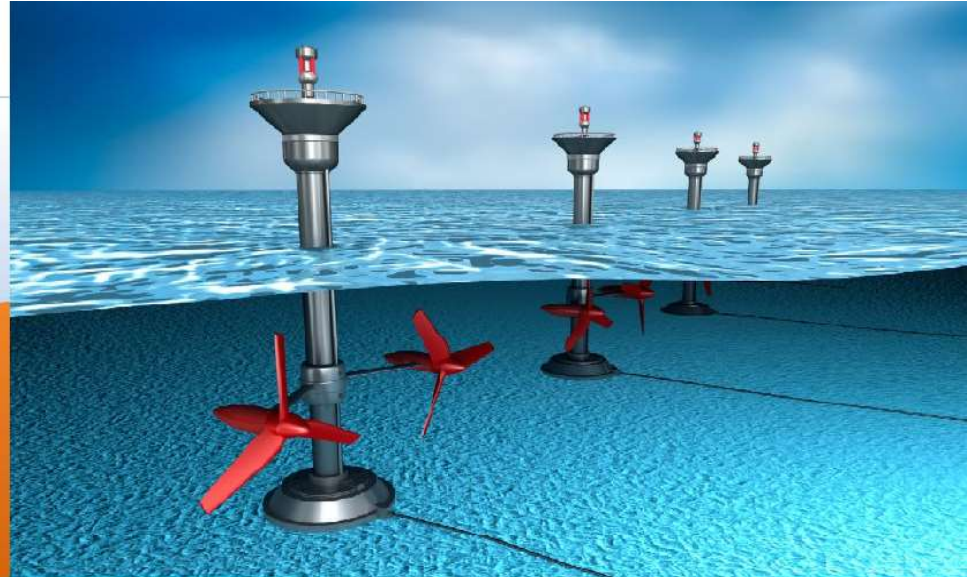
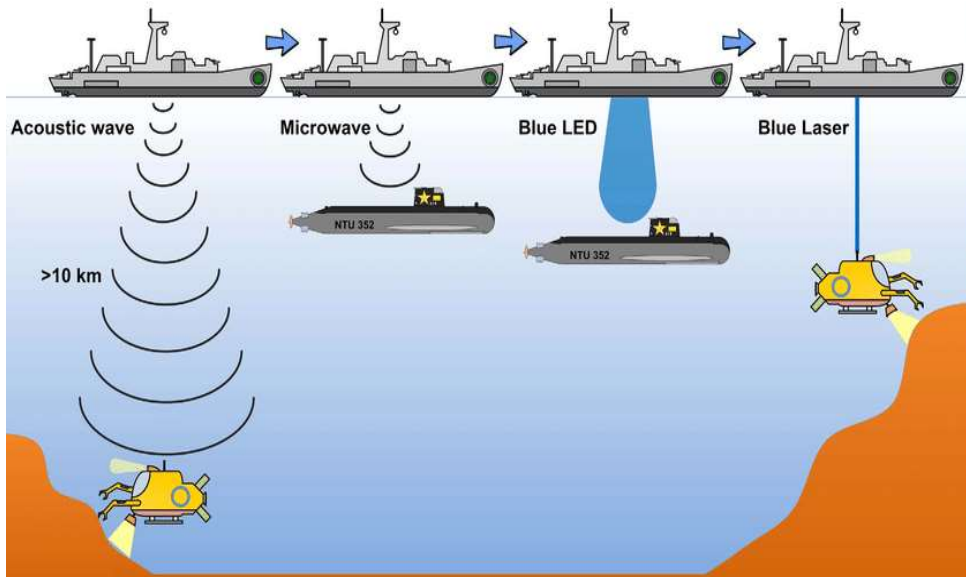




# 18<sup>th</sup> IBCAST 2021: Underwater Technologies

January 12-16, 2021



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## Technical Program (Tentative)

