



Zabrze, 9-10th October 2023

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HealthTech Innovation
CONFERENCE

ORGANISER



EVENT PARTNER

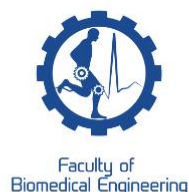


Silesian
Voivodeship



2023 | Silesia.
Year of Science

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October 9, 2023

09.00 - 10.30 **2023/2024 Academic Year Opening Ceremony for the Faculties of Biomedical Engineering and Organization and Management; Matriculation Ceremony of the Students**

PHILIPS Auditorium (EHTIC)

10.00 - 11.00 Registration open

HealthTech Innovation Conference Opening Ceremony

Commemorative speeches

prof. Marek Gzik, Director of European HealthTech Innovation Center

dr Małgorzata Mańka-Szulik, Mayor of Zabrze

prof. Arkadiusz Mężyk, Rector of the Silesian University of Technology

prof. Krzysztof Milewski, General Director of Center for Cardiovascular Research and Development, American Heart of Poland

Plenary Session with the participation of the Silesian Voivodeship: Science and Technology in Medicine

11.00 - 12.45 "Digitalization in healthcare system"

Chair: Anna Jedynak, prof. Krzysztof Milewski

Silesia as a leader in the digitization of medical services

Grzegorz Siwiec

Raygenic - multidimensional AI platform

Rafał Obuchowicz

Personalization of physical performance and disease treatment

Paweł Wiśniewski

PHILIPS Auditorium (EHTIC)

12.45 - 13.00 Coffee break





HealthTech Innovation in Personalized Medicine part 1

Session within Priority Research Area: Computational Oncology and Personalized Medicine

Chair: prof. Ewa Piętka, prof. Michael Skipper Andersen

Musculoskeletal modeling based on ambulatory measurements

Michael Skipper Andersen

Modern speech therapy and diagnosis: challenges and needs

Natalia Moćko

13.00 – 14.30 ***Computing and engineering as a support for personalized speech diagnosis and therapy***

Zuzanna Miodońska

Assessment of preoperative treatment of cleft palate using 3D scanning

Edyta Kawlewska

Is it possible to win health on the stock market? The use of stock market indices in the assessment of Parkinson's disease symptoms.

Piotr Wodarski

Discussion

PHILIPS Auditorium (EHTIC)

14:30 – 15:00 Lunch

EIT Health Session

“From Vision to Action: Transforming Healthcare through Collaborative Innovation”

15:00 – 16:30 ***Chair: Monika Ślęzak, prof. Marcin Kaczmarek***

EIT Health – For healthy lives in Europe

Ferenc Pongracz





Discussion:

Ferenc Pongracz (EIT Health); Maria Cristina Nieto Garcia (ERA4Health), Ines Matias (Medtronic); Łukasz Bandała (Revolve Healthcare), Azim Celik (GE Healthcare)

PHILIPS Auditorium (EHTIC)

15.00 – 16.30 **The Meeting of the Deans of Faculties which conduct the „Biomedical Engineering” Course**

Council Room 005 (Faculty of Biomedical Engineering)

16.30 – 16.45 Coffee Break

Special session of the American Heart of Poland

“Innovations in cardiovascular medicine”

Chair: prof. Krzysztof Milewski

Bioresorbable stents – the present and the future

Piotr Buszman

Is this lesion significant? Ask the AI

Krzysztof Milewski

16.45 – 18.15 ***The cathlab of the future***

Adam Janas

Innovations in cardiac surgery

Krzysztof Sanetra

Innovations in structural heart disease therapies

Mateusz Kachel

Discussion

PHILIPS Auditorium (EHTIC)

18.30 Dinner





19.00

**The gala dinner and meeting of the Conference Programme Council
and Scientific Committee**

Hotel Diament, Zabrze





October 10, 2023

HealthTech Innovation in Personalized Medicine part 2

Session within Priority Research Area: Computational Oncology and Personalized Medicine

Chair: prof. Arkadiusz Szarek, prof. Witold Walke

Surface modification of plates used for chest deformity treatment

Anita Kajzer

09.30 - 11.00

Biodegradable, drug-eluting polymeric materials for medical applications

Joanna Jaworska

Contemporary challenges in mechanical circulatory support

Maciej Gawlikowski

Scaffold for corneal reconstruction using 3D printing and bioprinting

Dariusz Dobrowolski

PHILIPS Auditorium (EHTIC)

