

2024 E-Health and Bioengineering Conference (EHB 2024)

**Iasi, Romania
14-15 November 2024**



**IEEE Catalog Number: CFP2403P-POD
ISBN: 979-8-3315-3215-4**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2403P-POD
ISBN (Print-On-Demand):	979-8-3315-3215-4
ISBN (Online):	979-8-3315-3214-7
ISSN:	2575-5137

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Cardiac Condition Detection Model using Alexnet and Time-Frequency Representation of ECG Signals	1
<i>Mihai Aron, Teofil Ilie Ursache, Gladiola Petroiu and Cristian Rotariu</i>	
Non-Invasive Device for Hearing Rehabilitation.....	5
<i>Daniela Goldan, Mihai Aron, Teofil Ilie Ursache, Gladiola Petroiu and Cristian Rotariu</i>	
Implementing of European Public Environmental Policies in the Context of Improving Public Health	9
<i>Corina Caușan</i>	
Retention of Rifaximin from Aqueous Solution by Adsorption on PET Fibers.....	13
<i>Elena Fasniuc Pereu and Laura Bulgariu</i>	
Enhancing Learning and Therapy for Children with Autism: Innovative Activities with the NAO Robot	17
<i>Iustina-Bianca Bulai and Otilia Zvorișteanu</i>	
A Brief Review on EEG-based Diagnosis of Parkinson’s Disease using Deep Learning Models.....	21
<i>Melika Ghasemi, Reza Boostani and Amir Jabbari Lak</i>	
A Hybrid Adaptive Object Identification Algorithm for Neglected Tropical Disease Diagnosis	25
<i>Serhan Turgul, Saumya Reni, Izzet Kale, Jaya Shrivastava and Peter L. Chiodini</i>	
Mental Monitoring Using a Portable Electroencephalography Device for an Educational Telepresence Robot	29
<i>Paul Tota, Mircea-Florin Vaida, Gelu Ovidiu Tirian, Romulus Mircea Terebes and Ligia Chiorean</i>	
Clustering 3D Tracking in Zebrafish Laboratory Trials.....	33
<i>Adrian Valentin Panaintescu, Vlad Constantin Craciun, Radu Marian Lefter and Mihaela Luca</i>	
Predicting the Time from Diagnosis to Treatment in Breast Cancer	38
<i>Sergiu Ceica and Stefan Daniel Achirei</i>	
Classifying Mental Disabilities from Virtual Reality Behavioral Data using Machine Learning	42
<i>Alexandru Robert Vlasiu, Marc Frincu, Daniel Chioibas, Darius Mocan and Marin Gabor</i>	
Application Development for Personalized Cancer Treatment	46
<i>Evelin-Henrietta Dulf, Gabriel Costenar, Alexandru-George Berciu and Levente Kovacs</i>	
Application of an Optimal Color Correction Method Adapted to Lighting Conditions in a Daily-Use Tongue Diagnosis System	50
<i>Keun Ho Kim</i>	

Development of an integrated system for remote monitoring of circuit integrity in biomedical devices	54
<i>Domenico De Carlo, Filippo Laganà, Danilo Praticò and Salvatore Andrea Pullano</i>	
Xenogeneic small intestine submucosa surface modification during processing for tissue engineering	60
<i>Olga Macagonova, Adrian Cociug, Tatiana Taralunga, Tudor Braniste, Liliana Verestiuc and Viorel Nacu</i>	
A Comprehensive Investigation of Volleyball Movements Using Electromyography and Visual Tracking Techniques	64
<i>Rodica Holonec, Laura Grindei and Laszlo Rapolti</i>	
Novel Activation Function Design for Multiple Sclerosis Detection in Medical Imaging	68
<i>Marina Adriana Mercioni, Stefan Holban and Raluca Dumache</i>	
