23rd IEEE Conference on BIBE-2023

PROGRAM - SESSIONS

TRACK-1   TRACK-2

DAY-1:

SESSIONS: 9:30 – 11:30am

BIOINFORMATICS   **BIOMEDICAL ENGINEERING**

Bioinformatics-Cells (11-12-37-93-99)   **MRI – PET (28-44-58-59-97)**

11:30 – 1:00pm   BREAK

SESSIONS: 1:00 – 3:00pm

Bio-Cells-Neuros (6-31-63-80-85-89)   **Ultrasound Imaging (2-9-32-54-91)**

3:00 – 3:30pm   BREAK

SESSIONS: 3:30 – 5:30pm

Classification (40-67-74-75-94-103)   **Seizures – EEG (20-30-35-53-95)**

END DAY-1

DAY-2:

SESSIONS: 9:30 – 11:30am

BIOINFO-BIOMED   **BIOMEDICAL ENGINEERING**

Cancer -- Biomarkers-1 (22-33-39-52-55)   **ECG – 1 (23-26-46-51)**

11:30 – 1:00pm   BREAK

SESSIONS: 1:00 – 3:00pm

Cancer – Biomarkers -2 (1-24-77-76-90-92)   **ECG – 2 (84-88-106-107)**

3:00 – 3:30pm   BREAK

SESSIONS: 3:30 – 5:30pm

Miscellaneous - 1 (8-13-14-15-98)   **Dementia (43-48-83-87-100)**

END DAY-2

DAY-3:

SESSIONS: 9:30 – 11:30am

BIOINFO-BIOMED   **BIOMEDICAL ENGINEERING**

Miscellaneous -2 (10-18-19-36-61--108) **Miscellaneous – 3 (38-69-73-79-101-102)**

END and Closing Remarks

PROGRAM - SESSIONS

TRACK-1   TRACK-2

DAY-1:

SESSIONS: 9:30 – 11:30am

Bioinformatics-Cells (11-12-37-93-99)

11-Domain Adaptation applied to microRNA Target Prediction,   V. Ajila & J. Green

12-PaKman+: Fast Distributed Sequence Assembly with a Concurrent K-mer Counting Algorithm,   V.Kundeti

37-Prediction of Secondary Structure for LongNon-Coding RNAs using a Recursive Cutting Method based on Deep Learning, L. Omnes, E.Angel, P.Bartet, F. Radvanyi, F.Tahi

93-CNT: Semi-Automatic Translation from CWL to Nextflow for Genomic Workflows, M.L Putra, I.K Kim, H.S.Gunawi, **&** R.L.Grossman

99-Transformer-based de novo peptide sequencing for data-independent acquisition mass spectrometry, S.Ebrahimi & X.Guo

MRI – PET (28-44-58-59-97)

28-Manifold Learning for Brain Tumor MRI Image Retrieval and Classification, A.L.T.Antonio & D.C.G.Pedronette

44-3D Image Generation from X-ray Projections Using Generative Adversarial Networks, M. AlShurbaji &S.Dhou

58-Dense UNets for Enhancement of Undersampled MRI Using Cross-Contrast Feature Transfer, R.Griffin, R.Sharma, A.Webb & N.Tsekos

59-From Perception to Precision: Navigating Perceptual Loss in MRI Super-Resolution, M.Javadi, R.Sharma, P.Tsiamyrtzis, S.Shah, E.Leiss, N.Tsekos

97-Approximate Vertebral Body Instance Segmentation by PET-CT Fusion for Assessment After Hematopoietic Stem Cell Transplantation, B.Carson, F.Hurdato, J.P. Havlicek, L.J.Powers, L. Lindenberg, D.N.Avila, C.G. Kanakry, P.Choyke, K. Kurdziel, P. Eclarinal, K.M.Williams, & J.H.Chakrabarty

11:30 – 1:00pm   BREAK

SESSIONS: 1:00 – 3:00pm

Bio-Cells-Neuros (6-31-63-80-85-89)

6-Identifying Clock Gene Signatures for Improved Cancer Chronotherapy Through Gene Expression Analysis, E.Yee

31-Deep Learning for Cell Classification in Histopathology Images Using Large-Scale Manually Annotated Datasets, L.Lin, Z.Li & R.Li

63-Machine Learning Models for Phenotype Prediction from Genotype, R.Annan, L.Qingge, P.Yang

80-Acceleration of Convolutional Neural Networks, A. Chaddad

85. Integrated Analysis of Bulk and Single-Cell Transcriptomics in Cervical Cancer: Insights into BPGM, EGLN3, SUN1, A. Elsherif, M.Emam, A. Abushady, M. Gamaleldin, W. Al-Atabany, & ElhadidiM.

