

EHB 2020 – PROGRAM OF PAPERS PRESENTATIONS

No.	ID	Section	Title	Authors	Oral/Poster
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Assistive Technologies for People with Disabilities I - AT I

THURSDAY, 29 October, 11:45 – 13:45, Room IV

1.	12	AT I	Glasses Connected to Google Vision that Inform Blind People about what is in Front of Them	Michael Cabanillas-Carbonell, Alexander Aguilar Chávez, Jeshua Banda Barrientos	Oral
2.	46	AT I	System for Monitoring Medical Rehabilitation Activities Using Virtual Reality – Case Study MIRA	Angela Repanovici, Diana Cotoros, Ionela Toceanu	Oral
3.	49	AT I	Methodology Dedicated to Assisted Visual Training Rehabilitation for People With Severe Disabilities Caused by Accidents or Serious Injuries	B. Braun, C. Drugă, I. Șerban	Oral
4.	50	AT I	Virtual Instrument for Screening and Visual Function Recovery for Preschool or Primary School Children	C. Drugă, B. Braun, I. Șerban	Oral
5.	73	AT I	Improved Software and Hardware of a Device Aiming to Assess Hand Movements During Rehabilitation in Hemiparetic People	Andrei-Iulian Roman, Marian-Silviu Poboroniuc, Daniel Sticea, Danut-Constantin Irimia	Oral
6.	96	AT I	Development of a System for Correlating Ocular Biosignals to Achieve the Movement of a Wheelchair	Delia Dragusin, Mihaela Ioana Baritz	Oral

Assistive Technologies for People with Disabilities II - AT II

THURSDAY, 29 October, 14:00 – 16:00, Room IV

1.	115	AT II	Riana – A Diagnostic Device for Measurement of Joint Range	Jan Kubicek, Marek Penhaker, Martin Augustynek, Petr Kudrna, Jan Grepl, Dominik Vilimek, Petra Maresova, Kamil Kuca	Oral
2.	116	AT II	A Mechanical Construction Proposal of Rehabilitation Instrument for Measurement and Analysis of Knee Joint Range	Jan Kubicek, Marek Penhaker, Martin Augustynek, Petr Kudrna, Jan Grepl, Dominik Vilimek, Ondrej Krejcar	Oral
3.	154	AT II	Modular Collaborative Sensing and Feedback Units for Smart Exercising	Alexandru Ianoși-Andreeva-Dimitrova, Dan Silviu Mândru, Paul Ciprian Dămoc	Oral
4.	166	AT II	Robotic Platform for Recovering Injured People in Smart Home	Sorin-Dan Grigorescu, George-Calin Seritan, Bogdan-Adrian Enache, Felix-Constantin Adochiei, Florin-Ciprian Argatu, Andreea Stavre	Poster
5.	174	AT II	On improving perception for visually impaired: requirements, research and practicality	Otilia Zvoristeanu, Stefan Daniel Achirei, Nicolae Alexandru Botezatu, Robert-Gabriel Lupu, Adrian Burlacu, Simona Caraiman	Oral
6.	175	AT II	SMARTCARE: On the Design of an IoT Based Solution for Assisted Living	Stefan Daniel Achirei, Otilia Zvoristeanu, Adrian Alexandrescu, Nicolae Alexandru Botezatu, Andrei Stan, Cristian Rotariu, Robert Gabriel Lupu, Simona Caraiman	Oral

7.	181	AT II	Remote Monitoring of Physiological Parameters used in Ambient Assistive Technologies	Stefan Daniel Achirei, Otilia Zvoristeanu, Adrian Alexandrescu, Nicolae Alexandru Botezatu, Andrei Stan, Cristian Rotariu, Robert Gabriel Lupu, Simona Caraiman	Oral
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Environmental protection and Health I – EPH I
THURSDAY, 29 October, 9:30 – 11:30, Room IV

1.	102	EPH I	Toxicity and Microbial Bioremediation of Chromium Contaminated Effluents	Mariana Diaconu, Mihaela Roșca, Petronela Cozma, Mariana Minuț, Camelia Smaranda, Raluca-Maria Hlihor, Maria Gavrilescu	Poster
2.	103	EPH I	Prediction of Equilibrium Sorption Isotherm for Cadmium Biosorption by Microorganisms: Comparison of Linear and Nonlinear Methods	Mihaela Roșca, Mariana Diaconu, Raluca-Maria Hlihor, Petronela Cozma, Maria Gavrilescu	Poster
3.	104	EPH I	The Beneficial Role of Some Microorganism in Soil Phytoremediation and Mitigation of Health Risk	Mariana Minuț, Mihaela Roșca, Petronela Cozma, Mariana Diaconu, Maria Gavrilescu	Poster
4.	109	EPH I	Human Risks Generated by the Bioaccumulation of Pollutants in Cereals and their Consumption	Ionela Catalina Vasilachi, Dana-Mihaela Asiminicesei, Mariana Minuț, Mihaela Rosca, Petronela Cozma, Camelia Smaranda, Maria Gavrilescu	Poster
5.	111	EPH I	Reducing Health and Ecological Risks by Using WEEE as Secondary Sources for Critical Raw Materials	Simona Cecilia Ghiga, Mihaela David, Mariana Minuț, Elena-Diana Comanita-Ungureanu, Petronela Cozma, Maria Gavrilescu	Oral

Environmental protection and Health II – EPH II
FRIDAY, 30 October, 11:15 – 13:30, Room II

