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ICBME 2026

POSTER PRESENTATION SCHEDULE

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

Date 19 November | Time 15:20-16:30

Poster No.	Presenter(s)	Title
POSTER SESSION: AI & Digital Health in Biomedical Engineering		
1024	Aida Abdi	Non-Invasive Detection of Neonatal Jaundice Using Deep Learning and Image Processing: A Comparative Evaluation of ResNet50, MobileNetV2, and Decision Tree
1026	Mohammad Mahdi Eftekhari	Lightweight Contextual-Temporal Feature Engineering for Accurate EEG-Based Eye-State Classification Using Extra Trees
1036	Mahsa Monajemi	Performance Evaluation of V-Net and U-Net for Breast Thermogram Segmentation
1039	Sarvin Chitsaz	Biologically Grounded Cancer Drug Response Prediction with Cross-Tissue Generalization and Graph Attention Networks
1042	Maryam Ostadsharif Memar	A Dual-Branch Graph and Convolutional Network for Interpretable Movement EEG Classification
1054	Mohammad Sadeghi	Breast Cancer Recurrence Prediction: A Deep Learning Approach Using Clinical Data
1071	Nadieh Khalilijafarabad	Design and Development of Metridium: An AI-Based Integrated mHealth Platform for Medical Error Prevention
1073	Solale Hatami	The Integration of Computer Vision and Responsive Architecture in the Design of an Intelligent Home-Based Rehabilitation Environment Using Patient Movement Monitoring
1080	Parsa Asadnezhad	A Comparative Study of Recurrent Neural Network Architectures for Multi Class Mental Health Detection from Social Media Text
1096	Arshia Abbaspour Mobarakeh	Patient-Wise Pancreatic Lesion Classification in Endoscopic Ultrasound Using Swin Transformer V2-Tiny and Temporal Median Filtering
1105	Elnaz Abedini	Machine Learning-Assisted Prediction of Mechanical Performance in Biomaterial Scaffolds Based on Structural Parameters
1107	Maedeh Moradifar	Mitigating Labeling Noise in Medical Texts: Drug Relation Extraction Using Evidence Localization with Language Models
1120	Ali Shahbazi	SAGE-Nurse: Safety-Constrained Adaptive Microlearning for AI Competency in Critical-Care Nursing
1151	Alireza Zarei	A Robust Explainable Framework for Prostate Cancer Detection in Histopathological Images Using ESRGAN, Fuzzy C-Means, and EfficientNet
1176	Omid Shafiei	A Data-Free PINN Framework for Static Modeling of Magnetically Steered Catheters
1178	Omid Shafiei	Hybrid Deep Reinforcement Learning and PID Control for Robust Magnetic Catheter Tip Tracking
1183	Mina Amiri	Squat Posture Classification from Images and Video: A Comparative Evaluation of Learning Approaches
1188	Ali Echresh	Optimized Machine Learning Models for Breast Cancer Diagnosis: A Comparative Study with Recall-Centric Hyperparameter Tuning