Healing IoT Data for Indoor Air Quality Using Artificial Intelligence	72
<i>Radu-Nicolae Pietraru, Adriana Olteanu, Alexandru Stefan Velicu and Robert-Alexandru Craciun</i>	
Validation of Blaze-Pose as model in the analysis of lower extremities during Gait	76
<i>Shelsy Zambrano, Raul Donaire, Shiyang Li and Karla Reyes</i>	
Comparison between Novel Machine and Deep Learning-based Skin Tumor Recognition Techniques	80
<i>Tudor Barbu and Lucian Murgu</i>	
Epilepsy Detection Through EEG Sub-band Classification Using Empirical Wavelet Transform and Statistical Features	84
<i>Mădălina-Giorgiana Murariu, Mihaela Gavrilă, Ramona-Florica Dorobanțu and Daniela Tărniceriu</i>	
Monitoring Health Traffic Participants Using a IoT Smart Band Integrated with a Data Collection Platform secured with Blockchain	88
<i>Mihaela Gavrilă, Madalina-Giorgiana Murariu, Roxana-Emanuela Ambrozie and Daniela Tarniceriu</i>	
A Computer Vision-Based Solution for Assessing Prosthetic Leg Length Discrepancy	92
<i>Otilia Zvorișteanu, Dimitrie-Cristian Fodor, Vasile-Ion Manta, Neculai-Eugen Seghedin, Ștefan-Daniel Achirei and Dragoș-Florin Chitariu</i>	
Voice-Controlled Serious Game: Design Insights for a Speech Therapy Application.....	96
<i>René Baranyi, Lukas Weber, Christoph Aigner, Vanessa Hohenegger, Sylvia Winkler and Thomas Grechenig</i>	
Postural Sway Parameters are useful to discriminate biomechanical risk classes associated with load lifting	100
<i>Giuseppe Prisco, Maria Agnese Pirozzi, Francesco Mercaldo, Antonella Santone, Mario Cesarelli, Fabrizio Esposito, Paolo Gargiulo, Francesco Amato and Leandro Donisi</i>	
IDI to Enhance the Longevity of the Knowledge Bases Established on Scoring Systems ...	104
<i>Iulian Secrieru, Carolina Țâmbală, Elena Guțuleac, Olga Popcova and Alina Spătaru</i>	

Post-Traumatic Stress Disorder Detection Through Video Sequences: A Transformer-Based Approach for e-Health Application.....	108
<i>Yahaya Idris Abubakar, Mamadou Dia, Patrick Siarry and Alice Othmani</i>	
Non-Invasive Suicide Risk Prediction Through Speech Analysis	112
<i>Shahin Amiriparian, Maurice Gerczuk, Justina Lutz, Wolfgang Strube, Irina Papazova, Alkomiet Hasan, Alexander Kathan and Bjorn W. Schuller</i>	
Predicting Waitlist Mortality for Liver Transplant Candidates: A Comparative Analysis between Statistical scores and Machine Learning Models.....	116
<i>Abdelghani Halimi, Nesma Houmani, Sonia Garcia-Salicetti, Ilias Kounis and Audrey Coilly</i>	
Exploring The Impact of Soundscapes on Emotional States: A Data Driven Approach on Environmental Noise Recordings	120
<i>Michele Giuseppe Di Cesare, David Perpetuini, Daniela Cardone and Arcangelo Merla</i>	
Modeling phosphate anion biosorption by green marine algae biomass	124
<i>Loredana Munteanu, Gabriela Antoaneta Apostolescu and Laura Bulgariu</i>	
Head-Level Obstacle Detector for Visually Impaired	128
<i>Iva Klimešová, Ján Lešták, Karel Hána, Pavel Smrčka and Tomáš Veselý</i>	
Optimization of Parameters for Fluorescent Carbon Nanodots Preparation	132