1.	110	EPH II	Identification and Valorization of Agri-Food By-Products: An Overview	Petronela Cozma, Nicoleta Ioana Ciomaga, Raluca-Maria Hlihor, Mihaela Roșca, Mariana Minuț, Camelia Smaranda, Maria Gavrilescu	Oral
2.	112	EPH II	Pesticides in the Environment and Harmonized Risk Indicators	Ionela-Cătălina Vasilachi, Larsia Tapciuc, Gina-Mihaela Finaru Chelaru, Dana-Mihaela Asiminicesei, Mihaela Roșca, Petronela Cozma, Elena-Diana Comăniță-Ungureanu, Camelia Smaranda, Raluca-Maria Hlihor, Daniela-Ionela Ferțu, Maria Gavrilescu	Poster
3.	132	EPH II	Human Health Risks Concerning Food Waste Management	Elena-Diana Ungureanu-Comanita, Ersilia Lazar Cosbuc, Petronela Cozma, Camelia Smaranda, Maria Gavrilescu	Poster
4.	141	EPH II	Human Health Risk Associated with the Use of Products from Contaminated Medicinal Plants	Dana-Mihaela Asiminicesei, Ionela Catalina Vasilachi, Mariana Minuț, Mihaela Rosca, Petronela Cozma, Raluca-Maria Hlihor, Maria Gavrilescu	Oral
5.	149	EPH II	Studies on Physiological Response of Sinapis alba Plants to Organochlorinated Pesticide Toxicity	Camelia Smaranda, Mihaela Rosca, Mariana Minuț, Diana Elena Comanita-Ungureanu, Petronela Cozma, Cezar Catrineacu, Maria Gavrilescu	Poster

6.	150	EPH II	Equilibrium Studies on the Sorption of Organochlorine Pesticide in Agricultural Soil	Camelia Smaranda, Mihaela Rosca, Ionela Cătălina Vasilachi, Dana-Mihaela Asiminicesei, Mariana Minut, Diana Elena Comanita-Ungureanu, Petronela Cozma, Maria Gavrilescu	Poster
7.	153	EPH II	Medicinal Plants: Linking Herbs Contamination with Human Health Risks	Dana Mihaela Asiminicesei, Raluca-Maria Hlihor, Petronela Cozma, Maria Apostol, Isabela Maria Simion, Mihaela Roșca, Maria Gavrilescu	Oral
8.	179	EPH II	Heavy Metals Accumulation in Fish Reared in a Pond Ecosystems and Health Risk Evaluation on Romanian Consumers	Ira-Adeline Simionov, Stefan-Adrian Strungaru, Stefan-Mihai Petrea, Victor Cristea, Mircea Nicoara, Alina Mogodan, Lacramioara Oprica, Diana Costin, Aurelia Nica	Oral
9.	107	EPH II	Understanding the Environmental and Personal Health Motivations of Consumers Purchasing Sustainable Agricultural Products at Romanian Farmers' Markets	John M. Polimeni, Raluca-Ioana Iorgulescu	Oral

Decision support systems, AI, Bioinformatics, Learning I - DSS-AI I
THURSDAY, 29 October, 9:30 – 11:30, Room II

1.	7	DSS-AI I	Bio-Receptor Signal Hierarchy Model for Decision Making Agents	Sergiu Manolache, Nirvana Popescu	Oral
2.	11	DSS-AI I	Opening the Door through the E-Learning and E-Assessment for Preclinical Medical Education in Romania: Academic, Social and Psychological Impact	Romeo Minodoru Coșniță, Anca Maria Cimpean, Richard Maerz, Marius Raica	Oral
3.	15	DSS-AI I	Machine Learning based Solution for Predicting the Affective State of Children with Autism	Aura Loredana Popescu, Nirvana Popescu	Oral
4.	18	DSS-AI I	Emotion Recognition Results using Deep Learning Neural Networks for the Romanian and German Language	Monica Feraru, Marius-Dan Zbancioc	Poster
5.	19	DSS-AI I	Application for Medical Misinformation Detection in Online Forums	Yuliia Parfenenko, Anastasiia Verbytska, Dmytro Bychko, Vira Shendryk	Poster
6.	20	DSS-AI I	Method of Primary Processing Unstructured Medical Data	Dmytro Bychko, Vira Shendryk, Yuliia Parfenenko	Poster
7.	23	DSS-AI I	Application Software Analysis for Children with Autism Spectrum Disorder: a Review of the Scientific Literature from 2005 - 2020	Anny Cabanillas-Tello, Michael Cabanillas-Carbonell	Poster
8.	24	DSS-AI I	Recognizing Fear / Anxiety in Relation to Other Emotions	Marius-Dan Zbancioc, Monica Feraru	Poster
9.	101	DSS-AI III	Cervical Cancer Diagnosis Using a Chicken Swarm Optimization Based Machine Learning Method	Dorin Moldovan	Oral

Decision support systems, AI, Bioinformatics, Learning II - DSS-AI II
THURSDAY, 29 October, 11:45 – 13:45, Room II

