Conference Program

CMBEBIH
International Conference on Medical and Biological Engineering

in Bosnia and Herzegovina,

Organised by

Stay focused.
# PROGRAM AT GLANCE

**WEDNESDAY, April 21st 2021**

- 19:00 – 23:00 Welcome Cocktail *(only with Invitations)*

**THURSDAY, April 22nd 2021**

- 08:00 - 10:00 Registration
- 09:45 - 10:00 Media Press Conference, CONFERENCE LOBBY
- 10:00 - 11:00 Opening Ceremony, AMPHITHEATRE
- 11:00-11:15 Break (Online + in venue Sponsors video)
- 11:15 - 12:45 Plenary Lectures I, AMPHITHEATRE
- 12:45 - 13:45 Lunch Break
- 13:45 - 18:00 Plenary Lectures I, AMPHITHEATRE
- 14:00 - 16:00 Plenary Session I, Room I
- 14:00 - 16:00 Plenary Session II, Room 2
- 14:00 - 16:00 Plenary Session III, Room 3
- 14:00 - 16:00 Plenary Session IV, Room 1
- 16:00-16:30 Coffee Break (Sponsor time)
- 16:30-18:00 Plenary Session IV, Room 1
- 16:30-18:00 Plenary Session V, Room 2
- 16:30-18:00 Plenary Session VI, Room 3
- 17:00-19:00 Sponsor Workshop I, Online + in venue

**FRIDAY, April 23rd 2021**

- 09:00 - 10:00 Registration
- 10:00 - 11:00 Plenary Lectures II, AMPHITHEATRE
- 11:00-12:00 SMART4ALL project session
- 12:00 – 12:15 Coffee break (Sponsor time)
- 12:15 - 14:15 Plenary Session VII, Room 1
- 12:15 - 14:15 Plenary Session VIII, Room 2
- 12:15 - 14:15 Plenary Session IX, Room 3
- 14:15 - 16:15 Plenary Session X, Room 1
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WEDNESDAY, April 21st 2021

Arrival of the participant and guests to Mostar. Free time—sightseeing.

Welcome to the 4th International Conference on Medical and Biological Engineering. We are committed to delivering event that will enable you broaden your horizons and unlock opportunities for future collaborations.

The safety and wellbeing of our participants, exhibitors, visitors and staff is of paramount importance to us as we look ahead to the 4th edition of the CMBEBIH.

The implementation of enhanced measures IN VENUE will provide you with the assurance and confidence that our event has health and safety as our number one priority.

19:00—23:00 Welcome Cocktail (only with Invitations)
THURSDAY, April 22nd 2021

08:00 - 10:00 Registration

(Call opened every day from 08:00 – 15:00h. In case of any issue there will be always a member from organization to help you!)

CMBEBIH 2021 Q&A Desk
April 22 – 24, 2021
Google Meet joining info
Video call link: https://meet.google.com/aiv-kfgm-kdk

09:45 - 10:00 Media Press Conference, CONFERENCE LOBBY

10:00 - 11:00 Opening Ceremony, AMPHITHEATRE

Addressing by:

1. Ankica Gudeljević – Ministry of Civil Affairs of Bosnia and Herzegovina
2. Zoran Tomić - Rector of University of Mostar
3. Ratko Magjarević – President of International Federation for Medical and Biological Engineering (IFMBE)
4. Leandro Pecchia – President of European Alliance of Medical and Biological Engineering and Science (EAMBES)
5. Adriana Velazquez – Team Lead Medical Devices and In Vitro diagnostics WHO Global Office
6. Monika Tomić – Dean of Faculty of Pharmacy Mostar, University of Mostar
7. Fahir Bečić – Dean of Faculty of Pharmacy Sarajevo, University of Sarajevo
8. Ranko Škrbić – Dean of Medical Faculty Banja Luka, University of Banja Luka
9. Almir Badnjević – Chair of the International Conference on Medical and Biological Engineering (CMBEBIH 2021), Bosnia and Herzegovina

CMBEBIH 2021 Opening ceremony (1)
Thursday, April 22 · 10:00 – 11:00am
Google Meet joining info
Video call link:
https://meet.google.com/tjs-vgwg-iqo

CMBEBIH 2021 Opening ceremony (2)
Thursday, April 22 · 10:00 – 11:00am
Google Meet joining info
Video call link:
https://meet.google.com/eki-ocss-sbw

CMBEBIH 2021 Opening ceremony (3)
Thursday, April 22 · 11:00am – 12:00pm
Google Meet joining info
Video call link:
https://meet.google.com/oyk-mxva-btn

