



22nd IBCAST 2025: Control & Signal Processing

19-22 August 2025

Technical Program (Conducted)

Venue: Imperial Hall-II
RAMADA Hotel Murree Hills
Updated: 22 August 2025

	0900 – 1100					1130 – 1300			1400 – 1530			1600 – 1815																								
Day-1 August 19, 2025 Tuesday	L U N C H B R E A K															T E A R E A K															1.1 Control Systems-I					
																															REGISTRATION		Invited Talk: Prof. Ilker Ustoglu ITU Turkiye	Paper 261	Paper 297 NS	Paper 260 NS
Day-2 August 20, 2025 Wednesday	2.1 Control Systems-II					2.2 Control Systems-III			2.3 Control Systems-IV			2.4 Signal Processing-I																								
	NS	Paper 37	Paper 225	Paper 243	Paper 419	Paper 501	Invited Talk: Prof. Mourad Oussalah Uni. of Oulu Finland		Invited Talk: Prof. Ilker Ustoglu ITU Turkiye	Paper 267	Paper 511	Paper 74	Invited Talk: Prof. Xiao Fei NPU, Xian, China		Invited Talk: Prof. Syed Ahmed Pasha Air University Islamabad		Invited Talk: Prof. Moncef Gabbouj Tampere Uni. of Tech. Finland	Paper 154	Paper 08	Paper 223	Paper 417	Paper 250	Paper 113													
Day-3 August 21, 2025 Thursday	3.1 Signal Processing-II					3.2 Plenary Talks-I			3.3 Plenary Talks-II			NS= No Show (ID-37, ID-260, ID-297,																								
	Paper 47	Paper 158	Invited Talk: Dr. Di Huang Beihang University China		Invited Talk: Prof. Moncef Gabbouj Tampere Uni. of Tech Finland		Prof. Xiao Fei NPU, Xian China		Prof. Zhang Lin Beihang University China	Prof. Neri Filippo, Italy	Prof. Hasan Mendal, Turkiye							Dr. Noshewan, IEEE Chairperson																		
Day-4 August 22, 2025 Friday	CLOSING CEREMONY																																			



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Day 1: August 19, 2025		
14:00 - 16:00	Registration	
15:30 - 16:00	TEA BREAK	
16:00 - 18:15	Session 1.1: Control Systems-I	Chair: Dr. Sajjad Asghar, CESAT
16:00-16:45	Invited Talk 1: Constrained Algebraic Model Predictive Control for Fixed-Wing Aircraft Auto Landing	Prof. Ilker Ustoglu ITU, Turkiye
16:45-17:00	22CSP 261: Multi-objective Nonlinear Control of a UAV System using Improved Grey Wolf Algorithm	Moazzam Ali SECS NUST Islamabad
17:00-17:15	22CSP 297: Energy-Efficient Fault Tolerant Control in Multiphase Permanent Magnet Synchronous System with Real-Time Adaptive Algorithm	Muhammad Latif NUST, Pakistan
17:15-17:30	22CSP 260: SM-Back stepping Control of a Spherical Airship for Semi-Indoor Filming and Monitoring	Fatima Batool GCUF, Pakistan
17:30-17:45	22CSP 503: Design and Analysis of Pakistan's First Scientific High-Altitude Balloon Flight	Daniyal Ahmed NUST
17:45-18:00	22CSP 281: A Novel Span-morphing Wing Incorporating a Stringer-Based Semi Rib-less Structure for Advanced Aerospace Application	Zahid Ahmed Quraishi CAE, NUST
18:00-18:15	22CSP 502: Analysis of two three axis Magnetometer for indoor and outdoor Geomagnetic Surveying applications	Hashim Raza Khan NED UET Karachi

Day 2: August 20, 2025		
09:00 - 11:00	Session 2.1: Control Systems-II	Chair: Dr. Mukhtar Ali, CESAT
09:00-09:15	22CSP 37: Control Authority Analysis of an Artillery Projectile with Fixed Canards Trajectory Correction Fuze	Ali Raza CESAT, Islamabad
09:15-09:30	22CSP 225: Design and Development of Pedal Powered Electric Bicycle with Regenerative Charging	Shehzad Ahmed Riphah Int. Uni. Islamabad
09:30-09:45	22CSP 243: Nonlinear Robust Control Design for Voltage Regulation and Disturbance Rejection Capability for Isolated Boost Converter with Voltage Doubler	Manaal Khan SECS, NUST, Islamabad
09:45-10:00	22CSP 419: A Novel Hybrid Cheetah and Slime Mould Algorithm to Improve Voltage Profile and Power Loss Minimization in Active Distribution System	Mohsin Atta UET Taxila