1.	27	DSS-AI II	Deep Learning Classification of two-class Motor Imagery EEG signals using Transfer Learning	Nijisha Shajil, Sasikala M, Arunnagiri A M	Oral
2.	31	DSS-AI II	Emotion Detection System Oriented on Anthropological Face Landmarks Complying with Isolated and Confined Environmental Conditions	Adrian-Cătălin Dinculescu, Livia Petrescu, Cristian Vizitiu, Alexandru-Mihai Mandu	Oral
3.	34	DSS-AI II	Crow Search Algorithm Based Ensemble of Machine Learning Classifiers for Epileptic Seizures Detection	Dorin Moldovan	Oral
4.	37	DSS-AI II	Machine learning tool detecting NBOME drugs of abuse based on geometrical descriptors	Adelina Ion, Steluta Gosav, Mirela Praisler, Teodora Gosav	Oral
5.	38	DSS-AI II	Refined Detection of Nbome Phenethylamines based on Their Most Important Topological Descriptors	Adelina Ion, Steluta Gosav, Mirela Praisler	Poster
6.	40	DSS-AI II	Artificial Neural Networks for Diagnosis of Coronary Heart Disease	Niculina Mischie, Adriana Albu	Oral
7.	53	DSS-AI II	Can Machine Learning Be Used to Recognize and Diagnose Coughs?	Charles Bales, Muhammad Nabeel, Charles N. John, Usama Masood, Haneya N. Qureshi, Hasan Farooq, Iryna Posokhova, Ali Imran	Oral
8.	58	DSS-AI II	Depth-based Human Activity Recognition: vINCI Case Study	Lidia Băjenaru, Ciprian Dobre, Radu-Ioan Ciobanu, Georgiana Dedu, Silviu-George Pantelimon, Ion Alexandru Marinescu, Veronica Gavrilă	Oral
9.	59	DSS-AI II	Needs and Preferences of Elderly Patients Regarding Ambient Assisted Living Systems: a Latent Profile Analysis	Alexandru Balog, Lidia Băjenaru, Irina Cristescu, Anna Marie Herghelegiu	Oral

Decision support systems, AI, Bioinformatics, Learning III - DSS-AI III
FRIDAY, 30 October, 9:00 – 11:00, Room I

1.	25	DSS-AI III	Arithmetic Abilities of the Living Cell Pumps	Bogdan Aman, Gabriel Ciobanu	Oral
2.	65	DSS-AI III	Development of a Patient-Specific Model for Patients with Diabetes Type I Using Meal and Exercise Guidelines from Modern Schools of Diabetes	Ghenadie Usic	Oral
3.	72	DSS-AI III	Using Additive Bayesian Networks and Association Rules in Antimicrobial Resistance Analysis	Raluca Mureșan, Claudia Zaharia, Daniela Zaharie	Oral

4.	81	DSS-AI III	Harnessing Information Technology while Teaching in Distress: the Pandemic Toll vs. the Opportunity of Long-Awaited Paradigm Shift	Diana Lungeanu, Ioan Dragan, Calin Muntean, Bogdan Timar	Oral
5.	86	DSS-AI III	Modeling a Bayesian Network for a Diabetes Case Study	Irina-Oana Lixandru-Petre	Oral
6.	87	DSS-AI III	A Fuzzy System Approach for Diabetes Classification	Irina-Oana Lixandru-Petre	Poster
7.	88	DSS-AI III	Mapping the Behavioral Change Evaluation of Elderly with Mild Cognitive Impairment in a Smart Environment	Marilena Ianculescu, Adriana Alexandru, Eleonora Tudora, Gabriel Neagu	Oral
8.	106	DSS-AI III	Automatic Subject Independent Pain Intensity Estimation using a Deep Learning Approach	Marilena-Cătălina Dragomir, Corneliu Florea, Valentin Pupezescu	Oral
9.	108	DSS-AI III	Ambient Assisted Living Environment based on Blockchain for Elderly Care	Andrei Vasilateanu, Andreea-Teodora Diaconu	Oral

Decision support systems, AI, Bioinformatics, Learning IV - DSS-AI IV
FRIDAY, 30 October, 11:15 – 13:30, Room I

1.	113	DSS-AI IV	A New M-voting System for COVID-19 Special Situation in Iraq	Naseer Abdulkarim Jaber Al-Habeeb, Dr. Nicolae Goga,, Haider Abdullah Ali, Sarmad Monadel Sabree Al-Gayar	Oral
2.	117	DSS-AI IV	Preliminary Design of an Interactive Web-based Platform for Regional Health Profiles of Bulgaria	Nikolay Dukov	Oral
3.	118	DSS-AI IV	Application of 3D Printed Anthropomorphic Phantoms for Research and Educational Purposes in Digital Radiology	Kristina Bliznakova, Nikiforos Okkalidis, Nikolay Dukov, Stavros Zikopoulos, Zhivko Bliznakov	Oral
4.	119	DSS-AI IV	Similarities between the Evolution of COVID-19 Number of Cases in Romanian Counties	Cristina Gena Dascalu, Gabriel Dimitriu, Magda Ecaterina Antohe, Daniela Anistoroaei, Loredana Golovcencu, Georgeta Zegan	Oral
5.	148	DSS-AI IV	Predicting Human Acceptor Splice Site Regions using Text Distance Methods	Cristian G. Zimbru, Nicoleta Andreescu, Adela Chirita-Emandi, Maria Puiu	Poster
6.	151	DSS-AI IV	Machine Learning Algorithms for Posture Identification of Obstructive Sleep Apnea Patients using IoT Solutions	Asma Channa, Muhammad Yousuf, Nirvana Popescu	Oral
7.	162	DSS-AI IV	Hospital Management and Scheduling with Multi Agents Approach	Kristijan Cincar	Oral
8.	171	DSS-AI IV	A Machine-Learning Approach to Survival Time-Event Predicting: Initial Analyses using Stomach Cancer Data	Lubomír Štěpánek, Filip Habarta, Ivana Malá, Luboš Marek, Filip Pazdírek	Oral