CMBEBIH 2021 Opening ceremony (4)
Thursday, April 22 · 10:00 – 11:00am
Google Meet joining info
Video call link:
https://meet.google.com/gxp-nawm-kuq
11:00-11:15 Break (Online + in venue Sponsors video)

11:15 - 13:15 Plenary Lectures I, AMPHITHEATRE

Plenary Lectures I
Thursday, April 22 · 11:15am – 1:15pm
Google Meet joining info
Video call link: https://meet.google.com/mmj-qawx-zaf

1. Ivan Djikic, Ph.D. – Science will defeat COVID-19
2. Thomas Penzel, Ph.D. – The future of sleep medicine technologies
3. Anne Humeau - Heurtier, Ph.D. – Entropy-based measures for the biomedical field
4. Prof. dr. Asim Kurjak - Amazing power of fetal brain – what did we learn from 4D ultrasonic studies

13:15 - 14:00 Lunch Break

14:00 - 16:00 Plenary Session I, Room I

BIOMEDICAL SIGNAL PROCESSING
Plenary Session I, BIOMEDICAL SIGNAL PROCESSING
Thursday, April 22 · 2:00 – 4:00pm
Google Meet joining info
Video call link: https://meet.google.com/kof-dmyv-bxn

Session Chairs:

S1-1: Lulzana Shabani, Teuta Shabani-Leka, Mimoza Bafqari-Bakiji, Ibadete Denjalli, Sanije Berisha - Effect of seasonal changes on serum vitamin D concentration

S1-2: Abdulhamit Subasi, Emine Yaman - Diagnosis of Neuromuscular Disorders using TQWT and Random Subspace Ensemble Classifier

S1-3: Magdalena Krbot Skoric, Ivan Adamec, Mario Cifrek, Mario Habek - Analysis of autonomic nervous system biosignals

S1-4: Ajdin Fejzic, Amina Tihak, Dusanka Boskovic, Orhan Lepara - Evaluation of vectorcardiogram perspectives in education and clinical practice

S1-5: Eva Rossi, Cosimo Aliani, Piergiorgio Francia, Roberto Anichini, Leonardo Bocchi - An improved model for the assessment of cutaneous microcirculation in type 1 diabetes
S1-6: Sara Deumi, Neira Crncevic, Ivana Zolota - **Respiratory System Dynamical Mechanical Properties: Modeling in Time and Frequency Domain**

S1-7: Dzenan Kovacic, Dado Latinovic, Hannah Abigail Boone - **Simulating Passage and Absorption of Bolus with an Emphasis on the Small Intestine Using a Multi-Component Model**

S1-8: Tijana Cvjetkovic, Medina Cajo, Ismet Fatih Cancar, Adna Colak, Nejra Cenanovic, Emira Direk, Selma Delic - **Detection of asthma inflammatory phenotypes using Artificial Neural Network**

**14:00 - 16:00 Plenary Session II, Room 2**

**BIOMECHANICS, BIOSENSORS AND BIOINSTRUMENTATION**

Plenary Session II, BIOMECHANICS, BIOSENSORS AND BIOINSTRUMENTATION
Thursday, 22. April · 2:00 – 4:00 PM
Google Meet joining info
Video call link: [https://meet.google.com/jzn-umkw-wni](https://meet.google.com/jzn-umkw-wni)

**Session Chairs:**

S2-1: Emil Valchinov, Konstantinos Rotas, Athanasios Antoniou, Aris Dermitzakis, NICOLAS PALLIKARAKIS - **Development of a reliable spiroximeter for Covid-19 patients’ telemonitoring**

S2-2: Gregor Nikolic, Andraz Stozer, Iztok Kramberger - **Development of a Portable Device for Urodynamic Data Acquisition Suitable for Home Use**

S2-3: Zlata Jelacic - **Comparison between different prototypes of above-knee prosthesis**

S2-4: Antonio Stanešić, Zeljka Lucev Vasic, Yueming Gao, Min Du, Mario Cifrek - **Integrated Intrabody Communication Node based on OOK modulation**

S2-5: Alma Šecerbegovic, Mustafa Spahić, Amir Hasanbašić, Vedad Mešić, Haris Hadzic, Aljo Mujčić - **Wearable sensor for home-based biofeedback therapy for migraine**

S2-6: Amir Kajmakovic, Amna Kapic, Selma Jusufovic, Tanja Jovicic, Neira Jelacic, Muamera Jahic - **The analysis of biochemical markers for the diagnosis of an acute myocardial infarction using Artificial Neural Network**

