

**19<sup>th</sup> IBCAST 2022: Control & Signal Processing**  
 16-19 August 2022  
 Tentative Technical Program

Updated on:  
 July 4, 2022

	900 – 1030		1100 – 1240		1400 – 1530		1600 – 1730
<b>Day-1</b> August 16, 2022 Tuesday	REGISTRATION			L U N C H B R E A K	Invited Talk	Control-I	Control-II
					Invited Speaker from YTU , Istanbul Turkey	Paper 94 Paper 73	Paper 549 Paper 653 Paper 639 Paper 513 Paper 633 Paper 545
<b>Day-2</b> August 17, 2022 Wednesday	Control-III	T E A B R E A K	Invited Talks	A B R E A K	Invited Talks	Control-IV	Control-V
	Paper 730 Paper 627 Paper 646 Paper 654 Paper 747 Paper 783		Prof. Jian Huang US&T, Beijing, China Dr. Iftikhar Ahmed NUST, Islamabad		Prof. Vaios Lappas N&KU, Athens, Greece	Paper 396 Paper 78	Paper 2 Paper 3 Paper 67 Paper 780 Paper 720 Paper 365
<b>Day-3</b> August 18, 2022 Thursday	Signal Processing-I	T E A B R E A K	Invited Talks	A B R E A K	Signal Processing-II	Signal Processing-III	A I W O R K S H O P
	Paper 58 Paper 79 Paper 774 Paper 296 Paper 595 Paper 499		Dr. Arif Mehmood ITU, Lahore Dr. Athanasios Kapoutsis CERTH , Greece		Paper 46 Paper 244 Paper 284 Paper 221		
<b>Day-4</b> August 19, 2022 Friday	Control-VI	T E A B R E A K	C L O S I N G C E R E M O N Y	D E P A R T U R E T O I S L A M A B A D	Departure to Islamabad		
	Paper 577 Paper 183 Paper 178 Paper 136 Paper 595						

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**Day 1: August, 16 2022**

9:00-12:40	REGISTRATION	
12:40-2:00	LUNCH BREAK	
<b>Control I</b> 2:00-3:30 Chair <b>Dr. Amir Iqbal Bhatti,</b> CUST, Islamabad	<b>Fault tolerant Gain-Scheduling Control Laws Applications to a Passenger Aircraft</b>	<b>Invited Speaker from</b> Yildiz Technical University, Istanbul, Turkey
	<b>22CSP 94</b> : Geometrization of Linearization-Based control Laws on the unit circle	<b>M. Farooq</b> IST
	<b>22CSP 73</b> : Integral Nonlinear Dynamic Inversion based control of Input-derivative Affine System	<b>Surraya Mobeen</b> IST
3:30-4:00	TEA BREAK	
<b>Control II</b> 4:00-5:30 Chair <b>Dr. Shakil Ahmed,</b> CESAT, Islamabad	<b>22CSP 549</b> : Speed Control of direct Torque Induction Motor drive Using Fuzzy Adaptive PID Controller	<b>M. Umer</b> UETTaxila
	<b>22CSP 653</b> : Speed & Thermal Analysis of High Speed Permanent Magnet Synchronous Motor for Electric Vehicle	<b>Qasim Kazmi</b> Air University Islamabad
	<b>22CSP 639</b> : Adaptive Cruise Control for Ground Vehicle using Control Barrier Function Under Weather Based Surface Conditions	<b>Faheem Gulzar</b> CUST
	<b>22CSP 513</b> : Estimation of Real-Time wheeled mobile Robot (Differential Derive) Motion & Pose with Obstacle Avoidance	<b>M. Farrukh</b> Ripah International University
	<b>22CSP 633</b> : Eco-driving Control of Electric Vehicle with Traffic Signal and Battery Dynamic Model	<b>Yasir Naeem</b> CUST
	<b>22CSP 545</b> : : Automatic Control of Hybrid Solar Cell & Diesel Power Distribution System	<b>Faizan Ahmed</b> Air University

