Technical Programme
INTERACT 2023
Day-1 Wednesday 15th March 2023

INAUGURAL SESSION
Wednesday 15th March 2023
Main Auditorium, NED University of Engineering & Technology, Karachi

Zoom Meeting ID: 883 2001 3606, Passcode: 501008 (https://us06web.zoom.us/j/88320013606?pwd=aVRCL3NNU1FzbzJMTkZFTTRuN1diZz09)

Time	Event
8:30 Hours	Registration Starts
10:30 - 10:50	Guests arrival
10:50 -11:00	Guests to be seated
11:00 - 11:05	Holy Quran recitation
11:05 - 11:10	National Anthem
11:10 - 11:20	Introduction by Conference Chair, Prof. Dr. Muhammad Imran Aslam
11:20 - 11:30	Welcome address by Conference Convener, Prof. Dr. Saad Ahmed Qazi
11:30 -11:40	Address by CEO DreamBig semiconductor, Mr. Sohail Syed (online)
11:40 - 11:50	Address by United Bank Ltd. Representative
11:50 - 12:15	Plenary talk by Dr. Kamran Arshad, Dean of Research and Graduate Studies, Ajman University
12:15 - 12:25	Address by Pro Vice Chancellor, NED University of Engineering and Technology
12:25 - 12:35	Address by Chief Guest, Honourable, Mr. Cemal Sangu, Council General, Republic of Turkiye,
12:35 - 12:45	Presentation of Conference Souvenirs and Group Photo
12:45 - 14:00	**Networking and Lunch**

Technical Session - 1, Wednesday Day - 1, March 15, 2023		Technical Session - 2, Wednesday Day - 1, March 15, 2023		Technical Session - 3, Wednesday Day - 1, March 15, 2023	
Sensors & Systems		**Internet of Things (IoT)**		**Industrial Session - 1**	
Session Chairs: **Prof. Dr. M. Mubashir Khan, Prof. Dr. M. Shahid Shaikh, Prof. Dr. Ghous Baksh**		Session Chairs: **Prof. Dr. Muhammad Ali Ismail, Prof. Dr. Sameer Qazi, Dr. Uzma Afsheen**		Moderators: **Dr. Asad Arfeen, Dr. Muhammad Fahim Ul Haque**	
Venue: Main Auditorium Zoom Meeting ID: 865 4834 4554, Passcode: 901716		**Venue: Audio Visual Hall, Dept. of Civil Engg.** Zoom Meeting ID: 834 7560 3835, Passcode: 026519		**Venue: Mechanical Audio Visual Hall** Physical mode only	
Time	**Title and Presenters**	**Time**	**Title and Presenters**	**Time**	**Title and Presenters**
14:00 - 14:15	Dur e Jabeen, Faiza Waqqas, Habib Shaukat, Rumaisa Iftikhar and Tehmina Khan, Watermark Embedding Scheme with variance of chromatic components	14:00 - 14:30	Keynote Address: Prof. Dr. Ruchire Eranga Wijesinghe (Sri Lanka), **Novel trends in high-resolution Optical Coherence imaging for strategic technologies in the modern era** (online)	14:00 - 14:20	**Entrepreneurship for engineers,** Shaikh Hammad Amjad, Deputy Country Head, Nippon Express Group
14:15 - 14:30	Ali Raza, Hadia Noor, Saira Riaz and Shahzad Naseem, Modifying the optical properties of ZnS for optoelectronics applications	14:30 - 14:45	Fatima Haider Naqvi, Binish Haseeb, Namra Khan, Soomal Qureshi, Sundus Ali, Taha Sajid and Muhammad Imran Aslam. Design and implementation of Smart Contract in supply chain management using Blockchain and Internet of Things	14:20 - 14:40	**Importance of technology audits in Industry 4.0,** Engr. Ahsan Zamir, Head-IT Audit, Bank Islami
14:30-14:45	Wakeel Shah, Sadia Faraz, Sana Arshad, Syed Shabhi Haider, and Muhammad Hassan Sayyad, Co-sensitized DSSC with natural dyes extracted from beetroot, pomegranate and cranberry	14:45 - 15:00	Aisha Danish and Naureen Farhan, Impact of amplitude response on the capacity of an intelligent reflecting surface enabled narrowband SISO system	14:40-15:00	**Role of Artificial Intelligence in Telecommunication,** Engr. Ambreen Kokab, AI and analytics solution Architect, Ericsson
14:45 - 15:00	Sehreen Moorat, Ahsan Ahmed Ursani, Aftab Memon, Nashrul Fazli Mohd Nasir and Bhawani Shankar Chowdhry. Simulation of low frequency sonophoretic piezoelectric transducer applied over human skin	15:00 - 15:15	Muhammad Haashir Absar, Warisha Zakai, Ghulam Fiza, Youail John and Noman Mansoor. Novel IoT-based Plant Monitoring System	15:00 – 15:20	**Growth of Customer XP centricity on scalable enterprise growth,** Engr. Haider Ali, Regional Head of Data, Daraz
15:00 - 15:15	Maryam Idrees, Faheela Waseem and Faizan Ahsan Wali Application of adaptive algorithms on ultrasound imaging	15:15 - 15:30	Zara Nasir, Amina Asif, Muhammad Nawaz and Muhammad Ali. Design of smart medical box for automatic pill dispensing and health monitoring (online)	15:20 - 15:40	**5G Technology: Challenges to launch in Pakistan** Mr. Ashar Hayat Siddiqui, Group Vice President, PTCL
15:20 - 15:50	Keynote Address: Prof. Dr. Muhammad Zeeshan Shakir (University of the West of Scotland), **Artificial Intelligence: Paving the way towards digital futures (online)**	15:30 - 15:45	Fasih Ur Rehman, Hafiz Muhammad Attaullah, Faisal Ahmed and Sundus Ali. Data Defense: Examine Fintech's security and privacy strategies (online)	15:40 - 16:00	**Advanced technologies for efficient geo-magnetic field monitoring,** Mr. Ayaz Amin, Director Space weather monitoring SUPARCO
15:50 - 16:05	Syed Talib Abbas Jafri, Irfan Ahmed, Sundus Ali and Faizan Qamar. Analysis of AgRED performance in LR-WPAN dense ad-hoc networks	15:45 - 16:00	Ayesha Butt. Mobile Cloud Computing (online)		
16:10	**Networking and Tea**				

