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ICBME 2026

POSTER PRESENTATION SCHEDULE

33rd National & 11th International Iranian Conference on Biomedical Engineering

Date 18 November | **Time** 15:30-16:10

Poster No.	Presenter(s)	Title
POSTER SESSION: Neural Engineering and Rehabilitation Technologies		
1034	Ali Nayerifar	Effect of Dopamine in Enhancement of SNR of Cortico-Striatal-Thalamo-Cortical Loop Spiking
1053	Ali Abedi	Escalation the Role of rTMS Effect on Autism Spectrum Disorder by Designing New Treatment Protocol and Using Machine Learning
1084	Setayesh Mohseni	Simulation and Numerical Evaluation of the Performance of Circular and Figure-of-Eight Coils in Transcranial Magnetic Stimulation (TMS) Using MATLAB
1089	Ali Koohian Mohamm adabadi	Do the cross frequency coupling-related features change due to upper extremity rehabilitation in hemiparetic CP childeren: A pilot study
1094	Shahed Salehzehi	Effects of Mechanical Vibrotactile Stimulation on Rest Tremor and Alpha-Gamma Coupling Metrics in Parkinson's Disease: A Pilot Study
1095	Ali Abedi	Prediction of Multiple Sclerosis by Using repetitive Transcranial Magnetic Stimulation based on Neural Decoding of EEG Signals via Machine Learning
1223	Mahdi Amini kheljan	Neural Manifolds for Conjunctive Working Memory Representations in Prefrontal Cortex
1227	Seyedeh Zahra Hezaveh	Kinetic Fingerprinting of History-Dependent Voltage-Gated Sodium Dynamics for Electrical Stimulation Waveform Selection
1320	Amirali Rezaei	Intrinsic Contributions Dominate the Position-Dependent Ankle Mechanical Response in Individuals With Hemiparetic Cerebral Palsy: A Parameter-Varying System Identification Approach
1407	Seyed Hossein Hosseini Dolat Abadi	Modeling and Prediction of Hand Grasp Kinematic Synergies Using EMG Signals and NARX Network
1465	Setareh Shirani Bidabadi	Tract-Level White Matter Changes Following rTMS in Hemiplegic Cerebral Palsy
1549	Setare Shirani Bidabadi	Identifying Young Adults at Risk for Substance Abuse and High-Risk Intimacy: A Deep Learning Approach Using Psychological Questionnaires
1548	Nahid Hadian	Parieto-Occipital EEG Asymmetry as a Candidate Predictive Biomarker of Postural Balance in Hemiparetic Cerebral Palsy: A Machine Learning Approach
1558	Melika Ghazi	Dual Machine-Learning Surrogates for Threshold and Stimulation-Margin Prediction in Demyelinated Axons
1608	Najme Dehghani	Cognitive Workload Evaluation Using EEG Signalsand Machine Learning Approch
1639	Hanie Bayat	Antigravity Treadmill Training in Multiple Sclerosis: Effects on Ankle Biomechanics and Walking
POSTER SESSION: Bioinformatics, Computational Biology and Personalized Medicine		
1005	Nima Mahmoudi	FastFusion-IF: Partner-Blind Protein-Protein Interface Prediction from Molecular Surface and Atomic Geometry
1007	Kiarash Ghaderi Ghahfarokhi	A Hybrid Lexical-Semantic Retrieval Framework for Medical Question Answering Using TF-IDF and MiniLM
1051	Mohammad Amin Boojari	Metabolic Modeling Uncovers the Acetate-Driven Advantages of Galacto-oligosaccharides Fermentation by Lactobacillus plantarum