89-Neuro-Cognitive Health Degeneration in a Post-Covid World – A Linguistically Induced Sentiment Manipulating Web-App as a Preventative Tool, R. Chopra & Chakraborty

Ultrasound Imaging (2-9-32-54-91)

2-Zero-shot performance of the Segment Anything Model (SAM) in 2D medical imaging: A comprehensive evaluation and practical guidelines, C.Mattjie, L.V.Moura, R.Ravazio, L.K.Nu, L.Parraga, M.M.Delucis, R.C.Barros.

9-Target tracking in 4D US based on template matching and target forecasting using spatio-temporal autoencoders, D. Wulff, R.Sarau & F. Ernst

32-Robust Semi-Supervised Learning for Histopathology Images through Self-Supervision Guided Out-of-Distribution Scoring, N.C Kurian, Varsha S., A. Patil, S.Khade, A. Sethi

54-A Two-Stage Neural Network Model for Breast Ultrasound Image Classification, B.Long, Y. Guan & M. Holden

91-Optic Disc Localization from Retinal Fundus Image using Discrete Cosine and Hough Transforms, MA.P.Silva, S.M.Mafalda, A.B.Alvarez & R.F.L.Chavez

3:00 – 3:30pm   BREAK

Classification (40-67-74-75-94-103)

40-Data Augmentation and Deep Learning in Audio Classification Problems: Alignment between Training and Test Environments S.Huq, P.Xi, R.Goubran, F.Knoefel, J.Green

67-Boosting Classification Tasks with Federated Learning: Concepts, Experiments and Perspectives, Y.Hu & A.Chaddad

74-When the task of traditional medicinal herbs classification meets supervised prototype contrastive learning, K.Guo and B.Zhang

75-Various Multimodal Image Fusion Analyses using Discrete Wavelets Transform and Gray Wolf Optimization, Nenisi J & Rolant Gini J

94-Fast Flexible Neighbor-joining using Multicomputing, A.Lima, E.Araujo, MA.Stefanes, L.C.S.Rozante

103-Transfer Learning with Deep Convolutional Neural Networks for Respiratory Disease Classification in X-ray Images, L.Dasic, O.Pavic, T.Goreski, D.Milovanovic, M.Petrovic & N.Filipovic

Seizures – EEG (20-30-35-53-95)

20-Colour Prediction using Vision Transformer and Continous Wavelet Transform on EEG signals, P. Mishra, M. Antonakakis, K.K.Singh, & M. Zervakis

30-SEEG Analysis to Identify MIS Treatment For Patients with Focal Epileptic Seizures, G. Peng, M. Nourani & J.Harvey

35-Unsupervised Detection of Seizure-Related Dynamic alterations with Autoencoder-derived Deep Features, A-Karasmanoglou, M. Antonakakis, M. Zervakis

53-A Chaos-based Non-linear Analysis Method for Detecting Human Attention Levels in EEG Signals, M.Rabbani, S.M.Mamun, P.Sridevi, I.Iqbal,… ,S.I.Ahamed

95-An Exploration of Optimal Parameters for Efficient Blind Source Separation of EEG Recordings Using AMICA, G.Frank, S.Y.Shirazi, J.Palmer, G. Cauwenberghs, S. Makeig & A. Delorme

END DAY-1

DAY-2:

Cancer -- Biomarkers-1 (22-33-39-52-55)

22- A Graph-based approach to Mitigate Drug-Drug Interactions and Optimize Therapeutic Regimens, M. Spanakis, E.Tzamali, G.Tzedakis, E.Spanakis, A.Tsatsakis, V.Sakkalis