<i>Leontýna Varvařovská, Andrei Bejan, Alexandru Anisie and Taťána Jarošíková</i>	
Real-time cognitive load measurement system of dual-tasking for first responders	136
<i>Blanca Larraga-García, Verónica Ruiz Bejerano, Federico Álvarez and Álvaro Gutiérrez</i>	
Sensory properties of CuO/Cu ₂ O nanostructures coated with Zeolitic Imidazolate Frameworks.....	140
<i>Rajat Nagpal, Maxim Chiriac, Masaya Sugihara, Dinu Litra, Nicolai Ababii, Nicolae Magariu, Cristian Lupan, Veaceslav Zinicovschi, Rob Ameloot and Oleg Lupan</i>	
EMC and EMI Issues of Mixed Sensor - Control Boards for Medical Devices.....	144
<i>Sergiu L. Tulbure</i>	
Finite Element Analysis on Solid Ankle-Foot Orthosis with Additive Manufacturing materials.....	149
<i>Katherine Dayana Alberto Serrano, José Daniel Martinez Silva and Karla Miriam Reyes Leiva</i>	
Wearable Devices and IoT: Advancing Continuous Health Monitoring and Management ..	153
<i>George Suci, Cosmina Stalidi, Carmen Mustata, Ecaterina Grecu, Eduard-Cristian Popovici, Ioana Suci and Ioan Cosma</i>	
Inhibitor-Driven Reaction-Diffusion Algorithm for Retinal Image Segmentation and Blood Flow Visualization.....	157
<i>Atsushi Nomura</i>	
Enhancing the Mapping of Irritative Network in Focal Cortical Dysplasia: Sorting Multifocal Interictal Epileptiform Discharges	161
<i>Jakub Vybulka, Petr Jezdik, Matias Ebel, Adam Kalina and Radek Janca</i>	

Machine Learning-Based Estimation of POMA Scores from EMG and Kinematic Data in Stroke Patients	165
<i>Francesco Romano, David Perpetuini, Daniela Cardone and Arcangelo Merla</i>	
Organoleptic and Physico-chemical Changes of Butter During Storage	169
<i>Ancuta Elena Prisacaru, Cristina Ghinea and Sergiu Paduret</i>	
Knowledge Fusion through Ambient Smart Living Technology and Telemonitoring in Emergency Response	173
<i>Mubaris Nadeem, Lisa Bender, Christian Weber and Kai Hahn</i>	
Case Studies on SMEs in E-Health	177
<i>Gabriela Ivanus and Angela Repanovici</i>	
Enhancing Antibiotic Stewardship with Power BI Visualization Dashboards: A User Experience Evaluation	182
<i>Ka Yee Hung, Mei Ju Su and Ya Chi Lee</i>	
Design and Development of Comprehensive Health Tracking Devices for Enhanced Health Monitoring	186
<i>Marilena Ianculescu, Victor Ștefan Constantin, Elena Anca Paraschiv and Adriana Alexandru</i>	
Scientometric Analysis of Research Trends in Nano Patches for Insulin Monitoring: Insights from Web of Science Using VOSviewer	190
<i>Leonard Gabriel Mitu, Angela Repanovici and Ileana Pantea</i>	
Deep Learning for Continuous Recognition of Activities of Daily Living	194
<i>Ainhoa Ruiz-Vitte, Alberto Comesaña, Blanca Larraga-García, Eduardo Rocón and Álvaro Gutiérrez</i>	
SURF and Texture Classification on Occluded Hand Images	198
<i>Anca Ignat, Ioan Păvăloi and Cristina Diana Nita</i>	
New Visible Quantitative Spectrophotometric Determination of Zolpidem from Tablets. Regression Statistics Analysis	202
<i>Cristian-Catalin Gavai and Afrodita Doina Marculescu</i>	
Emotion Detection from Face Images Using Deep Learning Techniques	206
<i>Corina Petean, Virginia Sandulescu and Ovidiu Bica</i>	