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1057	Amirreza Fallahnejad	A 3D Hybrid Multiscale Model to Investigate the Impact of Intra-Tumoral Antigenic Heterogeneity on CD8+ T-Cell Immune Response
1064	Avishan Hamidian	Mapping Effective Connectivity and Phase-Amplitude Coupling to Classify Parkinson's Disease
1109	Nima Falaki	Machine Learning-Based Sequential Information Acquisition for Resource-Constrained Emergency Department Triage
1136	Mahmoud Mirsalehian	Using A Novel Adaptive Fractional Operator for Modelling Neural Dynamics in Cognitive Systems
1168	Niloufar Karami	Integrated Molecular Docking, ADMET Profiling, and TOPSIS-Based Prioritization of Candidate Antibacterial Thymoquinone Analogues Against Staphylococcus aureus
1182	AmirMasoud Rismanchian	A Molecular Digital Twin Prototype for Predicting Treatment Response in Recessive Dystrophic Epidermolysis Bullosa Using Hierarchical Shrinkage
1228	Setareh Anvari Nejad	Predicting the Solubility of Drug Molecules in Solvent Systems
1243	Parisa Shahmoradipour	Computational Identification of Selective Octapeptides Targeting the Asymmetric Dimer Interface of the MMP9 Hemopexin Domain as Potential Leads for Metastasis-Related Studies in TNBC
1274	Narges Ghahremani	ML-Based Gastric Cancer Discrimination Using Upregulated Allergen-Like Microbial Proteins
1298	Shirin Jafari	Identification of EGFR as a Hub Gene and the Potential lncRNA-miRNA-EGFR Regulatory Axis in Preeclampsia: A Bioinformatics Study
1321	Dorna Dehghani	Transcriptomic Dissection of a Coordinated HIF1A/SP1/FOS-MALAT1-SERPINE1 Regulatory Axis in Fibrovascular Membranes of Proliferative Diabetic Retinopathy
1406	Mahtab Asadi Zadeh	An Interpretable Weighted and Priority-Oriented Fuzzy Framework for Cancer Diagnosis Based on miRNA Expression Patterns
1478	Arezoo Haratian	Improving Multi-Step Reasoning in Large Language Models Using Bayesian Networks
1499	Mahsa Bahrami	An Ensemble of Tabular Transformers and XGBoost for EGFR Mutation Status Prediction in Non-Small Cell Lung Cancer
1528	Fahimeh Mollamohammadi	In Silico Investigation of Mutation Effects on MMP-9 Hemopexin Domain Dimer Interface Organization: Implications for Cancer Biology
1554	Maryam Bidram	Molecular dynamics study of human glucose-6-phosphate dehydrogenase (G6PD) as a target for cancer treatment
1601	Narges Zakian	Leakage-Controlled Identification of Stable Autism-Associated Blood Transcriptomic Features through Repeated Nested Validation and Model Benchmarking
1620	Laya Khosravi	Repeated-Split Evaluation of a Staged Feature-Selection Pipeline for Autism Spectrum Disorder Transcriptomics in Peripheral Blood
POSTER SESSION: Biomedical Signal, Medical Image Processing, Medical Imaging and Molecular Imaging		
1010	Hadi Barati	Blind Source Separation Processing of Blood FTIR Data for Blood Glucose Concentration Analysis
1012	Elaheh Elahiparast	A Custom Vision Mamba-Based Approach for Brain Tumor Classification
1021	Maedeh Rahmanpour	Dual-Sensor Fusion for Cuffless Blood Pressure Estimation: Integrating PPG and Force Signals

