1st International Conference on Emerging Trends in Biomedical Engineering, Science and Technology (ICETBEST) 2024

Schedule for Technical Sessions

Organized by

Department of Biomedical Engineering

Salim Habib University

Karachi, Pakistan

Technical Session I (2:00 pm – 3:30 pm)			
Session Chairs: Dr. Hira Zahid & Dr. M. Farhan			
Venue: Seminar Room 1 (Ground Floor)			
Keynote Speaker Session (2:00 pm – 2:30 pm)	**Wearable sensors for improving health monitoring inside and outside the hospital** *by Dr. Ilkka Korhonen, Tampere University, Finland* **Microsoft Teams meeting: Click here to join the meeting** **Meeting ID: 498 683 883 416** **Passcode: iuMPs3**		
Time	**Paper ID**	**Paper Title**	**Authors**
2:30 pm - 2:45 pm	ICETBEST-OR-24021	Tracing Veins using Near Infra-red Imaging Techniques	Shanzae Zubair, Anoosh Fatima, Amna Wagley, Engr. Gul Munir Deedar, Engr. Muhammad Aamir
2:45 pm - 3:00 pm	ICETBEST-OR-24022	Automated Diagnosis of Alzheimer's Disease: A MobileNetV1-based Approach with MRI Data	Anoosh Fatima, Zuraiz Baig, Natasha, Shaheer Mirza
3:00 pm - 3:15 pm	ICETBEST-OR-24023	Artificial Intelligence based ECG for Early Detection of Dysrhythmia	Tariq Javid, Muhammad Faris, Hina Iftikhar, Tayyaba Khalid, Najam-ul-Saqib, Muhammad Bilal, Syeda Bazila
3:15 pm - 3:30 pm	ICETBEST-OR-24033	Optimizing Agricultural Predictions: A Comparative Evaluation of Regression Models and Ensemble Approaches	Priha Bhatti
Keynote Speaker Session (3:30 pm – 4:00 pm)	**Deep Learning Models for Severity Assessment of Social Anxiety Disorder Using Effective Connectivity in Default Mode Network** *by Dr. Nidal Kamel Vin University, Vietnam* **Microsoft Teams meeting: Click here to join the meeting** **Meeting ID: 412 420 504 760** **Passcode: rQG6kH**		

Technical Session II (2:00 pm – 3:30 pm)			
Session Chairs: Dr. Sidra Abid Syed & Dr. Eraj Humayun Mirza			
Venue: Seminar Room 2 (Ground Floor)			
Keynote Speaker Session (2:00 pm – 2:30 pm)	Robotics, AI and Healthcare *by Dr. Ali Raza Jafri, NED University of Engineering and Technology, Karachi*		
Time	Paper ID	Paper Title	Authors
2:30 pm - 2:45 pm	ICETBEST-OR-24003	Development of a Cost-Effective Plasma Thawer: A Potential Game-Changer in Blood Transfusion Technology	Shamrez Shahid, Danish Mujib
2:45 pm - 3:00 pm	ICETBEST-OR-24015	S.P.ENSER- A Symptom Based Smart Pill Dispenser	Muzammil Ahmed, Amna Jawed Shaikh, Sarah Tariq, Abdul Moiz
3:00 pm - 3:15 pm	ICETBEST-OR-24017	Design and Development of Cost-effective Arrhythmia Detector	Saba Fatima, M. Saad Imtiaz, Zuraiz Baig, Dr. M. Zeeshan Ul Haque, Engr. Gul Munir Deedar
3:15 pm - 3:30 pm	ICETBEST-OR-24040	Multi-Parametric Vital Sign Extraction for Search and Rescue Operations	Sarfaraz Khan, Saad Jawaid Khan, Muhammad Daniyal Maqsood Alvi

