

19th IBCAST 2022: Fluid Dynamics Activity- Technical Plan

Overview		0930 – 1300							I C C F	1400 – 1720									
		0930-1010	1010-1030	1030-1050	1050-1110	1120-1140	1140 – 1220	1220-1240		1240-1300	1300-1400	1400-1420	1420-1440	1440-1500	1500-1520	1520-1540	1540-1600	1600-1640	1640 - 1720
	Day – 1 August 16, 2022 Tuesday	REGISTRATION								Invited Talk	FD Paper			T E A B R E A K	Invited Talk	Invited Talk			
										Jehanzeb Masud <i>Air University</i>	22FD-568	22FD-567	22FD-36		HAITHEM E TAHA <i>University of California, USA</i>	Gene Fleeman <i>USA (Online)</i>			
	Day – 2 August 17, 2022 Wednesday	Invited Talk			T E A B R E A K	Invited Talk	FD Paper			FD Paper					Invited Talk				
		Simon Ching-Man Yu <i>Hong Kong Poly Technical University, HK</i>	22FD-440	22FD-451		22FD-528	Adnan Maqsood <i>NUST</i>	22FD-764		22FD-384	22FD-828	22FD-63	22FD-829		22FD-64	22FD-663	Messam Abbas Naqvi <i>CEO NaqCoDE Technologies</i>		
	Day – 3 August 18, 2022 Thursday	Invited Talk	FD Paper			Invited Talk	FD Paper			FD Paper	Workshop								
		Kevin Jamison <i>CSIR, SA</i>	22FD-611	22FD-455		22FD-287	Imran Akhtar <i>NUST</i>	22FD-91		22FD-694	22FD-220	22FD-725	Kevin Jamison <i>CSIR, SA</i>						
	Day – 4 August 19, 2022 Friday	Invited Talk	FD Paper			Conference Closing Ceremony													
		HAITHEM E TAHA <i>University of California, USA</i>	22FD-428	22FD-439									22FD-524						

930 -1300	REGISTRATION	
1300-1400	LUNCH	
SESSION – I Chaired by: Prof Haithem Taha		
1400 – 1440 Invited Talk	High Alpha Coning Motion Aerodynamics	Prof Jehanzeb Masud <i>Air University</i>
1440 – 1500	Computational Analysis of Shock Tube Operation and Simulation of Mach 6 Shock Tunnel	22FD-568
1500 – 1520	An axisymmetric supersonic nozzle computational flow analysis for a ground test facility	22FD-567
1520 – 1540	Combined Methodology for Conceptual Design of 2D External Compression Inlet and Dual Serpentine Diffuser	22FD-036
1540 – 1600	TEA / COFFEE	
1600 – 1640 Invited Talk	New Theory of Lift: Fluid Mechanics as a Minimization Problem	Prof HAITHEM E TAHA <i>University of California,USA</i>
1640 – 1720 Invited Talk	Design, Development and System Engineering Aspects of Aerosapce Systems	Gene Fleeman USA

SESSION – I Chaired by: Dr Arshad Majeed Mirza		
930 – 1010 Invited Talk	Recent Progress in Computational works on starting jets and plumes	Simon C. M. Yu The Hong Kong Polytechnic University
1010 – 1030	Study on Opposing Jet Simulation of Near Space Supersonic Vehicle Based on DSMC Method	22FD-440
1030 – 1050	Simulations and Analysis of Vortex Driven Combustion Instability	22FD-451
1050 – 1110	Numerical Simulation of Effect of Relative Humidity on Pressure Drop across Crossflow Heat Exchanger with Staggered Tube Arrays at its Extreme Operational Temperature	22FD-528
1120 – 1140	TEA / COFFEE	
SESSION – II Chaired by: Kevin Jamison		
1140 – 1220 Invited Talk	Causation & Control of Flow-Induced Limit-Cycle-Oscillations: Contemporary Aerospace Designs	Dr Adnan Maqsood NUST
1220 – 1240	A CFD-based study for understanding the relationship between geometric parameters of Vertical helical coil with Inner heat transfer coefficient	22FD-764
1240 – 1300	Flow quality characterization of a closed-circuit wind tunnel	22FD-384
1300 – 1400	LUNCH	
SESSION – III Chaired by: Simon Yu		
1400 – 1420	Heat Transfer in Gas-Solid Flows Using Direct Numerical Simulations	22FD-828
1420 – 1440	MOLECULAR DYNAMICS EVOLUTION FOR THERMAL CONDUCTIVITY OF COMPLEX YUKAWA LIQUIDS	22FD-63
1440 – 1500	Particle Resolved Direct Numerical Simulations of Spouted Bed	22FD-829
1500 – 1520	Dynamical Spectra of Two-dimensional Dusty plasmas Using Molecular Dynamics Simulations	22FD-64
1520 – 1540	Computational Fluid Mechanics Model for Numerical Investigation of Frictional Tribo-pair during Mixed Lubrication	22FD-663
1540 – 1600	TEA / COFFEE	
1600 – 1640 Invited Talk	Collaborative Engineering & Digital Twins	Messam Abbas Naqvi CEO, NaqCoDE

SESSION – I Chaired by: Dr Muhammad Rafique		
930 – 1010 Invited Talk	A new paradigm for approaching stores integration with aircraft	Kevin Jamison CSIR, SA
1010 – 1030	CFD study of Liquid slosh in Aerial Vehicle to investigate damping effects	22FD-611
1030 – 1050	Numerical Analysis and Validation of Regenerative Cooling in Liquid Engines	22FD-455
1050 – 1110	Model-based Performance Analysis and Health Monitoring of a Low Bypass Ratio Turbofan Engine	22FD-287
1120 – 1140	TEA / COFFEE	
SESSION – II Chaired by: Prof Kevin Jemison		
1140 – 1220 Invited Talk	Deep learning paradigm in CFD - Aircraft Design Perspective	Imran Akhtar NUST
1220 – 1240	Investigation of performance parameters of Rotating Wings	22FD-91
1240 – 1300	Deep learning-based reduced-order model for turbulent flows	22FD-694
1300 – 1400	LUNCH	
SESSION – III Chaired by: Dr Imran Akhtar		
1400 – 1420	Transmission of Cough Aerosols in a Hospital Room Related to COVID-19	22FD-220
1420 – 1440	Formation of microdroplets in PMMA microfluidic device	22FD-725
1440 – 1720 Workshop	Store integration by analogy: Case studies integrating the Inundu electronics pod with three fast jet aircraft types	Kevin Jamison CSIR, SA

SESSION – I Chaired by: Dr Imran Akhtar

930 – 1010 Invited Talk	Exquisite Stability of Insect Flight	Prof HAITHEM E TAHA <i>University of California, USA</i>
1010 – 1030	Design, Manufacturing and CFD Analysis of Diffuser Augmented Wind Turbine incorporating Bio-inspired Leading Edge Tubercles	22FD-428
1030 – 1050	Interaction mechanism of parallel bionic fish using immersed boundary method	22FD-439
1050 – 1110	Energy Harvesting From a Symmetric Airfoil under Varying Flow Conditions	22FD-524
1120 – 1140	TEA / COFFEE	
<i>Conference Closing Ceremony</i>		

- Please keep visiting www.ibacast.org.pk for latest updates
- In case of any query, please contact:
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