Engineering Institute, Kaunas University of Technology, Lithuania*

THE SIGNIFICANCE OF B-MODE ECHOCARDIOGRAPHY, TWENTY-FOUR-HOUR AMBULATORY BLOOD PRESSURE MONITORING WITH SHILLER BLOOD PRESSURE MONITOR AND ELECTROCARDIOGRAPHY FOR DIAGNOSIS AND TREATMENT OF ESSENTIAL ARTERIAL HYPERTENSION IN CHILDREN

K. Adamonyte¹, I. Ruskyte¹, M. Zebiene¹, R. Simoliuniene²

¹*Department of Pediatrics, Lithuanian University of Health Sciences, Lithuania*

²*Department of Physics, Mathematics and Biophysics, Lithuanian University of Health Sciences, Lithuania*

KNEE LIGAMENTS' LAXITY ASSESSMENT USING GNRB[®] SYSTEM AFTER ACL RECONSTRUCTION OPERATION

R. Jurkonis^{1,2}, R. Gudas^{1,2}, L. Šiupšinskas¹

¹*Institute of Sport, Lithuanian University of Health Sciences, Lithuania*

²*Orthopaedic and traumatology department, Hospital of Lithuanian University of Health Sciences Kauno klinikos, Lithuania*

EYE-MOVEMENT EVENT DETECTION MEETS MACHINE LEARNING

R. Zemblys

Department of Engineering, Siauliai University, Lithuania

CONCEPT OF NAVIGATION SYSTEM FOR BLIND PEOPLE USING IMAGE RECOGNITION AND CLASSIFICATION

D. Dirvanauskas, F. Orujov, R. Maskeliūnas

Multimedia Engineering Department, Kaunas University of Technology, Lithuania

MOBILE VIRTUAL REALITY SYSTEM FOR INVESTIGATION OF SUBJECTIVE VISUAL VERTICAL

M. Totilienė¹, A. Paulauskas², T. Blažauskas², V. Ulozas¹, V. Marozas³, I. Ulozienė¹

¹*Department of Otorhinolaryngology, Lithuanian University of Health Sciences, Lithuania*

²*Department of Software Systems, Kaunas University of Technology, Lithuania,*

³*Biomedical Engineering Institute, Kaunas University of Technology, Lithuania,*

Coffee break (11:15 – 11:30)

Section V

25th of November, 11:30
K. Baršausko str. 59 Hall 2

Chairperson:

A. Kriščiukaitis, *Neuroscience Institute, Lithuanian University of Health Sciences, Lithuania*

EVALUATION OF THE BACKGROUND EXTRACTION INFLUENCE TO QUANTITATIVE ANALYSIS OF TWO-DIMENSIONAL ELECTROPHORESIS GEL IMAGES

E. Šabanovič, D. Matuzevičius, A. Serackis

Department of Electronic Systems, Vilnius Gediminas Technical University, Lithuania

ORB FEATURE BASED MATCHING OF TWO-DIMENSIONAL ELECTROPHORESIS GEL IMAGES

P. Tumas, A. Serackis

Department of Electronic Systems, Vilnius Gediminas Technical University, Lithuania

ALGORITHM FOR THE DETECTION OF MID-BRAIN IN B MODE ULTRASOUND IMAGES

A. R. Juknevičius¹, A. Sakalauskas^{1,2}

¹*Department of Electronics Engineering, Kaunas University of Technology, Lithuania*

²*Biomedical Engineering Institute, Kaunas University of Technology, Lithuania*

CHARACTERIZATION OF GASTROINTESTINAL CANCER CELLS INVASIVENESS BY ESTIMATION OF THEIR MOTILITY

R. Petrolis^{1,4}, R. Ramonaitė², D. Jocevičius², G. Kiudelis³, L. Kupčinskas², A. Kriščiukaitis^{1,4}

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⁴*Department of Physics, Mathematics and Biophysics, Lithuanian University of Health Sciences, Lithuania*

