

EHB 2020 - YOUNG RESEARCHER CONTEST

No.	ID	Section	Title	Authors	Presentation
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Assistive Technologies for People with Disabilities I - AT I

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

1.	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
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Assistive Technologies for People with Disabilities II - AT II

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

1.	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
2.	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
3.	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

Environmental protection and Health II – EPH II

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

1.	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
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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.	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	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

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

1.	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
2.	86	DSS-AI III	Modeling a Bayesian Network for a Diabetes Case Study	Irina-Oana Lixandru-Petre	Oral

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

1.	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
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Medical devices, Instrumentation, Modeling/Simulation, Robotics I - MD I
THURSDAY, 29 October, 9:30 – 11:30, Room I

1.	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
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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.	75	MD II	Machine Learning Approaches based on Wearable Devices for Respiratory Diseases Diagnosis	Elena-Anca Paraschiv, Cătălina-Maria Rotaru	Oral

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

1.	99	MD III	Arduino Based Fatigue Level Measurement in Muscular Activity using RMS Technique	Muhammad Ayaz, Muhammad Waqas Ayub, Imran Ahmad Qureshi	Oral
2.	126	MD III	Head Posture Monitor Based On 3 IMU Sensors: Consideration Toward Healthcare Application	Ionuț-Cristian Severin	Oral
3.	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
4.	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.	137	MD IV	Microfluidic Channel from Gelatin Using Laser Printer	Chanin Lochotinunt, Thitirat Teechot, Suejit Pechprasarn, Treesukon Treebupachatsakul	Oral
2.	142	MD IV	Auto Focusing Ophthalmoscope for Smartphone	Nitipon Navaitthiporn, Preeyarat Rithcharung, Chuttima Wongpa, Treesukon Treebupachatsakul, Suejit Pechprasarn	Oral
3.	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

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.	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

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.	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
3.	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
4.	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

Medical Imaging and Image Processing I - MIIP I					
THURSDAY, 29 October, 11:45 – 13:45, Room III					
1.	10	MIIP I	Robust Technique to Detect COVID-19 using Chest X-ray Images	Asma Channa, Nirvana Popescu, Najeeb ur Rehman Malik	Oral
2.	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
3.	62	MIIP I	Automatic Detection of Infantile Hemangioma using Convolutional Neural Network Approach	Balazs Horvath, Cătălina Neghină, Andreea Griparis, Alina Sultana	Oral

Medical Imaging and Image Processing II - MIIP II					
FRIDAY, 30 October, 11:15 – 13:30, Room III					
1.	100	MIIP II	Kidney Cancer Staging: Deep Learning Neural Network Based Approach	Nathan Hadjiyski	Oral
2.	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

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

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.	130	TM II	Low Cost and Integrable Healthcare Services Using VoIP for Remote Patient Monitoring	Mihai Oproiu, Cristian Muşuroi, Marius Volmer	Oral