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1206	Zahra Abbasaliniakeshteli	Patient-Independent Seizure Detection from Scalp EEG Using a 1D-CNN + CBAM Architecture with Cross-Fold SHAP Explainability
1208	Yasaman Motaharifar	Interpretable Multidomain Assessment of Post-Stroke Balance Using Plantar Pressure Dynamics
1209	Nasrin Alipoor	Enhancing Adversarial Robustness through Attractor Dynamics in Unified Classification and Out-of-Distribution Detection
1218	Mohammad Rahmanitalab	An Activity-Specific Machine Learning Framework for Classifying Simulated NSAA Performance Levels Using Wearable IMUs
1235	Haniyeh Narimani	A Multi-Task CBAM Encoder-Decoder Network for Joint Glaucoma Screening and Optic Disc/Cup Segmentation: An Exploratory Study
1249	Jafar Abdollahi	GWO-LeNet: Metaheuristic-Optimized Multi-Class Lung Nodule Classification
1254	Mahsa Yaghoobi	Lightweight Knowledge Distillation via Hybrid ViT-CNN for Coronary Artery Disease Detection on Resource-Constrained Cardiac MRI
1258	Mahsa Yaghoobi	Optimized Lightweight MobileNetV3 for Robust Multiple Sclerosis Detection from MRI
1263	Mahla Khodaverdi	Comparing Nonlinear Cardiovascular Dynamics During Psychological Stress and Physical Activation Using Smartwatch PPG
1291	Melisa Daryayi	Two-Level Multimodal Information Fusion for Metastatic Tumor-Burden Stratification in Gamma Knife Radiosurgery
1294	Nazanin Maheri	Detector-Guided Regional-Global Multitask Learning for Brain Tumor Segmentation and Classification
1303	Yaghoub Saberi	MedHEVC-SR: HEVC-Guided Super-Resolution for High-Fidelity Medical Image Compression
1315	Zahra Roohani Ghehsareh	Glaucoma Detection from Color Fundus Images Using a Hybrid Patch-Based CNN-LSTM Network
1332	Salman Khajeh	AVRSeek: Multimodal Evidence-Aware Extraction of Antiviral Synthesis Routes
1343	Arya Mollaaghaei	Driver Drowsiness Detection from Facial Images Using a Hybrid Geometric-CNN Approach
1356	Zahra Seraji	Multimodal MRI Classification of Pediatric White-Matter Disorders: A Comparative Study of Radiomic-based Machine Learning, Deep Transfer Learning, and Transformer Models
1375	Yas Tahmaseb Zadeh Ahrabi	Investigating Older Adults' Acceptance and Engagement with an AI-Enabled Socially Assistive Robotic Framework for Preventive Cognitive Care
1379	Elham Bagheri	Feature-Level Fusion of Handcrafted and Deep Representations for Pneumonia Classification from Chest X-Ray Imagese
1384	Zahra Khosravi	Beyond Cepstral Peak Prominence: Multiscale Wavelet Characterization of Cepstral Peak Regions for Automatic Dysphonia Detection
1392	Paniz Faraji	Cross-Subject Muscle Fatigue Classification During Dynamic Elbow Flexion Using Sensor Fusion
1416	Nastaran Khakestari	A Frequency-Guided Multi-Layer Framework for Robust Foveal Avascular Zone Segmentation in OCT Angiography

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1433	Mojtaba Babaei Khorzoughi	Validation of the MOJBA Intelligent Vision-Based System for Assessing Body Composition and Postural Abnormalities: An Examination of Criterion Validity and Diagnostic Agreement
1436	Pouyan Bahmani	Contactless Heart Rate Estimation from Facial Videos Using Adaptive Channel Selection and ICA-EMD
1441	Faezeh Jamshidi	Identifying Informative EEG Channels for Alzheimer's Disease and Frontotemporal Dementia Classification
1443	Amir Hossein Javanmardinia	Machine Learning for Predicting Treatment Outcomes in Epilepsy Using Clinical, Drug Sequence, and MRI-Derived Features
1457	Ali Jeldian Tehrani Fard	Shallow NetTraST : A Lightweight Transformer for Low-Density Inner-Speech EEG Decoding
1467	Behnam Zeinali	Physics-Informed Neural Network for Dose-Dependent Reconstruction of Transient Thermal Responses in Magnetic Hyperthermia
1471	Kasra Mehrafshan	Real-Time Embedded Driver Drowsiness Detection: A Comparative Evaluation of Haar Cascade and MediaPipe pipelines on Raspberry Pi 5
1477	Hadi Ahmadi	Smartphone-Based Skin Cancer Classification via Deep Learning with Clinical Metadata Fusion
1506	Mahboube Saeedi Landi	Automated Lumbar Vertebrae Segmentation in Ultrasound Images: Comparative Evaluation of U-Net-Based Architectures
1520	Masume Roshanak	Reproduction and performance evaluation of MedNet architecture in medical image classification
1532	Amirhossein Adami Esfahlan	An Artificial Intelligence -Assisted MCDM Approach (FAHP-TOPSIS) and Monte Carlo Simulation for Evaluating GelMA/Alginate (IPN) in Cartilage Tissue Engineering
1533	Alireza Shamsi Saeedabad	Auditing Audio-Language Models for Pediatric Respiratory Sound Classification
1535	Ilia Aghajanzadeh	Feature Selection Stability and Predictive Performance in Cancer Transcriptomic Classification
1549	Setare Shirani Bidabadi	Identifying Young Adults at Risk for Substance Abuse and High-Risk Intimacy: A Deep Learning Approach Using Psychological Questionnaires
1551	Elahe Daviran	How Much Reported Breast-Cancer AI Accuracy Survives Honest Validation? An Optimism-Ladder Audit of Metastasis Classifiers and an Audit-Ready Digital Twin
1560	Fatemeh Shirvani	Differentiating Dentigerous Cysts from Other Unerupted Tooth-Associated Lesions on Panoramic Radiographs Using Swin Transformer and ConvNeXt
1568	Azadeh Dolati Milkariz	Effects of Anti-Gravity Treadmill Training on Functional Clinical Balance and Static Control in Individuals With Multiple Sclerosis
1572	Maryam Sadat Mashkani	Performance Evaluation of Convolutional Neural Network and Transformer-Based Architectures in Automated White Blood Cell Detection: A Case Study of YOLO and DETR Models
1583	Kosar Mohammadi	Sleep Deprivation Alters EEG Functional Network Efficiency and Temporal Complexity
1602	Motahareh Matin	Pharma kinetic-dynamic Modelings of Tumor Growth Using Physics-Informed Neural Networks

