

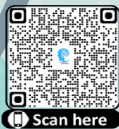


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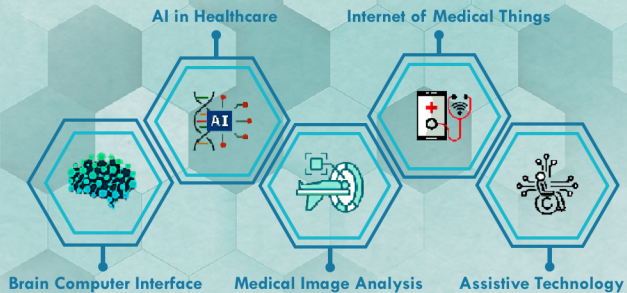
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iCon-BCIHT

2024 International Conference on BRAIN COMPUTER INTERFACE & HEALTHCARE TECHNOLOGIES



📅 19 & 20 December 2024

📍 Hotel Dimora
Thiruvananthapuram, Kerala, India

Speakers Spotlight

 Smt. Sunita Verma Scientist 'G' & Group Coordinator, MeitY	 Shri. Magesh Ethirajan Director General C-DAC	 Dr. Kalai Selvan A Director, C-DAC Thiruvananthapuram	 Dr. Vijayan K Asari Prof. University of Dayton, USA	 Dr. Erwin Fuhrer Visiting Faculty at IIT Guwahati
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iCon-BCIHT

The 2024 International Conference on Brain-Computer Interface & Healthcare technologies (iCon-BCIHT) is organized by C-DAC Thiruvananthapuram, GMC Thiruvananthapuram, SCTIMST Thiruvananthapuram, IIST Thiruvananthapuram, IEEE EMBS Kerala chapter and IEEE Kerala Section. This event will focus on the practical applications of cutting-edge theories and methodologies in Brain computer interface, Medical image Analysis, AI in Health Care, IoMT & assistive technologies. The conference aims to unite researchers from industry and academia to exchange ideas, present innovative techniques, and address current issues and future trends in BCI research and healthcare applications.

Schedule of Paper Presentations

DAY 1	TRACK 1 : BCI	GARNET	DAY 1	TRACK 1 : HEALTH	SAPPHIRE
➤ Brain Computer Interfaces for Enhancing Motor Imagery Classification Using EEG Signal (105)	➤ Analyzing P300 Signals to Assess Undergraduate Attention Span Using Impulse Neiry BCI (34)	➤ AI based Assistive Communication system for Multiple sclerosis and paralysed patient (18)	➤ Emotion Detection Mastery: EEG Signal Analysis with Balanced vs. Unbalanced Data (32)	➤ Image Restoration and Enhancement of Retinal Images using Multi-Resolution Dual CNN (37)	➤ Data-driven approach for medical competency assessment using VR patients (38)
➤ EEG-Based Eye Blink Detection and Interpretation for Human-Computer Interaction and Communication (117)	➤ SSVPE Speller Implementations Across Desktop Web and Mobile Platforms (101)	➤ Epilepsy detection: neural network with PSO-based feature selection (35)		➤ Enhanced U-Net with Transformer-Driven Encoder for Medical Image Segmentation (72)	➤ Substantia Nigra Segmentation in 7T MRI Using a 3D UNet Architecture for Enhanced Parkinson's Disease Diagnosis (78)
➤ Cognitive Ergonomic Evaluation of Mental Fatigue for Different Exam Patterns Using EEG (36)	➤ Analysis of Muscle Activation in Lower limb using markerless motion capture system (40)	➤ WEBCG: A Web based Application for EEG Seizure Detection (44)	➤ Tapping the differences between reward processes and executive control for efficient brain-machine interfacing (BMI) recovery in post-stroke patients with upper limb impairments (89)	➤ IoT-Based Fall Detection and Airbag Deployment System for Enhanced Elderly Care Using NodMECU ESP8266 and MPU6050 Sensor (81)	➤ Design and development of a Gait Analysis System using Force Sensitive Resistor (39)
➤ Decoding Suppressed Emotions: Micro-Expression Recognition via Facial Electromyography and Action Unit Coding (111)	➤ EEG Signal Analysis to Verify the Impact of Music on Human Emotions (86)	➤ Towards building cognitive brain computer interfaces for controlling neural variability during repetitive transcranial magnetic stimulation treatment in Depression (98)	➤ A study on the effectiveness of Concentration and Coordination Exercise Tool among normal population (120)	➤ Machine Learning-based Consciousness Assessment in Disorders of Consciousness Patients (25)	➤ Design of force plate for gait analysis (115)
➤ UNIFY-ESSL: UNIFIED Framework for Yielding EEG-based Emotion Recognition Model with Self-Supervised Learning (113)				➤ Recognition of lower limb movements from the time domain features of surface emg and catboost classifier (43)	➤ Vericose Vein Detection and Automated Treatment using Body Area Network (52)
DAY 2	TRACK 1 : BCI	SAPPHIRE	DAY 2	TRACK 1 : HEALTH	GARNET
➤ EEG Based Deep Learning Model for Automated Classification of Frequent and Infrequent Readers (76)	➤ One-class SVM using Domain-based sEMG Features for Detection of Neuromuscular Disorders (63)	➤ Simpler BCI by Neurological analysis of Eyeblink and Jaw Clench events (94)	➤ Dynamic Emotion Regulation through Reinforcement Learning: A Neurofeedback System with EEG Data and Custom Wearable Interventions (90)	➤ Revolutionizing Endoscopic Diagnostics: A Comparative Study of DC-UNet and MC-UNet (28)	➤ Machine Learning-Enhanced Solutions for Mitigating PCOS/PCOD-Related Women's Health Disparities in Rural Areas: A Holistic Telemedicine System Design and Implementation (83)
➤ Deciphering Braille: EEG based Deep learning for character recognition (48)	➤ MODWT Based Analysis of Facial EMG for Assessing Muscle Fatigue: Implications for Rehabilitation and HCI Systems (112)			➤ Classification of diabetic retinopathy disease using GNN (109)	➤ Detection of high prospective value in the diagnosis of doubtful melanocytic skin lesions (131)
				➤ Bacterial contamination monitoring and prevention in chambers using post processing techniques (56)	➤ Enhancing Autism Detection in MRI Images with Explainable AI: A Transfer Learning Approach using GradCAM (85)
				➤ Optimization of artificial neural network modelling for improving diabetic diagnosis: a promising approach for early detection (84)	➤ Identification of Affective States from Malayalam Audios based on Valence Arousal Prediction (61)
				➤ Association of neurological family health history in Parkinson's Diseases (100)	➤ Effectiveness of the Gross Motor Coordination Exercise Tool (GMCEIT) in Enhancing Cognitive and Motor Functions Among Children with ADHD (92)
				➤ Enhancement of Fetal Brain Ultrasound Image via Anatomical ROI Extraction (96)	➤ Adaptive Algorithm based Text to Braille Conversion for Visually Impaired People (55)