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**Day 2: August, 17 2022**

<p style="text-align: center;"><b>Control III</b> 9:00-10:30 <b>Chair</b> <b>Dr. Ghulam Mustafa</b> PIEAS, Islamabad</p>	22CSP 730 : An Improved Hybrid DC Circuit Breaker with Regenerative Capability for HVDC System	Qumrish Arooj CUST ISB
	22CSP 627 : Flexibility Based Coordination Framework for Three- Level Energy Management System	Sadam Hussain Concordia Uni. Montreal Canada
	22CSP 646 : Optimized Dual Loop Control Strategy for Grid-Connected Interleaved Converter	Abdul Mateen PIEAS
	22CSP 654 : Effect of Uncoordinated Electric Vehicle Charging on a Distribution Network	Ahmed Usman Habib University
	22CSP 747 : Converter Control for Photovoltaic Power Generation	Khalid Mehmood Fatima Jinnah Women University.
	22CSP 783 : Robust Hierarchical Non-linear Droop Control Design for the PV Based Island Micro Grid	Arslan Ahmed National Uni. Of Science & Technology
<b>10:30-11:00</b> <span style="color: purple;">TEA BREAK</span>		
<p style="text-align: center;">11:00-12:40 <b>Chair</b> <b>TBD</b></p>	Data-Driven Fault Detection for Large- Scale Industrial Process: A Distributed Framework	<b>Prof. Jiang Huang,</b> US&T, Beijing, China
	Robust Non-Linear Control of Fuel Cell based Plug in Hybrid Electric Vehicles	<b>Dr. Iftikhar Ahmed</b> NUST, Islamabad
<b>12:40-2:00</b> <span style="color: purple;">LUNCH BREAK</span>		
<p style="text-align: center;"><b>Control IV</b> 2:00-3:30 <b>Chair</b> <b>Dr. Iftikhar Ahmed</b> NUST, Islamabad</p>	Autonomy in Aerospace System	<b>Prof Vaios Lappas</b> National & Kapodistrian University of Athens
	22CSP 396 : Approximation of Large Scale System using Equivalent-Norm Frequency Selected Projection	Rahila Malik MUST Mirpur Pakistan
	22CSP 78 : Active Disturbance Rejection Control of a Quadrotor : a Comparative Study	M. Adeel Ahsen CESAT
<b>3:30-4:00</b> <span style="color: purple;">TEA BREAK</span>		
<p style="text-align: center;"><b>Control V</b> 4:00-5:30 <b>Chair</b> <b>Dr. Asif Mughal</b> CESAT, Islamabad</p>	22CSP 2 : Iterative Guidance Scheme for a Satellite Launch Vehicle along a Three-Dimensional Trajectory	Fawad Farooq Ashraf CESAT
	22CSP 3 : Feasibility Analysis of Numerical Integration Techniques Is on Board Flight Control Computer for Impact Point Prediction	Fawad Farooq Ashraf CESAT
	22CSP 67 : Simulation Based Analysis of True North Seeking Technique	Muhammad Ibbtisam Asim IST
	22CSP 780 : GNSS Fault Detection & Exclusion Algorithm for Single Frequency Receiver	Sunnyaha saeed IST
	22CSP 720 : Fault-Tolerant Control of Fighter Aircraft using MPC	Muhammad Faheem CUST Islamabad
	22CSP 365: Robust Optimal Control & Trajectory Tracking of an Unmanned Aerial Aquatic Vehicle(UAAV)	Umair Kamal CESAT

