

Conference Program

Friday

March 13, 2015

09:00 - 10:00 Registration

10:00 - 10:30 Opening Ceremony, Conference Hall

Ika Ferer Gotic- CMBEBIH Programme Manager, Editor in chief, N1-CNN

Welcome Speeches

Almir Badnjević – CMBEBIH 2015 Chair

Aljo Mujčić – President of the Scientific Committee of CMBEBIH 2015

Mehmet Uzunoğlu – Rector of International Burch University

Almira Hadžović – Džuvo – Dean of Faculty of Medicine, University of Sarajevo

Mirsada Hukić – Representative of Academy of Sciences and Arts of Bosnia and Herzegovina

Senaid Memić – Mayor of Ilidža Municipality

Ratko Magjarević – President of International Federation for Medical and Biological Engineering (IFMBE)

10:30 - 12:30 Plenary Lectures I, Conference Hall

- 1. Ratko Magjarevic, Ph.D.** – *Challenges of Biomedical Engineering – Research, Industrialization, Sustainability*
- 2. Leandro Pecchia, Ph.D.** - *Applied Biomedical Signal Processing and Intelligent eHealth for Falls Prediction in the Elderly*
- 3. Dejan Milosevic, Ph.D.** - *Attoscience*
- 4. Mustafa Kahramanyol, Ph.D.** - *The Gülhane Mastoidectomy*
- 5. Mark Bale, Ph.D.** - *Emerging Technologies and Human Rights: What Are the Challenges?*

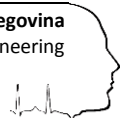
13:00 - 13:20 Special Lecture I, Conference Hall

SPL1: **Božidar Ferek – Petrić, Ph.D.** – *MEDTRONIC: Remote Pacemaker Programming - 15 Years After*

13:30 -14:30 Lunch Break, Burch Restaurant

13:30 – 14:00 Student transfer for Student Workshop to the Faculty of Medicine

14:00 – 15:00 Lunch Break for Students at Faculty of Medicine



15:00 – 20:00 Student's Workshop, Faculty of Medicine

SW1-1: *Testing the Safety of Automated External Defibrillators* – University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia

SW1-2: *Evaluation of repetitive physical exercise using inertial and magnetic sensors* – University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia

SW1-3: *ERP signal measurement and processing* – University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia

SW1-4: *ZigBee wireless communication protocol and comparison with affined standards commonly used in body sensor networks* – University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia

SW1-5: *Software differentiation of occurrence of acute myocardial infarction and display of its localization* – University of Sarajevo, Faculty of Electrical Engineering and Faculty of Medicine, Sarajevo, Bosnia and Herzegovina

14:30 - 16:00 Plenary Session I, Sarajevo Room (207)

BIOMEDICAL SIGNAL PROCESSING

Chairs: *Leandro Pechia, University of Warwick (UK), Dusanka Boskovic, University of Sarajevo (Bosnia and Herzegovina)*

S1-1: *Investigation of Heart Rate Variability using Wavelet Packet Transform in Major Depressive Disorder*, Akar S.A, Kara S, Bilgiç V.

S1-2: *Theoretical and Experimental UV-Vis Spectroscopic Analysis Of Chamazulene*, Salihovic M, Sapcanin A.

S1-3: *Sleep stage classification using AR Burg and C4.5 classifier* Arnaut N, Subasi A.

S1-4: *EEG verified diagnosis of epilepsy using Hilbert Huang transform*, Ibric S, Avdakovic S, Omerhodzic I, Suljanovic N, Mujcic A.

S1-5: *Surface EMG pattern recognition by using DWT feature extraction and SVM classifier*, Podrug E.



14:30-16:00 Plenary Session II, Motive Room (208)

BIOMEDICAL IMAGING AND IMAGE PROCESSING

Chairs: *Adnan Beganovic, University Clinical Centre Sarajevo (Bosnia and Herzegovina), Haris Huseinagic, University of Tuzla (Bosnia and Herzegovina)*

S2-1: *Three Dimensional Airway Tree Segmentation from Computed Tomography Lung Images*, Mesanovic N, Huseinagic H, Smajic E.

S2-2: *Texture-based automatic polyp detection in colonoscopy videos*, Avramovic A, Sevo I.

S2-3: *Three-dimensional rotational angiography in the control of the results of endovascular coiling of intracranial aneurysms*, Huseinagic H, Moranjkic M, Mesanovic N.

S2-4: *RTG diagnostics in paediatric infirmary*, Begic N, Begic Z, Begic E, Dobraca A, Mandzuka M.

S2-5: *Fractal Analysis of Digital Mammograms*, Đedović E, Gazibegović-Busuladžić A, Beganović A.