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1023	Fatemeh Farsijani	Functional Connectivity Analysis and Deep Learning-Based Classification of Electroencephalography Signals for Brain-Computer Interface-Based Computer Cursor Control
1043	Mehrdad Ghazli	Noban: An Edge-Triggered Private Voice Assistant for Elderly Emergency Response
1044	Soroush Salari	Utilizing VGG16 U-Net Architecture for Lesion Detection in FLAIR Images of Multiple Sclerosis Patients
1085	Mohammad Malekzadeh	Analysis and Processing of Respiratory Sound Signals for Medical Applications Toward the Diagnosis and Prediction of Pulmonary Diseases
1108	Tehereh Nezam	Learning Subject-Specific ROI--Demographic Interactions for Interpretable Brain Age Prediction with Hypergraph Transformers
1119	Mahsa Khodabakhsh	Inner Speech Classification from EEG Using an Ensemble of Complementary Features
1122	Fatemeh Hadipour	Frequency-Resolved HbO-HbR Coupling in Wavelet Packets for Functional-Systemic Separation in fNIRS
1131	Fatemeh Yaghoobi	Investigating the Relationship Between EEG Band Power and Cognitive Functions in Athletes and Non-Athletes
1137	Fatemeh Shahbodaghy	Classification of Olfactory Stimulus Type Using Brain Effective Connectivity Patterns
1147	Zahra Mansourjozan	Investigating the effect of hippotherapy on Iranian monozygotic and dizygotic multiples with autism using EEG and HRV signal processing
1164	Monireh Sheikh Hosseini	A Learning-Based Non-Rigid Image Registration Approach for 3D Cardiac Motion Estimation Based on Echocardiography
1174	Yalda Khodarahmi	HOA-Optimized Multi-Layer Perceptron for EEG-based Emotion Recognition
1177	Amirhossein Bagheri Baboukani	StrongEEGNet: Compact Temporal-Spatial Convolutional Decoding for Subject-Independent Motor-Imagery EEG
1180	Sana Reyhanezadeh	ECG-Based Atrial Fibrillation Detection Using Heart Rate Variability Features and Machine Learning
1194	Ali Ghafourzadeh	Structural and geometric features of reduced EEG phase space for sleep apnea subtypes classification
1217	Soroush Salari	Perturbation-Calibrated, Physics-Regularized Latent Representation Learning for Explainable Analysis of Aortic 4D Flow MRI
1233	Amirhosein Hajizadeh	A-Matrix: Adaptive Fusion of Doctor Gaze and Machine-Generated Attention for Chest X-Ray Classification
1234	Ali Babaei	Lightweight Spatio-Temporal-Spectral Feature Learning for Automated Sleep Staging
1244	Fatemeh Azami	End-to-End Digitization and Interpretable Multilabel Classification of Paper-Based 12-Lead ECG Signals for Heart Disease Detection Using Conformer Networks via XAI
1247	Sahar Semsarha	Frequency-Specific Network Reorganization Under Mental Workload Revealed by a Hierarchical STFT Transformer

1267	Mina Amiri	Hyperspectral Histopathology Segmentation with Transformer-Enhanced nnU-Net

Continued		
1278	Nazanin Samadi	A Preprocessing and Synchronization Framework for ECG and ICG Signals to Improve Cardiac Signal Analysis
1299	Fatemeh Mahdavi	RGB-Based Digital Image Analysis for Quantitative Evaluation of Gold Nanorod-Etching Plasmonic ELISA for $A\beta_{1-42}$ Detection
1300	Alireza Habibi	Single-System Stress Recognition Using Prefrontal fNIRS and Optically Derived Heart Rate Variability
1306	Mohadese Karimi	Preliminary Determination of Prostate-Specific Antigen Concentration by Image-Based Analysis of Colorimetric Signals in a Plasmonic Enzyme-Linked Immunosorbent Assay
1311	Kiana Heydari	Multimodal Physiological Dataset for Consumer Purchase Decision Analysis
1346	Shabnam Shojaardalan	Transformer-Based Classification of Severe Obstructive Sleep Apnea Using Wakefulness HRV Dynamics
1347	Ehsan Abbasi	Cross-Frequency EEG Connectivity Maps and Deep Representation Learning for Subject-Independent Alzheimer's Disease Detection
1361	Vala Saleh	VAE-Based Reduced Sampling and ECG Signal Reconstruction for IoMT Edge Nodes
1387	Erfan Ebrahimi	Hemispheric Differential EEG for Estimating Berg Balance Scale Score in Childeren with Hemiplegic CP: a Region-specific CNN-GRU Approach
1388	Seyed Ehsan Zolfaghari	A Scale-Invariant Deep Learning Framework for Generalizable Subject-Wise Sleep Apnea Detection Using Single-Lead ECG
1394	Mohaddese Qaremohammadlou	Investigating Multimodal EEG-fNIRS Functional and Directed Connectivity During Mental Workload Tasks
1404	Fatemeh Shalchizadeh	Peripheral Physiology and Two-Channel Frontal EEG for Four-Quadrant Emotion Recognition: A Comparative Evaluation on PEEFS and DEAP
1408	Pardis Moradi	Segmentation of Melanoma Tissues in Histopathology Images Using a Mixture-of-Experts Model and Prior Knowledge
1429	Milad Yaghoubi	Representation-Aware Visibility Graph and Spectral Fusion for Hybrid Motor-Speech Imagery EEG Decoding
1430	Fatemeh Abharinejhad	A Cost-Sensitive EEG Feature-Selection Algorithm for Major Depressive Disorder Detection Based on Asymmetric Brain Activity
1437	Mohammad Javad Heidari	DynaGAT: Causal Dual-View Graph Attention for Patient-Independent Online Seizure Detection from Scalp EEG
1438	Mohammad Javad Heidari	Matched Ablation of Reliability and Edge-Stability Priors in Frozen Graph Attention for Patient-Independent Seizure Window Detection
1442	Reyhane Fadaei Eslam	Automated Multi-Structure Thalamic Segmentation in MRI Benchmarking Deep Learning Methods
1450	Mohammad Amin Naghiyan	Scalable Multi-Target Knee MRI Analysis under Multi-Institutional Heterogeneity via Report-Derived Supervision