S2-7: Ines Musa Trolic, Stjepan Spalj, Sven Karlovic, Goran Bosanac - **Influence of probiotic bacteria on mechanical properties of nickel-titanium alloys used in orthodontics**

S2-8: Iman Alihodzic, Selena Hadzic, Anja Trkulja - **Immunosensors: Recent Advances and Applications**
14:00 - 16:00 Plenary Session III, Room 3

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN HEALTHCARE I

Plenary Session III, ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN HEALTHCARE I
Thursday, 22. April · 2:00 – 4:00PM
Google Meet joining info
Video call link: https://meet.google.com/wxf-wxnz-ssc

Session Chairs:

S3-1: Emina Imamovic, Amar Deumic, Abdulrahman Khouly, Kursat Talha Pisil, Elida Avdic, Mirzada Hukic, SANJA JAKOVAC, Monia Avdic Ibrisimovic - Prediction of multi-drug resistance in Escherichia coli using machine learning algorithms

S3-2: Abdulhamit Subasi, Emir Kremic, Shahad Algebsani, Jawaher Almaasrani, Wafa Alghamdi - Intrusion Detection in Smart Healthcare Using Bagging Ensemble Classifier

S3-3: Sebahattin Babur, Mehmet Recep Bozkurt, Sanam Moghaddamnia - A machine learning approach to predict the sepsis status: Analyzing the connection between relevant laboratory values and other physiological measurements obtained in intensive care unit

S3-4: Merima Bukva, Ajla Bešlija, Lejla Bihorac, Melika Brckalija, Semira Budimovic, Nejra Buljubašić - Analysis Of Predictive Parameters In Prediction Of The Occurrence Of Myocardial Infarction Using Artificial Neural Networks

S3-5: Memnuna Hasanovic, Ena Haskovic, Alisa Hebibovic, Azra Heric, Amila Hodzic, Nura Hodzic - Application of Neural Network in the Kidney Living Donor Selection Criteria using biomarkers data

S3-6: Amina Drace, Murveta Durakovic, Amel Dzafic, Elmedina Dzananovic, Mehila Dzanko, Alma Dzubur - Diagnosis of different types of hyperbilirubinemia using Artificial Neural Network

16:00-16:30 Coffee Break (Sponsor time)

16:30-18:00 Plenary Session IV, Room 1

HEALTH INFORMATICS

Plenary Session IV, HEALTH INFORMATICS
Thursday, April 22 · 4:30 – 6:00pm
Google Meet joining info
Video call link: https://meet.google.com/equ-eiyq-cgq
Session Chairs:

S4-1: K Praveen Kumar, Neela Harish, R Prasanth Kumar, V Aparna, N Athaf Khanam - *Flex Sensor Based Gesture Controlled Assist device for COVID-19 Patients*

S4-2: Dzelila Mehanovic, Zerina Masetic, Dino Keco, Jasmin Kevric - *Comparison of the wavelet denoising methods for denoising of phonocardiogram signal*

S4-3: Izabela Mitreska, Dijana Capeska Bogatinoska, Ninoslav Marina - *Electronic Health Records System for Efficient Healthcare Services*

S4-4: Merhunisa Mahir, Lejla Mahmutovic, Klara Lovric, Amna Lenjinac, Benjamin Mahic, Nerma Mackovic - *Diagnosis of Iron-deficiency Anemia using Artificial Neural Network*

S4-5: Ajla Turajlic, Hava Turkovic, Mevljia Tursunovic, Amina Vatreš, Nedzma Vehabovic, Minela Viteškic - *Using artificial network for identification of kidney cancer*

16:30-18:00 Plenary Session V, Room-2

**CLINICAL ENGINEERING AND HEALTH TECHNOLOGY ASSESSMENT**

**Plenary Session V, CLINICAL ENGINEERING AND HEALTH TECHNOLOGY ASSESSMENT**

**Thursday, 22. April · 4:30 – 6:00PM**

Google Meet joining info

Video call link: [https://meet.google.com/ked-bvyp-ebt](https://meet.google.com/ked-bvyp-ebt)

Session Chairs:

S5-1: Lorenzo Mascii, Alessio Luschi, Ernesto Iadanza - *Sentiment Analysis for Performance Evaluation of Maintenance in Healthcare*

S5-2: Tarik Abdukic, Valida Abdagic, Amar Alagic, Anisa Alajbegovic, Amra Adzamija Kesten, Lamija Alešević - *Application of Artificial Intelligence Techniques to Predict Renal Function Based on Diagnostic Parameters*