16:00-16:30 Coffee Break

16:30-18:00 Plenary Session III, Sarajevo Room (207)

BIOSENSORS AND BIOINSTRUMENTATION

Chairs: *Mustafa Busuladzic, University of Sarajevo (Bosnia and Herzegovina), Almir Badnjevic Verification Laboratory VERLAB (Bosnia and Herzegovina)*

S3-1: *Metamaterial Absorber Based Biosensor Applications*, Karaaslan M, Dincer F, Bakir M, Unal E, Delihacioglu K, Ozer Z, Akgol O, Sabah C.

S3-2: *Biosensor Application by Using Gammadion Shaped Chiral Metamaterials*, Karaaslan M, Bakir M, Dincer F, Unal E, Delihacioglu K, Ozer Z, Akgol O, Sabah C.

S3-3: *A virtual environment to test and validate model based insulin infusion therapies*, Smajlagic D, Palumbo P.

S3-4: *Adjustment of quantification of catecholamines and their metabolites in biological samples using the Shimadzu LCSOL SINGLE-LC EN HPLC system with electro-chemical detection*, Ibragic S, Sofic E.



S3-5: *A polymer-based, optical biosensor chip for detection of microbial leucine aminopetidase (LAP) activity and its potential as a novel, medical diagnostic test*, Ibrisimovic-Mehmedinovic N, Ibrisimovic M, Kesic A.

16:30-18:00 Plenary Session IV, Motive Room (208)

BIOSENSORS, BIOINSTRUMENTATION AND BIOMATERIALS

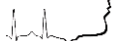
Chairs: *Enisa Omanovic-Miklicanin, University of Sarajevo (Bosnia and Herzegovina), Elma Feric, International Burch University (Bosnia and Herzegovina)*

S4-1: *Conducting Polymer Based Efficient Surface Design for the Detection of Cholesterol*, Soylemez S, Udum Y.A, Kesik M, Gündoğdu Hızlıateş C, Ergun Y, Toppare L.

S4-2: *Practices the different cells types like target genotoxic endpoint in micronucleus assay*, Velickova N, Milev M, Nedeljkovic B, Gorgieva P.

S4-3: *Bioelastic extramedullary bone osteosynthesis in locomotor surgery*, Hadziahmetovic Z, Vavra Hadziahmetovic N.

22:00 – 02:00 Student Party at CLUB JEZ



09:00 – 10:30 Plenary lectures II, Conference Hall

1. **Werner Mantele, Ph.D.** - *Spectroscopists do it with Light: Development of Optical Sensors for Medical Applications*
2. **Dragan Primorac, Ph.D.** - *Personalised Medicine: Myth or Reality*
3. **Herve Liebgott, Ph.D.** - *Ultrasound Advanced Imaging: beyond anatomy*
4. **Damir Marjanovic, Ph.D.** - *Automation of the Forensic*

10:30 – 11:30 Coffee Break and Poster session

Chairs: **Ratko Magjarevic**, University of Zagreb (Croatia), **Igor Lackovic**, University of Zagreb

P1: *Analysis of proteins with IR spectroscopy*
Authors: Dzafic E, Mantele W.

P2: *The Impact of PET Reconstruction Parameters on SUV values*
Authors: Skopljak-Beganovic A, Beganovic A, Gazdic-Santic M, Drljevic A.

P3: *Four-dimensional computer tomography: a review*
Author: Rovcanin B.

P4: *Development of a New Amperometric Sensor for Adrenaline Based on the Carbon Electrode Modified with Ru(III) Complex*
Authors: Redzic S, Kahrovic E, Turkusic E.

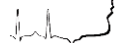
P5: *Selenium Containing Conducting Polymer Based Pyranose Oxidase Biosensor for Glucose Detection*
Authors: Gokoglan T.C, Soylemez S, Kesik M, Toksabay S, Toppare L.

P6: *Synthesis of Graphene Layers for biomedical applications*
Authors: Satilmis H, Yildiz B, Tanis Y.E, Unlu C.G, Ozmen Y.

P7: *Stem Cells and plastic surgery – Future and Perspectives*
Authors: Jakirlic M, Dujso V.

P8: *Stem cells of bone marrow - isolation and cultivation*
Authors: Redzic I, Aljicevic M.

P9: *Laser – induced nonlinear processes in molecules*
Authors: Habibovic D, Hasovic E, Gazibegovic-Busuladzic A, Odzak S, Cerbic A, Busuladzic M, Milosevic D.B.



P10: *Teaching Physical Aspects of Medical Imaging Techniques*

Authors: Kiseljakovic M, Sotonica M, Ejubovic M, Fatic V, Omerbasic A, Dalipagic S, Zoranovic D, Muharemovic Z, Busuladzic M.