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1610	Sajedeh Eghbali	Identification and Comprehensive Characterization of MAPK Pathway Hub Genes in Gastric Cancer: An Integrative Bioinformatics Analysis
1617	Sajad Mosali	DG-SSMNet: Dynamic Graph Selective State Space Network for EEG-Based Driver Drowsiness Detection
1619	Sophia Rostami	Branch-Aware Interventional Faithfulness of Attention versus Top-k Evidence in Weakly Supervised Head CT for Intracranial Hemorrhage Detection
1624	Shayan Farhang Pazhooh	Fitrax: A Context-Aware AI Fitness Application for Decision Support in Resistance Training
1641	Mohammad Reza Saqafi	Hierarchical Deep Learning for Clinical Pain Recognition on the PainMonit Clinical Dataset: A Raw-Signal, Feature-Engineering-Free Approach
POSTER SESSION: Physiological Modeling, Cardiopulmonary Systems and Biofluid Mechanics		
1006	Sepehr Parvin	Musculoskeletal Injury Risk Assessment and Intervention in a Cylinder Head Assembly Workstation Using Biomechanical and Ergonomic Tool
1115	Amirmohammad Shahin Shamsabadi	Physics-Informed Neural Networks for Hemodynamic Simulation of Aortic Valve Flow: A Two-Dimensional Comparative Study
1197	Alireza Afrouzan	Computational Analysis of the Effects of Scaffold Stiffness in the Presence of a Cell on Mechanical Stimuli Associated with Endothelial Differentiation of Mesenchymal Stem Cells in a Bioreactor
1262	Ali Nourbakhsh	Cross-Anatomy Transfer Versus Sparse Interpolation in Digital-Twin-Oriented Aortic Fluid-Structure Interaction Surrogates
1309	Javad Parandeh	Coordinated Modulation of Cardiac and Vascular Function by the Baroreflex: A 0D Modeling Study
1314	Mohammad Javad Rahmani	Numerical investigation of the interplay between confined spheroid growth and the poroelastic vascularized tumor microenvironment
1397	Mohsen Avesta	A Unified Adaptive State-Space Paradigm for Causal Identification of Hippocampal Sharp-Wave Ripple Replays
1401	Mohsen Avesta	Motivated Latent-State Inference of Placebo and Nocebo Effects: A Hierarchical Bayesian State-Space Framework with Asymmetric Learning and Dynamic Stickiness
1403	Mohsen Avesta	Latent-State Inference for Effective Brain Connectivity Estimation: An EM-Based Multivariate Autoregressive State-Space Framework
1418	Mohsen Estaji	Modeling breathing-Induced Wall Motion in a Space-Filling Three-Dimensional Mouse Deep-Lung Model
1521	Shamim Salemi	Computational Investigation of Porous Respiratory Membrane and Mucus Layer Effects on Oxygen Transport in a Lung-on-a-Chip

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POSTER SESSION: Smart Drug Delivery and Therapeutic Technologies

