

**EUROPEAN FORUM
BIOMEDICAL ENGINEERING
FROM RESEARCH TO COMMERCIALIZATION**

December 2-4, 2019

**International Centre of Biocybernetics and
Nalecz Institute of Biocybernetics and Biomedical Engineering
Polish Academy of Sciences (IBBE PAS)
4 Trojdena street, Warsaw, Poland**

Chairmen:

Prof. Dr. Ratko Magjarević, Zagreb, Croatia

Faculty of Electrical Engineering and Computing, University of Zagreb
President Elect of the International Federation for Medical and Biological Engineering

Assoc. Prof. Dr. Piotr Ładyżyński, Warsaw, Poland

Nalecz Institute of Biocybernetics and Biomedical Engineering PAS
Chairman of the Industry Working Group of IFMBE

Secretary:

Dr. Anna Gerega, Warsaw, Poland

Nalecz Institute of Biocybernetics and Biomedical Engineering PAS

Sponsors:

International Federation for Medical and Biological Engineering
Polish Academy of Sciences
International Centre of Biocybernetics PAS
Nalecz Institute of Biocybernetics and Biomedical Engineering PAS



Monday, December 2, 2019

- 17:45 – 19:00 **OPENING OF THE FORUM**
Location: IBBE PAS, Lecture hall
Chairmen: Prof. Ratko Magjarević
 Assoc. Prof. Piotr Ładyżyński
- 17:45 – 18:00 **Assoc. Prof. Dr. Piotr Ładyżyński**
International Centre of Biocybernetics PAS (*Poland*)
WELCOME ADDRESS
- 18:00 – 18:15 **Prof. Dr. Ratko Magjarević**
Faculty of Electrical Engineering and Computing, University of Zagreb (*Croatia*)
International Federation for Medical and Biological Engineering
Sixty Years of the International Federation for Medical and Biological Engineering
- 18:15 – 18:25 **Assoc. Prof. Dr. Piotr Ładyżyński**
Nalecz Institute of Biocybernetics and Biomedical Engineering PAS (*Poland*)
Activities of the Industry Working Group of IFMBE
- 18:25 – 18:40 **Prof. Dr. Adam Liebert**
Nalecz Institute of Biocybernetics and Biomedical Engineering PAS (*Poland*)
**Nalecz Institute of Biocybernetics and Biomedical Engineering PAS:
from Bench to Bedside**
- 18:40 – 19:00 **Prof. Dr. Krzysztof Milewski (*Poland*)**
Center for Cardiovascular Research and Development, American Heart of Poland S.A.
**Experiences on Collaboration of the Center for Cardiovascular Research and
Development of the American Heart of Poland S.A. with Other Research
Institutions**
- 19:00 – 21:00 **GET TOGETHER**
Location: IBBE PAS, Exhibition hall

Tuesday, December 3, 2019

- 9:30 – 11:00 **SESSION I. The New EU Member States in Framework Programmes**
Location: IBBE PAS, Lecture Hall
- Chairmen: Ms. Ewa Kuśmierczyk (*Poland*)
 Prof. Dr. Ratko Magjarević (*Croatia*)
- 9:30 – 9:50 **Ewa Kuśmierczyk (*Poland*)**
Excellence in Science Department, Polish Academy of Sciences
**The ERC Grants: Ways to Increase the Success Rate of Applications from
Central and Eastern Europe**
- 9:50 – 10:10 **Katarzyna Walczyk-Matuszyk, tbc (*Poland*)**
National Contact Point for Research Programmes of the EU
**Polish and EU13 Research Institutions in Framework Programmes –
Challenges and Future Prospects**
- 10:10 – 10:30 **Prof. Dr. Adam Liebert (*Poland*)**
Nalecz Institute of Biocybernetics and Biomedical Engineering PAS (*Poland*)
**Horizon 2020 ITN from the BitMap Project Partner's Perspective: Brain
Injury and Trauma Monitoring Using Advanced Photonics**
- 10:30 – 11:00 *Discussion*
- 11:00 – 11:30 *Coffee break*

Tuesday, December 3, 2019

11:30 – 13:00 **SESSION II. From Scientific BME Research to Practical Applications**