Emotional Health Monitoring as a Key Module within the NeuroPredict Platform	210
<i>Andreea-Maria Gușatu, Ana-Mihaela Vasilevschi, Marilena Ianculescu and Mihail-Cristian Petrache</i>	
Preliminary Results on Designing Mechatronic Devices for Pelvic Muscles Floor Assessment	214
<i>Alina Roxana Miron, Marian-Silviu Poboroniuc and Iulia-Adelina Bonceag</i>	
Enhancing Health Monitoring Security: A Robust Solution with Automated Periodic Re-Authentication	219
<i>Ovidiu Bica, Dragos Nicolau and Lidia Bajenaru</i>	

Evaluation of Liposomal Stability on Spontaneous Oxidation by Spectroscopic Methods . .	223
<i>Ioana A. Duceac, Roxana-Maria Amarandi, Gabriela Ailiesei, Fulga Tanasa, Sergiu Coseri, Rares Stiufiuc and Brandusa Dragoi</i>	
Robotic assisted immersive therapy system for stroke rehabilitation.....	227
<i>Robert Gabriel Lupu, Adrian Burlacu, Ovidiu Catarama and Ionut Sapon</i>	
Research on Advances in production of Human Dentition and Dental Bridges Using Additive Manufacturing (Metal 3D Printing)	231
<i>Florin Dimitriu</i>	
Life Cycle Assessment of Chicken Meat Production: a Romanian Case Study	235
<i>Cristina Ghinea, Ancuta Elena Prisacaru and Ana Leahu</i>	
Oxidative Stress Assesmennt In Preterm Premature Rupture Of Membranes (Pprom) - A New Challenge	239
<i>Maria Ursachi-Bolota, Mihaela Gavrilă, Roxana-Emanuela Ambrozie, Maria-Raluca Munteanu, Sorana-Caterina Anton and Emil Anton</i>	
Subclinical Gait Differences in Multiple Sclerosis with mild disability: Spatiotemporal Analysis During Single and Dual Task.....	244
<i>Michela Russo, Martina Mestizia, Marianna Amboni, Federico Di Filippo, Noemi Pisani, Umberto De Marca, Rocco Capuano, Maria Di Gregorio, Maria Romano, Francesco Amato and Carlo Ricciardi</i>	
Ophthalmic Lenses Assessment For Ultraviolet Radiation Protection.....	248
<i>Adrian Cătălin Lungu, Luciana Cristea, Mihaela Ioana Baritz, Barbu Cristian Braun, Anca Ioana Tataru and Alexandra Maria Lazar</i>	
Addressing Complex Data Integration and Harmonization Scenarios.....	253
<i>Marina Loulaki, Athanasios Kiourtis, Argyro Mavrogiorgou and Dimosthenis Kyriazis</i>	
A Vision-Based Approach for the Automated Evaluation of the MoCA Clock-Drawing Test Using a YOLO Neural Network	257
<i>Juan Carlos Sánchez-Pérez, Mauricio Mussi-Villareal, Victor Solís-García, Umberto León-Domínguez, Pablo Mir, Juan Francisco Martín-Rodríguez and Antonio Martínez-Torteya</i>	
Application and initial evaluation of an innovative technology for the creation of 3D anatomical objects	261
<i>Vencislav Nastev, Kristina Bliznakova, Nikolay Dukov and Zhivko Bliznakov</i>	
Simulation of Comfort Behavior During the Gait Cycle of People with Low Vision	265
<i>Mirela Gabriela Apostoaie, Mihaela Ioana Baritz, Barbu Braun, Angela Repanovici, Alexandra Lazăr and Gyory Bodi</i>	
Deep Learning-Based Retinal Blood Vessel Segmentation Using U-Net Architecture.....	269
<i>Ligia-Gabriela Boazu, Marian-Alexandru Petraru and Otilia Zvoristeanu</i>	
Integrated modules for monitoring walking cycle at different stages	273
<i>Anca-Ioana Tătaru, Mihaela-Ioana Baritz, Angela Repanovici, Luciana Cristea, Mirela Gabriela Apostoaie and Adrian Catalin Lungu</i>	