	1000 to 1130 hrs.			TEA				1150 to 1300 hrs.				LUNCH					1400 to 1600 hrs.				
<b>Day-1</b> January 12 <sup>th</sup> , 2021 Tuesday	<b>Underwater Communication</b>			<b>TEA</b>				<b>Underwater Sensor Networks-I</b>				<b>LUNCH</b>					<b>Underwater Sensor Networks-II</b>				
	Dr. Liu Songzuo	21UW 260	21UW 373					Dr. Abdul Wahid		21UW 295	Dr. Lu Ma						Dr. Anthony Pottier	Dr. Niaz Ahmad	21UW 657	21UW 578	
<b>Day-2</b> January 13 <sup>th</sup> , 2021 Wednesday	<b>Underwater Sensors</b>							<b>Marine Sciences</b>									<b>UUV-I</b>				
	Dr. Sajjad Zaidi	21UW 485	21UW 29					Dr. Asif Inam		21UW 161	21UW 50						21UW 576	21UW 585	21UW 606	21UW 575	
<b>Day-3</b> January 14 <sup>th</sup> , 2021 Thursday	<b>Marine Structures</b>			<b>UUV-II</b>				<b>Marine Vehicles</b>													
	21UW 640	21UW 42	21UW 172	21UW 43	21UW 116	21UW 194	21UW 181	21UW 392	21UW 214	21UW 222	21UW 191	21UW 15									
<b>Day-4</b> January 15 <sup>th</sup> , 2021 Friday	<b>Special Session</b>																				
	Dr. David Bradley	Dr. Jonathon Chambers																			

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Day 1: January 12, 2021

0945 to 1000 hrs.	Opening Speech	Dr. Zafar uz Zaman <b>Scientific Secretary IBCAST</b>
1000 to 1130 hrs. Underwater Communication	Subcarrier Modulation Identification for Underwater Acoustic OFDM Signal	Dr. Liu Songzuo <b>Harbin Engineering University, China</b>
	<b>21UW 260:</b> Full-duplex Underwater Optical Communication Systems: A Review	Basit Iqbal <b>HEU, China</b>
	<b>21UW 373:</b> Reduction of PAPR by Convolutional Neural Network with Soft Feed-back in an Underwater Acoustic OFDM Communication	Amir Ali <b>HEU, China</b>
1130 to 1150 hrs.	<b>TEA</b>	
1150 to 1300 hrs. Underwater Sensor Networks-I	Challenges and Routing Issues in Underwater Wireless Sensor Networks	Dr. Abdul Wahid <b>NUST, Islamabad</b>
	<b>21UW 295:</b> An Enhanced Full-Duplex Bidirectional MAC Protocol for Underwater Acoustic Sensors Network	Basit Iqbal <b>HEU, China</b>
1300 to 1400 hrs.	<b>LUNCH</b>	
1400 to 1600 hrs. Underwater Sensor Networks-II	Recent Progress of High-Speed Underwater Acoustic Communications	Dr. Lu Ma <b>Harbin Engineering University, China</b>
	Robust Spectrum Sharing for Underwater Acoustic Communication	Dr. Antony Pottier <b>ISEN Ouest, France</b>
	Underwater Magnetic Communication	Dr. Niaz Ahmed <b>Harbin Engineering University, China</b>
	<b>21UW 657:</b> PSO algorithm for channel estimation in underwater acoustic MSML	Li Tan <b>GMU, China</b>
	<b>21UW 578:</b> Implementation of Synthetic Steering Algorithm for Underwater Acoustic Beam	Muhammad Usman Ghani <b>CEAST, Islamabad</b>