Location: IBBE PAS, Lecture Hall

Chairmen: Prof. Dr. Miroslav Trajanovic (*Serbia*)
Prof. Dr. Marek Gzik (*Poland*)

11:30 – 11:50 **Assoc. Prof. Dr. Lenka Lhotská** (*Czech Republic*)

Department of Natural Sciences Faculty of Biomedical Engineering & Department of Cognitive Systems and Neurosciences, Czech Institute of Informatics, Robotics and Cybernetics, Czech Technical University in Prague

Information and Communication Technologies in the Integrated Care Cycle

11:50 – 12:00 *Discussion*

12:00 – 12:20 **Prof. Dr. Marek Darowski** (*Poland*)

Nalecz Institute of Biocybernetics and Biomedical Engineering PAS (Poland)

Simulation Platform for VAD–Heart Interaction in ICT Collaborative Project “SensorART”

12:20 – 12:30 *Discussion*

12:30 – 12:50 **Prof. Dr. Ulyana Lushchyk**, Prof. Dr. Viktor Novytskyk (*Ukraine*)

Centre of Innovative Medical Technologies "Veritas IT Med", National Academy of Sciences of Ukraine

Hemodynamical and Hydrodynamical Aspects as the Background for Modern Medical Technologies Smart-Software

12:50 – 13:00 *Discussion*

13:00 – 14:00 *Lunch break (complimentary lunch will be provided for speakers)*

Tuesday, December 3, 2019

14:00 – 15:30 **SESSION III. A Few Components for Successful Commercialization**

Location: IBBE PAS, Lecture Hall

Chairmen: Prof. Dr. Almir Badnjevic (*Bosnia & Herzegovina*)
Prof. Dr. Adam Liebert (*Poland*)

14:00 – 14:20 **Prof. Dr. Jörg Vienken** (*Germany*)

Vienken Consultant, Usingen

Biodesigning Medical Devices: Current Concepts and Their Disqualification by "Fake News"

14:20 – 14:30 *Discussion*

14:30 – 14:50 **Aleksander Klósek** (*Poland*)

YouNick Technology Park sp. z o.o.

What Are the Key Elements in the Project to Start Commercialization with the Venture Capital Fund? Are There Any Secret Ingredients Involved?

14:50 – 15:00 *Discussion*

15:00 – 15:20 **Alan Mutka** (*Croatia*)

Cognitus d.o.o.

A Multidisciplinary Approach in the Development of a Mechatronic Diagnostic Device - Our Experience

15:20 – 15:30 *Discussion*

15:30 – 16:00 *Coffee break*

Tuesday, December 3, 2019

- 16:00 – 17:30 **SESSION IV. From Scientific or Clinical Challenge To a Medical Product**
Location: IBBE PAS, Lecture Hall
- Chairmen: Prof. Dr. Yuri Dekhtyar (*Latvia*)
 Assist. Prof. Dr. Matej Reberšek (*Slovenia*)
- 16:00 – 16:20 **Prof. Dr. Miroslav Trajanovic** (*Serbia*)
Department for Production and Information Technology, Faculty of Mechanical
Engineering, University of Nis
Design of Osteofixation Devices - Personalized Approach
- 16:20 – 16:30 *Discussion*
- 16:30 – 16:50 **Dr. Łukasz Koltowski** (*Poland*)
1st Department of Cardiology Medical University of Warsaw
**From Clinical Challenge to Marketable Product: Example of AioCare and
Smartmedics**
- 16:50 – 17:00 *Discussion*
- 17:00 – 15:20 **Prof. Dr. Vaidotas Marozas** (*Lithuania*)
Biomedical Engineering Institute, Kaunas University of Technology
Personal Health Devices for Unobtrusive Monitoring of Chronic Diseases
- 17:20 – 17:30 *Discussion*

Wednesday, December 4, 2019

9:00 – 10:30 **SESSION V. BME Education, Research and Partnership with Industry**

Location: IBBE PAS, Lecture Hall

Chairmen: Assoc. Prof. Dr. Lenka Lhotská (*Czech Republic*)
Prof. Dr. Vaidotas Marozas (*Lithuania*)

9:00 – 9:20 **Prof. Dr. Yuri Dekhtyar** (*Latvia*)