Hospital information systems, internet applications - HIS

1.	159	HIS	Integrated Software System for Registering of Patients with Stroke in Varna Region: Design and Initial Implementation	Kristina Bliznakova, Virginia Atanasova, Mihael Tsalta, Dimitrinka Rosenova, Silva Andonova, Klara Dokova	Oral
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Medical devices, Instrumentation, Modeling/Simulation, Robotics I - MD I**THURSDAY, 29 October, 9:30 – 11:30, Room I**

1.	6	MD I	Pre- and Post-surgical Monitoring by Laser Bio-photometry	Cristian Ravariu, Ala Bondarciuc	Oral
2.	3	MD I	Au-NPs/ZnO single nanowire nanosensors for health care applications	Vasile Postica, Heather Cavers, Rainer Adelung, Thierry Pauporté, Lee Chow and Oleg Lupan	Oral
3.	28	MD I	Improvements of a Simple Piezoresistive Array Armband for Gesture Recognition	Daniele Esposito, Gaetano Dario Gargiulo, Caitlin Polley, Giovanni D'Addio and Paolo Bifulco	Oral
4.	29	MD I	Path Simulation using Inertial Sensor	Mihaela Hnatiuc, Joseph Dussart	Oral
5.	35	MD I	A Statistical Interpretation of the Classical Action with Implications in the Dynamics of Non-Linear Growth Biostructures	Vlad Ghizdovăţ, Cipriana Ştefănescu, Irena Cristina Grierosu, Dan Dimitriu, Alexandra Iuliana Saviuc, Mihail Frăsilă, Ştefan Andrei Irimiciuc, Roxana Iacob, Maricel Agop	Oral
6.	45	MD I	Accuracy and Precision Improvement for the Biochemistry Assays by Using an Automatic Ultrasonic Cleaning System	Manole-Ştefan Niculescu, Adriana Florescu, Sever Paşca	Oral
7.	47	MD I	Systems for Monitoring Hands Hygiene of Medical Staff in Hospitals	A. Repanovici, D. Cotoros, M. Haineala, C. Nemet, E. Dinu	Oral
8.	51	MD I	AudiTread: Towards a Low-cost Wireless Auditory Feedback and Gait Analysis System	Utkarsh Tripathi, Samir Sangani, Liam Le Yu Liu, Anouk Lamontagne	Oral
9.	66	MD I	Identification of 'Manas' (States of Mind): Simulation Studies in Biophotonics	Shishir Prasad, Renu Prasad, Vikas Prasad, Rai Sachindra Prasad	Poster

Medical devices, Instrumentation, Modeling/Simulation, Robotics II - MD II**THURSDAY, 29 October, 11:45 – 13:45, Room I**

1.	68	MD II	FPGA Implementation of Multinomial Logistic Regression For Vibrotactile Feedback In a Robotic Hand	İsmail Erbaş, David Alejandro Vargas, Burak Güçlü	Oral
2.	69	MD II	Automatic Recognition of Numeric Values from the Monitor of Vital Signs	Petr Kudrna, Michaela Soukopová	Oral
3.	71	MD II	Mechanical Test Lung Simulation Device	Iulian Constantin Coropeţchi, Andrei Ioan Indreş, Florin Moţa, Alexandru Vasile	Oral
4.	75	MD II	Machine Learning Approaches based on Wearable Devices for Respiratory Diseases Diagnosis	Elena-Anca Paraschiv, Cătălina-Maria Rotaru	Oral
5.	77	MD II	On Predictive Control Stabilization of Periodic Orbits in a Chaotic Mapping Describing Tumor Growth: A Numerical Analysis	Deleanu Dumitru, Constantin Louis Dumitrache	Poster
6.	78	MD II	Extending the Range of Stability for the Periodic Orbits of a Prey – Predator Chaotic System	Deleanu Dumitru, Mariana Panaitescu	Poster

7.	92	MD II	A Novel Screening Tool to Identify Cancerous Skin Lesions in Biophotonics	Vikas Prasad, Shishir Prasad, Gautam Kumar Singh, Rai Sachindra Prasad	Oral
8.	93	MD II	Freezing of Gait Detection for Parkinson's Disease Patients using Accelerometer Data: Case Study	Alexandra-Maria Tăuțan, Alexandra-Georgiana Andrei, Bogdan Ionescu	Oral

Medical devices, Instrumentation, Modeling/Simulation, Robotics III - MD III
THURSDAY, 29 October, 14:00 – 16:00, Room III

1.	97	MD III	Blood (RBC/HGB) Analysis Using Colorimetry	Lorant Andras Szolga, Florin Mudure	Oral
2.	98	MD III	Nitrates and Nitrites Detection System in the Drinking Water Using UV Absorption	Lorant Andras Szolga, Teodor Radu Cilean	Oral
3.	99	MD III	Arduino Based Fatigue Level Measurement in Muscular Activity using RMS Technique	Muhammad Ayaz, Muhammad Waqas Ayub, Imran Ahmad Qureshi	Oral
4.	114	MD III	Analysis of Enzyme Attachment onto Electrode for Glycemic Measurement	Klara Fiedorova, Jan Kubicek, Matej Komar, Dominik Vilimek, Marek Penhaker, Martin Augustynek, Petr Kudrna, Ondrej Kejcar, Kamil Kuca	Oral
5.	125	MD III	Vision-Based System for Driver Posture Tracking to Prevent Musculoskeletal Disorders	Gheorghe-Daniel Voinea, Florin Girbacia	Poster
6.	126	MD III	Head Posture Monitor Based On 3 IMU Sensors: Consideration Toward Healthcare Application	Ionuț-Cristian Severin	Oral
7.	133	MD III	LabVIEW and Android BCI Chat App Controlled By Voluntary Eye-Blinks Using NeuroSky Mindwave Mobile EEG Headset	Oana Andreea Rușanu, Luciana Cristea, Marius Cristian Luculescu	Oral
8.	9	MD III	Increasing Autonomy In Health Care Management With Teal Organizations	Cristina Elena Mazilu, Radu Dobrescu	Oral