33-Attention-based Multimodal Bilinear Feature Fusion for Lung Cancer Survival Analysis, H. Na, L. Wang, X. Zhuang, J.He, Z.Liu, Z.Wang, H-S. Gan

39-The influence of image cropping sizes on mammographic breast cancer classification using CNN, G.M.Harshvardhan, K.Mori, S.Verma, L.Athanasiou

52-Precision Targeting of Non-Small Cell Lung Cancer: Identifying Optimal Drug Targets and FDA Approved Combinations for Enhanced Therapeutic Efficacy, P. Bhattacharjee, A. Lahiri, N.P. Reeves & A. Datta

55-Combination Supplements for Endometrial Cancer, M.Mondal, A.Lahiri, H.Vundavilli, G.Del Priore, ….P.Reeves A. Datta

ECG – 1 (23-26-46-51)

23-Machine Learning Assessment of Heart Rate Confidence from Video Magnification, D.Elhajjar, B. Wallace, A.Law, R.Goubran, & F.Knoefel

26-CNN based deep learning to detect low ejection fraction using single lead ECG, V.Vasudevan, J.Howard, S.Landman, S.Sarkar, D. Keene

46-An Explainable and Robust Deep Learning Approach for Automated Electroencephalography-based Schizophrenia Diagnosis, A. Sattiraju, C.A. Ellis, R.L. Miller & V.D. Calhoun

51-Image Registration for Multi-View 3D Echocardio-graphy Sequences, S. Shanmuganathan, M.Noga, B.Foster, H. Becher, K. Punithakumar

11:30 – 1:00pm   BREAK

SESSIONS: 1:00 – 3:00pm

Cancer – Biomarkers -2 (1-24-77-76-90-92)

1-ERP as biomarkers of early selective attentional bias, reward sensitivity, and vulnerability to excessive internet use, M. Balconi & L. Angioletti

24-Radiomics for predicting oxygen necessity in COVID-19 patients using longitudinal lung computed tomography, R.Ravazio, C.Mattjie, L.de Moura, L.Kupssinskü, R.C. Barros, DC. Machado, & A.M.M. da Silva

77-A Novel Deep Learning Approach for Breast Cancer Detection on Screening Mammography C.K. Leung & H.Nguyen

76-Evaluation of Surface Electromyography Parameters as Possible Biomarkers for the Assessment of Sarcopenia, I.Junquera-Godoy, J.Gomis-Tena, J. Saiz, J.L.Martinez-de-Juan, J.M.Carot-Sierra & G. Prats-Boluda

90-Lung-RADS + AI: a tool for quantifying the risk of lung cancer in computed tomography reports, T.L.Ferreira, M.C.Oliveira, and T.M.deAlmeida Vieira

*92-Personalized Clustering of Glucose Time Series in Patients with Type-1 Diabetes Mellitus Using Self Organized Maps During Nocturnal Sleep *,* F. Konstantakopoulos, Katsarou, E.Giorge, M.Christou, S.Tigas, D.Fotiadis

ECG – 2 (84-88-106-107)

84-DECODE: A New Cloud-Based Framework for Advanced Visualization, Simulation, and Optimization Treatment of Peripheral Artery Disease, MA.AboArab, V.T.Potsika, D.I.Fotiadis, G.Gkois

88-Convolutional Neural Networks for the segmentation of coronary arteries, M. Anic, D.I.Fotiadis V.Potsika

106-Finite Element Analysis of Patient-Specific Heart Model with Simulated Aortic Stenosis, S. Tomasevic, I.Saveljic, L.Velicki, T. Exarchos, & N. Filipovic

*107-Machine Learning Models Predict Fatal Myocardial Infarction Within 10-years Follow-up Utilizing Explainable AI *,* K.H.Tsarapatsani, A. Sakellarios, V.D.Tsakanikas, M.Kleber, W.Marz, & D.I.Fotiadis

3:00 – 3:30pm   BREAK

SESSIONS: 3:30 – 5:30pm

Miscellaneous - 1 (8-13-14-15-98)

8-Seam Removal for Patch-Based Ultra-High-Resolution Stain Normalization, C-C.Lee & CH Peng

13-How do norms and noise impact clustering results? A robustness analysis applied to digital pathology, G.Nikoletti, G.Balestra, S.Rosati, C.Marchiò, E.Berrino, D.Regge & V.Giannini