Institute Biomedical Engineering and Nanotechnologies Institute Faculty of Machinery,
Transport and Aeronautics, Riga Technical University

**The Medical Engineering and Physics BSc and MSc Education Towards
Medical Engineering Business in Latvia**

9:20 – 9:30 *Discussion*

9:30 – 9:50 **Prof. Dr. Marek Gzik** (*Poland*)

Faculty of Biomedical Engineering, Silesian University of Technology

**Project „Silesian Center for Engineering Support of Medicine and Sport” as
a Chance for the Development of Biomedical Engineering**

9:50 – 10:00 *Discussion*

10:00 – 10:20 **Przemysław Kopyto** (*Poland*)

SDS Optic

Lifesaving Innovations

10:20 – 10:30 *Discussion*

10:30 – 11:00 *Coffee break*

Wednesday, December 4, 2019

- 11:00 – 13:00 **SESSION VI. BME: From Research to Commercialization**
Location: IBBE PAS, Lecture hall
- Chairmen: Prof. Dr. Jörg Vienken (*Germany*)
 Assoc. Prof. Dr. Piotr Ładyżyński (*Poland*)
- 11:00 – 11:20 **Prof. Dr. Maciej Wojtkowski** (*Poland*)
Department of the Physical Chemistry of Biology Systems,
Institute of Physical Chemistry PAS
**Development and Commercialization of a Tomography Instrument for
Retinal Imaging Based on OCT with Fourier Detection**
- 11:20 – 11:30 *Discussion*
- 11:30 – 11:50 **Prof. Dr. Ratko Magjarević** (*Croatia*)
Faculty of Electrical Engineering and Computing, University of Zagreb (*Croatia*)
**Development and Commercialization of a Personalized Diabetes
Management System**
- 11:50 – 12:00 *Discussion*
- 12:00 – 12:20 **Assist. Prof. Dr. Matej Reberšek** (*Slovenia*)
Faculty of Electrical Engineering, University of Ljubljana
Electroporation from Research to Commercialization
- 12:20 – 12:30 *Discussion*
- 12:30 – 12:50 **Prof. Dr. Arūnas Lukoševičius** (*Lithuania*)
Biomedical Engineering Institute, Kaunas University of Technology
**Biomedical Engineering Institute on the Way from Research to
Commercialization: Experience within Lithuanian Context**
- 12:50 – 13:00 *Discussion*
- 13:00 – 14:00 *Lunch break (complimentary lunch will be provided for speakers)*

Wednesday, December 4, 2019

- 14:00 – 15:30 **SESSION VII. Before and After Placing the Medical Device on the Market**
Location: IBBE PAS, Lecture Hall
- Chairmen: Prof. Dr. Arūnas Lukoševičius (*Lithuania*)
 Prof. Dr. Marek Darowski (*Poland*)
- 14:00 – 14:20 **Prof. Dr. Jörg Vienken** (*Germany*)
Vienken Consultant, Usingen
- The New European Medical Device Regulation (MDR): Stresses, Challenges and Assets**
- 14:20 – 14:30 *Discussion*
- 14:30 – 14:50 **Prof. Dr. Almir Badnjevic** (*Bosnia & Herzegovina*)
Verlab Ltd. Sarajevo Medical Devices Verification Laboratory
- Legal Metrology Framework for Medical Devices – Post Market Surveillance Experiences**
- 14:50 – 15:00 *Discussion*
- 15:00 – 15:20 **Prof. Dr. Roman Cherniha** (*Ukraine*)
Institute of Mathematics, National Academy of Science of Ukraine
- Mathematical Modeling of Physiological Systems, Pathophysiological Processes or Treatments of Different Diseases is a Part of Biomedical Engineering**
- 15:20 – 15:30 *Discussion*
- 15:30 – 15:50 **CLOSING OF THE FORUM**
Location: IBBE PAS, Lecture Hall
- Prof. Dr. Ratko Magjarević** (*Croatia*)
Faculty of Electrical Engineering and Computing, University of Zagreb (*Croatia*)
- Assoc. Prof. Dr. Piotr Ładyżyński** (*Poland*)
Nalecz Institute of Biocybernetics and Biomedical Engineering PAS (*Poland*)