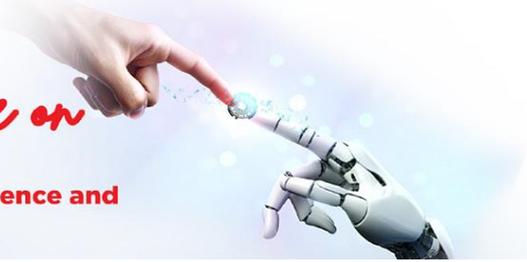| Technical Session III (2:00 pm – 3:30 pm)			
Session Chairs: Dr. Abul Hasan & Dr. Ubaida Fatima			
Venue: Classroom No C-22 (2nd Floor)			
Keynote Speaker Session (2:00 pm – 2:30 pm)	AI-Enabled Accessible and Affordable Diabetic Retinopathy Screening for Remote Underprivileged Areas *by Dr. Majida Kazmi, NED University of Engineering & Technology, Karachi*		
Time	Paper ID	Paper Title	Authors
2:30 pm - 2:45 pm	ICETBEST-OR-24031	Multifaceted Approach to Ventricular Tachycardia Ablation: Computational Modelling	Syeda Nabiha Rahman, Amna Ayaz, Maryiam Ashfaq, Hassan Ali, Gul Munir, Abdul Moiz
2:45 pm - 3:00 pm	ICETBEST-OR-24035	Optimization of Electrodes for Deep Brain Stimulation of Patients with Parkinson's Disease -A Simulation-based Study	Amna Jawed Shaikh, Syeda Fakhra Jalal, Saad Imtiaz, Zuraiz Baig, Engr. Abdul Moiz, Fahad Shamim, Engr. Hassan Ali
3:00 pm - 3:15 pm	ICETBEST-OR-24039	Comparative Analysis of Materials for Coronary Artery Stents: A COMSOL Multiphysics Study	Sarah Tariq, Muzammil Ahmed, Engr. Hassan Ali, Engr. Abdul Moiz
3:15 pm - 3:30 pm	ICETBEST-OR-24043	Telemedicine as a Means for Medical Treatment During Political Conflicts	Dur-e-Shahwar Tariq

Technical Session IV (2:00 pm – 3:30 pm)			
Session Chairs: Dr. Mariam Raziq & Dr. Affhan Shoaib			
Venue: Class Room No: C-23 (2ⁿᵈ Floor)			
Keynote Speaker Session (2:00 pm – 2:15 pm)	**Genetic Engineering for Effective Vaccines Against Viral Pathogens** *by Dr Shahana Urooj Kazmi, Center for Non-Communicable Diseases, Karachi*		
Keynote Speaker Session (2:15 pm – 2:30 pm)	**Immunodiagnostic Techniques** *by Dr Aqeel Ahmed, Salim Habib University, Karachi*		
Time	**Paper ID**	**Paper Title**	**Authors**
2:30 pm - 2:45 pm	ICETBEST-OR-24055	The Secrets of Timeless Minds: A Multifaceted Approach to transform Accelerated Brain Aging into Resilience	Sadaf Ahmed
2:45 pm - 3:00 pm	ICETBEST-OR-24056	Therapeutic validation of FATP5/SLC27A5 using loss-of-function variation in humans	Muhammad Jahanzaib
3:00 pm - 3:15 pm	ICETBEST-OR-24054	Neuroscience in Focus: A Paradigm Shift from Brain to Well-being	Shamoon Noushad
3:15 pm - 3:30 pm	ICETBEST-OR-24012	Invitro Antibacterial Activity of Cinnamon against Staphylococcus aureus in Minced Meat	Fariha Ibrahim, Sana Karim, Alyshba Abdul Rahim, Syeda Maryam Zehra Naqvi

