

**E-HEALTH AND BIOENGINEERING CONFERENCE - EHB 2023,
11-th edition, Bucharest, Romania, November 9-10, 2023**

YOUNG RESEARCHER CONTEST

No.	ID	Young Researcher	Authors	Title
1.	8	Andrei-Daniel Tudosi	Andrei Daniel Tudosi, Adrian Graur, Doru Gabriel Balan and Alin Dan Potorac	Automatic Directory Service Integration in Distributed Firewall Resources: A Study of Scripting and LDAP Integration with pfSense
2.	16	Iulia Florentina Darie	Iulia-Florentina Darie, Steluta Gosav and Mirela Praisler	Characterisation of novel illicit drugs based on computational toxicology
3.	18	Mehul Chauhan	Mehul Chauhan	Optimising Magnetic Fields & Coil Designs for Magnetic Hyperthermia - Breast Cancer Treatment
4.	21	Elena-Claudia Maftei	Elena-Claudia Maftei and Otilia Zvoristeanu	The future of therapy: a study on emotion recognition solutions using NAO robot
5.	22	Ethan Yan	Ethan Yan	Detection of Acute Myeloid Leukemia Using Deep Learning Models Based Systems
6.	23	Raul Mihai Petrascu	Raul Mihai Petrascu, Sever Gabriel Racz and Dan Mihai Rusu	Collection of Key Bioresponsive Materials
7.	24	Marija Gorelova	Marija Gorelova, Zuzana Slemrova, Petra Hospodkova and Vladimir Rogalewicz	Early stage health technology assessment: still unknown helper of medical device manufacturers
8.	31	Eunice Leung	Eunice Leung	Muscle Fatigue Identification Using a Time Frequency Deep Autoencoder
9.	36	Alexandru-George Berciu	Evelin-Henrietta Dulf, Alexandru-George Berciu and Teodora Mocan	Tumour Evolution Prediction Based on Mathematical Models
10.	40	Cristina Montero-Pardo	Cristina Montero-Pardo, Blanca Delgado-Bonet, Alejandro Pascual-Valdunciel, Javier Ricardo Pérez-Sánchez, Francisco Grandas,	Comparison of Wrist Positions and Assessment Techniques to Evaluate Disynaptic Group I Inhibition

			Juan C. Moreno, Álvaro Gutiérrez and Filipe Oliveira Barroso	
11.	45	Simon Walzel	Simon Walzel	Comparing Perfusion Index Between Fingers During Short-term Hypoxemia: Implications for SpO2 Monitoring
12.	48	Emanuele Tauro	Emanuele Tauro, Alessandra Gorini, Grzegorz Bilo and Enrico Caiani	A data-driven method to perform Personas Validation using Clustering consensus metrics
13.	53	Pilar Escribano Cano	Pilar Escribano Cano, Juan Ródenas García, Manuel García Teruel, Flavia Ravelli, Michela Masè, José Joaquín Rieta and Raúl Alcaraz Martínez	Automatic Detection of High-Quality Fibrillatory Waves Segments from Atrial Fibrillation Electrocardiographic Recordings
14.	61	Xiaofu Zhang	Yijing Xia, Xiaofu Zhang and Saeid Sanei	Murmur Separation and Classification from Heart Sound
15.	64	Lucian Evdochim	Lucian Evdochim, Dragos Dobrescu, Lidia Dobrescu, Silviu Stanciu and Stela Halichidis	Group Delay Effect Analysis Between Arterial Blood Pressure and Photoplethysmography Waveforms
16.	75	Andrei Horia Brănescu	Andrei-Horia Brănescu, Dan-Mihai Rusu, Nicolae-Florin Cofaru and Raul-Mihai Petraşcu	Developing the 3D model of the human lower body using the Skeleton System method
17.	77	Ahmed Mostafa	Saied Salem, Ahmed Mostafa, Yasien E. Ghalwsh, Manar N. Mahmoud, Ahmed F. Elnokrashy and Ahmed M. Mahmoud	Computer-Aided System for Breast Cancer Lesion Segmentation and Classification Using Ultrasound Images
18.	85	Jessica Alvariño-Duran	Jessica Alvariño-Durán, Betania Hernández-Ocaña, José Hernández-Torruco and Oscar Chávez-Bosquez	Detection of cardiac arrhythmias using unsupervised learning: a preliminary approach based on PAM and CLARA clustering algorithms
19.	86	Elena-Valentina Serbanescu	Elena-Valentina Serbanescu, George-Calin Seritan and Bogdan-Adrian Enache	Digital stethoscope with signal processing capabilities for IoMT applications
20.	89	Simon Burbach	Simon Burbach, Rainer Brück and Alexander Keil	State-of-the-art Analysis of Cuffless Methods for Blood Pressure Measurement
21.	96	Jasmin Freudenberg	Jasmin Freudenberg, Rainer Brück and Tanja Eiler	Experience and acceptance of AI expert systems in medical teaching
22.	97	Marina Algaba Vidoy	Marina Algaba-Vidoy, Jorge Andrés Gómez-García, Filipe Oliveira Barroso, Francisco Molina-Rueda, Diego Torricelli and Juan Camilo Moreno	Gait analysis of electromyographic spectral differences in stroke survivors and healthy controls
23.	103	Lorena Stracke	Lorena Stracke, Simon Burbach, Rebekka Jakob, Rainer Brück and Tanja Joan Eiler	Development of a Standalone VR Application for the Simulation of Lower Extremity Amputations