Medical devices, Instrumentation, Modeling/Simulation, Robotics IV - MD IV
FRIDAY, 30 October, 9:00 – 11:00, Room III

1.	134	MD IV	Porous Trabecular Implants - Surface Analysis, Design and 3D Printing Prototyping	Dan Laptoiu, Ștefan Laptoiu, Marian Miculescu	Oral
2.	137	MD IV	Microfluidic Channel from Gelatin Using Laser Printer	Chanin Lochotinunt, Thitirat Teechot, Suejit Pechprasarn, Treesukon Treebupachatsakul	Oral
3.	138	MD IV	Network Centric Therapy for Machine Learning Classification of Hemiplegic Gait through Conformal Wearable and Wireless Inertial Sensors	Robert LeMoyne, Timothy Mastroianni	Oral

4.	139	MD IV	Diadochokinesia Distinction of Hemiparesis through Quantification of Conformal Wearable and Wireless Inertial Sensor with Machine Learning	Robert LeMoyne, Timothy Mastroianni	Oral
5.	140	MD IV	Conformal Wearable and Wireless Inertial Sensor System for Machine Learning Classification of Hemiplegic Reduced Arm Swing	Robert LeMoyne, Timothy Mastroianni	Oral
6.	157	MD IV	Virtual Proprioception for Eccentric Training through Conformal Wearable and Wireless Inertial Sensor Systems	Robert LeMoyne, Timothy Mastroianni	Oral
7.	142	MD IV	Auto Focusing Ophthalmoscope for Smartphone	Nitipon Navaitthiporn, Preeyarat Rithcharung, Chuttima Wongpa, Treesukon Treebupachatsakul, Suejit Pechprasarn	Oral
8.	144	MD IV	Program Extension for Data Analysis from Operating Rooms	Valeriia Trukhan, Lenka Horakova, Martin Rozanek	Oral

Medical devices, Instrumentation, Modeling/Simulation, Robotics V - MD V					
FRIDAY, 30 October, 13:45 – 15:45, Room I					
1.	152	MD V	Using Eye-tracking Technologies in Vision Teachers' Work – a Norwegian Perspective	Qasim Ali, Ilona Heldal, Mads G. Eide, Carsten G. Helgesen, Gunvor Birkeland Wilhelmsen	Oral
2.	155	MD V	State-of-the-art and Future Directions for Using Augmented Reality Head Mounted Displays for First Aid Live Training	Tord Hettervik Frøland, Ilona Heldal, Elisabeth Ersvær, Gry Sjøholt	Oral
3.	177	MD V	A Numerical Model for the Assessment of the Transcranial Magnetic Stimulation	Alin A. Dobre, Alexandru M. Morega, Mihaela Morega	Oral
4.	156	MD V	Accuracy Improvement for the Biochemistry Assays by Using Total Dissolved Solids and Turbidimetry Measurements	Manole-Ștefan Niculescu, Adriana Florescu, Pașca Sever	Oral
5.	167	MD V	Computing the Caloric Expenditure During Kick Scooter Activity	George-Calin Seritan, Bogdan-Adrian Enache, Felix-Constantin Adochiei, Florin-Ciprian Argatu, Anrei-Sebastian Petrescu, Ioana-Raluca Adochiei, Daniel Iulian Voiculescu	Poster
6.	168	MD V	Drivers' Drowsiness Detection and Warning Systems for Critical Infrastructures	Ioana-Raluca Adochiei, Oana-Isabela Știrbu, Narcis - Iulian Adochiei, Matei Pericle-Gabriel, Ciprian- Marius Larco, Stefan-Mircea Mustata, Diana Costin	Poster
7.	169	MD V	Electronic System for Real-Time Indoor Air Quality Monitoring	Felix-Constantin Adochiei, Șerban - Teodor Nicolescu, Ioana-Raluca Adochiei, George-Calin Seritan, Bogdan-Adrian Enache, Florin-Ciprian Argatu, Diana Costin	Poster
8.	176	MD V	Young's Modulus Evaluation for the Blood Vessel Walls using Intravascular Optical Coherence Tomography	A. Yu. Potlov, S.G. Proskurin, S.V. Frolov	Oral