Technical Session V (2:00 pm – 3:30 pm)			
Session Chairs: Dr. Amjad Ali Shah & Dr. M. Faris			
Venue: Classroom No B-04 (1ˢᵗ Floor)			
Time	**Paper ID**	**Paper Title**	**Authors**
2:30 pm - 2:45 pm	ICETBEST-OR-24014	Security and Privacy Algorithms in Internet of Vehicles – A Technical Analysis	Iqbal Uddin Khan, Dr. M. Aamer Saleem, Faizan Hussain, Jibran Rasheed Khan, Muhammad Adeel Mannan
2:45 pm - 3:00 pm	ICETBEST-OR-24046	Development of a Machine Learning-Based System That Assists Speech Therapy in the Urdu Language	Zainab Ali, Bareera Amjad, Hajra Waheed, Hina Shaheen, Hamza Toor, Muhammad Shafique
3:00 pm - 3:15 pm	ICETBEST-OR-24034	Modernising Logistics - Accessible Robotic Solutions for Autonomous Indoor Deliveries	Muhammad Ammar Khan, Muzammil Tariq, Syed Muhammed Abdullah Arif, Laraib Aftab Zedie

Technical Session VI (2:00 pm – 3:30 pm)			
Session Chairs: Dr. Ahmad Zahid Rao & Dr. Tariq Javid			
Venue: Classroom No B-19 (1st Floor)			
Keynote Speaker Session (2:00 pm – 2:30 pm)	**3D Virtual Biomedical Instrumentation of the Educational System of Pakistan** *by* **Dr. Zia Mohy Uddin, Air University, Islamabad** **Microsoft Teams meeting: Click here to join the meeting** **Meeting ID: 435 149 160 207** **Passcode: 8SQgMo**		
Time	**Paper ID**	**Paper Title**	**Authors**
2:30 pm - 2:45 pm	ICETBEST-OR-24048	Design & Development of Cost-Effective Patient Simulator	M. Ahsan Mirza, Naqi Chatta, Waheed Sultan
2:45 pm - 3:00 pm	ICETBEST-OR-24057	Advanced Telecommunication-Enabled Patient Monitoring System for Remote Consultation	Taha Mushtaq Shaikh, Saad Jawaid Khan, Hareem Rizwan Ahmed, Shehzeen Fatima, Hassan Arif
3:00 pm - 3:15 pm	ICETBEST-OR-24044	Smart Hand Glove with Obstacle Detection	Gul Munir, M. Wasim Munir, Zahid Siddique, Sami Ullah Khan, Yousaf Masih

Technical Session VII (2:00 pm – 3:30 pm)			
Session Chairs: Mr. Wasim Munir & Engr. Abdul Moiz			
Venue: Online **Microsoft Teams meeting: Click here to join the meeting** **Meeting ID: 491 369 533 130** **Passcode: VEC9pD**			
Time	**Paper ID**	**Paper Title**	**Authors**
2:00 pm - 2:15 pm	ICETBEST-OR-24018	How to protect Virtual World from Cyber Attacks	Syed Muhammad Mushtaher uddin, Prof Dr Muhammad Shahab Siddiqui
2:15 pm - 2:30 pm	ICETBEST-OR-24008	Design and development of EMG acquisition system for the monitoring of jaw clenching to detect bruxism	Anusha Ishtiaq, Hafiz Zia Ur Rehman, Zia Mohy-ud-din
2:30 pm - 2:45 pm	ICETBEST-OR-24016	Smart Biomedical Mattress for Monitoring and Prevention of Pressure Ulcers	Noor Fatima, Zia Mohy-ud-din, Sana Mahmood
2:45 pm - 3:00 pm	ICETBEST-OR-24020	IoMT Solutions for Remote Patient Reporting and Monitoring	Sherbano Saleem, Prof Dr Muhammad Shahab Siddiqui
3:00 pm - 3:15 pm	ICETBEST-OR-24028	Design and Development of a Biomaterial Based Arm Patch for Intravenous Medical Simulation and Training	Fizza Zaheer, Maida Nadeem, Moiz Wali Khan, Engr. Fahad Shakeel, Dr. Jahan Zeb Gul
3:15 pm - 3:30 pm	ICETBEST-OR-24041	Automatic Estimation of 10m Walk Test Using Smart Rollator	Nazia Ejaz, Saad Jawaid Khan, Mehwish Faiz, Fahad Azim