24.	105	Benedetta Salvatori	Benedetta Salvatori, Agnese Piersanti, Tina Linder, Daniel Eppel, Micaela Morettini, Christian Göbl and Andrea Tura	Machine Learning-Based Indices Assessing Different Aspects of Beta-Cell Function in Pregnancy
25.	107	Ionela Riciu	Ionela Riciu and Magdalena Anghel	Using LabVIEW in Neural Network Modeling
26.	112	Jad Botros	Jad Botros, Farah Mourad-Chehade and David Laplanche	CNN-LSTM Fusion: An Intelligent Framework for Classifying Heart Failure Severity
27.	114	Ionut Manea	Ionuț Manea, Ștefana Duță, Laura Elena Radu and Felix Constantin Adochiei	Automated Assessment of Hospital Waste Bin Fill Ratios: A Novel AI-driven Approach for Enhanced Waste Management and Infection Control
28.	116	Simon Burbach	Simon Burbach, Annika Steiger, Neruna Yugarajah, Rainer Brück and Tanja Joan Eiler	Virtual Heartbeats, Real Expertise – Concept and Implementation of a Virtual Reality ECG-Training-Simulator
29.	117	Laura Elena Radu	Laura Elena Radu, Ștefana Duță, Ionuț Manea and Ioana Raluca Adochiei	Towards Sustainable Healthcare: Development of an Integrated Waste Management Application for Hospital Environments
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32.	130	Hadi El Zein	Hadi El Zein, Farah Mourad-Chehade and Hassan Amoud	Wi-Fi CSI-based Fall Detection using CNN with Advanced Decision Mechanism
33.	131	Malek Ghourabi	Malak Ghourabi, Farah Mourad Chehade and Aly Chkeir	Enhancing Wet and Dry Cough Classification with MFCC and Audio Augmentation
34.	135	Mădălin Corneliu Frunzete	Bianca-Alexandra Zîrnă, Denis Mihailovschi and Mădălin-Corneliu Frunzete	EEG signal processing for epileptic seizure detection
35.	136	Mădălin Corneliu Frunzete	Denis Mihailovschi, Bianca-Alexandra Zîrnă and Mădălin-Corneliu Frunzete	Development of a portable heart rate monitoring device
36.	145	Martin Holá	Martina Holá, Ondřej Gajdoš, Vojtěch Kamenský and Karolína Kubincová	Cost-effectiveness analysis of multiple sclerosis treatment approaches
37.	147	Karla Mothejloova	Karla Mothejlova, Gleb Donin, Jan Broulim and Ales Tichopad	Legal and procedural health data anonymization framework of the Faculty of biomedical engineering, Czech technical university
38.	148	Yun Xin Teoh	Yun Xin Teoh, Alice Othmani, Siew Li Goh,	Segmentation of Knee Bones for Osteoarthritis Assessment: A