P11: *3D technology in the manufacture of a medicament forms with controlled – release*

Authors: Maleskic E, Maleskic S, Dedic M.

P12: *Application of nano-drugs in cancer therapy*

Authors: Ziga N, Dobraca A, Becic F, Cordalija V, Dedic M.

P13: *Evaluation of xenoestrogenic effects of organic UV filters*

Authors: Imamovic B, Dujic T, Malenica M, Becic E, Dedic M

P14: *In silico models to predict the absorption, distribution, metabolism, elimination and toxicity of drugs*

Authors: Mujkic S, Vojinovic T, Smajovic A.

P15: *Determination influence of inhibiting platinum acid on the activity of catalase*

Authors: Herenda S, Ostojic J, Klepo L, Galic B.

P16: *Determination of Body Surface Area Using the Mathematical Harmony*

Authors: Omerbašić A, Šečić D, Muharemović Z, Musuladžić M.

P17: *Nanoparticles as bioactive nanocarriers for cancer therapy*

Authors: Vranic E, Rahic O, Hadziabdic J, Elezovic A, Boskovic D.

P18: *New advances in human skin subtitles*

Authors: Vranic E, Grizic D, Lamprecht A.

P19: *The future of Healthcare: Nanomedicine and Internet Nano Things*

Authors: Omanovic-Miklicanin E, Maksimovic M, Vujovic V.

P20: *Determination of gender and age specific differences in total iron levels in human serum using a spectrophotometric method*

Authors: Tahirovic I, Boloban A, Ibragic S, Dzudzevic-Cancar H, Toromanovic J, Lepara O, Ajanovic A, Dizdar M.

P21: *Promising tissue engineering approaches using biodegradable poly (D,L-lactic-co-glycolic acid) scaffolds,* Grizic D, Vranic E, Lamprecht A.

11:30 – 13:30 Plenary lectures III, Conference Hall

1. **Yves Lemoigne, Ph.D.** - 7 years of high-level education in Medical Physics for Eastern Europe



2. **Mario Medvedec, Ph.D.** - *Vision and Provision of Clinical Engineering Division - CED/IFMBE*
3. **Atila Aydinli, Ph.D.**- *Advances in Plasmonic Detection: Plexcitonic Crystals*
4. **Zijad Dzemic, M.S.** - *National metrology institute for Quality of life*

13:30 -14:30 Lunch Break, Burch restaurant

13:30 – 14:00 Student transfer for Student Workshop to the Faculty of Medicine

14:00 – 15:00 Lunch Break for Students at Faculty of Medicine

15:00 – 20:00 Student's Workshop, Faculty of Medicine

SW2-1: *Novel biomedical engineering applications for the teaching of various STEM subjects* – University of Warwick, United Kingdom

SW2-2: *Illustrating Genetic Variation through DNA Analysis* – International Burch University, Sarajevo, Bosnia and Herzegovina

SW2-3: *The system for monitoring patients in physical therapy* – University of Sarajevo, Faculty of Electrical Engineering and Faculty of Medicine, Sarajevo, Bosnia and Herzegovina

SW2-4: *Neural networks as a basis for the design of smart drugs* – University of Sarajevo, Faculty of Electrical Engineering and Faculty of Pharmacy, Sarajevo, Bosnia and Herzegovina

14:30-16:00 Plenary Session V, Sarajevo Room (207)

BIOMECHANICS, ROBOTICS AND MINIMALLY INVASIVE SURGERY

Chairs: **Elmedin Mesic**, University of Sarajevo (Bosnia and Herzegovina), **Ibrahim Omerhodzic**, University Clinical Centre (Bosnia and Herzegovina)

S5-1: *The computer modelling and biomechanical analysis of musculoskeletal systems in The AnyBody Modeling System*, Spahic D, Karac A.

S5-2: *Analysis of sub-cerebellar regions in patients with Chiari Malformations*, Akar E, Kara S, Akdemir H, Kiriş A.

S5-3: *Numerical and experimental stress analysis of an external fixation system*, Mesic E, Avdic V, Pervan N.



S5-4: *Sensory re-education after median and ulnar nerve repair*, Jakirlic M, Dujso V, Omerhodzic I.

S5-5: *Analysis of signals collected by intraoperative neuromonitoring procedure during the neurosurgical operation of patients with complex intramedullary spinal cord tumors*, Omerhodžić I, Zahirović S, Avdaković S, Hodžić H, Vardo A, Bišćević M, Drnda S, Adilović A, Badnjević A.