Technical Session VIII (2:00 pm – 3:30 pm)			
Session Chairs: Engr. M. Aamir & Engr. Gul Munir			
Venue: Online **Microsoft Teams meeting: Click here to join the meeting** **Meeting ID: 469 514 272 026** **Passcode: iNfpWA**			
Time	**Paper ID**	**Paper Title**	**Authors**
2:00 pm - 2:15 pm	ICETBEST-OR-24005	Electroencephalography Based Stress Analysis Using Machine Learning	Humna Saeed, Laiba Junaid, Zahra Zia, Mashal Fatima, Saadullah Farooq Abbasi, Zia Ur Rehman
2:15 pm - 2:30 pm	ICETBEST-OR-24006	A Systematic Review on Comparative Study of AI Techniques for Classification of Brain Tumour	Laiba Junaid, Javeria Noor, Aqsa Zahoor, Jawwad Sami Ur Rehman
2:30 pm - 2:45 pm	ICETBEST-OR-24013	Literature Review on Imaging Processing Methods for of Brain Tumor Detection	Shifa Maryum, Mariam Barkaat, Jawwad Sami Ur Rahman
2:45 pm - 3:00 pm	ICETBEST-OR-24038	ESP 32 Camera Module: A Breakthrough in Veins Localization Technology	Javaria Babar, Muhammad Omar Cheema, Shehryar Khalid, Muhammad Shoaib Malik, Amir Shahzad, Zia Mohy-ud-din
3:00 pm - 3:15 pm	ICETBEST-OR-24002	Computational Modeling for Hemodynamic Analysis of Stenosed Carotid Artery)	Laiba Junaid, Tayaba Naz, Natasha Mohsin, Arham Saddique, Muhammad Abrar Baig, Syed Muddusir Hussain, Dr Faisal Amin

Day 02 – Thursday (29th February 2024)

Technical Session IX (9:30 am – 11:00 am)			
Session Chairs: Dr. Sarmad Shams & Dr. Umair Korai			
Venue: Seminar Room 1 (Ground Floor)			
Keynote Speaker Session (9:30 am – 10:00 am)	How biomedical engineering has contributed to progress in understanding the impact of spinal function on brain function *by Dr Heidi Haavik, New Zealand College of Chiropractic*		
Time	**Paper ID**	**Paper Title**	**Authors**
10:00 am - 10:15 am	ICETBEST-OR-24027	Incorporating a novel biomaterial to propose a battery less Cardiac Pacemaker	Hira Kanwal, Ansharah Hasib, Mehwish Faiz, Hunaina Abbasi
10:15 am - 10:30 am	ICETBEST-OR-24029	Comparative Evaluation of the properties of PEEK, PMMA and Titanium for Cranial Implant	Marium Fatima, Uzair Rauf, Eisha Shahid, Tooba Khan, Wasim Munir, Osama Asif
10:30 am - 10:45 am	ICETBEST-OR-24032	Fabrication of Sodium Alginate Microparticles Embedded in PVA hydrogel for Tissue Regeneration	Iqra Hanif, Savaira Hashmi, Amna Feroz, Abdul Moiz, Wasim Munir, Tooba Khan
10:45 am - 11:00 am	ICETBEST-OR-24045	Low Cost Mini Ventilator	Noorulain, Sapna Dahar, Areej Anwar, Dua Hanif