Deep Learning Networks Trained with Eccentric and Concentric Cylinders to Estimate the Electric Fields.....	277
<i>Giuseppe Carluccio, Eros Montin, Riccardo Lattanzi, Michalis Latoussakis and Christopher M. Collins</i>	
A Serverless Implementation of a Tool for Temperature and SAR Estimation (TESS 2.0) .	281
<i>Eros Montin, Giuseppe Carluccio, Christopher M. Collins and Riccardo Lattanzi</i>	
A novel breast phantom created using GPU-based voxelization for x-ray breast imaging research.....	285
<i>Ktistina Bliznakova and Zhivko Bliznakov</i>	
Skin Cancer Detection Using Constrained Neural Networks and the Development of an Optimized Technical Infrastructure for Resource-Efficient Diagnosis	289
<i>Daniel-Mihai Armanda, Alin-Gabriel Cococi, Ioana Dogaru and Radu Dogaru</i>	
Advancing Voice Authentication: Insights from Cepstral Coefficients and Recursive Feature Elimination in Speech Signal.....	293
<i>Michele Giuseppe Di Cesare, Daniela Cardone, Arcangelo Merla and David Perpetuini</i>	
Advanced Machine Learning Approaches for Classifying Parkinson’s Disease Using fNIRS Data from Gait Analysis	297
<i>Sara Quattrocelli, Arcangelo Merla, Daniela Cardone and David Perpetuini</i>	
Utilization of <i>Hermetia illucens</i> (Linnaeus,1758) as an Alternative Feed in Aquatic and Terrestrial Zootechny: Implications for Sustainable Food Production and Human Health Safety.....	301
<i>Isabelle Metaxa, Aurelia Nica, Ștefan-Mihai Petrea, Ira-Adeline Simionov and Alina Antache</i>	
Brain Computer Interface Controlled Humanoid Robot	307
<i>Alexandru Mitocaru, Alexandru Buzamat, Marian Silviu Poboroniuc, Danut Constantin Irimia and Alina Georgiana Baci</i>	
Evidence-Based Reasoning in Medical Assessment: Collaborating with Physicians in Practicing Argument Development and Evidence Marshalling.....	311
<i>Zhemín An, Juan Huang and Fredric Garner</i>	
Versatile, Low-Cost Interface Device for Keyboard and Mouse Emulation.....	315
<i>Rodrigo Garcia, Rocío Cabral, Leandro Díaz, Agustina Pérez, Francisco Veirano and Pablo Pérez-Nicoli</i>	
Implementation of a Smartwatch with Machine Learning for Ascertaining Efficacy of Deep Brain Stimulation for Parkinson’s Disease Treatment	319
<i>Robert LeMoyné and Timothy Mastroianni</i>	
nnU-Net: Investigation of Attention Mechanism for Prostate Zone Segmentation Task	323
<i>Aleksas Vaitulevičius, Jolita Bernatavičienė and Povilas Treigys</i>	
A review of advances in the dietary inclusion of <i>Hermetia illucens</i> in fish feeds.....	327
<i>Nica Aurelia, Metaxa Isabelle, Ira-Adeline Simionov, Alina Antache and Ștefan Mihai Petrea</i>	

The Role of Digitalization In The Development of Activities Oriented To Increase The Quality Of Life.....	331
<i>Corina Caușan and Mircea Petic</i>	
Contact-constrained Finite Element Analysis to Evaluate Obstetric Forceps Placement ...	335
<i>Omar Valladolid Garcia and Rudy Lapeer</i>	
Implications of Bioimpedance in Determining Body Composition Analysis	339