14:30-16:00 Plenary Session VI, Motive Room (208)

CARDIOVASCULAR, RESPIRATORY AND ENDOCRINE SYSTEMS ENGINEERING

Chairs: *Lejla Divovic-Mustafic*, University Clinical Centre (Bosnia and Herzegovina), *Alma Badnjevic-Cengic*, Canton Hospital Zenica (Bosnia and Herzegovina)

S6-1: *Treatment of iatrogenic dissection of the left subclavian artery*, Huseinagic H, Jaganjac S, Moranjkic M, Mesanovic N.

S6-2: *Evaluation of the amount of used Onyx*, Huseinagic H, Moranjkic M, Mesanovic N, Ademovic Z, Begic A.

S6-3: *Comparison of postoperative outcomes within patients treated with different stent types*, Divovic Mustafic L, Kulic M.A.

S6-4: *Heart rate variability in assessment of autonomic nervous system function in preoperative period*, Omerbegovic M, Ferhatovic M.

S6-5: *Evaluation of factors that influence the occurrence of early hypothyroidism following radioactive iodine treatment in thyrotoxicosis*, Dzubur M, Kucukalic - Selimovic E, Dzubur-Aganovic M, Bahtic A, Begic E, Hrvo S.

S6-6: *Serum nitric oxide levels in patients with acute myocardial infarction with ST elevation (STEMI)*, Badnjević – Cengic A, Kovacevic P, Badnjevic A, Gurbeta L, Hasanefendic B.

16:00-16:30 Coffee Break

16:30-18:00 Plenary Session VII, Sarajevo Room (207)

MOLECULAR, CELLULAR AND TISSUE ENGINEERING

Chairs: *Damir Marjanovic*, International Burch University (Bosnia and Herzegovina), *Radivoj Jadric*, University of Sarajevo (Bosnia and Herzegovina), *Emina Cengic Kiseljakovic*, University of Sarajevo (Bosnia and Herzegovina)



S7-1: *User verification for hemoglobin a1c on cobas 501 roche analyzer*, Kucukalic E, Coric J, Hasanefendic B, Mujic J, Curovic L, Bodulovic A.

S7-2: *Raman chemical imaging of collagen-based biomineralized composites*, Masic A.

S7-3: *Stem cell technology*, Balkaya H.

S7-4: *Transcutaneous electrical nerve stimulation in the treatment of lumbar pain syndrome*, Miladinovic K, Vavra-Hadziahmetovic N.

16:30-18:00 Plenary Session VIII, Motive Room (208)

CLINICAL ENGINEERING AND HEALTH TECHNOLOGY ASSESSMENT

Chairs: Leandro Pecchia, University of Warwick (UK), Mario Medvedec, University of Zagreb (Croatia)

S8-1: *Continuous ECG holter monitoring in child age*, Begic Z, Mesihovic Dinarevic S, Kadic A, Halimic M.

S8-2: *Internal exposure arising from intravenous administration of F-18 fluorodeoxyglucose*, Beganovic A, Modronja M, Odzak S, Skopljak-Beganovic A, Gazdic-Santic M.

S8-3: *Determination possibility of skin distance focus by using camera in order of verification patient's position in radiotherapy*, Fazlic S, Osmic H, Osmic J.

S8-4: *From regenerative dentistry to regenerative medicine: potential of oral stem cells*, Porovic S, Jurisic S, Juric H.

S8-5: *The role of endoscopic capsule in finding the cause of gastrointestinal bleeding*, Zubcevic N, Zubcevic S, Mesihovic R, Vanis N, Puhalic A, Pilav A.

18:00-19:00 Special Workshop II, USA Room (206)

SPW2: DEVLOGIC - *Software Development in Biomedical Engineering*

20:00-00:00 Conference Dinner at RESTAURANT PIVNICA SARAJEVO



09:00-10:30 Plenary Session IX, Sarajevo Room (207)

HEALTH INFORMATICS, E-HEALTH AND TELEMEDICINE I

Chairs: *Adnan Salihbegovic, University of Sarajevo (Bosnia and Herzegovina), Aljo Mujcic, University of Tuzla (Bosnia and Herzegovina)*

S9-1: *Data mining, processing and web –based ECG signal imaging*, Zunic E, Zunic B.

S9-2: *Software solution in differantion and treatment of acid-base disorders*, Begic E, Mandzuka M, Begic Z, Boskovic D, Masic I.

S9-3: *Development of domain specific language and IDE for Internet of Things applications in remote patient monitoring*, Salihbegovic A, Kaljic E, Eterovic T, Ribic S.

S9-4: *IoT Wireless Sensor Networks for Healthcare Applications*, Ugrenovic D, Gardasevic G, Golic D, Gazdic V.