INITIAL RESULTS OF LIVER TISSUE CHARACTERIZATION USING ENDOGENOUS MOTION TRACKING METHOD

A. Sakalauskas¹, R. Jurkonis¹, S. Gelman², A. Lukoševičius¹, L. Kupčinskas²

¹*Biomedical Engineering Institute, Kaunas University of Technology, Lithuania*

²*Gastroenterology Department, Lithuanian University of Health Sciences, Lithuania*

COW UDDER DETECTION IN THERMAL IMAGES OF COWS

M. Patašius^{1,2}, D. Beliavska-Aleksiejūnė³, Ž. Garbenytė³, K. Musayeva³, A. Sederevičius³

¹*Department of Applied Informatics, Kaunas University of Technology, Lithuania*

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³*Department of Anatomy and Physiology, Veterinary Academy, Lithuanian University of Health Sciences, Lithuania*

Lunch time (13:00 – 14:00)

Section VI

25th of November, 14:00
K. Baršausko str. 59 Hall 2

Chairperson:

A. Marozas, *Biomedical Engineering Institute, Kaunas University of Technology, Lithuania*

REVIEW OF ASSISTIVE TECHNOLOGIES FOR DISABLED PEOPLE

J. Gelšvartas¹, A. Lauraitis², R. Simutis³, R. Maskeliūnas⁴

^{1,3}*Automation Department, Kaunas University of Technology, Lithuania*

^{2,4}*Department of Multimedia Engineering, Kaunas University of Technology, Lithuania*

CORRELATIONS BETWEEN AUTOMATED DYSPHONIA QUANTIFICATION AND PERCEPTUAL VOICE EVALUATION

N. Ulozaitė¹, T. Petrauskas¹, V. Šaferis², V. Uloza¹

¹*Department of Otorhinolaryngology, Lithuanian University of Health Sciences, Lithuania*

²*Department of Physics, Mathematics and Biophysics, Lithuanian University of Health Sciences, Lithuania*

AUTO-ENCODER BASED ECG SIGNAL FEATURE EXTRACTION FOR REAL-TIME DETECTION OF CARDIAC ARRHYTHMIAS

A. Gudiškis, A. Serackis

Department of Electronic Systems, Vilnius Gediminas Technical University, Lithuania

EXPLORATION OF MODELLING OF BLOOD FLOW THROUGH THE ARTERIAL TREE USING PHASE ERROR REDUCING FINITE ELEMENT MODEL

M. Patašius^{1,2}, A. Kriščiūnas¹, A. Rapalis^{2,3}, R. Barauskas¹, A. Janušauskas², D. Čalnerytė¹, A. Nečiūnas¹

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³*Department of Electronics Engineering, Kaunas University of Technology, Lithuania*

CARDIOVASCULAR SCREENING OF PATIENTS REVEALING RISK OF DIABETES: EVALUATION OF POSSIBILITIES

S. Sosunkevič¹, A. Rapalis^{1,2}, A. Lukoševičius¹

¹*Biomedical Engineering Institute, Kaunas University of Technology, Lithuania*

²*Department of Electronics Engineering, Kaunas University of Technology, Lithuania*

SMART TEXTILE GARMENT FOR BREATHING VOLUME MONITORING

A. Okss¹, A. Katashev², J. Mantyla³, R. Coffeng³

¹*Institute of Design Technology, Riga Technical University, Latvia*

²*Institute of Biomedical Engineering and Nanotechnologies, Riga Technical University, Latvia*

³*GE Healthcare, Finland*

MOTION ARTIFACTS IN PHOTOPLETHYSMOGRAPHIC SIGNALS MODELING BASED ON OPTICAL AND TOPOLOGICAL PROPERTIES OF SKIN

V. Vizbara, D. Sokas, V. Marozas

Biomedical Engineering Institute, Kaunas University of Technology, Lithuania

**AUTOMATIC WORKING TIME COUNTER FOR ULTRASOUND DIAGNOSTIC
SYSTEMS**

H. Kručas¹, R. Jurkonis²

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klinikos, Lithuania*

²Biomedical Engineering Institute, Kaunas University of Technology, Lithuania