S5-3: Neira Omeragic, Aida Omanovic, Minela Omerovic, Lejla Osmanagic, Ehlimana Omanovic, Nedzmina Ohran - *Cardiovascular disease risk assessment in patients with metabolic syndrome using artificial neural networks*

S5-4: Amar Deumi, Emina Imamovic, Lejla Pokvic, Almir Badnjevic - *Performance inspection of patient monitors according to the legal metrology framework: Bosnia and Herzegovina case study*

S5-5: Adna Besic, Sead Karakas, Zarema Obradovic, Adisa Musovic, Emilija Hrapovic - *Travel-related epidemiological studies of legionellosis in Federation of Bosnia and Herzegovina*
16:30-18:00 Plenary Session VI, Room 3

PHARMACEUTICAL ENGINEERING I

Plenary Session VI, PHARMACEUTICAL ENGINEERING I
Thursday, 22. April · 4:30 – 6:00PM
Google Meet joining info
Video call link: https://meet.google.com/bkx-zatt-jfe

Session Chairs:

S6-1: Mirsada Salihovic, Emin Sofic - *Hydrocephalus: 5-HIAA and HVA in the cerebrospinal fluid*

S6-2: Jasmina Hadziabdic, Lejla Šejto, Ognjenka Rahic, Amina Tucak, Lamija Hindija, Merima Sirbubalo, Selma Škrbo, Edina Vranic - *Transdermal Patches as Noninvasive Drug Delivery Systems*

S6-3: Aida Sapcanin, Mirsada Salihovic, Selma Korac, Emina Ramic, Belma Pehlivanovic, Sacira Mandal - *Calculation of hazard quotient based on the content of heavy metals in different mushrooms*

S6-4: Sacira Mandal - *Association between serum concentrations of free fatty acids with free iron in Type 2 diabetes*

S6-5: Melissa Jones, Corina Ionescu, Daniel Walker, Bozica Kovacevic, Susbin Raj Wagle, Folarin Oluyede, Armin Mooranian, Daniel Brown, Hani Al-Salami - *Bile acid-Cyclodextrin Formulation Design as drug carrier systems for the delivery of Coenzyme Q10: the impact on surface tension*

S6-6: Belma Pehlivanovic, Kenan Caklovica, Aida Sapcanin, Dina Fethovic, Naida Omerovic, Nermina Ziga Smajic, Selma Škrbo, Fahir Becic - *Potentially new synergistic combination of curcumin and rosuvastatin: An in vitro study*

S6-7: Elma Haskovic, Sumeja Hadzalic - *Influence of electrolytes on acetylsalicylic acid concentration*

17:00-19:00 Sponsor Workshop I, Online + in-venue
FRIDAY, April 23rd 2021

09:00 - 10:00 Registration

CMBEBIH 2021 Q&A Desk
April 22 – 24, 2021
Google Meet joining info
Video call link: https://meet.google.com/aiv-kfgm-kdk

10:00 - 11:00 Plenary Lectures II, AMPHITHEATRE

Plenary Lectures II
Friday, April 23 · 10:00 – 11:00am
Google Meet joining info
Video call link: https://meet.google.com/vwg-offi

1. Adnan Mehonic, Ph.D. – The future of energy-efficient AI and neuromorphic engineering

11:00-12:00 SMART4ALL project session

SMART4ALL project session
Friday, April 23 · 11:00am – 12:00pm
Google Meet joining info
Video call link: https://meet.google.com/jyt-qxvi-yhx

*SMART4ALL is a H2020 funded project (Grant Agreement No. 872614) that builds capacity amongst European stakeholders via the development of self-sustained, cross-border experiments that transfer knowledge and technology between academia and industry. It targets Customised Low-Energy Computing (CLEC) for CyberPhysical Systems (CPS) and the Internet of Things (IoT) and combines a set of unique characteristics that join together under a common vision different cultures, different policies, different geographical areas and different application domains. The SMART4ALL consortium is led by the University of Peloponnese (Greece) and is composed of 25 partners from Central, South and Eastern Europe. This is informative session for all interested in applying for financial support for their projects.