S9-5: *Internet of Thing for health care – new level “smart” of health care services*, Macinkovic D.

S9-6: *Nav1.7 Expression in adult mouse sensory neurons*, Feric E, Gingras J, McDermott J

09:00-10:30 Plenary Session X, Motive Room (208)

HEALTH INFORMATICS, E-HEALTH AND TELEMEDICINE II

Chairs: *Edin Skaljo, University of Sarajevo (Bosnia and Herzegovina), Alma Secerbegovic, University of Tuzla (Bosnia and Herzegovina)*

S10-1: *Smartphone-based remote health monitoring: opportunities and challenges*, Secerbegovic A, Suljanovic N, Mujcic A.

S10-2: *Comparison of Bioinformatics Web-Tools for Prediction of G-quadruplexes*, Jasarevic F, Doluca O.

S10-3: *Overview for computer aided detection of aortic diseases*, Smajic E, Mesanovic N.

S10-4: *High frequence technology in telemedicine services*, Skaljo E, Hodzic M, Mujcic A.



10:30-11:00 Coffee break

11:00-12:30 Plenary Session XI, Sarajevo Room (207)

BIOMEDICAL ENGINEERING EDUCATION

Chairs: *Radovan Stojanovic, University of Podgorica (Montenegro), Dusanka Boskovic, University of Sarajevo (Bosnia and Herzegovina)*

S11-1: *Opportunities and Challenges in Biomedical Engineering Education*, Boskovic D, Badnjevic A.

S11-2: *Turning the Challenge into Opportunity – A Strategic Framework for the Biomedical Engineering Development in Bosnia and Herzegovina*, Mustoo S, Gurbeta L.

S11-3: *Measurement in medicine – Past, present, future*, Badnjevic A, Gurbeta L, Boskovic D, Dzemic Z.

S11-4: *Alternative approach to addressing infrastructure needs in biomedical engineering programs (Case of emerging economies)*, R. Stojanovic, A. Caplanova, Z. Kovacevic, N. Filipovic, Z. Bundalo

S11-5: *Pediatric dilemmas in using modern biotechnologies*, Zubcevic S.

11:00-12:30 Plenary Session XII, Motive Room (208)

PHARMACEUTICAL ENGINEERING

Chairs: *Hurija Dzudzevic - Cancar, University of Sarajevo (Bosnia and Herzegovina), Fahir Becic, University of Sarajevo (Bosnia and Herzegovina)*

S12-1: *Pharmaceutical engineering*, Mehovic S, Dedic M, Jordamovic N.

S12-2: *In vitro models to determine the pharmacokinetic parameters*, Pehlivanovic B.

S12-3: *Drug design*, Maleskic E, Dedic M, Becic F.

S12-4: *Usage of neuron circles in drug development*, Haseljic N, Smajovic A.

S12-5: *Detection of non-esterified fatty acids in plasma samples in diabetes management*, Mandal S, Causevic A, Semiz S.



11:00-12:30 Plenary Session XIII, USA Room(206)

STUDENT PAPERS

Chairs: *Aljo Mujcic*, University of Tuzla (Bosnia and Herzegovina), *Mirza Dedic*, University of Sarajevo (Bosnia and Herzegovina), *Ibrahim Omerhodzic*, University Clinical Centre Sarajevo (Bosnia and Herzegovina)

S13-1: *The validation of smartphone's built-in cameras for heart rate extraction*, Nišić J, Beganović N, Zaimović E, Goletić L, Hujdur E, Šećerbegović A.

S13-2: *Non-contact video-based heart rate and heart rate variability extraction from different body regions*, Alic A, Bajric B, Hodzic A, Kameric O, Basic A, Secerbegovic A.

S13-3: *Radioiodine therapy of differentiated thyroid cancer*, Kaimovic S, Hairlahovic A.

S13-4: *BioEcomat (BEC) Machine for recycling biotech drugs*, Sijerčić A.

S13-5: *AC and DC Coupling of Electrocardiograph in Mobile Monitoring*, Jurić D, Akšamović A

S13-6: *Localization and 2D imaging of ST elevation myocardial infarction using software differentiation*, Huskic V, Vardo A, Begic E, Hrvat E, Gurbeta L, Dzubur M, Badnjevic A, Dajic A, Kadic A.