Technical Session X (9:30 am – 11:00 am)			
Session Chairs: Dr. Saad Jawaid Khan & Dr. Dur-e-Jabeen			
Venue: Seminar Room 2 (Ground Floor)			
Keynote Speaker Session (9:30 am – 10:00 am)	Advancing Life Sciences: Insights from Medical Imaging on Retinal and Brain MRI Cases *by Dr. Toufique Akbar Soomro Quaid-e-Awam University of Engineering, Science & Technology (QUCEST), Larkana*		
2qTime	**Paper ID**	**Paper Title**	**Authors**
10:00 am - 10:15 am	ICETBEST-OR-24047	Hand-E-ssist: A Robot for Upper Extremity Rehabilitation	Mahnoor Maqsood, Adam Rafiq Jeraj, Mudasir Rafiq, Hassan Ali, Tooba Khan
10:15 am - 10:30 am	ICETBEST-OR-24004	Blue Light Therapy: A Skin Treatment Mask using Blue Light to cure Skin Disorders	Aleena Kamal, Minahil Kamal, Tayaba Naz, Syed Muddusir Hussain
10:30 am - 10:45 am	ICETBEST-OR-24053	Vein Pattern Vista (VPV): Providing an ease for difficult intravenous access	Soha Muneer, Muhammad Jawad Shafique, Darakshan M. Saleem, Sidra Abid Syed
10:45 am - 11:00 am	ICETBEST-OR-24042	Smart Glove: Designing of Hand Motion Translator for Deaf & Dumb	Qamar-un-Nisa, Tooba Ali, Engr. Sasuee Khatoon, Shuja Memon, Saniya Zehra, Engr. Murk Saleem

Technical Session XI (09:30 am – 11:00 am)			
Session Chairs: Dr. Ali Asghar & Dr. Irfan Usmani			
Venue: Class Room No C-22 (2nd Floor)			
Keynote Speaker Session (9:30 am – 10:00 am)	Accelerating Generative AI models on high performance computing resources *by Dr. Mohsin Shaikh, King Abdullah University of Science and Technology, Saudi Arabia*		
Time	**Paper ID**	**Paper Title**	**Authors**
10:00 am - 10:15 am	ICETBEST-OR-24025	Artificial Intelligence based Vital Signs Monitoring System	Tariq Javid, Muhammad Faris, Hina Iftikhar, Tayyaba Khalid, Maham Arshad
10:15 am - 10:30 am	ICETBEST-OR-24050	Advancing Soft Tissue Engineering: Simulation of Self-healing Biopolymers using ANSYS	M. Usman Baig, M. Jawad Shafique, Mariam Raziq, Sidra Abid Syed
10:30 am - 10:45 am	ICETBEST-OR-24051	Design and Implementation of 4D Synthetic Human Pulse Generator	Tariq Javid, M. Faris, Sadia Ali, Fatima Irshad, Aliza Sohail, Arisha Shah, Omema Shakil

Technical Session XII (09:30 am – 11:00 am)			
Session Chairs: Dr. Munsif Ali Jatoi & Engr. Hassan Ali			
Venue: Class Room No C-23 (2nd Floor) (Online)			
Microsoft Teams meeting: **Click here to join the meeting** Meeting ID: 443 503 455 980 Passcode: 5EtHWX			
Time	**Paper ID**	**Paper Title**	**Authors**
9:30 am - 9:45 am	ICETBEST-OR-24007	Treatment of Post Viral Vagal Neuropathy via Vagus Nerve Stimulation	Muhammad Omar Cheema, Rida-e-Fatima, Ahsan Naveed, Zia Mohyuddin, Jahanzeb Gul
9:45 am - 10:00 am	ICETBEST-OR-24009	Enhancing Shoulder Mobility: A Two Degree of Freedom Assistive Device for Adhesive Capsulitis Rehabilitation	Shehla Inam, Faisal Amin, Rahat Ehsan, Hussain Faisal, Uzair Iftikhar, Muhammad Waqar, Farrukh Qureshi, Muhammad Shafique
10:00 am - 10:15 am	ICETBEST-OR-24010	A Computational Modeling Approach in COMSOL: Design and Optimization of a Novel Stentrode for Peripheral Nerve Stimulation	Muhammad Omar Cheema, Noor Ul Ain, Abdul Rehman, Jahanzeb Gul, Zia Mohy Ud Din
10:15 am - 10:30 am	ICETBEST-OR-24011	Balance Analysis in Virtual Environment: A Study Utilizing Force Platform and Electromyography of The Lower Limb	Moiz Wali Khan, Maida Nadeem, Fizza Zaheer, Engr. Omar Cheema, Prof. Dr. Zia Mohy Ud Din
10:30 am - 10:45 am	ICETBEST-OR-24049	Cluster Analysis of Covid-19 Through Genome Sequences	Maryam Ghauri, Dr. Naeem Ahmed Mahoto, Dr. Sania Bhatti, Aqsa Umar
10:45 am - 11:00 am	ICETBEST-OR-24052	Differential Force-Time Dynamics in Standing Vertical Jumps: A Comparative Study of Athletic and Non-Athletic Groups	Muhammad Ali, Shoaib Zafar, Ahmad Abdullah Haris, Faisal Amin