11.00 - 11.15

Coffee break

HealthTech Innovation Presentations – poster session

Chair: prof. Marcin Basiaga, prof. Robert Michnik, prof. Dominik Spinczyk

Opening lecture:

11.15 - 13.00

Key issues related to the certification of medical devices utilizing AI

Katarzyna Doroszkiewicz





Poster presentations:

A study of selected properties of a tantalum-based coating for a NiTi alloy for cardiovascular implants

Anna Taratuta, Julia Lisoń-Kubica, Marcin Basiaga, Magdalena Antonowicz, Zbigniew Paszenda

Applications of 3d printing in pediatric rehabilitation products

Aleksandra Mikulikova, Wyleżoł Marek, Muzalewska Małgorzata

Assessment of wear of photopolymer temporary crowns in a chewing simulator

Julia Oskroba, Anna Ziębowicz, Wojciech Kajzer

Effect of ALD-applied Al₂O₃ coating on electrochemical properties of WE43 magnesium alloy for biomedical applications

Barbara Rynkus, Witold Walke, Anna Taratuta, Marta Kiel-Jamrozik, Wojciech Kajzer

Classification of the heartbeats in electrocardiogram with k-nearest neighbors algorithm, random forests, and support vector machines - a pilot study

Muzaffer Samed Vural, Katarzyna Heryan, Szymon Sieciński, Paweł Biłko, Marcin Grzegorzek

Design and 3D printing of a occlusal splint used in bruxism

Katarzyna Kolbuch, Wojciech Kajzer

The Suzuki's lessons with children on autism spectrum

Joanna Kruszyńska-Szwedo

Ultrasound blood flow monitoring as one of the elements of assessing the ability for pilots to fly - preliminary study

Ewelina Sobotnicka, Jan Mocha, Jerzy Gałęcka, Aleksander Sobotnicki

A foot-operated computer mouse

Katarzyna Czop, Maria Supernak, Małgorzata Adamczyk, Andrzej Michnik, Iwona Chuchnowska





Influence of ZnO coating parameters by nPVD method on physicochemical properties of magnesium alloy

Marta Kiel-Jamrozik, Barbara Rynkus, Witold Walke, Mariusz Król

Identification of the human body physical model for exoskeleton designing in selected industrial application

Sara Sarraj, Tomasz Machoczek, Paweł Jureczko, Małgorzata Szymiczek

Is impedance cardiography a better tool than ECG in supporting the diagnosis of patients with heart failure?

Mirella Urzeniczok, Ilona Karpiel, Dariusz Komorowski

Monitoring of respiratory parameters as a factor supporting the improvement of the efficiency of exercisers

Ilona Karpiel, Maciej Mysiński, Kamil Olesz, Mirella Urzeniczok, Marek Czerw

Analysis of bipolar disorder genomic data to identify differences in gene expression

Anna Tamulewicz, Victoria Budziak

A wearable cardiac surveillance system based on ECG recording and respiratory rate using a tectronic T-shirt - preliminary study

Marek Czerw, Ilona Karpiel

Feature extraction and selection as a crucial step in modern biomedical signal processing, based on the analysis of selected use cases.

Paweł Kostka, Dariusz Komorowski, Ewaryst Tkacz, Barbara Mika, Maciej Gawlikowski, Szymon Sieciński, Konrad Duraj

The classifier algorithm for recognition of secondary distracting factors while driving - pilot study

Emilia Skwarek, Piotr Ferst, Marta Piwko, Julia Bodak, Kamil Pilarski, Marcin Pieniążek, Katarzyna Bryzik, Julia Mieszczanin, Katarzyna Mocny-Pachońska, Natalia Piaseczna, Rafał Doniec

A new concept of device for acoustic emission analysis of human joints

Bartłomiej J. Sawaryn, Dariusz Komorowski

Muscle activity pattern in hip flexion resistance training

Dobrochna Fryc, Michael Skipper Andersen, Katarzyna Jochymczyk-Woźniak, Katarzyna Nowakowska-Lipiec, Hanna Zadoń, Robert Michnik





Problems and challenges in bitemarks analysis: comparison and potential of the concept of "biometric dental rosette"

Sebastian But, Michał Rychlik, Agnieszka Przysańska

Assessment of musculoskeletal loads in three types of body posture according to dolphins

Katarzyna Nowakowska-Lipiec, Paulina Sośniak, Hanna Zadoń, Katarzyna Jochymczyk-Woźniak, Karol Bibrowicz, Tomasz Szurmik, Andrzej W. Mitas, Robert Michnik