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**Day 3, 18 August 2022**

<b>SP I</b> <b>9:00-10:30</b> <b>Chair</b> <b>TBD</b>	<b>22CSP 58</b> : Approximate Multiplier Based on Low Power 4:2 Compressor for Error Tolerant Application	<b>Muhammad Abdullah Rizwan</b> CESAT
	<b>22CSP 79</b> : Convex & Non-convex Approaches for the Matrix Completion Problem	<b>Ghulam Nabi Ahmed</b> Air University
	<b>22CSP 774</b> : Cooperative Search Strategy of Multiple UAV's Based on Matrix Game	<b>Song Dalei</b> Shenyang University of Technology
	<b>22CSP 296</b> : An Educational Platform for Testing & Evaluating Satellite Control Algorithm in Real Time and Frictionless Environment	<b>Muhammad Kamran Saleem</b> UCP Lahore
	<b>22CSP 595</b> : Modeling & Identification of Power Forecasting Scheme for Real PV System using Gray Box Neural Network Based NARMAX Model	<b>Khubab Ahmed</b> CESAT
	<b>22CSP 499</b> : Building 3-D Perception Model around Moving Vehicle Using Laser and Vision Information	<b>Syed Riaz Un Nabi Jafri</b> NEDUET
<b>10:30-11:00</b> <span style="float: right;"><b>TEA BREAK</b></span>		
<b>SP II</b> <b>11:00-12:40</b> <b>Chair</b> <b>Dr Jamshed Riaz</b> IST, Islamabad	An Overview Of Neural Information Fusion	<b>Dr. Arif Mehmood</b> ITU, Lahore
	Multi Robot coverage path planning to Unlock cooperative swarm of UAVs	<b>Dr. Athanasios Kapoutsis</b> CERTH, Greece
<b>12:40-2:00</b> <span style="float: right;"><b>LUNCH BREAK</b></span>		
<b>SP III</b> <b>2:00-3:30</b> <b>Chair</b> <b>Dr Arif Mehmood</b> ITU, Lahore	<b>22CSP 46</b> : Fast Sparse Magnetic Resonance Image Reconstruction	<b>Maimoona Siddiq</b> Air University
	<b>22CSP 244</b> : Multi Model Face Anti Spoofing Transformer (MFAST)	<b>Abrar Raza Samar</b> FAST Islamabad
	<b>22CSP 284</b> : Deep Network for Smart Precision Agriculture through Segmentation and Classification of Crops	<b>Abrar Ahmed</b> Air University Islamabad
	<b>22CSP 221</b> : Automatic Modulation Recognition using Convolutional Neural Network	<b>M. Sabih Ul Qamar</b> IST
<b>3:30-4:00</b> <span style="float: right;"><b>TEA BREAK</b></span>		
<b>4:00-5:30</b> <b>Chair: TBD</b>	<b>AI Workshop: Using edge AI to build early warning systems for different use cases.</b>	

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<b>Control VI</b> <b>9:00-10:30</b> <b>Chair</b> <b>Dr. Ijaz Kazmi</b> CESAT, Islamabad	<b>22CSP 577</b> : Investigation of Low Back Pain Using Fatigue – A Review	<b>Muhammad Farhan Khan</b> UET Taxila
	<b>22CSP 183</b> : Automatic Anesthesia Depth Control System for Isoflurane Concentration	<b>Akasha Mehr</b> Air University Islamabad
	<b>22CSP 178</b> : Automatic PH Control for Anaerobic Bacteria of Wastewater Treatment of Paper & Pulp Industry	<b>Usama Sarfaraz</b> Air University Islamabad
	<b>22CSP 136</b> : Velocity Control using Torque Inputs to The Motor of a Textile Cross Lapper Machine	<b>Abdullah Nadeem</b> Air University Islamabad
	<b>22CSP 752</b> : An Indoor Air Temperature Prediction Framework for Model Predictive Control In HVAC System	<b>Faizan Hamayat</b> UET Taxila
<b>10:30-11:00</b>	<b>TEA BREAK</b>	
<b>11:00-12:40</b>	<b>CLOSING CEREMONY</b>	
<b>12:40-2:00</b>	<b>LUNCH BREAK</b>	
<b>2:00-5:30</b>	<b>DEPARTURE TO ISLAMABAD</b>	