Technical Session XIII (11:30 am - 01:00 pm)			
Session Chairs: Dr. Mariam Yamin & Dr. Suhaib Masroor			
Venue: Seminar Room 1 (Ground Floor)			
Keynote Speaker Session **(11:30 am – 12:00 pm)**	**A joint experimental-modelling approach to gastrointestinal electrophysiology and Motility** *by Dr. Peng Du, University of Auckland, New Zealand* **Microsoft Teams meeting: Click here to join the meeting** **Meeting ID: 426 232 500 087** **Passcode: KstK9F**		
Time	**Paper ID**	**Paper Title**	**Authors**
12:00 pm - 12:15 pm	ICETBEST-OR-24026	Evaluation of Antibacterial efficacy of Pakistani Honey in combination with Black Seed against Food Borne Pathogens	Mahnoor Fatima, Shiza Ali, Fariha Ibrahim
12:15 pm - 12:30 pm	ICETBEST-OR-24024	A novel technique for the measurement of chest wall kinematics using low cost stretch sensors	Atiqa Saleem, Zainab Ali, Rida Nisar
12:30 pm - 12:45 pm	ICETBEST-OR-24001	Antimicrobial resistance and surveillance of infections using whole-genome sequencing through Molecular typing of protozoan Naegleria (Pakistani Strain)	Rabia Faizan, Eraj Javed
12:45 pm - 01:00 pm	ICETBEST-OR-24037	Assistive Navigation Gloves for Hurdle Free Ambulation of the Visually Impaired Individuals	Sheikh Muzammil Anwar, Dua Ubaid, Adnan Javed, Unsia Shakeel, Mehwish Faiz, Daniyal Alvi, Hassan Sarwar

Technical Session XIV (11:30 am - 1:00 pm)			
Session Chairs: Dr. Syed Faraz Jawed & Dr. Danish Mujib			
Venue: Seminar Room 02 (Ground Floor)			
Keynote Speaker Session **(11:30 am – 12:00 pm)**	**The Role of HPC in CFD Applications** *by Dr. Rooh ul Amin Khurram, King Abdullah University of Science and Technology, Saudi Arabia*		
Time	**Paper ID**	**Paper Title**	**Authors**
12:00 pm - 12:15 pm	ICETBEST-OR-24019	A Centralized Patient Monitoring System for Ward Patients	Sabahat Ansari, Feroza Malik, Maryam Ali Soomro, Fahad Shamim, Zia Ahmed Shaikh, Sarmad
12:15 pm - 12:30 pm	ICETBEST-OR-24030	Breast Cancer Detection and Classification Using Deep Learning	Fatima Tuz Zahra, Amber Asif, Uzma Fatima, Dr. Sheeraz Arif
12:30 pm - 12:45 pm	ICETBEST-OR-24036	Innovative Cardiac Health Monitoring: Smart Cardio Stethoscope System	Hadia Rehman, Aisha Badar, Muqaddas Fatima, Ahmed Khoso
12:45 pm - 01:00 pm	ICETBEST-OR-24058	Glucose Monitoring with Heart Rate Detection: A Non-Invasive Solution for Diabetes Management	M. Jawad Shafique, M. Daniyal Maqsood Alvi, Faizan Raza Shah Zaidi, Sidra Abid Syed, Khair UL Wara, Komal Tariq