<i>Sabinne-Marie Albișteanu, Adina Carmen Ilie, Ramona Ștefaniu, Ana-Maria Turcu, Gabriela Grigoraș, Anca Iuliana Pislaru and Ioana Dana Alexa</i>	
Thermal Imaging for Real-Time Monitoring of Stress and Engagement in Autonomous and Manual Smart Wheelchair Navigation.....	343
<i>David Perpetuini, Sabrina Iarlori, Daniela Cardone, Manish Chinthakindi, Luca Cavanini, Alessandro Freddi, Francesco Ferracuti, Andrea Monteriù, Arcangelo Merla and Michele Tritto</i>	
Comparative Evaluation of Psychophysiological State in Psychologists vs. Tablet-Based Administration of the Mini-Mental Test Through Thermal Imaging	347
<i>David Perpetuini, Sabrina Iarlori, Daniela Cardone, Manish Chinthakindi, Giovanna Bubbico, Michele Giuseppe Di Cesare, Andrea Monteriù, Arcangelo Merla and Michele Tritto</i>	
Integration of Generative Artificial Intelligence in Medicine - first steps toward an ethical risk management methodology	351
<i>Miruna-Elena Iliuță, Damien Trentesaux, Eugen Pop and Mihnea-Alexandru Moisesescu</i>	
Calcium Hydroxide Liners Enhanced with Silver Nanoparticles Doped Hydroxyapatite-Initial Assesment	357
<i>Irina Gradinaru, Alexandra Bargan and Bianca-Iulia Ciubotaru</i>	
Creation of 3D Printed Anatomical Models for Teaching Purposes of Dentistry Students..	361
<i>Viktoria Petkova and Nikolay Dukov</i>	
Prototype of A Surgical Template Based On CBCT Scan and Produced With Additive Technology.....	365
<i>Viktoria Petkova, Desislava Konstantinova and Nikolay Dukov</i>	
Ultrasound Breast Phantom for Breast Biopsy Training	369
<i>Nataliia Grigorova, Daniela Kaloyanova, Nikolay Dukov and Kristina Bliznakova</i>	
SnakeMaker A Preview of A User-Friendly Tool For Biomedical Data Processing	373
<i>Tomáš Krajča, Stanislav Mareček, Iva Bublíková, Tereza Hubená and Radim Krupička</i>	
Development of an Orthopedic Insole with Pressure Sensors for Automated Assessment of Flat Foot in Children.....	377
<i>Armando Josué Piña Díaz, Mauricio Aarón Pérez Romero, Adrián Estéban Mejía García, Mario Cesar Maya-Rodriguez and Mario Antonio Lopez-Pacheco</i>	
Preliminary Analysis on the Usage of Hyperspectral Reconstruction for Imaging Photoplethysmography and Heart Rate Detection	381
<i>Tobias Vogelsang, Alexander Woyczyk, Filip Packań, Jonas Kolonko, Alwin Hoffmann, Björn Schuller, Shahin Amiriparian and Sebastian Zaunseder</i>	

EEG Denoising with Channel Ranking and Selection	387
<i>Alexe Ciurea, Cristina-Petruta Manoila and Bogdan Ionescu</i>	
Quantitative analysis of benefits of the tele-visit services in pain therapy	391
<i>Granata Rita, Michela D'Antò, Mimma Castaldo, Arturo Cuomo, Marco Cascella, Vittorio Santoriello, Alessandra Franco, Alfonso Maria Ponsiglione, Maria Romano and Francesco Amato</i>	
Automated Assessment of Medical Rehabilitation of Gait by Means of Video Processing in Cloud Environment.....	395
<i>Elena-Claudia Maftai, Otilia Zvoristeanu, Hariton-Nicolae Costin, Silviu-Ioan Bejinariu, Florin Rotaru, Vasile Manta and Ramona Luca</i>	
Revolutionizing Medical Data Management with Secure Self-Sovereign Applications for Patient Empowerment	399
<i>Ana Balan</i>	
Combining GANs and Federated Learning for Privacy Protection.....	403