S13-7: *-Possibilities of applying stem cells to treat MS. Parkinson*, Mali G

12:30-13:30 Closing Ceremony, Conference Hall



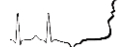
PROGRAMME AT A GLANCE

Program of the 1th Conference of Medical and Biological Engineering in Bosnia and Herzegovina (CMBEBIH 2015), Sarajevo, from 13th to 15th March 2015.

| From | | To | | FRIDAY 13 March 2015 | | From | | To | | SATURDAY 14 March 2015 | | From | | To | | SUNDAY 15. MARCH 2015 | | |
|-------|-------|-------------------------------------|--------------|----------------------|--------------|-------|-------------------------------------|------------------------------|-------|------------------------|--|-------|-------|------------------|--|-----------------------|--|-----|
| 9:00 | 9:30 | Registration | | | | 9:00 | 9:30 | PL2 | | | | 9:00 | 9:30 | S9 | | S10 | | |
| 9:30 | 10:00 | Opening Ceremony | | | | 9:30 | 10:00 | | | | | 9:30 | 10:00 | | | | | |
| 10:00 | 10:30 | | | | | 10:00 | 10:30 | | | | | 10:00 | 10:30 | | | | | |
| 10:30 | 11:00 | | | | | 10:30 | 11:00 | Coffee Break- Poster Session | | | | 10:30 | 11:00 | Coffee Break | | | | |
| 11:00 | 11:30 | PL1 | | | | 11:00 | 11:30 | | | | | 11:00 | 11:30 | S11 | | S12 | | S13 |
| 11:30 | 12:00 | | | | | 11:30 | 12:00 | PL3 | | | | 11:30 | 12:00 | | | | | |
| 12:00 | 12:30 | | | | | 12:00 | 12:30 | | | | | 12:00 | 12:30 | | | | | |
| 12:30 | 13:00 | SPL1 | | | | 12:30 | 13:00 | SPL2 | | | | 12:30 | 13:00 | Closing Ceremony | | | | |
| 13:00 | 13:30 | | | | | 13:00 | 13:30 | | | | | 13:00 | 13:30 | | | | | |
| 13:30 | 14:00 | Lunch Break | | | | 13:30 | 14:00 | Lunch Break | | | | 13:30 | 14:00 | | | | | |
| 14:00 | 14:30 | | | | | 14:00 | 14:30 | | | | | 14:00 | 14:30 | | | | | |
| 14:30 | 15:00 | Student Workshop at Medical Faculty | S1 | | S2 | | Student Workshop at Medical Faculty | S5 | | S6 | | 14:30 | 15:00 | | | | | |
| 15:00 | 15:30 | | Coffee Break | | Coffee Break | | | 15:00 | 15:30 | | | | | | | | | |
| 15:30 | 16:00 | | S3 | | S4 | | | 15:30 | 16:00 | | | | | | | | | |
| 16:00 | 16:30 | | Coffee Break | | Coffee Break | | | 16:00 | 16:30 | | | | | | | | | |
| 16:30 | 17:00 | | S7 | | S8 | | | 16:30 | 17:00 | | | | | | | | | |
| 17:00 | 17:30 | | SPW2 | | SPW2 | | | 17:00 | 17:30 | | | | | | | | | |
| 17:30 | 18:00 | | | | | | | 17:30 | 18:00 | | | | | | | | | |
| 18:00 | 18:30 | | | | | | | 18:00 | 18:30 | | | | | | | | | |
| 18:30 | 19:00 | | | | | | | 18:30 | 19:00 | | | | | | | | | |
| 19:00 | 19:30 | | | | | | | 19:00 | 19:30 | | | | | | | | | |
| 19:30 | 20:00 | | | | | 19:30 | 20:00 | | | | | | | | | | | |
| 20:00 | 20:30 | | | | | 20:00 | 20:30 | | | | | | | | | | | |
| 20:30 | 21:00 | | | | | 20:30 | 21:00 | | | | | | | | | | | |
| 21:00 | 21:30 | | | | | 21:00 | 21:30 | | | | | | | | | | | |
| 21:30 | 22:00 | | | | | 21:30 | 22:00 | | | | | | | | | | | |
| 22:00 | 23:00 | Student Party | | | | 22:00 | 23:00 | Conference Dinner | | | | 22:00 | 23:00 | | | | | |
| 23:00 | 0:00 | | | | | 23:00 | 0:00 | | | | | 23:00 | 0:00 | | | | | |
| 0:00 | 1:00 | | | | | 0:00 | 1:00 | | | | | 0:00 | 1:00 | | | | | |
| 1:00 | 2:00 | | | | | 1:00 | 2:00 | | | | | 1:00 | 2:00 | | | | | |