Biomedical Signal Processing I – SP I					
THURSDAY, 29 October, 9:30 – 11:30, Room III					
1.	44	SP I	Study on How Catheter Ablation Affects Atrial Structures in Patients with Paroxysmal Atrial Fibrillation: The Case of the Coronary Sinus	Aikaterini Vraka, Vicente Bertomeu-Gonzalez, Joaquin Osca, Flavia Ravelli, Raul Alcaraz, Jose J. Rieta	Oral
2.	48	SP I	OculusGraphy: Overview of Retinal Toxicity Methods Based on Biomedical Signals Analysis	Anton Yu. Dolganov, Aleksei E. Zhdanov, Evdochim Lucian, Xinqi Bao, Vasiliu I. Borisov, Victor N. Kazajkin, Vyacheslav O. Ponomarev, Alexander V. Lizunov, Leonid G. Dorosinskiy	Oral
3.	52	SP I	Reliable Paroxysmal Atrial Fibrillation Substrate Assessment During Sinus Rhythm Through Optimal Estimation of Local Activation Waves Dynamics	Aikaterini Vraka, Fernando Hornero, Aurelio Quesada, Luca Faes, Raúl Alcaraz, José J. Rieta	Poster
4.	70	SP I	A Straightforward Methodology to Distinguish Complex Fractionated Atrial Electrograms of Paroxysmal from Persistent Atrial Fibrillation	Emanuela Finotti, Edward J Ciaccio, Hasan Garan, Vicente Bertomeu-Gonzalez, Raul Alcaraz, Jose J Rieta	Poster
5.	74	SP I	On the Classification of ECG Signals Subject to Various Degrees of Dimensionality Reduction	Monica Fira, Liviu Goras	Oral
6.	76	SP I	Assessing the Stability of Complex Fractionated Atrial Electrograms for the Characterization of Atrial Substrate in Atrial Fibrillation	Emanuela Finotti, Edward J Ciaccio, Hasan Garan, Fernando Hornero, Raul Alcaraz, Jose J Rieta	Oral
7.	80	SP I	Deep Learning Detection of Corrupted Segments in Recordings from Wearable Devices to Improve Atrial Fibrillation Screening	Alvaro Huerta, Arturo Martinez-Rodrigo, Miguel A. Arias, Phillip Langley, Jose J. Rieta, Raul Alcaraz	Oral
8.	79	SP I	Comparison of Pre-Trained Deep Learning Algorithms for Quality Assessment of Electrocardiographic Recordings	Alvaro Huerta, Arturo Martinez-Rodrigo, Alberto Puchol, Marta I. Pachon, Jose J. Rieta, Raul Alcaraz	Poster
9.	82	SP I	Refined Electrical Cardioversion Outcome Prediction with Bipolar Surface Standard Leads for Patients in Persistent Atrial Fibrillation	Eva M. Cirugeda, Sofia Calero, Aurelio Quesada, Victor M. Hidalgo, Jose J. Rieta, Raul Alcaraz	Poster

Biomedical Signal Processing II – SP II					
THURSDAY, 29 October, 14:00 – 16:00, Room I					
1.	83	SP II	Prediction of Early Failure in Electrical Cardioversion of Atrial Fibrillation Using Refined Multiscale Entropy	Eva M. Cirugeda, Sofia Calero, Victor M. Hidalgo, Jose Enero, Jose J. Rieta, Raul Alcaraz	Oral
2.	84	SP II	Multidimensional Fibrillatory Waves Analysis for Improved Electrical Cardioversion Outcome Prediction in Persistent Atrial Fibrillation	Eva M. Cirugeda, Sofia Calero, Eva Plancha, Jose Enero, Jose J. Rieta, Raul Alcaraz	Poster
3.	85	SP II	Time Variability of P-wave Features from the Preoperative Electrocardiogram Predicts Recurrence After Catheter Cryoablation of Atrial Fibrillation	Antonio Ruiz, Miguel A. Arias, Alberto Puchol, Marta I. Pachon, Jose J. Rieta, Raul Alcaraz	Oral

4.	89	SP II	An Experimental Review on Obstructive Sleep Apnea Detection Based on Heart Rate Variability and Machine Learning Techniques	Daniele Padovano, Arturo Martinez-Rodrigo, Jose Manuel Pastor, Jose Joaquin Rieta, Raul Alcaraz	Oral
5.	90	SP II	Novel Time-Frequency Features of the Fibrillatory Waves Improve Catheter Ablation Outcome Prediction of Persistent Atrial Fibrillation	Pilar Escribano, Juan Ródenas, Miguel A. Arias, Philip Langley, José J. Rieta, Raúl Alcaraz	Oral
6.	91	SP II	Atrial Fibrillation Surgical Ablation Long-term Outcome Prediction Just with One Lead of the Preoperative Surface Electrocardiogram	Manuel García, Pilar Escribano, Juan Ródenas, Miguel Martínez-Iniesta, Fernando Hornero, José J. Rieta, Raúl Alcaraz	Poster
7.	105	SP II	Low Latency Automated Epileptic Seizure Detection: Individualized vs. Global Approaches	Alexe Ciurea, Cristina-Petruta Manoila, Alexandra-Maria Tautan, Bogdan Ionescu	Oral
8.	127	SP II	OculusGraphy: Literature Review on Electrophysiological Research Methods in Ophthalmology and Electroretinograms Processing Using Wavelet Transform	Aleksei E. Zhdanov, Anton Yu. Dolganov, Victor N. Kazajkin, Vyacheslav O. Ponomarev, Alexander V. Lizunov, Vasilii I. Borisov, Evdochim Lucian, Xinqi Bao, Leonid G. Dorosinskiy	Poster
9.	146	SP II	Analysis of Some EMG Signals Using Multiresolution and Time-Frequency Techniques	Radu Matei, Daniela Matei	Oral

