

1st International Biomedical and Digital Health Conference (IBDC-2022)

1. Description

Biomedical Engineering Department of NED University of Engineering and Technology in collaboration with The Institute of Engineers Pakistan (IEP), and UNESCO Chair “Sustainable Urban Regions” organized a two days conference titled “International Biomedical and Digital Health Conference 2022” on November 22-23, 2022. The venue of the conference was the main campus of NED University of Engineering and Technology. The conference was in line to attain SDG#3 “Good Health and Well Being” which is the integral part to address the challenges faced by “Sustainable Urban Regions” to attain SDG#11.

Since, Biomedical Engineering is a cross-disciplinary field that integrates engineering knowledge, physical, chemical and mathematical sciences, biomedical sciences and clinical practices. Its importance in health care sector is vital for the benefit and sustainability of



communities. This emerging field is setting new standards in telemedicine and digital health just after the covid-19 pandemic as the spread of this deadly virus highlights the need for electronic health (e-health) as well as mobile health (m-health) technologies. In the light of this immense significance.

2. Summary of Highlights of Conference

The theme of 1st International Biomedical Conference (IBDC-2022) was “Transforming Lives Through Digital Health Intervention”. The conference spanned over five technical sessions namely, Digital Health and IoT, Pharmaceuticals and Regenerative Medicine, Computational Modeling and Biomechanics, Computational Intelligence and Neuroscience, Telemedicine and Biomedical Sensors. There was total 18 oral presentations and 14 poster presentations in the conference.

The inaugural session was held at Audio Visual Hall, Department of Civil Engineering, NED University of Engineering and Technology which started from the recitation of Holy Quran by Engr. Muhammad Ansub, followed by National Anthem. Prof. Dr. Saad Ahmed Qazi, Dean, Faculty of Electrical and Computer Engineering, NED University of Engineering and Technology, Convener, IBDC-2022, briefed about the conference. The welcome address was delivered by Engr. Sohail Bashir, Chairman, IEP Karachi Center.

An address was delivered by Engr. Prof. Dr. Muhammad Tufail, Pro Vice-Chancellor, NED University of Engineering and Technology. The chief guest, Mr. Sardar Yasin Malik, Hilal-e-Imtiaz, Sitara-e-Imtiaz, Group Chairman, Hilton Pharma Private Limited and Hinovex Pharma, presented his inaugural address. The conference shield were presented to the chief guest by Engr. Sohail Bashir, Chairman, IEP Karachi Center, along with Engr. M. Farooq Arbi, Secretary, IEP Karachi Center and Prof. Dr. Saad Ahmed Qazi, Dean, Faculty of Electrical and Computer Engineering, NEDUET and Convener, IBDC-2022. Finally, the vote of thanks was presented by



Dr. Eraj Humayun Mirza, Chairman, Department of Biomedical Engineering, NEDUET and Co-Convener, IBDC-2022.

After the successful completion of the five technical sessions, closing session was held on November 23, 2022 which started with recitation of Holy Quran by Engr. Muhammad Ansub. The conference highlights were presented by Dr. Eraj Humayun Mirza, Chairman, Department of Biomedical Engineering, NEDUET and Co-Convener, IBDC-2022. An address was delivered by Engr. Sohail Bashir, Chairman, IEP Karachi Center. A keynote lecture titled "Haptics lab and NCRA", was delivered by Dr. Riaz Uddin, Associate Professor, Department of Electrical Engineering, Director ORIC, PI of Haptics, Human-Robotics and Condition Monitoring Laboratory, NEDUET. The chief guest, Dr. Sarosh Hashmat Lodhi, Vice Chancellor of NED University of Engineering and Technology presented his kind address. Finally, the concluding remarks and vote of thanks was presented by Dr. Muhammad Abul Hasan, Associate Professor, Department of Biomedical Engineering, NEDUET and Conference Secretary, IBDC-2022.

3. Keynote Speakers

- i. Mr. Abdullah Butt, CEO, Educast.
- ii. Dr. Zakiuddin Ahmed, CEO, Digital Care.
- iii. Dr. Zahid Faheem, COO, Ziauddin Hospital.
- iv. Dr. Shariq Khoja, CEO, Tech4Life.
- v. Dr. Anila Kazmi, Group Head, Department of Quality Assurance, Ziauddin Hospital.
- vi. Dr. Suhail Chughtai, Orthopaedic Surgeon, Telemedicine Expert, London
- vii. Dr. Ateeq ur Rehman, Assistant Professor, Materials Science and Engineering, IST, Islamabad
- viii. Dr. Salman Haleem, Assistant Professor, Applied Biomedical Signal Processing and Intelligent eHealth Lab, School of Engineering at University of Warwick
- ix. Dr. Darakhshan Jabeen Haleem, Meritorious Professor Neuroscience, PCMD, ICCBS was formerly Dean Faculty of Science and Chairperson Department of Biochemistry, University of Karachi
- x. Dr. Saad Jawaid Khan, Chairman, Department of Biomedical Engineering, Ziauddin Hospital
- xi. Dr. Farhan Abdul Ghaffar, Assistant Professor, Electrical Engineering, Lakehead University, Canada

4. Top Research Papers (Title and Authors Only)

- i. Joint Awards: Salim Habib University and NED University
S. Habib Paper title: Optimization of Conductive Ink Materials for Designing Cost-Effective Force Sensitive Resistor (FSR) Sensors for Soft Robotics
Authors: Amna Jawad Shaikh, Gul Munir, Hassan Ali, Tooba Khan
NED Paper title: Design & Development of Adjustable Arm Support
Authors: Zobia Nadeem, Kulsoom Zaidi, Talia Murad, Ahmad Zahid Rao
- ii. Poster Presentation winner: Hamdard University
Title: Intelligent Agent For Precised Simulated Image-Guided Cardiac Interventions
Authors: Faisal Mujtaba, Sumaiya Aziz, Ayesha Hasany, Dr. Tariq Javid, Hina Ifthikar

5. Conference in Pictures