12:00 – 12:15 Coffee break (Sponsor time)

12:15 - 14:15 Plenary Session VII, Room 1

BIOMATERIALS, MOLECULAR, CELLULAR AND TISSUE ENGINEERING

Plenary Session VII, BIOMATERIALS, MOLECULAR, CELLULAR AND TISSUE ENGINEERING
Friday, April 23 · 12:15 – 2:15pm
Google Meet joining info
Video call link: https://meet.google.com/trs-hsjh-ypb
Session Chairs:

S7-1: Lejla-Nur Smajovic, Ayla Arslan, Furkan Oflaz - *A study of the CaCl2 induced E. Coli DH5-Alpha transformation by heat shock accompanied by vibration*

S7-2: Pinar Erturk, Sevde Altuntas, Fatih Buyukserin - *Cellular Investigation of Alumina Membrane Coated Titanium Implants on Osseointegration*

S7-3: Almedina Hajrović, Arnisa Alibegovic, Emir Šeherchajic, Adisa Ramic, Berina Hasanefendić - *Detection of hrHPV DNA with simulated HPV16 and HPV18 typing based on real-time PCR*

S7-4: Bozica Kovacevic, Corina Ionescu, Daniel Walker, Susbin Raj Wagle, Melissa Jones, Folarin Oluyede, Armin Mooranian, Daniel Brown, Hani Al-Salami - *Addition of hyperbranched dendrimers to alginate-based hydrogel for biomedical application*

S7-5: Faris Hrvat, Osman Hasanic, Amina Aleta, Amel Spahic, Amra Dzuho, Mirsada Hukic - *Comparison of biofilm category determination using TCP method depending on signal molecule adherence*

S7-6: Aleksandra Vulovic, Nenad Filipovic - *Finite Element Analysis of Modified Hip Implant Surfaces*

S7-7: Lejla-Nur Smajovic, Dino Pecar, Lana Salihefendic, Altijana Hromcic-Jahjefendic, Rijad Konjihodzic - *Genomic Alterations of KRAS and NRAS in B&H Colorectal and Non-small Cell Lung Cancer Patients*

S7-8: Valentina Veselinovic, Tijana Adamovic, Nataša Trtic, Borut Kosec, Rebeka Rudolf - *Evaluation of thermal conductivity, thermal effusivity and diffusivity of polymethylmethacrylate modified with gold nanoparticles and its influence in oral cavity environment*

**12:15 - 14:15 Plenary Session VIII, Room 2**

**PHARMACEUTICAL ENGINEERING II**

Plenary Session VIII, PHARMACEUTICAL ENGINEERING II

Friday, 23. April - 12:15 – 2:15PM

Google Meet joining info

Video call link: [https://meet.google.com/wdk-sano-gwc](https://meet.google.com/wdk-sano-gwc)

Session Chairs:

S8-1: Safija Herenda, Edhem Haskovic, Denis Haskovic, Ena Haskovic, Svjetlana Dilber - *Effect of diclofenac and potassium ions on catalase activity*

S8-2: Amila Hajdarevic, Miralem Kmetaš, Faris Begovic, Merima Duric, Ema Vajzovic - *Current trends in cancer immunotherapy*
S8-3: Riana Jaha, Tea Kolak, Hanna Helac, Haris Cesir, Emina Sarajlic, Melika Spahic - **Smart drugs mechanisms of action and ethical issues**

S8-4: Azra Ibrahimovic, Dalida Adilovic, Lamija Brkovic, Nedzla Buco, Amra Hadzagic, Lana Popovic - **Pharmacogenomics: current trends and future perspectives**

S8-5: Mirha Pazalja, Mirsada Salihovic - **Spectrophotometric determination of cysteine based on complex reaction alizarin red with cooper**

S8-6: Sanja Rogic, Miljana Nukic, Zarko Gagic - **Quantitative structure-activity relationship study of DPP-4 enzyme inhibitors as drugs in therapy of type 2 diabetes mellitus**

S8-7: Lamija Hindija, Jasmina Hadziabdic, Amina Tucak, Merima Sirbubalo, Ognjenka Rahic - **Improving the formulation aspects of or dispersible tablets by co-processed excipients: results of the latest studies**

S8-8: Azra Hamidovic, Ena Haskovic, Sumeja Muhic, Matej Planinic, Naida Omerovic, Selma Škrbo - **Application of in silico methods in pharmacokinetic studies during drug development**

**12:15 - 14:15 Plenary Session IX, Room-3**

**CARDIOVASCULAR, RESPIRATORY AND ENDOCRINE SYSTEM ENGINEERING**

**Plenary Session IX, CARDIOVASCULAR, RESPIRATORY AND ENDOCRINE SYSTEM ENGINEERING**

**Friday, 23. April · 12:15 – 2:15PM**

Google Meet joining info

Video call link: [https://meet.google.com/iqf-vkiq-jhr](https://meet.google.com/iqf-vkiq-jhr)

**Session Chairs:**

S9-1: Josip Lesko, NIKOLINA OBRADOVIC, Vana Turudic - **Incidence of arterial hypertension in patients with obstructive sleep apnea treated at the Mostar Medical Sleep Center**