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| S1 | BIOMEDICAL SIGNAL PROCESSING |
| S2 | BIOMEDICAL IMAGING AND IMAGE PROCESSING |
| S3 | BIOSENSORS AND BIOINSTRUMENTATION |
| S4 | BIOSENSORS, BIOINSTRUMENTATION AND BIOMATERIALS |
| S5 | BIOMECHANICS, ROBOTICS AND MINIMALLY INVASIVE SURGERY |
| S6 | CARDIOVASCULAR, RESPIRATORY AND ENDOCRINE SYSTEMS ENGINEERING |
| S7 | MOLECULAR, CELLULAR AND TISSUE ENGINEERING |
| S8 | CLINICAL ENGINEERING AND HEALTH TECHNOLOGY ASSESSMENT |
| S9 | HEALTH INFORMATICS, E-HEALTH AND TELEMEDICINE I |
| S10 | HEALTH INFORMATICS, E-HEALTH AND TELEMEDICINE II |
| S11 | BIOMEDICAL ENGINEERING EDUCATION |
| S12 | PHARMACEUTICAL ENGINEERING |
| S13 | STUDENT SESSION |

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|-------|--|
| PL1-1 | Challenges of Biomedical Engineering – Research, Industrialization, Sustainability |
| PL1-2 | Applied Biomedical Signal Processing and Intelligent eHealth for falls prediction in the elderly |
| PL1-3 | Personalised medicine: myth or reality |
| PL1-4 | The Gülhane Mastoidectomy |
| PL1-5 | Emerging technologies and human rights: what are the challenges? |
| PL2-1 | Spectroscopists do it with Light: Development of Optical Sensors for Medical Applications |
| PL2-2 | Attoscience |
| PL2-3 | Ultrasound advanced imaging: beyond anatomy |
| PL2-4 | Automation of the Forensic DNA Analysis Procedures: Advantages and Challenges |
| PL2-5 | 17 years of high-level education in Medical Physics for Eastern Europe |
| PL3-1 | Vision and Provision of Clinical Engineering Division - CED/IFMBE |
| PL3-2 | Advances in Plasmonic Detection: Plexitonic Crystals |
| PL3-3 | National metrology institute for Quality of life |



PROGRAM – DAY 1 – FRIDAY 13 March 2015

| FRIDAY 13 March 2015 | | From | To | |
|-------------------------------------|--------------|-------|-------|-------|
| Registration | | 9:00 | 9:30 | |
| Registration | | 9:30 | 10:00 | |
| Opening Ceremony | | 10:00 | 10:30 | |
| PL1 | | 10:30 | 11:00 | |
| | | 11:00 | 11:30 | |
| | | 11:30 | 12:00 | |
| | | 12:00 | 12:30 | |
| SPL1 | | 12:30 | 13:00 | |
| SPL1 | | 13:00 | 13:30 | |
| Lunch Break | | 13:30 | 14:00 | |
| | | 14:00 | 14:30 | |
| Student Workshop at Medical Faculty | S1 | S2 | | |
| | | 14:30 | 15:00 | |
| | Coffee Break | | 15:00 | 15:30 |
| | Coffee Break | | 15:30 | 16:00 |
| | S3 | S4 | | |
| | | 16:00 | 16:30 | |
| | S3 | | 16:30 | 17:00 |
| | S3 | | 17:00 | 17:30 |
| S3 | | 17:30 | 18:00 | |
| S3 | | 18:00 | 18:30 | |
| S3 | | 18:30 | 19:00 | |
| S3 | | 19:00 | 19:30 | |
| S3 | | 19:30 | 20:00 | |
| S3 | | 20:00 | 20:30 | |
| S3 | | 20:30 | 21:00 | |
| S3 | | 21:00 | 21:30 | |
| S3 | | 21:30 | 22:00 | |
| Student Party | | 22:00 | 23:00 | |
| | | 23:00 | 0:00 | |
| | | 0:00 | 1:00 | |
| Student Party | | 1:00 | 2:00 | |

| | |
|----|---|
| S1 | BIOMEDICAL SIGNAL PROCESSING |
| S2 | BIOMEDICAL IMAGING AND IMAGE PROCESSING |
| S3 | BIOSENSORS AND BIOINSTRUMENTATION |
| S4 | BIOSENSORS, BIOINSTRUMENTATION AND BIOMATERIALS |

| | |
|-------|--|
| PL1-1 | Challenges of Biomedical Engineering – Research, Industrialization, Sustainability |
| PL1-2 | Applied Biomedical Signal Processing and Intelligent eHealth for falls prediction in the elderly |
| PL1-3 | Personalised medicine: myth or reality |
| PL1-4 | The Gülhane Mastoidectomy |
| PL1-5 | Emerging technologies and human rights: what are the challenges? |