Poster Exhibition outside the Auditorium

Day-2 Thursday 16th March 2023

Technical Session - 4, Thursday Day - 2, March 16, 2023		Technical Session - 5, Thursday Day - 2, March 16, 2023		
Artificial Intelligence (AI)		**Wireless Communication**		
Session Chairs: **Prof. Dr. Ghazanfar Monir, Prof. Dr. Najeed Ahmed Khan, Dr. Danish Mahmood Khan**		Session Chairs: **Prof. Dr. Fahad Azim, Prof. Dr. Shehnila Zardari, Dr. Aamir Zeb**		
Venue: Main Auditorium Zoom Meeting ID: 864 5700 0699, Passcode: 453889		Venue: Mechanical Audio Visual Hall Physical mode only		
Time	**Title and Presenters**	**Time**	**Title and Presenters**	
09:10 - 09:40	Keynote Address: Prof. Dr. Jawad Shamsi (NUCES), **Generative AI: Concepts and Cutting-Edge Applications**	09:10 - 09:40	Keynote Address: Prof. Dr. Arsalan Jawed (KIET), **Microsystems and microchips for healthcare and biomonitoring applications**	
09:40 - 09:55	Madiha Mazhar, Saba Fakhar and Yawar Rehman, Semantic segmentation for various applications: research contribution and comprehensive review	09:40 - 09:55	Saba Ahmed, Rizwan Aslam Butt and Muhammad Imran Aslam, Simultaneous upstream and Inter Optical Network Unit communication for Next Generation PON	
09:55 - 10:10	Mariam Memon, Adil Ahmed Umar, Syed Saad Ahmed, Ghulam Hussain Daudpoto and Rabeea Jaffari. Feature-based semi supervised learning approach to android malware detection (online)	09:55 - 10:10	Hira Mariam and Irfan Ahmed, Performance of dense millimeter wave network with uniform cylindrical array	
10:10 - 10:25	Nehal Abdul Rehman and Dr. Farah Haroon, Adaptive Gaussian and double thresholding for contour detection and character recognition of 2D area using computer vision	10:10 - 10:25	Sheraz Shamim and Syed Riaz Un Nabi Jafri, A comparative study of multiple 2D laser scanners for out-door measurements	
10:30	Networking and Tea Break			