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1452	Mustafa Ebadinezhad	Presenting a Hybrid Model for Alzheimer's Disease Diagnosis Using Artificial Intelligence and Fuzzy Logic
1462	Zeinab Yazdani	Segmentation of MS Lesions from MRI and Identification of Lesion Changes Over Time
1473	Amirali Rezaei	Progression-Aware Multi-Task Learning with Train-Only Liver Guidance for Three-Stage Cirrhosis Staging in T2-Weighted MRI
1474	Forouzan Khalouei	Age Estimation from Pediatric Wrist Radiographs
1475	Parsa Bahramsari	SynConE2K: A Synergy-Conditioned Convolutional-Attention Network for Continuous Finger Kinematics Estimation
1495	Arian Mesforoosh	Cross-Wavelength Relational Morphology for Multi-Wavelength PPG-Based Glucose Estimation
1497	Milad Rezaei Arjmand	CS-MRI-CORE: Parameter-Efficient Cross-Slice Adaptation of an MRI Foundation Model for Extreme Few-Shot Meningioma Segmentation
1505	Maryam Saidi	Amplitude and Energy Features of Speech as Potential Acoustic Markers of Mizaj: A Preliminary Study
1523	Parisa Ghorbani	EEGNet-Based Transfer Learning for Cross-Dataset Motor Imagery Classification of EEG Signals
1534	Ayda Afshari	Mapping Scalp-EEG Information Dynamics During Repeated Stress and Recovery Using Integrated Information Decomposition
1543	Amirsadra Khodadadi	Altered Stimulus-Locked ERP Dynamics in Parkinson's Disease During a Simon Task: A Spatiotemporal EEG Analysis
1544	Elias Ebrahimzadeh	Identifying Neural Substrates of Reward and Punishment in a Gambling Paradigm: An EEG-fMRI Investigation
1545	Mohammad Rezaei	Integrated Information Decomposition of EEG During Mental Arithmetic: Information Mode Persistence Tracks Time-Delayed Mutual Information
1563	Hossein Hassanpoor	Comparative Analysis of Seven Fractal Dimension Measures in EEG Signals of Patients With Schizophrenia
1580	Mahdi Jafari asl	Frequency-Aware Deep Learning Based on Empirical Fourier Decomposition for Alzheimer's Disease Detection
1584	Mahdi Jafari asl	Ultra-Low-Channel EEG Emotion Recognition Using Hybrid 1D-CNN Recurrent Networks
1587	Seyed Reza Mousavi	A Lightweight Log-Mel CNN Baseline on ICBHI 2017 and a Test-Time Protocol for Acquisition-Chain Sensitivity Analysis
1590	Taraneh Nikpour	Driver Mental Fatigue Detection Based on EEG Spectral Features and Convolutional Neural Networks
1596	Mohammad Javad Heidari	Redundant Spectral Coding of Maturation in Pediatric Resting-State EEG: Release-Blocked Panel Discovery and Explainability Analysis
1614	Mahdi Kafaee	A New Contextual Cue in Emotion Recognition using Physiological Signals: The Influence of Temperament on Electrodermal Activity
1618	Kimiya Rajabi Torbehbar	A Hierarchical Selective-Correction Beta-Edge Rescue Framework for EEG-Based Differentiation of Alzheimer's Disease, Frontotemporal Dementia, and Controls

