

# TECHNICAL PROGRAM – 22<sup>nd</sup> IBCAST-2025

## ( Fluid Dynamics Activity )

Venue: Galiyat Hall  
RAMADA Hotel Murree Hills  
Updated: 22 August 2025

	0930-1010	1010-1030	1030-1050	1050-1110	1110-1130	1130-1210	1210-1230	1230-1250	1250-1310	1310-1400	1400-1440	1440-1500	1500-1520	1520-1600	1600-1620	1620-1700	1700-1720	1720-1740	1740-1800					
Day – 1 19 <sup>th</sup> Aug											<b>REGISTRATION</b>					<b>Chaired by Dr. M. Rafique</b>								
																<b>Invited Talk</b>								
																1   2   3								
																Dr. Laurent Dala, Northumria Univ, UK								
																ID-150   ID-188   ID-254								
Day – 2 20 <sup>th</sup> Aug	<b>Chaired by M.S. Mughal</b>					<b>Chaired by Dr. Imran Akhtar</b>					<b>Chaired by M.S. Mughal</b>					<b>Chaired by Prof. F. Mellibovsky</b>								
	<b>Invited Talk</b>				4	5	6	<b>Invited Talk</b>				7	8	9	<b>Invited Talk</b>			10	11	<b>Invited Talk</b>		12	13	14
	Prof. Fernando Mellibovsky, UPC, Spain				ID-169	ID-402	ID-288	Prof. M.S. Mughal, Imperial College, UK				ID-112	ID-159	ID-177	Dr. Messam Abbas Naqvi			ID-370	ID-461	Prof. Fernando Mellibovsky, UPC, Spain		ID-302	ID-347	ID-401
	<b>TEA</b>					<b>LUNCH</b>					<b>TEA</b>					<b>TEA</b>								
Day – 3 21 <sup>st</sup> Aug	<b>Chaired by Dr. B.A. Haider</b>					<b>Plenary Session - I</b>					<b>Plenary Session - II</b>					<b>NS</b>								
	<b>Invited Talk</b>				15	16	17	<b>Invited Talk in CSP Track</b>				<b>To be Announced</b>					<b>NS=No Show (ID-401)</b>							
	Prof. M.S. Mughal, Imperial College, UK				ID-87	ID-205	ID-230	Prof. Ms Xiao Fei, NPU, China																
Day – 4 22 <sup>nd</sup> Aug	<b>CLOSING CEREMONY</b>																							

<b>LEGEND</b>	Session Chair
	Invited Talks
	Contributed Talks
	CESAT Contributed Talks

# 22<sup>nd</sup> IBCAST-2025

## FLUID DYNAMICS ACTIVITY

### ( TECHNICAL PROGRAM )

(Conducted)

DAY-1	SESSION – I [ Chaired by Dr. Muhammad Rafique ]	19 <sup>th</sup> August 2025
1620 – 1700	Invited Talk – Arbitrary Accelerating Flow Response of the Boundary Layer	Dr. Laurent Dala, Northumria Univ, UK <b>[Online]</b>
1700 – 1720	#1 [ID-150] - Two Phase Heat Transfer Enhancement in Twined Tube Steam Generator Design using Numerical Analysis	M. Tahir Waqas PIEAS
1720 – 1740	#2 [ID-188] - Flow and Heat Transfer Improvement Through Bleed-Feed Caonda Surface Fluidic Oscillator	Taha Ahmer CESAT
1740 – 1800	#3 [ID-254] - Numerical Analysis of Two-Phase Flow for Droplet Formation in PMMA Microchannels	Zarfishan Kanwal PIEAS

**DAY - 2 SESSION – I [ Chaired by M.S. Mughal ]****20<sup>st</sup> August 2025**

0930 – 1010	Invited Talk – Bistability of vortex-shedding modes of airfoils at very low Reynolds numbers	Prof. Fernando Mellibovsky, UPC, Spain
1010 – 1030	#4 [ID-169] – A Radial Basis Functions Interpolation Integrated Sharp-Interface Immersed-Boundary Method	Dr. Imran Akhtar NUST
1030 – 1050	#5 [ID-402] – Aerodynamic Improvement of a Car by Ejector-Driven Flow Entrainment with Integrated Rear Wing and Underbody Diffuser	Tamur Ahmad NUST
1050 – 1110	#6 [ID-288] – Aerodynamic Performance and Wake Behavior of Drag-Based Vertical Axis Wind Turbines at Varying Tip-Speed Ratios	Dr. Imran Akhtar NUST
1110 – 1130	<b><u>TEA BREAK</u></b>	