			Juliana Usman and Khin Wee Lai	Comparative Analysis of Supervised, Few-Shot, and Zero-Shot Learning Approaches
39.	149	Alexandru Pusca	Alexandru Pusca, Iulia Andras, Andrei Cailean, Nicolae Crisan, Calin Vaida, Corina Radu, Bogdan Gherman, Nadim Al Hajjar, Damien Chablat and Doina Pisla	On the development of an innovative surgical parallel robotic system
40.	150	Martina Homolková	Martina Homolkova and Vojtech Kamensky	Costs and effects of treatment of biceps long head tendon injury
41.	151	Miruna-Elena Iliuță	Miruna-Elena Iliuță, Mihnea-Alexandru Moiescu, Eugen Pop and Traian-Costin Mitulescu	Integration of Digital Twin models with Systems Medicine for Eye Diseases
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43.	157	Hacer Duzman	Hacer Duzman, Reza Daryani, Emre Cenk Ersan and Mustafa Serdar Çelebi	Patient-Specific In-Silico Hemodynamic Analysis of the Anomalous Aortic Origin of the Coronary Artery (AAOCA)
44.	160	Tracy Guevara	Tracy Cristina Guevara Garcia, Maria Fernanda Berlioz and Karla Miriam Reyes Leiva	Biomechanical analysis of functional movement in athletes using Kinovea
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48.	166	Iuliana Soldanescu	Iuliana Soldanescu, Andrei Lobiuc and Mihai Dimian	Development of Nanopores Raw Signal Analysis Techniques for Accurate Protein Detection and Quantification
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50.	168	Andreea Manea	Andreea Manea, Florin Argatu, George Seritan, Bogdan-Adrian Enache, Ioana-Raluca Adochiei and Felix Constantin	Intelligent Monitoring System for Stress Levels in Critical Infrastructures

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54.	174	Alexandru-Ionut Slean	Alexandru-Ionuț Șlean, Cornelia Ilciuc and Petruța-P. Rusu	Couples Coping Enhancement Training: A Mobile Relationship Education Program
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56.	176	Narcisa Simona Arghir	Simona Narcisa Arghir, Ioana-Raluca Adochiei, Gladiola G. Petroiu, Oana-Isabela Stirbu, Florin Argatu and Felix Constantin Adochiei	Exploring Emotions: Play-Based Interventions for Children with Autism Spectrum Disorders
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63.	198	Agnese Piersanti	Agnese Piersanti, Benedetta Salvatori, Piera	Diabetic Retinopathy Detection: a Machine-Learning

			D'Avino, Laura Burattini, Christian Göbl, Andrea Tura and Micaela Morettini	Approach based on Continuous Glucose Monitoring Metrics
64.	200	Lorenzo Hermez	Lorenzo Hermez, Nesma Houmani, Sonia Garcia-Salicetti, Omar Galarraga and Vincent Vigneron	Gait Deviation and Neurological Diseases: a Comparative Study of Quantitative Measures
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67.	223	Rajat Nagpal	Rajat Nagpal, Cristian Lupan, Adrian Birnaz, Philipp Schadte, Mihai Brînză, Leonard Siebert and Oleg Lupan	Study on Al ₂ O ₃ /ZnO heterostructure based UV detection for biomedical applications
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69.	227	Monica Dugăeșescu	Monica Dugăeșescu, Violeta Ionela Bădiță and Elena Poenaru	Returning incidental findings to study participants in genomic research: a discussion of the ethical aspects
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73.	235	Are Dæhlen	Are Are Dæhlen, Ilona Heldal, Qasim Ali, Jozsef Katona and Attila Kovari	Virtual Reality and Eye-Tracking Based Vision Screening – a Bibliometric Study
74.	239	Oana Stribu	Cosmin Banica, Paraschiv Ruxandra, Titi Paraschiv, Oana-Isabela Stirbu, Felix Constantin Adochiei and Laura Elena Radu	A Study on the Correlation Between EEG Wave Patterns and Conscientiousness
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