Poster Exhibition outside the Auditorium

Technical Session - 6, Thursday Day - 2, March 16, 2023		Technical Session - 7, Thursday Day - 2, March 16, 2023		Technical Session - 8, Thursday Day - 2, March 16, 2023	
Communication Systems		**Robotics & Control**		**Industrial Session - 2**	
Session Chairs: **Prof. Dr. Muhammad Aamir, Dr. Irfan Ahmed, Dr. Rizwan Aslam**		Session Chairs: **Dr. Imtiaz Kalwar, Dr. Eraj Humayun Mirza, Dr. Tariq Rehman**		Moderators: **Dr. Riaz Un Nabi Jafri, Dr. Sadia Muniza Faraz**	
Venue: Main Auditorium		Venue: Lecture Hall, Electrical Department		Venue: Mechanical Audio Visual Hall	
Zoom Meeting ID: 889 5589 2586, Passcode: 095568		Zoom Meeting ID: 859 8015 1503, Passcode: 060486		Physical mode only	
Time	**Title and Presenters**	**Time**	**Title and Presenters**	**Time**	**Title and Presenters**
11:00 - 11:30	Keynote Address: Prof. Dr. Bhawani Shankar Chowdhry, **Role of vertically integrated projects in achieving academic excellence through multidisciplinary experiential learning**	11:00 - 11:30	Keynote Address: Prof. Dr. Jameel Ahmed (Riphah International University), **Artificial Intelligence in Healthcare** (online)	11:00 - 11:20	**Industry 5.0, opportunities for Pakistani manufacturers;** Engr. Sophia Hasnain, CEO and founder, Linked Things
11:30 - 11:45	Humayun Khan and Riaz Uddin, Optimized Network Solution for Bilateral Haptic Teleoperation: Improving Robustness over Long Distances	11:30 - 11:45	Ahsan Tanveer and Sarvat Mushtaq Ahmad, Genetic algorithm-based Proportional Integral Controller (GAPI) for ROV Steering Control (online)	11:20 - 11:40	**Future of Smart Grids**, Mr. Mujtaba Ahmed Qadri, Business Development Lead, Seimens
11:45 - 12:00	Moazzam Shah Bukhari Syed, Hafiz Muhammad Attaullah, Sundus Ali and Muhammad Imran Aslam. Wireless communication beyond antennas: The role of Intelligent Reconfigurable Surfaces (online)	11:45 - 12:00	Aziz Ur Rehman and Ahsan Tanveer. Electric motor drive control of planetary gears of a variable 2-valve system of an internal combustion engine (online)	11:40 - 12:00	**Prospects of Electrical Vehicle in Pakistan**, Mr. Hashir Bin Khalid, AIM motors Pvt. Ltd.
12:00 - 12:15	Shahram Hamza Manzoor, Shahinza Manzoor and Marry Antonette Perez Diez., An Efficient Opto electronic filter design of Reflective CMY Colors for Optical Communications (online)	12:00 - 12:15	Mian Muhammad Amir Ayaz, Dr. Ajmal Farooq and Ihteshamul Haq, Extra super-fast charger for Electric Vehicles (EV's) and Plug in Hybrid Electric Vehicles (PHEV's) (online)	12:00 - 12:20	**Surveying and mapping of indoor and outdoor environments using low cost 2D laser scanners**, Sheraz Shamim, SUPARCO
12:15 - 12:30	Ashar Ahmed and Bushra Aijaz, A Case-Study on the Potential Applications of V2V Communication for Improving Road Safety in Pakistan	12:15 - 12:30	Raza Jafri and Ghous Narejo, A Novel Yagi-Uda Antenna Based Wireless Power Transmission (WPT) System Using Passive Reflectors		
12:30	Networking and Lunch				

Technical Session - 9, Thursday Day-2 March 16, 2023	
Plenary session on the current state and future prospects of semiconductor industry in Pakistan (Moderator: **Dr. Hashim Raza Khan**)	
Venue: Main Auditorium (Zoom Meeting ID: 879 1118 4656, Passcode: 67721; https://us06web.zoom.us/j/87911184656?pwd=N2lvTnRPWi9kR1pYc3E0ckhSYUxNdz09)	
Time	**Title and Presenters**
14:00 - 14:15	**Smart Network interface card**, Mr. Faisal Masood, VP DreamBig Semiconductor, USA
14:15 - 14:30	**Data in Power Applications**, Mr. Enam Rehman, CEO NuNami USA (online)
14:30 - 14:45	**Platform Based SoC Design**, Mr. Raheel Khan, CEO Xcelerium Inc. USA
14:45 - 15:00	**Emerging Wireless Communication Technology**, Mr. Haris Tauqeer, Digitek Engineering, Pakistan

CLOSING SESSION Thursday 16th March 2023
Main Auditorium, NED University of Engineering & Technology, Karachi

Time	Event
15:00 - 15:20	Guests arrival and Seating
15:20 - 15:25	Holy Quran Recitation
15:25 - 15:30	National Anthem
15:30 - 15:40	Welcome address by Conference Co-chair, Prof. Dr. Ghous Bakhsh Narejo
15:40 -16:00	Plenary Talk by Dr. Ted Johannson, Uppsala University (online)
16:00-16:10	Address by PTCL Ufone Representative
16:10- 16:20	Address by Prof. Dr. Muhammad Tufail, Pro Vice Chancellor, NED University of Engineering and Technology
16:20 - 16:30	Address by Chief Guest, Chairman Sindh Higher Education Commission, Dr. Tariq Rafi
16:30 - 16:35	Vote of Thanks by Conference Secretary, Dr. Muhammad Faizan Shirazi
16:35 - 16:50	Presentation of Conference Souvenirs to Guests and Organizers
16:50-16:55	Group Photograph
16:55	Networking and Tea