

08:30 - 08:45	Virtual Waiting Room
08:45 - 09:00	<b>Welcome from Andrew Holden</b> Chair of ICUA2020 Organising Committee <i>Underwater Group, Dstl Portsdown West, UK</i>
09:00 - 09:15	<b>Invited Speaker</b> Optical studies of acoustic fields <i>Victor Humphrey, ISVR, University of Southampton, UK</i>
09:15 - 10:45	<b>Parallel Session IA - Ambient Noise</b>
09:15 - 09:30	Low-frequency ocean acoustics – measurements from the Lofoten-Vesterålen Ocean Observatory, Norway <i>Shaula Garibbo, University of Bath, UK</i>
09:30 - 09:45	Acoustic signatures of shipping, weather and marine life: comparison of NE pacific and arctic soundscapes <i>Philippe Blondel, University of Bath, UK</i>
09:45 - 10:00	Ambient noise in the Archipelago <i>Jörgen Pihl, FOI, Sweden</i>
10:00 - 10:15	An underwater acoustic modelling framework for Santos Basin, Brazil <i>Fabiano Marcos De Lima, Universidade Federal do Rio de Janeiro, Brazil</i>
10:15 - 10:30	Shipping noise in the Azores: A threat to the Faial-Pico Cetacean community? <i>Ricardo Duarte, Universidade Do Algarve, Portugal</i>
10:30 - 10:45	Long-term very-low-frequency ambient noise properties extracted from CTBTO sites <i>Anthony Eller, Applied Ocean Sciences, US</i>
09:15 - 10:45	<b>Parallel Session IB - Underwater Propagation &amp; Seabed Sediments</b>
09:15 - 09:30	Performance of a 3D parabolic, normal mode and ray model in a complex shallow water environment <i>Tiago Oliveira, University of Aveiro, Portugal</i>
09:30 - 09:45	Local accuracy of 3D parabolic-equation models in cylindrical and cartesian coordinates <i>Sven Ivansson, Sweden</i>
09:45 - 10:00	Finite elements 3D-modeling of t-waves from a south mid-atlantic ridge earthquake <i>Jean Lecoulat, Irenav, France</i>
10:00 - 10:15	New relationships between geophysical and acoustic parameters <i>Nicholas Chotiros, The University of Texas at Austin, US</i>
10:15 - 10:30	The angle of intromission: observations and geoacoustic inference <i>Charles W. Holland, Portland State University, US</i>

	<p>10:30 - Underwater channel characterization for shallow water multi-domain communications 10:45 <i>Jay Patel, Dalhousie University, Canada</i></p>
10:45 - 11:00	Coffee Break
11:00 - 12:00	<p><b>Parallel Session 2A - Acoustic Particle Motion &amp; Bubble Acoustics/Sediment Transport</b></p> <p>11:00 - Vector acoustic properties of underwater sound fields 11:15 <i>Peter Dahl, Applied Physics Laboratory, University of Washington, US</i></p> <p>11:15 - Characterization of seismic noise near offshore wind farm sites in the United States east coast 11:30 <i>Gopu Potty, University of Rhode Island, US</i></p> <p>11:30 - Passive acoustic monitoring of seabed gas seeps - application of beamforming techniques 11:45 <i>Jianghui Li, University of Southampton, UK</i></p> <p>11:45 - Utilisation of underwater acoustic backscatter systems to characterise nuclear waste suspensions remotely 12:00 <i>Serish Tanya Hussain, University of Leeds, UK</i></p>
11:00 - 12:00	<p><b>Parallel Session 2B - Synthetic Aperture Sonar &amp; Automatic Target Recognition</b></p> <p>11:00 - Low frequency SAS: spatial coherence study 11:15 <i>Fabien Novella, Ensta Bretagne, France</i></p> <p>11:15 - Seabed characterization with multi-band interferometric sonar 11:30 <i>Robbert Van Vossen, TNO, Netherlands</i></p> <p>11:30 - Finding similar targets in synthetic aperture sonar images with deep learning 11:45 <i>Narada Warakagoda, Norwegian Defence Research, Norway</i></p>
12:00 - 12:45	<p><b>Parallel Session 3A - Impacts of Sound/Marine Renewables</b></p> <p>12:00 - Field report of impact pile-driving noise in shallow water from 10 years of experience within Germany 12:15 <i>Michael Bellmann, Itap GmbH, Germany</i></p> <p>12:15 - Passive acoustic monitoring of indo-pacific humpback dolphins and indo-pacific finless porpoises in southwest Hong Kong in relation to vessel traffic 12:30 <i>Ka Yi Woo, WWF, Hong Kong</i></p> <p>12:30 - A tool for combining both source and hearing acoustic models to evaluate the impact of anthropogenic activities on marine life 12:45 <i>Ben Clark, Loughborough University, UK</i></p>