Influence of auditory stimuli on balance maintaining capabilities in healthy subjects

Grzegorz Gruszka, Marta Chmura, Marek Ples, Piotr Wodarski, Jacek Jurkojć

Numerical simulations of the musculoskeletal system during natural gait and walking with poles

Katarzyna Nowakowska-Lipiec, Hanna Zadoń, Robert Michnik, Piotr Szaflik, Andrzej W. Mitas

Simple method for producing artificial nylon muscle fibers - preliminary experiments in bionics

Marek Ples, Grzegorz Gruszka, Wojciech Wolański

Biopsychological features analysis for music entrainment

Aleksandra Tuszy, Patrycja Romaniszyn-Kania, Anita Pollak, Damian Kania, Andrzej W. Mitas

Dynamic and static posture influenced by music entrainment

Aleksandra Tuszy, Mirosław Czak, Adam Fic, Damian Kania, Tomasz Szurmik, Karol Bibrowicz, Bruce Turner, Mateusz Wykręt, Andrzej W. Mitas

Effect of metrorhythmic stimulation on modifications of walking with poles

Piotr Szaflik, Hanna Zadoń, Robert Michnik, Andrzej W. Mitas

Neuromotor modeling of music entrainment – older patient's case study

Ewa Banachiewicz, Bruce Turner, Andrzej W. Mitas

The use of surface EMG to determine the muscle imbalance

Komorowski Dariusz, Mika Barbara





Assessment of shooting repeatability when shooting with short and long firearms using the Matlab environment

Maria Filipiek, Maria Hankus, Wojciech Pieniżek, Artur Stępnia, Weronika Rasińska, Miłosz Chrzan, Sławomir Suchoń, Anna Miller-Banaś, Agata Guzik-Kopyto, Robert Michnik

Analysis of acceleration of selected body segments during long and short firearm shots

Wojciech Pieniżek, Artur Stępnia, Maria Filipiek, Maria Hankus, Weronika Rasińska, Miłosz Chrzan, Sławomir Suchoń, Anna Miller-Banaś, Agata Guzik-Kopyto, Robert Michnik

Parameter mapping sonification (pm son) of pelvis in gait, for the purpose of developing symmetrical gait behaviours

Bruce Turner, Aleksandra Tuszy, Andrzej W. Mitas

PHILIPS Auditorium (EHTIC)

Roundtable of regional hospital managers

“Green hospital - challenges vs opportunities”

11:45 - 13:00

Marcin Bruszewski (American Heart of Poland), Mariusz Nowak (dr Stanislaw Sakiel Burn Treatment Center in Siemianowice Śląskie), Norbert Komar (Upper-Silesian Centre of Rehabilitation “Repty”), Krzysztof Skłodowski (Maria Skłodowska-Curie National Research Institute of Oncology in Gliwice), Piotr Przybyłowski (Silesian Center for Heart Diseases in Zabrze), Krystian Wita (Leszek Giec Upper-Silesian Medical Centre of the Medical University of Silesia in Katowice), Michał Ciach (RAYGENIC/TECHINTEGRA)

Conference Room (EHTIC)

13.00 -13.30

Lunch

Special session of Kardio-Med Silesia

13:30 - 14.45

“Regulatory, research and business aspects in the implementation of a medical device”

Chair: Prof. Paweł Buszman, Adam Konka, MBA





Silesian Park of Medical Technology Kardio-Med Silesia as a leading research and implementation unit in the field of biotechnology, pharmacy and personalized medicine

Adam Konka

Medical devices – how to perform the process from the idea to product certification

Małgorzata Gonsior – Kustosz

Quality standards for in vitro and in vivo testing of medical devices

Marzena Dyhdalewicz

Technological trends in medical market: development potential of Polish medical products

Adam Dawidziuk

From Idea to Commercialization a Clinician's Perspective

Paweł Buszman

Raising funds for medical device research in Silesia

Marshall Office of the Silesian Voivodeship

Discussion

PHILIPS Auditorium (EHTIC)

14.45 – 15.30

International meeting & music gig

Anna Ziębowicz, Bogusław Ziębowicz

“Around the world tour”

PHILIPS Auditorium (EHTIC)

15.30

Closing Session

Awards

PHILIPS Auditorium (EHTIC)





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Zabrze, 9 - 10th October, 2023



2023

Silesia.
Year of Science



15.45 **Social Event**
the Planetarium" - Silesian Science Park