S9-2: Josip Lesko, Vana Turudic, NIKOLINA OBRADOVIC - **Frequency and causes of primary and secondary hyperparathyroidism in patients treated with surgery at the University Clinical Hospital Mostar**

S9-3: Dzejla Zukic, Zeco Nadina, Zametica Rubina, Zilki Hasiba, Talic Lejla, Carkadzic Tarik - **Classification of hypertension and assessment of cardiovascular risk using digital data and biochemical parameters**

S9-4: Smiljana Djorovic, Lazar Velicki, Nenad Filipovic - **Finite Element Analysis of PatientSpecific Ascending Aortic Aneurysm**
S9-5: Amar Elezovic, Sandra Cvijic, Alisa Elezovic, Saša Pilipovic, Jelena Parojcic - Particle deposition in respiratory tract: where are the limits?

S9-6: Davor Tomic - Epidemiologic data of adult native biopsy-proven renal diseases in University Clinical Hospital Mostar

14:15 -15:00 Lunch

15:00 - 16:00 Plenary Lectures III, AMPHITHEATRE

Plenary Lectures III
Friday, April 23 · 3:00 – 4:00am
Google Meet joining info
Video call link: https://meet.google.com/vry-gmso-hej


16:00-18:00 Plenary Session X, Room-I

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN HEALTHCARE II

Plenary Session X; ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN HEALTHCARE II
Friday, 23. April · 4:00 – 6:00PM
Google Meet joining info
Video call link: https://meet.google.com/hzx-zwnw-nny

Session Chairs:

S10-1: Lejla Habibovic, Azra Hamidovic, Nihada Habibovic, Dzenana Hadzic, Neira Halilovic, Samila Halilovic- Machine Learning Techniques for Prediction of Psoriatic Arthritis development in Patients with Psoriasis

S10-2: Emina Gutosic, Amna Foco, Medina Glamoc, Amina Gljiva, Lamija Gudic, Rudaba Dzudzevic, Mirna Djoja - Laboratory Diagnosis of Viral Infection using Artificial Network

S10-3: Rijad Serak, Berina Sahinovic, Faruk Sehic, Aisa Sero, Melisa Skrijelj, Ajla Spago - Using artificial neural networks in diagnostics of Familial combined hyperlipidaemia based on levels of certain blood parameters and risk assessment of developing cardiovascular disease

S10-5: Nejla Odobasic - **Artificial intelligence in type 2 diabetes**

S10-6: Ismar Šahovic, Monia Avdic Ibrisimovic, Mirsada Hukic, Zerina Masetic - **A fuzzy model for the risk of urinary tract infections prediction using microscopic and chemical urine analysis**

**16:00-18:00 Plenary Session XI, Room-2**

**BIO-MICRO/NANO TECHNOLOGIES I**

**Plenary Session XI, BIO-MICRO/NANO TECHNOLOGIES I**
**Friday, 23. April - 4:00 – 6:00PM**
Google Meet joining info
Video call link: [https://meet.google.com/dmc-sxix-qrk](https://meet.google.com/dmc-sxix-qrk)

**Session Chairs:**

S11-1: Selma Cifric, Lemana Spahić, Dina Osmanovic, Emina Imamovic, Amar Deumic - **Fighting Cancer using Nanoparticles - Diagnosis, Treatment and Monitoring**

S11-2: Merima Sirbubalo, Amina Tucak, Kenan Muhamedagic, Ognjenka Rahic, Ahmet Cekic, Edina Vranic - **Photopolymerization-based technologies for the production of microneedle arrays**

S11-3: Corina Ionescu, Bozica Kovacevic, Daniel Walker, Susbin Raj Wagle, Melissa Jones, Fola Oluyede, Armin Mooranian, Daniel Brown, Hani Al-Salami - **Spray Dried Probucol/Bile Acid Particles for Trans-Tympanic Delivery**

S11-4: Susbin Raj Wagle, Bozica Kovacevic, Corina Ionescu, Daniel Walker, Melissa Jones, Folarin Oluyede, Armin Mooranian, Daniel Brown, Hani Al-Salami - **Humanised bile acid nanocapsules for optimum drug pharmacology**

S11-5: Merima Bukva, Evelina Pulo, Naida Omerovic, Selma Škrbo - **Gastric parietal cell regeneration by nano-scaffolding in hypochlorhydria and achlorhydria treatment**

S11-6: Faris Hrvat, Amina Aleta, Amra Dzuho, Osman Hasanic, Lemana Spahic Becirovic - **Artificial Intelligence in Nanotechnology: Recent trends, challenges and future perspectives**
16:00-18:00 Plenary Session XII, Room-3