Medicine & Informatics I - MI I					
THURSDAY, 29 October, 14:00 – 16:00, Room II					
1.	14	MI I	Dose-Dependent Effect of Angiotensin II on Uterine Smooth Muscle Motility	Roxana Mihaela Barbu, Georgiana Butura, Ioana Armasu, Bogdan Stana, Cristina Maria Gavrilescu, Walther Bild	Oral
2.	39	MI I	Biomechanical Devices Used for the Treatment of Open Bite Malocclusion	Anistoroaei Daniela, Zegan Georgeta, Cernei Eduard Radu, Sodor-Botezatu Alina, Dascalu Cristina Gena, Golovcencu Loredana	Oral
3.	41	MI I	Iloprost treatment in systemic sclerosis – effects on autonomic nervous system assessed through heart rate variability parameters	Elena Esmeralda Saramet, Doina-Clementina Cojocar, Sorin Ungurianu, Robert D. Negru	Poster
4.	43	MI I	Relationship between Maxillary and Mandibular Base Length and Type of Malocclusion	Golovcencu Loredana, Zegan Georgeta, Sodor-Botezatu Alina, Cernei Eduard Radu, Dascalu Cristina Gena, Anistoroaei Daniela	Oral
5.	61	MI I	Regression Study of Cephalometric Measurements Involved in Establishing Skeletal Classes	Zegan Georgeta, Anistoroaei Daniela, Golovcencu Loredana, Cernei Eduard Radu, Sodor-Botezatu Alina, Dascalu Cristina Gena	Oral
6.	94	MI I	Rehabilitation in Fecal Incontinence in Geriatric Patients Using an Implantable Electrical Stimulator of the Sacral Nerves	Gabriel Statescu, Dragos Andrei Chiran, , Marius Constantin Moraru, Alin Horatiu Nedelcu, Simona Alice Partene-Vicleanu, Irina Mihaela Jemnoschi-Hreniuc, Dragos Valentin Crauciuc, Cristina Luca	Oral

7.	95	MI I	The Association between Psychiatric Diseases and Hormonal Dysfunctions	Roxana Mihaela Barbu, Ioana Armasu, Cristina Maria Gavrilescu, Cristina Oprisa, Catalin Pohaci-Antonesei, Bogdan Stana, Elena Cojocaru, Luiza Pohaci-Antonesei	Oral
8.	172	MI I	Cytokinesis–Block Micronucleus (CBMN) Assessment for Medical Personnel Occupationally Exposed to Ionizing Radiation	Diana Costin, Irina-Anca Popescu, Mirela-Mihaela Cîmpeanu	Oral

Medicine & Informatics II - MI II					
FRIDAY, 30 October, 13:45 – 15:45, Room II					
1.	147	MI II	A Systemic Review with Visualization using Adjutant: Application in Case of Febrile Seizure Research	Ionela Maniu, George Maniu	Poster
2.	158	MI II	Cut-off Values for Biomarkers. A Review of Statistical Methods and an Application Study on the Association Between UTI and CRP in Febrile Seizure	Ionela Maniu, Raluca Costea, Bogdan Mihai Neamtu	Poster
3.	160	MI II	Management of Urological Geriatric Patients in Hospital Healthcare	Adina Carmen Ilie, Anca Iuliana Pislaru, Ioana Alexandra Sandu, Ramona Stefaniu, Ioana Dana Alexa	Oral
4.	161	MI II	Importance of CT – Scan in Fragility Fracture of the Pelvis	Ioana Dana Alexa, Bogdan Veliceasa, Ovidiu Alexa, Claudiu Carp, Alexandru Filip	Oral
5.	173	MI II	3D Prints are not a Panacea, but Definitely Support Orthopedic Surgery	Rodica Marinescu, Diana Popescu	Oral
6.	180	MI II	Romanian Citizens' Attitudes and Opinions over the Course of the Covid-19 Pandemic	Daniel Boldureanu, Ioana Roman, Dragos Sardaru, Gabriela Gladiola Andruseac	Poster

Medical Imaging and Image Processing I - MIIP I					
THURSDAY, 29 October, 11:45 – 13:45, Room III					
1.	4	MIIP I	Variational Quantum Denoising Technique for Medical Images	Tudor Barbu	Oral
2.	10	MIIP I	Robust Technique to Detect COVID-19 using Chest X-ray Images	Asma Channa, Nirvana Popescu, Najeeb ur Rehman Malik	Oral
3.	16	MIIP I	A hybrid approach for automatic breast cancer detection	Ahmed Bouziane, Sara Boumali, Nada Berkane and Fedoua Sabrine Guendouz	Oral
4.	17	MIIP I	Two Steps Iris Recognition with SIFT Descriptors and Texture Features	Ioan Păvăloi, Anca Ignat	Oral
5.	22	MIIP I	Animal Tracking Method Used in Neuroscience Experiments	Florin Rotaru, Silviu-Ioan Bejinariu, Hariton Costin, Ramona Luca, Cristina Diana Niță	Oral

6.	42	MIIP I	A Novel Image Quality Assessment Index for Edge-Aware Noise Reduction in Low-Dose Fluoroscopy: Preliminary Results	Emilio Andreozzi, Maria Agnese Pirozzi,, Antonio Fratini, Giuseppe Cesarelli, Mario Cesarelli, Paolo Bifulco	Oral
7.	62	MIIP I	Automatic Detection of Infantile Hemangioma using Convolutional Neural Network Approach	Balazs Horvath, Cătălina Neghină, Andreea Griparis, Alina Sultana	Oral
8.	64	MIIP I	Coronary Artery Identification on Echocardiograms for Kawasaki Disease Diagnosis	Tomas Mantecon, Elisa-Fernandez-Cooke, Capucine Bertrand, Carlos Grasa, Ana Barrios, Belen Toral, Leticia Albert, Pablo Rojo, Julian Cabrera	Oral
9.	67	MIIP I	Objective Method for Colon Cleansing Evaluation Using Color CIELAB Features	Adrian Ciobanu, Mihaela Luca, Vasile Drug	Oral