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1622	Sayed Morteza Nourian Najafabadi	Neural-Adaptive Likelihood-Informed Sequential Particle Filtering for Multi-Source EEG Localization
1626	Danial Rahimi	Window-Level Data Leakage Inflates EEG Seizure Classification Performance: A Patient-Held-Out Study on CHB-MIT
1631	Arian Mesforoosh-M	Feature-Selected TSK Fuzzy Classification of Diabetes from Short PPG Recordings
1633	Hasti Ebrahimzadeh Navabi	An Explainable Leakage-Controlled Multimodal Framework for MCI-to-Alzheimer's Disease Conversion Prediction Using Classification and Survival Analysis
1644	Shiva Bousaidi Eshtorjani	Improving Skin Cancer Detection in Dermoscopic Images Using a Convolutional Neural Network
1645	Fatemeh Moradi	3D Attention-Guided U-Net for Multiple Sclerosis Lesion Segmentation: An External Validation Study on Clinical Brain FLAIR MRI Scans
1660	Elnaz AsghariMahforojaki	Brain Age Estimation from EEG Signals Using Fusion of Spectral and Riemannian Representations
POSTER SESSION: Biosensors and Wearable Devices		
1069	Zahra Navidsadr	A Multi-Parameter Wearable Device for Noninvasive Auricular Vagus Nerve Stimulation
1156	Shaghayegh Shahnazari	A Wearable Multi-Sensor Smart Glove for Real-Time Hand Gesture Recognition
1169	Farzin Shama	Planar bent microstrip antenna with high return loss for medical applications
1219	Akram Poursharif	Investigation of Polarization of the Reflected Light from the Surface of Ferromagnetic Nanoarrays Induced by Biological Environment Variations
1221	Mina Amiri	Fall Detection of Elderly People Using Lightweight Machine Learning for Wearable Devices
1251	Mobina Shirvani	Multiphysics Modeling and Noise Cancellation in a Microfluidic Capacitive Biosensor
1305	Fatemeh Zahra Nikyar	Simulated Falls, Real Protection: A Deep Learning Approach to Pre-Impact Fall Detection
1350	Saba Mostajabodavati	Machine learning-assisted liquid crystal-based aptasensor for the specific detection of whole-cell Escherichia coli in water and food
1369	Shohreh Shahabadi	Toward Dopamine Sensing with Oxygen-Deficient Plasmonic MoO3-x NSs: A Concentration-Regime-Dependent Fluorescence Response
1370	Maryem Amoo	Development of an Electrochemical Biosensor for Sensitive Detection of the CD4 Biomarker
1398	Amin Forouzan Najafabadi	Self-Powered Triboelectric Pulse Sensor for Wearable Health Monitoring
1405	Amin Aref	Simultaneous Optimization of Geometry and Materials of Impedimetric Biosensors Using Bayesian Optimization

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1524	Mohammad Mehdi Soleimani TaghiAbadi	Design and Simulation of a Microfluidic Chip Based on Dielectrophoresis (DEP) for the Separation of Colorectal Cancer Cells from Blood Cells
1527	Mohammad Mehdi Soleimani TaghiAbadi	Design and Simulation of a Microfluidic Disc for Separating PC3 Prostate Cancer Cells from Blood Cells
1540	Ramez Pourahmad	Membrane-Free Drift Compensation in Amperometric Nanozyme Biosensors Using a Lightweight 1D-CNN Framework
1575	MohammadMehdi Sadeghian Khorasgani	Surrogate-Assisted Optimization of an Inertial Microfluidic Device for High-Efficiency and Low-Stress Circulating Tumor Cell Separation
1606	Soheil Moradi	Design and Comparative Analysis of DSRR-Based Microwave Sensors with Different Geometries
1627	Omid Raeisi Filabadi	Simulation-Trained 1D-CNN for Gradient-Encoded NV-Diamond ODMR: An In-Silico Proof-of-Concept for Interference-Aware Biomarker Quantification
1630	Parisa Gheisari	Biosensor based on electroactive molecularly imprinted nanopolymers for monitoring the infertility hormone estradiol in saliva
1632	Pegah Mamasani	Disposable Biosensor Based on Electroactive Molecularly Imprinted Polymer/Graphene Nanoribbon for Oriented Immobilization and On-Site Detection of D-Dimer
1635	Furuzan Nourani	Reaction-Diffusion Kinetic Modeling and In Silico Evaluation of Single-Atom Nanozymes and Conductive Nanofiber Bio-Interfaces for Comorbid Biomarker Detection