

**20<sup>th</sup> IBCAST 2023: Underwater Technologies**  
**22-25 August 2023**  
**Technical Program (Tentative)**

	1000 to 1100		1130 to 1300		1400 to 1530		1600 to 1800
<b>Day-1</b> August 22, 2023 Tuesday		<b>T E A B R E A K</b>	REGISTRATION	<b>L U N C H</b>	REGISTRATION	<b>T E A B R E A K</b>	Dr. Aleem Mushtaq ID-286 ID-294 ID-105 ID-562
<b>Day-2</b> August 23, 2023 Wednesday	Dr. Muhammad Irfan		ID-275 Vice Adm (R) Ahmed Saeed		Dr. Ahmed Zuri ID-76		Dr. Niaz Ahmed ID-186 ID-158 ID-258
<b>Day-3</b> August 24, 2023 Thursday	Dr. Adnan Qaseem ID-209 ID-605		Dr. Qun Zheng Dr. Adil Malik Workshop		Dr. Qun Zheng Workshop		Dr. Qun Zheng Workshop

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**Day 1: August 22, 2023**

<b>1130 to 1300</b>	<b>REGISTRATION</b>	
<b>1300 to 1400</b>	<b>LUNCH</b>	
<b>1400 to 1530</b>	<b>REGISTRATION</b>	
<b>1530 to 1600</b>	<b>TEA BREAK</b>	
<b>1600 to 1800</b>	Invited Talk: <b>“Challenges in Modern Underwater Warfare”</b>	<b>Dr Aleem Mushtaq</b> PNEC NUST Karachi
	<b>ID-286</b> : “On Efficient Implementation of Signal Processing Algorithms for Underwater Sensor Array Systems”	<b>Umar Hamid</b> CESAT, Islamabad
	<b>ID-294</b> : “A Comparison of Beamforming Approaches using Subarrays for Passive Underwater Detection”	<b>Ameer Ahmed</b> CESAT, Islamabad
	<b>ID-105</b> : “Cascaded Switching Power Amplifier for Imaging SONAR”	<b>Adnan Ameen</b> CESAT, Islamabad
	<b>ID-562</b> : “Implementation of Multi-Channel Data Acquisition System with Gigabit Ethernet Interface, using FPGA”	<b>Ruman Tahir</b> CESAT, Islamabad

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**Day 2: August 23, 2023**

<b>1000 to 1100</b>	Invited Talk: <b>“Underwater Target Classification using Artificial Intelligence”</b>	<b>Dr. Muhammad Irfan</b> NWPU, China
<b>1030 to 1100</b>	<b>TEA BREAK</b>	
<b>1130 to 1300</b>	<b>ID-275</b> : Corrosion Resistance of Cupronickel Material exposed to Marine Environment of North Indian Ocean	<b>Syed Ali Sarfraz</b> SCME, NUST Islamabad
	Invited Talk: <b>“TITAN: A Trail of Errors &amp; Omissions”</b>	<b>Vice Adm (R)</b> <b>Ahmed Saeed HI (M)</b> DG – NIMA Islamabad
<b>1300 to 1400</b>	<b>LUNCH</b>	
<b>1400 to 1530</b>	Invited Talk: <b>“Time-Varying Signal Analysis Techniques for Underwater Acoustics Applications”</b>	<b>Dr. Ahmad Zuri</b> Universiti Teknologi Malaysia
	<b>ID-76</b> : “Estimation of 3 DOF Position Trajectory of AUV by Extended Kalman Filter using Inertial Navigation Sensor”	<b>Commodore Dr. Sajjad Haider</b> PNEC, NUST, Karachi
<b>1530 to 1600</b>	<b>TEA BREAK</b>	
<b>1600 to 1730</b>	Invited Talk: <b>“Advancement &amp; Challenges in Underwater Magneto Inductive Wireless Sensor Networks”</b>	<b>Dr. Niaz Ahmed</b> FAST-NU Islamabad
	<b>ID-186</b> : “A Q-learning-based Multi-hop Energy-efficient and Low Collision MAC Protocol for Underwater Acoustic Wireless Sensor Networks”	<b>Wazir Ur Rahman</b> HEU, China
	<b>ID-158</b> : “Integration of Deep Neural Networks and Local mean decomposition for accurate underwater acoustic channel estimation”	<b>Mansoor Jan</b> HEU , China
	<b>ID-258</b> : “Design And Implementation Model Based Control Strategy For Autonomous Underwater Vehicle (AUV)”	<b>Ghulam Nabi</b> CESAT, Islamabad

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**Day 3: August 24, 2023**

1000 to 1100	Invited Talk : “Design & Manufacturing of Underwater Acoustic Transducer”	Dr. Adnan Qaseem CESAT, Islamabad
	ID-209 : “A Novel Continuous Variable Transmission for Underwater Towed Array Sonar Winching System”	Muhammad Bilal HEU, China
	ID-605 : “Design of Winch System with Automated Cable Winding Mechanism”	Hafiz Adnan Yaseen CESAT, Islamabad
1030 to 1100	TEA BREAK	
1130 to 1300	WORKSHOP “Steam Turbine Design”	Dr. Qun Zheng HEU China
1300 to 1400	LUNCH	
1400 to 1530	WORKSHOP “Steam Turbine Design”	Dr. Qun Zheng HEU China  Dr. Adil Malik NRDI, Karachi
1530 to 1600	TEA BREAK	
1600 to 1730	WORKSHOP “Steam Turbine Design”	Dr. Qun Zheng HEU China  Dr. Adil Malik NRDI, Karachi