1048	Arman Mottaghi	Time-Dependent Poroelastic Modeling of Microbubble-Induced Blood-Brain Barrier Opening under Ultrasound Excitation
1067	Fatemeh Naserbafghi	Evaluation of the Antibacterial Activity and TGF-β1 Gene Expression of a Hydrogel Containing Chitosan-Coated Nanoliposomes Loaded with Chlorhexidine for Chronic Wound Healing
1155	Salar Mohammadi shabestari	Machine-Learning-Assisted Analysis of pH-Responsive Carboxymethyl Cellulose Hybrid Nanocarriers for Quercetin Delivery in Lung Cancer Cells
1161	Rozhan Khoz	Synthesis of pH-responsive magnetic core-shell nanocarriers for cancer therapy
1193	Faezeh Foroughi -	Gated Residual Patient Representation Refinement for Medication Combination Recommendation
1265	Hosein Samadieh	Computational Screening of Multi-Target Natural Products for Alzheimer's Disease: Docking, ADMET, and Blood-Brain Barrier Penetration
1287	Kimiya Aboutalebi	Numerical Evaluation of Particle Deposition in a Human Nasal Cavity for Nose-to-Brain Drug Delivery
1349	Mohammad Pashaei	RSP-ADMM-PID: Robust Safety-Projected Adaptive Glucose Control Across Heterogeneous Virtual Cohorts
1351	Abolfazl Adibi	Effect of Wall Slant Angle on Inertial Particle Migration in Straight Trapezoidal Microchannels: A Direct Numerical Simulation Study
1357	Mozhdeh Tataei	Quantitative Analysis of Magnetic Field-Induced Redistribution in Ag-Fe Nanocolloids
1414	Mojdeh Rahnama Ghahfaroghi	Synthesis and Characterization of Upconversion Nanoparticles for Photodynamic Therapy under Near-Infrared Irradiation
1432	Mohammadali Vosouli	A Fluid-Structure Interaction and Surrogate Modeling Framework for Predicting Ultrasound-Induced Sonoporation in Brain Microvessels
1445	Sina Alipour	Numerical Investigation of Drug Transport in Tumor Tissue Considering the Microvascular Network and Porous Environment
1466	Maedeh Bakhshipour	Xanthan Gum Modification for Targeted and Controlled Drug Delivery to Cancer Tissues
1468	Rasa Soltanbeygi	Engineering Alkali Lignin Nanoparticles with Controlled Size for Potential Oral Delivery
1486	Fatemeh Rokni	Preparation of Magnetic Nanocomposites Coated with Natural Mucilage for Targeted Drug Delivery

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1504	Niloofar Khorshidnia	Drug Release Kinetics from DMPC Nanoliposomes: Statistical Evaluation and Comparative Model Analysis
1507	Elham Bahmani	Process Simulation and Economic Evaluation of Alginate-Nanocellulose Probiotic Bead Production
1513	Shima Sanjari	Theoretical Analysis of Factors Affecting Controlled Drug Release from Smart Hydrogels with Emphasis on Their Applications in Modern Drug Delivery
1621	Minoo Alizade Pirposhte	Hollow Mesoporous Silica Nanoparticles as Doxycycline Carriers: Correlating Textural Properties with Loading, Release, and Biological Activity
1628	Mohammad Hadi Mazaheri Tehrani	Investigation of the Effect of Temperature on the Stability and Opening Behavior of a DNA Origami Nanocapsule Using Molecular Dynamics Simulation
1650	Fatemeh Rezaee	Enhanced Dissolution Behavior of Curcumin Nanoparticles: A Comparative Kinetic Analysis Using the Weibull Model, Dissolution Efficiency, and Mean Dissolution Time
POSTER SESSION: Medical Devices, Clinical Engineering and Regulatory Affairs		
1030	Narjes Ahmadnezhad	Designing and Validating a Prediction Model for Determining Required Physiotherapy Duration in Post-TAVI Patients
1326	Zeynab Alipour	Passive Motile-Sperm Selection in a Microfluidic Chip based on Rheotaxis and Thigmotaxis behaviour Using Wall-Engineered Recesses
1374	Marzieh Safaei	Real-Time Cascade Pressure Control of a Hysteroscopic Irrigation Pump with a Hybrid Angle-Time Filter
1389	Samin Rezayati	Investigation of the Effect of the Interlayer on the Microstructure, Biological Properties, and Adhesion Strength of Hydroxyapatite Coating Applied on a Ti6Al4V Substrate by Plasma Spraying
1393	Marzieh Safaei	Multivariable Modeling and Control of a Three-Channel LED Light Source for Intensity and Color Characteristic Stabilization in Medical Imaging
1529	Mohammadreza Maleki	Design of a Three-Stage Integrated Microfluidic System for Sperm Recovery from Heterogeneous Biopsy Samples
1547	Saeid Maktoubian	Compression Evaluation of a Porous Gyroid Lumbar Interbody Cage Additively Manufactured by Laser Powder Bed Fusion Process
1556	Shirin Alikhasi amnieh	Machine Learning enabled optimization of acoustic micromixer
1030	Narjes Ahmadnezhad	Designing and Validating a Prediction Model for Determining Required Physiotherapy Duration in Post-TAVI Patients
1207	Toktam Javan Jaafari Bojnoudi	Introducing a Device for Disinfecting Surfaces using DBD Plasma