MEDICAL PHYSICS & BIOMEDICAL IMAGING AND RADIATION PROTECTION I

Plenary Session XII, MEDICAL PHYSICS & BIOMEDICAL IMAGING AND RADIATION PROTECTION I
Friday, April 23 · 4:00 – 6:00pm
Google Meet joining info
Video call link: https://meet.google.com/dnc-erhg-nyc

Session Chairs:

S1-1: Saifullah Harith Suradi, Kamarul Amin Abdullah, Nor Ashidi Mat Isa - Breast Lesions Detection using FADHECAL and Multilevel Otsu Thresholding Segmentation in Digital Mammograms

S12-2: Adnan Beganovic, Samra Stabance-Dragunic, Senad Odzak, Amra SkoljakBeganovic, Rahima Jašic, Irmina Sefic-Pašić - Estimation of effective doses to patients in whole body computed tomography with automatic tube current modulation systems

S12-3: Taa Awad, Lejla Civa, Adnan Beganovic, Mustafa Busuladzic, Edis DJedovic, Sandra Vegar-Zubovic - Local diagnostic reference levels in emergency computed tomography of the head

S12-4: Tijana Djukic, Nenad Filipovic - Lattice Boltzmann simulation of fluid flow between two rotating cylinders and application in biomedicine

S12-5: Igor Saveljic, Slavica Macuzic Saveljic, Nenad Filipovic - Influence of random vibration on semicircular canals during exposure to whole body vibrations

16:00-18:00 Sponsor Workshop II, Online + in-venue

20:00—00:00 Gala dinner (only for registered Members, Non-Members and Invitations)
SATURDAY, April 24th 2021

CMBEBIH 2021 Q&A Desk
April 22 – 24, 2021
Google Meet joining info
Video call link: https://meet.google.com/aiv-kfgm-kdk

10:00 - 12:15 Plenary Session XIII, AMPHITHEATRE

COVID - 19 RELATED RESEARCH

Plenary Session XIII, COVID - 19 RELATED RESEARCH
Saturday, April 24 · 10:00am – 12:15pm
Google Meet joining info
Video call link: https://meet.google.com/srg-ohmv-uto

Session Chairs:

S13-1: Merima Bukva, Minela Islamovic, Selma Jusufovic, Enisa Njemcevic, Neven Meseldzic, Tamer Bego - The Most Significant Biomarkers and Specific Antibodies for the Early Diagnosis and Monitoring in COVID-19 Patients


S13-3: Evelina Pulo, Tarik Abdukic, Matej Planinic, Faruk Sehic, Neven Mesledzic, Tamer Bego - A Review of Novel Methods For Diagnosing COVID-19


S13-7: Faris Hrvat, Amina Aleta, Amra Dzuho, Osman Hasanic, Lemana Spahic Becirovic - First report on public opinion regarding COVID-19 vaccination in Bosnia and Herzegovina

10:00 - 12:15 Plenary Session XIV, Room 1

BIO-MICRO/NANO TECHNOLOGIES II

Plenary Session XIV, BIO-MICRO/NANO TECHNOLOGIES II
Saturday, 24. April · 10:00AM – 12:15PM
Google Meet joining info
Video call link: https://meet.google.com/wiq-vofo-ocq

Session Chairs:

S13-1: Naida Omerovic, Selma Škrbo, Edina Vranic - Tolerance assays performed in animal models during the evaluation of nanoparticles for ocular drug delivery

S14-2: Nevena Milivojevic, Dalibor Nikolic, Dragana Šklic, Zivana Jovanovic, Marko Zivanovic, Nenad Filipovic - Development of Microfluidic Lab-on-Chip System for Cultivation of Cells and Tissues

S14-3: Katarina Virijevic, Jelena Grujić, Mihajlo Kovanovic, Dalibor Nikolic, Marko Zivanovic, Nenad Filipovic - Electrospinning and electrospun nanofibrous materials – promising scaffolds in tissue engineering

S14-4: Naida Mirvic, Edina Vranic, Jasmina Hadziabdic, Alisa Elezovic, Lamija Hindija - The application of nanotechnology in constructing scaffolds for bone tissue engineering

S14-5: Ermina Krndzija, Amina Stambolic, Enisa Omanovic-Miklicanin - Silver Nanoparticles Biosynthesis from Cinnamon (Cinnamomum verum) and Cloves (Syzygium aromaticum)