12:00 - 12:45	<p><b>Parallel Session 3B - Signal Processing</b></p> <p>12:00 - Beamforming and source localization in the ocean using frequencies below the recorded signal's bandwidth 12:15 <i>David Dowling, University of Michigan, US</i></p> <p>12:15 - An accurate correlation-type doppler estimator in dynamic underwater acoustic channels using comb-type shift-orthogonal signals 12:30 <i>Ali Bassam, Dalhousie University, Canada</i></p> <p>12:30 - Design of a low-complexity miniature underwater three-dimensional acoustical imaging system 12:45 <i>Shuo Wang, The Institute of Acoustics of the Chinese Academy of Sciences, China</i></p>
12:45 - 14:00	Lunch Break
13:30 - 14:00	We invite you to watch video messages from previous AB Wood medal winners
14:00 - 15:15	<p><b>Parallel Session 4A - Radiated Noise</b></p> <p>14:00 - On the characteristics of modal radiation from ducts above and below cutoff 14:15 <i>Ben Baddour, University of Southampton, UK</i></p> <p>14:15 - Sound levels from an oil and gas asset recorded by marine robotics and comparison with established models 14:30 <i>Nikhil Banda, Seiche Ltd, UK</i></p> <p>14:30 - Accounting for sea floor properties in the assessment of underwater noise radiated from ships in shallow water 14:45 <i>Valentin Meyer, Naval Group Research, France</i></p> <p>14:45 - The effect of water surface roughness on the measurement of radiated ship noise 15:00 <i>Victor Humphrey, ISVR, University of Southampton, UK</i></p> <p>15:00 - Propagation loss analysis using ship radiated noise in shallow water 15:15 <i>Yezhen Pang, China Ship Scientific Research Center, China</i></p>
14:00 - 15:15	<p><b>Parallel Session 4B - Sonar Calibration &amp; Sonar Performance Measurement</b></p> <p>14:00 - Ocean noise monitoring for the North Sea: standards for project JOMOPANS 14:15 <i>Jake Ward, National Physical Laboratory, UK</i></p> <p>14:15 - Errors in estimating the arrival direction of sonar signals due to turbulence 14:30 <i>Peter Dobbins, UK</i></p> <p>14:30 - Investigating high frequency acoustic doppler current profiler (ADCP) capabilities in measuring vertical turbulence in tidal channels 14:45 <i>Emma Shouldice, Defence Research and Development Canada, Canada</i></p> <p>14:45 - Estimating the spatial coherence of narrowband underwater acoustic signals 15:00 <i>Roald Otnes, Norwegian Defence Research Establishment, Norway</i></p> <p>15:00 - Opportunities and prospects of using standard telecom cables for long-range distributed real-time underwater acoustic research and applications 15:15 <i>Mohammad Belal, National Oceanography Centre Southampton, UK</i></p>

15:15 - 15:30	Coffee Break
15:30 - 16:45	<b>Parallel Session 5A - Acoustic Metamaterials</b>
15:30 -	Elastic metamaterials
15:45	<i>Richard Craster, Imperial College London, UK</i>
15:45 -	Subwavelength acoustic imaging by deep learning
16:00	<i>Bakhtiyar Orazbayev, EPFL, Switzerland</i>
16:00 -	Experimental observation of directional acoustic stop bands in fluid-solid systems
16:15	<i>Benjamin Pearce, University of Exeter, UK</i>
16:15 -	Designing acoustic cloaks using coordinate changes, homogenization and a genetic algorithm
16:30	<i>Sebastien Guenneau, Centre National Recherche Scientifique (CNRS), UK</i>
16:30 -	Application of acoustic metasurfaces to turbulent flow
16:45	<i>Timothy Starkey, University of Exeter, UK</i>
15:30 - 16:45	<b>Parallel Session 5B - Unexploded Ordnance &amp; Target Scattering</b>
15:30 -	Target echo calculations using the graphics pipeline
15:45	<i>Lennart Bossér, FOI, Swedish Defence Research Agency, Sweden</i>
15:45 -	Data-model comparison of a shallow water sonar system for buried UXO detection
16:00	<i>Jason Philtron, Applied Research Laboratory at the Pennsylvania State University, US</i>
16:00 -	Suppression of specular interface returns for sub-bottom imaging sonar systems
16:15	<i>Dan Brown, Pennsylvania State University, US</i>
16:15 -	New target detection algorithms for volumetric synthetic aperture sonar data
16:30	<i>David Williams, NATO STO CMRE, US</i>
16:30 -	Modification of the time, frequency, and sonar image domain signatures of cylinders due to a material junction
16:45	<i>Timothy Daniel, Nswc-pcd, US</i>
16:45 - 17:00	Conference Close
17:00 - 17:30	Networking