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10:00-10:15	22CSP 501: Resilient AI-Driven Adaptive Neuro-Fuzzy Inference System Control of Boost Converters	Farrukh Mehmood UET, Lahore
10:15- 11:00	Invited Talk 2: Sate of the Art Deep Learning Model and Generative AI in Shaping the Control Boundaries of Intelligent Systems	Prof. Mourad Oussalah Uni. of Oulu, Finland
11:00 - 11:30	TEA BREAK	
11:30 - 13:00	Session 2.2: Control Systems-III	Chair: Dr. Shakil Ahmed, CESAT
11:30 -12:15	Invited Talk 3: Robust Actuator/ Sensor Fault Diagnosis in Quadrotor Via Augmented State EKF	Prof. Ilker Ustoglu ITU, Turkey
12:15-12:30	22CSP 267: A Hybrid Eigen Decomposition and Least Square Framework for GGT-Based Autonomous Positioning with the MATLAB Application GravGuide	Muhammad Ihsan ul Haq COMSATS Uni. Islamabad
12:30-12:45	22CSP 511: Digital Filtering of Self-acquired Gyroscope Signal: A Comparative Study	Maryam Ali NUCES, Lahore
12:45-13:00	22CSP 74: Comparative Analysis of Adaptive Filtering Algorithm for Parasitic Vibration Cancellation in Self-Mixing Interferometric Sensors	Dr.Zohaib Khan NUST, Islamabad
13:00 - 14:00	LUNCH BREAK	
14:00 - 15:30	Session 2.3: Control Systems-IV	Chair: Prof. Zhang Lin, China
14:00-14:45	Invited Talk 4: Intelligent Operation and Predictive Sustainment	Prof. Xiao Fei NPU, Xian, China
14:45-15:30	Invited Talk 5: The Geometry of Optimization on Manifolds	Prof. Syed Ahmed Pasha Air Uni. Islamabad
15:30 - 16:00	TEA BREAK	
16:00 - 18:15	Session 2.4: Signal Processing-I	Chair: Dr. Muhammad Ali Chaudhry, CESAT
16:00-16:45	Invited Talk 6: Artificial Neural Networks for Artificial Intelligence – From Inception to Dominance	Prof. Moncef Gabbouj Tampere Uni. of Tech, Finland
16:45-17:00	22CSP 154: Reinforcement Learning Driven Autonomous PEVs Charging Optimization	M. Bilal Raza UET Taxila
17:00-17:15	22CSP 08: An Indigenous Verification Stimulus Generation Framework for Dual-Redundant 1553 Bus System	Haroon Waris CESAT, Islamabad
17:15-17:30	22CSP 223: Comparative Evaluation of FTT and Py Wavelet Transform for Corrosion Detection in AI2024T3 via Lock-in Thermography	Anam Riaz CAE NUST
17:30-17:45	22CSP 417: IOT based Accident Detection and Alert System	Aliza Arshad NED UET Karachi



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17:45-18:00	22CSP 250: Acoustics Signature Measurement and Frequency Characterization of an eVTOL Aircraft Propeller	Muhammad Ahmed NUST, Islamabad
18:00-18:15	22CSP 113: Experimental and Numerical Analysis for Reduction of Resonance and High Acceleration Amplitude with Deck Integrated Mast Structure of Ship	Syed M. Mansoob Bukhari IST, Islamabad

DAY 3: AUGUST 21, 2025

09:00 - 11:00	Session 3.1: Signal Processing-II	Chair: Dr. Zahid Mahmood, CESAT
09:00-09:15	22CSP 47: Space-time Dilemna: Choosing Appropriate Filter to Remove Periodic Noise in Real-time Imagery	Raheel Ahmed CESAT, Islamabad
09:15-09:30	22CSP 158: 3D Reconstruction via Incremental Structure from Motion	Muhammad Zeeshan Air University, Islamabad
09:30-10:15	Invited Talk 7: Multimodal Visual Perception	Dr. Di Huang Beihang University China
10:15-11:00	Invited Talk 8: Image Processing with Advanced ANN based Machine Learning	Prof. Moncef Gabbouj Tampere Uni. of Tech Finland
11:00-11:30	TEA BREAK	
11:30-13:00	Session 3.2: Plenary Talks-I	Chair: Prof. Mourad Oussalah, Finland
11:30-12:15	Plenary Talk: From Digital Twin Foundation to Enhanced Design Process	Prof. Xiao Fei NPU, Xian China
12:15-13:00	Plenary Talk: An Integrated Modelling & Simulation Language for M&S Based System Engineering	Prof. Zhang Lin Beihang University, China
13:00-14:00	LUNCH BREAK	
14:00 - 15:30	Session 3.3: Plenary Talks-II	Chair: TBD
14:00 - 14:30	Plenary Talk: Digital Radar Intercept and Countermeasures (DRIAC)	Prof. Flippo Neri VirtuaLabs Radar & EW Innovation Italy
14:30 - 15:00	Plenary Talk: Progress in Advance Materials	Prof. Hasan Mandal, Rector ITU Turkiye
15:00 - 15:30	Plenary Talk: IEEE: Advancing Technology for Humanity	Dr. Noshawan Shoaib IEEE Chairperson Islamabad Section
15:30 - 16:00	TEA BREAK	