<i>Andreea Cozuc, Andreea Oltean, Irina Mocanu and Oana Cramariuc</i>	
Monitoring Yeast Cells Behaviors by Electrical Impedance Spectroscopy	407
<i>Madalina Petronela Simion, Ina Turcan, Tudor Alexandru Filip and Marius Andrei Olariu</i>	
Multidimensional Assessment of Advanced Systems for Managing Difficult Intubation.....	411
<i>Vittorio Santoriello, Arturo Cuomo, Michela D'Antò, Giuseppe D'Agostino, Rita Granata, Fabrizio Clemente, Francesco Amato, Maria Romano and Alfonso Maria Ponsiglione</i>	
New Paradigm in Postural Control Response: A Dual Approach using Center of Pressure and Electroencephalography	415
<i>Vittorio Santoriello, Lorena Guerrini, Federica Pescaglia, Marco Recenti, Ida Maruotto, Carmine Gelormini, Carlo Ricciardi, Alfonso Maria Ponsiglione, Maria Romano, Francesco Amato and Paolo Gargiulo</i>	
AI Algorithm for Assessing Levels of Dissimulation through EEG and Physiological Data Analysis.....	421
<i>Oana-Isabela Stirbu, Serban Teodor Nicolescu, Ioana-Raluca Adochiei, Cosmin Karl Bănică, Daniela Anamaria Dolhascu and Felix-Constantin Adochiei</i>	
Intraocular Pressure Determining System Based on Rebound Tonometry	425
<i>Ioana-Raluca Adochiei, Matei Popescu, Florin Ciprian Argatu, Gladiola Petroiu and Felix Constantin Adochiei</i>	
IoT-Based Real-Time Electrocardiogram Monitoring and Recording System	430
<i>Felix-Constantin Adochiei, David-Andrei Dumitrescu, George Calin Seritan, Florin Ciprian Argatu, Bogdan-Adrian Enache and Ioana-Raluca Adochiei</i>	
Advanced Differential Rendering-Based Auto-Calibration Framework for 3D Colonoscopy: Integrating Single and Multi-Frame Methodologies for Enhanced Intrinsic-Extrinsic Parameter Optimization.....	435
<i>R. Banu Prakash, V. Dhilip Kumar, Oana Geman and Roxana Todorean</i>	

Innovative approaches to EEG in the ear. Review	441
<i>Alexandra Ștefania Mihai, Oana Geman and Roxana Todorean</i>	
Leveraging ResNet-50 for Precision Toxicity Classification in Plants: A Vision-Based Approach to Safeguard Public Health	447
<i>Aria Makhija</i>	
Rotator Cuff Suture Repair: Insights into Cost-Effectiveness and Patient Clinical Outcomes	453
<i>Aneta Benešová, Martina Homolková, Ondřej Gajdoš, Tereza Boudová and Vojtěch Kamenský</i>	
Intelligent system for detecting medical instruments used in surgery	457
<i>Mirabela-Roxana Daicu, Elise Margot Jaegle, Simona Palumbo, Oana Geman and Dragoș Ionuț Vicoveanu</i>	
Exploring Dunbar's Number through COVID-19: Analyzing Daily Testing and Case Dynamics in Dunbar-sized Groups and Their Impact on Twitter Sentiment via Granger Causality	461
<i>Lubomír Štěpánek</i>	
SpO2 histograms - valuable tools for assessing oxygen saturation stability of newborns	465
<i>Petr Kudrna</i>	
From Electromyography to Brain-Computer Interface Controlled Prosthetic Hand in Rehabilitation Therapy	469
<i>Constantin-Daniel Ailenei, Oana Geman, Dragoș-Ionuț Vicoveanu and Roxana Todorean</i>	
Speech Perception and Speech Attention: A Case Study Based on Event-Related Potential Using the OpenBCI System	474
<i>Sara Sharghilavan, Oana Geman and Roxana Todorean</i>	