**SESSION – II [ Chaired by Dr. Imran Akhtar ]**

1130 – 1210	Invited Talk – Numerical Approaches in Laminar-Turbulent Transition Prediction and Flow Receptivity in Complex Aerodynamic Flows	Prof. M.S. Mughal, Imperial College, UK
1210 – 1230	#7 [ID-112] – Mechanical and Computational Design of a Smart Flapping Bird	Abdul Samad Kamran NUST
1230 – 1250	#8 [ID-159] – CFD-Based Aerodynamic Analysis of a Blended Wing Body UAV Under Gust Conditions	Hashim Shafiq NUST
1250 – 1310	#9 [ID-177] – Aerodynamic Design of a Roll Control Mechanism Without Deflecting a Control Surface	M. Safi ul Haq Qazi Air University
1310 - 1400	<b><u>LUNCH BREAK</u></b>	

## DAY - 2 SESSION – III [ Chaired by M.S. Mughal ]

1400 – 1440	Invited Talk –	
1440 – 1500	#10 [ID-370] – Transient Numerical Investigation of a PCM-Integrated PV/T System	Nusrat Jabeen NUST
1500 – 1520	#11 [ID-461] – Enhancing Thermal Management in Electronics Using PCM-Based Heatsinks: A Numerical Simulation Approach	Ozair Ghufan Bhatti CESAT
1520 – 1600	Invited Talk – Onset of chaos in the early subcritical regime of counter-rotating Taylor-Couette flow	Prof. Fernando Mellibovsky, UPC, Spain
1600 – 1620	<b><u>TEA BREAK</u></b>	

## SESSION – IV [ Chaired by Prof. Fernando Mellibovsky ]

1620 – 1700	Invited Talk – Flow Control using Local Unsteady Heating: A New Pathway	Dr. Laurent Dala, Northumbria Univ, UK [ <b>Online</b> ]
1700 – 1720	#12 [ID-302] – Sea-Keeping of an Oscillating Cylinder using Radial Basis Functions	Sameer Adnan Ansari NUST
1720 – 1740	#13 [ID-347] – Design and Development of Fan-In-Wing Concept for Aerodynamic Enhancement	M. Taimur Ali Shams NUST
1740 – 1800	#14 [ID-401] – Noise Control of a Deep Cavity by Finite Elastic Panels <b>No Show</b>	Irsalan Arif NUST

**DAY-3      S E S S I O N – I [ Chaired by Dr. Basharat Ali Haider ]****21<sup>st</sup> August 2024**

0930 – 1010	Invited Talk – Laminar-Turbulent Transition Flow Control and Stabilization: Subsonic to Hypersonic Regimes	Prof. M.S. Mughal, Imperial College, UK
1010 – 1030	#15 [ID-87] – Base Flow Topology in Differentially Throttled Linear Aerospike Nozzle	Jehangir Hassan Politecnico di Torino, Italy
1030 – 1050	#16 [ID-205] – POD-LSTM Based Reduced Order Modeling of Fluid Structure Interaction (FSI) problem for Energy Harvesting Applications	Imran Khan NUST
1050 – 1110	#17 [ID-230] – Design and Optimization of a Blended Wing Body UAV Using AI-Driven Surrogate Modeling and CFD Analysis	M. Uns Haider Shah COMSAT
1110 – 1130	<b><u>T E A</u> B R E A K</b>	
1130 – 1300	<b>Plenary Session – I (CSP Track)</b> Digital Twin Technology in Aerospace Systems: From Conception to Implementation	Prof. Ms Xiao Fei, NPU, China
1300 - 1400	<b>L U N C H</b>	
1400 – 1620	<b>Plenary Session - II</b>	