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Day 2: January 13, 2021

1000 to 1130 hrs. Underwater Sensors	Challenges in Underwater Sensor Networks	Dr. Sajjad Zaidi PNEC, Karachi
	21UW 485: Design of a Low Noise High Quality Pre-amplifier	Saqib Ali CEAST, Islamabad
	21UW 29: Underwater Navigation, Localization and Path Planning for Autonomous Vehicles: A Review	Fahad Jalal CEAST, Islamabad
1130 to 1150 hrs.	TEA	
1150 to 1300 hrs. Marine Sciences	United Nations decade of Oceans Science for Sustainable Development (2021-2030). Challenges to Pakistan's Blue Economy	Dr. Asif Inam Bahria University, Karachi
	21UW 161: Renewable Tidal Power Generation Its Significance & Challenges	Muhammad Khizar PNEC, Karachi
1300 to 1400 hrs.	LUNCH	
1400 to 1600 hrs. UUV-I	21UW 50: Low Cost Assembly Design of Unmanned Underwater Vehicle (UUV)	Ghulam Nabi Yar Air University, Islamabad
	21UW 576: Modeling and Simulation of Propulsion Train relating drag and power with operational and physical parameters of UUVs	Muhammad Saad CEAST, Islamabad
	21UW 585: Thrust Estimation for Electric Propulsion System of High Speed Unmanned Underwater Vehicle (HSUUV)	Sabugtageen Ahmed CEAST, Islamabad
	21UW 606: Robust Output Regulation of a Class of Autonomous Underwater Vehicles Implementing Lyapunov Redesign Approach Using Conditional Servocompensator	Muhammad Ahsan CEAST, Islamabad
	21UW 575: Design and Simulation of Steering Controller for Autonomous Underwater Vehicle (AUV)	Ghulam Nabi CEAST, Islamabad

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Day 3: January 14, 2021

1000 to 1130 hrs. Marine Structures	21UW 640: Numerical Evaluation of Pentramaran Hullform for Roll Resonance	Dr. Hassan Khalid PNEC, Karachi
	21UW 42: Optimum Structural Design Study of Marine Machinery Foundation	Saif Ur Rehman CEAST, Islamabad
	21UW 172: Resistance Prediction & Running Attitude of High-Speed Semi-Planing Hull Using Computational Fluid Dynamics	Muhammad Meesam PNEC, Karachi
1130 to 1150 hrs.	TEA	
1150 to 1300 hrs. UUV-II	21UW 43: FSI simulation of water entry impact of three-dimensional rigid AUV under different initial parameters	Ahmad Zamir Chaudhary NPU, China
	21UW 116: Numerical Computation of Wave Forces on Blended Winged-Body Underwater Glider using Panel Method	Naveed Ali NPU, China
	21UW 194: Design of a Peripheral Jet Type High Speed Air Cushion Vehicles	Muzamil Anees PNEC, Karachi
	21UW 181: To Develop a Source Panel Method Tool To Estimate Pressure Distribution Over A 3D Non-Lifting Prolate Ellipsoid of Revolution	Zulqarnain Ali PNEC, Karachi
1300 to 1400 hrs.	LUNCH	
1400 to 1600 hrs. Marine Vehicles	21UW 392: Application of the Methodology for Quick Seakeeping Assessment of Warships for Helicopter Operations in Rough Weather	Dr. Hassan Khalid Pakistan Navy
	21UW 214: Development of a Large Angle Stability Tool for the Ships and Boats	Umair Abbas NUST
	21UW 222: Development of tool to calculate large angle stability and hydrostatics of a ship using MATLAB	Muhammad Raheel PNEC, Karachi
	21UW 191: An Empirical and Numerical Approach to Develop a Single and Multi-phase CFD Methodology for submarines and ship	Dr. Asif Mansoor PNEC, Karachi
	21UW 15: Evolutionary Algorithms based Optimization of Resistance for Marine Vessels	Hammad Khan CEAST, Islamabad

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Day 4: January 15, 2021

<b>1000 to 1130 hrs. Special Session</b>	Derivation of Acoustic Wave Equation	Dr. David Bradley <b>University of Nebraska at Kearney, USA</b>
	Opportunities in Adaptive Signal Processing and Machine Learning	Dr. Jonathon Chambers <b>University of Leicester, UK</b>