PROGRAM – DAY 2 – SATURDAY 14 March 2015

| SATURDAY 14 March 2105 | | | From | To | |
|-------------------------------------|-------------------|----|-------|-------|-------|
| PL2 | | | 9:00 | 9:30 | |
| | | | 9:30 | 10:00 | |
| | | | 10:00 | 10:30 | |
| Coffe Break- Poster Session | | | 10:30 | 11:00 | |
| | | | 11:00 | 11:30 | |
| PL3 | | | 11:30 | 12:00 | |
| | | | 12:00 | 12:30 | |
| | | | 12:30 | 13:00 | |
| SPL2 | | | 13:00 | 13:30 | |
| Lunch Break | | | 13:30 | 14:00 | |
| | | | 14:00 | 14:30 | |
| Student Workshop at Medical Faculty | S5 | S6 | 14:30 | 15:00 | |
| | | | 15:00 | 15:30 | |
| | | | 15:30 | 16:00 | |
| | Coffee Break | | | 16:00 | 16:30 |
| | S7 | S8 | 16:30 | 17:00 | |
| | | | 17:00 | 17:30 | |
| | SPW2 | | | 17:30 | 18:00 |
| | | | | 18:00 | 18:30 |
| | Conference Dinner | | | 18:30 | 19:00 |
| | | | | 19:00 | 19:30 |
| 19:30 | | | | 20:00 | |
| 20:00 | | | | 20:30 | |
| 20:30 | | | | 21:00 | |
| 21:00 | | | | 21:30 | |
| 21:30 | | | | 22:00 | |
| | | | 22:00 | 23:00 | |
| | | | 23:00 | 0:00 | |
| | | | 0:00 | 1:00 | |
| | | | 1:00 | 2:00 | |

| | | |
|--|----|---|
| | S5 | BIOMECHANICS, ROBOTICS AND MINIMALLY INVASIVE SURGERY |
| | S6 | CARDIOVASCULAR, RESPIRATORY AND ENDOCRINE SYSTEMS ENGINEERING |
| | S7 | MOLECULAR, CELLULAR AND TISSUE ENGINEERING |
| | S8 | CLINICAL ENGINEERING AND HEALTH TECHNOLOGY ASSESSMENT |

| | | |
|--|-------|---|
| | PL2-1 | Spectroscopists do it with Light: Development of Optical Sensors for Medical Applications |
| | PL2-2 | Attoscience |
| | PL2-3 | Ultrasound advanced imaging: beyond anatomy |
| | PL2-4 | Automation of the Forensic DNA Analysis Procedures: Advantages and Challenges |
| | PL2-5 | 17 years of high-level education in Medical Physics for Eastern Europe |
| | PL3-1 | Vision and Provision of Clinical Engineering Division - CED/IFMBE |
| | PL3-2 | Advances in Plasmonic Detection: Plexitonic Crystals |
| | PL3-3 | National metrology institute for Quality of life |



PROGRAM – DAY 3 – SUNDAY 15 March 2015

| From | To | SUNDAY 15. MARCH 2015 | | |
|-------|-------|-----------------------|-----|-----|
| 9:00 | 9:30 | S9 | S10 | |
| 9:30 | 10:00 | | | |
| 10:00 | 10:30 | | | |
| 10:30 | 11:00 | Coffee Break | | |
| 11:00 | 11:30 | S11 | S12 | |
| 11:30 | 12:00 | | | S13 |
| 12:00 | 12:30 | | | |
| 12:30 | 13:00 | Closing Ceremony | | |
| 13:00 | 13:30 | | | |
| 13:30 | 14:00 | | | |
| 14:00 | 14:30 | | | |
| 14:30 | 15:00 | | | |
| 15:00 | 15:30 | | | |
| 15:30 | 16:00 | | | |
| 16:00 | 16:30 | | | |
| 16:30 | 17:00 | | | |
| 17:00 | 17:30 | | | |
| 17:30 | 18:00 | | | |
| 18:00 | 18:30 | | | |
| 18:30 | 19:00 | | | |
| 19:00 | 19:30 | | | |
| 19:30 | 20:00 | | | |
| 20:00 | 20:30 | | | |
| 20:30 | 21:00 | | | |
| 21:00 | 21:30 | | | |
| 21:30 | 22:00 | | | |
| 22:00 | 23:00 | | | |
| 23:00 | 0:00 | | | |
| 0:00 | 1:00 | | | |
| 1:00 | 2:00 | | | |

| | |
|-----|--|
| S9 | HEALTH INFORMATICS, E-HEALTH AND TELEMEDICINE I |
| S10 | HEALTH INFORMATICS, E-HEALTH AND TELEMEDICINE II |
| S11 | BIOMEDICAL ENGINEERING EDUCATION |
| S12 | PHARMACEUTICAL ENGINEERING |
| S13 | STUDENT SESSION |