10:00 - 12:15 Plenary Session XV, Room 2

MEDICAL PHYSICS & BIOMEDICAL IMAGING AND RADIATION PROTECTION II

Plenary Session XV, MEDICAL PHYSICS & BIOMEDICAL IMAGING AND RADIATION PROTECTION II
Saturday, 24. April · 10:00AM – 12:30PM
Google Meet joining info
Video call link: https://meet.google.com/uwg-qcpz-qov

Session Chairs:

S15-2: Edis DJedovic, Azra Gazibegovic-Busuladzic, Mustafa Busuladzic- How differently generated clinical tasks affect the observer performances in CT images analysis

S15-3: Hanka Becirovic, Suad Kunosic, Minela Halilovic, Ivan Lasic, Stipe Galic, Jasmina Bajrovic- Radiation exposure of patients in mammography: an overview of the 15-year practice


S15-5: Amra Skopljak-Beganovic, Lejla Civa, Rahima Jašic, Branka Metlic, Alma Pašić-Alic, Davorin Samek- Use of a smaller size phantom when measuring scatter radiation in diagnostic and interventional radiology

10:30 - 12:00 Plenary Session XVI, Room 3

PHARMACEUTICAL ENGINEERING III

Plenary Session XVI, PHARMACEUTICAL ENGINEERING III
Saturday, April 24 · 10:30am – 12:00pm
Google Meet joining info
Video call link: https://meet.google.com/kjb-krsk-vcf

Session Chairs:


S16-3: Amila Suljic, Ines Konjevic, Lamija Smaka, Saadet Leyla Suleymanoglu, Muamra Subašić, Nermina Sofić- Machine Learning Techniques for prediction of liver fibrosis based on biomarkers

S16-4: Dzenita Redzic, Alisa Elezovic - Effects of microencapsulation on the release and permeation of active substances from topical preparations

S16-5: Indira Zuko, Denisa Tahirovic, Anisa Tandir, Izudin Ugljanin, Andrea Šumic, Hana Turkovic - Assessment of parameters for the diagnosis of insulin resistance using artificial neural network
S16-6: Minela Dacic, Alija Uzunovic, Saša Pilipovic, Larisa Alagic-Dzambic, Kemal Duric - **RP-HPLC determination of lipophilicity in series of corticosteroids**

S16-7: Alija Uzunovic, Minela Dacic, Saša Pilipovic, Larisa Alagic-Dzambic, Kemal Duric, Hurija Dzudzevic-Cancar - **In vitro evaluation of three brands of salicylic acid plasters from Bosnian markets**

S16-8: Srdjan Lucic, Lejla Gurbeta, Ervina Becic, Almir Badnjevic - **Health sector pricing and financing models: challenges and pharmacoeconomic trends in Bosnia and Herzegovina**

**10:30 - 12:00 Plenary Session XVII, Room 4**

**ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN HEALTHCARE III**

*Plenary Session XVII, ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN HEALTHCARE III*

*Saturday, April 24 · 10:30am – 12:00pm*

Google Meet joining info

Video call link: [https://meet.google.com/kve-xugw-jvm](https://meet.google.com/kve-xugw-jvm)

**Session Chairs:**

S17-1: Amina Koric, Bozana Lauš, Lejla Kruško, Nejra Krekić, Nermama Kubat, Amina Lelo - **Application of Artificial Intelligence Techniques to Predict Effects of Cigarette Smoking on Hematological Parameters and Attributable Diseases**

S17-2: Mubina Hodzic, Lamija Huseinspahic, Lejla Husovic, Emina Ikanovic, Minela Islamovic, Amina Išovic - **Diagnosis of Hyperthyroidism using Artificial Neural Networks**

S17-3: Amila Pajević, Nejra Pašalic, Nejra Piljug, Adis Pinjic, Matej Planinic, Amina Pojata - **Using artificial intelligence in prediction of osteoporosis risk in patients**

S17-4: Sumeja Muhić, Amina Mujagic, Amra Mujic, Lejla Mehic, Almedina Mujcinovic, Sabina Murto - **Machine Learning Techniques for Risk Assessment and Diagnosis of Diabetes mellitus**


S17-6: Muhamed Karajic, Edin Begic, Emina Hrvat, Lejla Gurbeta Pokvic - **Application of Artificial Intelligence tools in classification and diagnosis of heart disease: general review**
12:00-12:30 Closing Ceremony, CONFERENCE HALL

Closing ceremony
CMBEBIH Closing Ceremony
Saturday, April 24 · 12:00 – 1:00pm
Google Meet joining info
Video call link: https://meet.google.com/eyx-pbfs-xxp