14-An empirical study concerning the impact of perceived usefulness and ease of use on the adoption of AI-empowered medical applications, P. Panagoulias, M.Virvou & G.Tsihrintzis

15-Unified Framework for Real-Time Fluid Simulation in Virtual Rotator Cuff Arthroscopic Skill Trainer (ViRCAST), A.Dendukuri, M.Tunc, D.Demirel, S.Kockara & T.Halic

98-Immersion into 3D Biomedical Data via Holographic AR Interfaces based on the Universal Scene Description (USD) Standard, K.Q.Tran, H.Neeli, N.Tsekos & J.Velazco-Garcia

Dementia (43-48-83-87-100)

43-A Transfer Learning-based Smart Homecare Assistive Technology to Support Activities of Daily Living for People with Mild Dementia,* X. Chen, G. Fan, E.Roberts & H. Jr Steven

48-Predicting the Onset of Dementia in Initially Healthy Individuals Using Demographic and Clinical Data, N.Ntampakis, K.Diamantaras, K.Goulianas, I. Chouvarda

83-Molecular Docking and ADMET of Levodopa against Leucine-rich Repeat Kinases, and In-vitro Mobility Analysis in C. elegans for Parkinson's Disease, T.Jatti, N.Maniyal, S.Mouli, R.Shenoy, & S.Bhat

87-Ensemble and Transformer Models for Infectious Disease Prediction, B.I.Adeika, J.Aina, T.Ibirinde, T.Adeyemi, M.Rahman & S.Pramanik

100-Anomaly detection in real scarce data : A case study on monitoring elderly's physical activity and sleep, S.Kebir &K.Tabia

END DAY-2

DAY-3:

SESSIONS: 9:30 – 11:30am

Miscellaneous -2 (10-18-19-36-61-108)

10-Comparison between different approaches for the creation of the training set: how clustering and dimensionality impact the performance of a Deep Learning model, J.Panic, A. Defeudis, D.Regge, G.Balestra, S.Rosati & V.Giannini

18-NLICE: Synthetic medical record generation for effective primary healthcare differential diagnosis, Zaid Al-Ars, O Agba, Z. Guo

19-Detection of Fluid Intake Swallowing Events Using Acoustic Signals and Template Matching, X.Chen & E.Kamavuako

36-Rapid Detection of Penetration-Aspiration from Fluoroscopic Videos in Dysphagia Patients, G.Sanjeevi,U. Gopalakrishnan, R.K. Pathinarupothi, Arya CJ & Subramania I.K.

61-Medical Metaverse: A New Virtual Health Experience, A.Chaddad, Y. Jiang

108-Transi-Net: An Explainable Deep Learning Model Ensemble For Prostate's Transition Zone Segmentation, D. Zaridis , E.Mylona, N.Tsachos, C.Kalantzopoulos, K.Marias, M.Tsiknakis, D.Koutsouris, G.Matsopoulos, & D.Fotiadis

Miscellaneous – 3 (38-69-73-79-101-102)

38-Assessment of Muscle Activity with Laparoscopic Tools through EMG. Novel Proposal for Bivariate Amplitude-Frequency Analysis. I. Alandí-Rocafull, JL. Martínez-de-Juan, A.Conejero Rodilla, H.M.Pace Bedetti & G.Prats-Boluda

69-Quantifying Exam Stress Progressions Using Electrodermal Activity and Machine Learning, A.Hsu

73-ChatGPT: An Artificial Intelligence-Based Approach to Enhance Medical Applications, A. Chaddad, C. He,Y. Jiang

79-Towards Real-time Polyp Segmentation during Colonoscopy using an Efficient Net-based UNet Architecture, V. Mehta

101-Application of neural network in prediction of frequency response of drivers during driving, I.Saveljic, S.Macuzic Saveljic, B. Arsic & N. Filipovic

102-Optimization of Physics-Informed Neural Networks for Efficient Surrogate Modeling of Huxley's Muscle Model in Multi-Scale Finite Element Simulations, B.Milicevic, M.Ivanovic, B.Stojanovic, M.Milosevic, V.Milovanovic, F.Kojic & N. Filipovic

END