Medical Imaging and Image Processing II - MIIP II

FRIDAY, 30 October, 11:15 – 13:30, Room III

1.	143	MIIP II	A Supervised Generative Model for Efficient Rendering of Medical Volume Data	Marius Gavrilescu	Oral
2.	100	MIIP II	Kidney Cancer Staging: Deep Learning Neural Network Based Approach	Nathan Hadjiyski	Oral
3.	120	MIIP II	Deep Learning Based Human Locomotion Recognition in Video Sequences	Silviu-Ioan Bejinariu, Hariton Costin, Florin Rotaru, Ramona Luca, Camelia Lazăr	Oral
4.	122	MIIP II	Physical Anthropomorphic Breast Phantoms for Xray Imaging Techniques: Manufacturing Approach	Kristina Bliznakova, Nikiforos Okkalidis, Antonio Sarno, Nikolay Dukov, Giovanni Mettievier, Paolo Russo, Zhivko Bliznakov	Oral
5.	123	MIIP II	Diagnosis of Alzheimer’s Disease by Canonical Correlation Analysis Based Fusion of Multi-Modal Medical Images	Anahita Baninajjar, Hamid Soltanian-Zadeh, Sajad Rezaie, Ali-Reza Mohammadi-Nejad	Oral
6.	128	MIIP II	A Review of Glaucoma Detection from Digital Fundus Images using Machine Learning Techniques	Ana-Maria Ștefan , Elena-Anca Paraschiv, Silvia Ovreiu , Elena Ovreiu	Oral
7.	131	MIIP II	An Exploratory Study for Glaucoma Detection using Densely Connected Neural Networks	Silvia Ovreiu, Irina Cristescu, , Florian Balta, Elena Ovreiu	Oral
8.	136	MIIP II	Pneumonia Detection on Chest X-Ray Images using Convolutional Neural Networks Designed for Resource Constrained Environments	Alin Cococi, Iulian Felea, Daniel Armanda, Radu Dogaru	Oral

Telemedicine, e/p/m-health I - TM I

FRIDAY, 30 October, 9.00-11.00, Room IV

1.	13	TM I	Mobile application for the monitoring and control of the diet in people with Anemia	Michael Cabanillas-Carbonell, Harold Ñahuiña-Balbuena, Jhan Soto-Justiniano, Oswaldo Casazola-Cruz	Oral
2.	21	TM I	Mobile Application for Registration and Diagnosis of Respiratory Diseases: a Review of the Scientific Literature between 2010 and 2020	Jazmin Flores-Rodriguez, Michael Cabanillas-Carbonell	Oral

3.	26	TM I	A New Integrated Platform for Gathering and Managing Multivariable and Multisensor Data in Diabetes Clinical Studies	Cossu Luca, Cappon Giacomo, Sparacino Giovanni, Facchinetti Andrea	Oral
4.	30	TM I	A Framework for Internet of Things-Based Body Mass Index Estimation and Obesity Prediction	Chukwuemeka Obasi, Ijeoma Ndu, Ogechukwu Iloanusi	Oral
5.	32	TM I	Gait Pattern Analysis with Accelerometer Data From a Smartphone in PAD Patients	Kassandra Renner, Vitor Filipe, Luis Torres Pereira, Ivone Silva, Hugo Paredes	Oral
6.	33	TM I	eHealth Perspective Co-designed and Implemented with Romanian Elders for Independent Living	Cristian Vizitiu, Călin Bîră, Adrian Dinculescu, Mihai Mandu, Alexandru Nistorescu, Mihaela Marin	Oral
7.	57	TM I	Benefits of Using Mobile Applications to Keep Under Control, Detect, Attenuate and Monitor COVID-19 Pandemic	Cristian Vladoescu, Marius Tunea, Loredana Stanciu	Poster

Telemedicine, e/p/m-health II - TM II FRIDAY, 30 October, 13.45-15.45, Room IV					
1.	60	TM II	Assisted Environment Comprehension using a Mobile Terminal Application	George Nitroi, Corneliu Florea, Mihai Badea	Oral
2.	121	TM II	Mesh Networks with Interconnected Li-Fi and Wi-Fi Communications Applied to Telepresence Robots for Medical Emergency Situations	Paul Țoța, Mircea-F. Vaida, Ligia Chiorean	Oral
3.	124	TM II	Improved Secure Internet of Things System using Web Services and Low Power Single-board Computers	Ciubotaru Bogdan-Iulian, Sasu Vasiliică-Gabriel, Mitrea Dan Alexandru, Goga Nicolae, Vasilățeanu Andrei	Oral
4.	129	TM II	Security and Privacy Risks for Remote Healthcare Monitoring Systems	Marilena Ianculescu, Dora Coardoș, Ovidiu Bica, Victor Vevera	Oral
5.	130	TM II	Low Cost and Integrable Healthcare Services Using VoIP for Remote Patient Monitoring	Mihai Oproiu, Cristian Mușuroi, Marius Volmer	Oral
6.	135	TM II	Growing the E-Health Business with Personalised Models for a Non-Invasive Monitoring and Health Assessment System Assisting Elderly People	Gabriela Florescu, Valentin Florescu	Poster
7.	145	TM II	A Digital Services Centre for Improving Home Assistance	Sorin Pușcoci, Virginia Săndulescu, Monica Petre, Alexandru Gîrlea, Viorel Bota	Oral
8.	165	TM II	Development of a Wearable Device for Monitoring People with Heart Problems	Cristina-Daniela Enache, Simona Gabriela Tudorache, Coriolan Emil Ulmeanu, Daniel Iulian Voiculescu, Cristina-Adriana Becheanu, Andreea Daniela Florea	Poster