International Conference on Underwater Acoustics 2020

Programme

08:30 - 08:45	Virtual Waiting Room	
	Room 1	**Room 2**
08:45 - 09:00	**Welcome from Andrew Holden** Chair of ICUA2020 Organising Committee *Underwater Group, Dstl Portsdown West, UK*	
09:00 - 09:15	**Invited Speaker** Optical studies of acoustic fields *Victor Humphrey, ISVR, University of Southampton, UK*	
09:15 - 10:45	**Parallel Session 1A - Ambient Noise** Chaired by Steve Robinson & Lian Wang	**Parallel Session 1B - Underwater Propagation & Seabed Sediments** Chaired by Alex Brooker & Philippe Blondel
	09:15 - 09:30 Low-frequency ocean acoustics – measurements from the Lofoten-Vesterålen Ocean Observatory, Norway *Shaula Garibbo, University of Bath, UK*	Performance of a 3D parabolic, normal mode and ray model in a complex shallow water environment *Tiago Oliveira, University of Aveiro, Portugal*
	09:30 - 09:45 Acoustic signatures of shipping, weather and marine life: comparison of NE pacific and arctic soundscapes *Philippe Blondel, University of Bath, UK*	Local accuracy of 3D parabolic-equation models in cylindrical and cartesian coordinates *Sven Ivansson, Sweden*
	09:45 - 10:00 Ambient noise in the Archipelago *Jörgen Pihl, FOI, Sweden*	Finite elements 3D-modeling of t-waves from a south mid-atlantic ridge earthquake *Jean Lecoulat, Irenav, France*
	10:00 - 10:15 An underwater acoustic modelling framework for Santos Basin, Brazil *Fabiano Marcos De Lima, Universidade Federal do Rio de Janeiro, Brazil*	New relationships between geophysical and acoustic parameters *Nicholas Chotiros, The University of Texas at Austin, US*
	10:15 - 10:30 Shipping noise in the Azores: A threat to the Faial-Pico Cetacean community? *Ricardo Duarte, Universidade Do Algarve, Portugal*	The angle of intromission: observations and geoacoustic inference *Charles W. Holland, Portland State University, US*
10:45 -11:00	Coffee Break	
11:00 -12:00	**Parallel Session 2A - Acoustic Particle Motion & Bubble Acoustics/Sediment Transport** Chaired by Jianghui Li & Serish Haussian	**Parallel Session 2B - Synthetic Aperture Sonar & Automatic Target Recognition** Chaired by Narada Warakagoda
	11:00 - 11:15 Vector acoustic properties of underwater sound fields *Peter Dahl, Applied Physics Laboratory, University of Washington, US*	Low frequency SAS: spatial coherence study *Fabien Novella, Ensta Bretagne, France*
	11:15 - 11:30 Characterization of seismic noise near offshore wind farm sites in the United States east coast *Gopu Potty, University of Rhode Island, US*	Seabed characterization with multi-band interferometric sonar *Robbert Van Vossen, TNO, Netherlands*

	11:30 - 11:45 Passive acoustic monitoring of seabed gas seeps - application of beamforming techniques *Jianghui Li, University of Southampton, UK* 11:45 - 12:00 Utilisation of underwater acoustic backscatter systems to characterise nuclear waste suspensions remotely *Serish Tanya Hussain, University of Leeds, UK*	Finding similar targets in synthetic aperture sonar images with deep learning *Narada Warakagoda, Norwegian Defence Research, Norway*
	Room 1	Room 2
12:00 - 12:45	**Parallel Session 3A - Impacts of Sound/Marine Renewables** Chaired by Federica Pace	**Parallel Session 3B - Signal Processing** Chaired by Roald Otnes & Adam Woolley
	12:00 - 12:15 Field report of impact pile-driving noise in shallow water from 10 years of experience within Germany *Michael Bellmann, Itap Gmbh, Germany* 12:15 - 12:30 Passive acoustic monitoring of indo-pacific humpback dolphins and indo-pacific finless porpoises in southwest Hong Kong in relation to vessel traffic *Ka Yi Woo, WWF, Hong Kong* 12:30 - 12:45 A tool for combining both source and hearing acoustic models to evaluate the impact of anthropogenic activities on marine life *Ben Clark, Loughborough University, UK*	Beamforming and source localization in the ocean using frequencies below the recorded signal's bandwidth *David Dowling, University of Michigan, US* An accurate correlation-type doppler estimator in dynamic underwater acoustic channels using comb-type shift-orthogonal signals *Ali Bassam, Dalhousie University, Canada* Design of a low-complexity miniature underwater three-dimensional acoustical imaging system *Shuo Wang, The Institute of Acoustics of the Chinese Academy of Sciences, China*
12:45 - 14:00	Lunch Break	
13:30 - 14:00	We invite you to watch video messages from previous AB Wood medal winners Chaired by Gary Heald & Tony Lyons	
14:00 - 15:15	**Parallel Session 4A - Radiated Noise** Chaired by Kevin Hamson & Nikhil Banda	**Parallel Session 4B - Sonar Calibration & Sonar Performance Measurement** Chaired by Mathieu Colin & Robbert Van Vassen
	14:00 - 14:15 On the characteristics of modal radiation from ducts above and below cutoff *Ben Baddour, University of Southampton, UK* 14:15 - 14:30 Sound levels from an oil and gas asset recorded by marine robotics and comparison with established models *Nikhil Banda, Seiche Ltd, UK* 14:30 - 14:45 Accounting for sea floor properties in the assessment of underwater noise radiated from ships in shallow water *Valentin Meyer, Naval Group Research, France* 14:45 - 15:00 The effect of water surface roughness on the measurement of radiated ship noise *Victor Humphrey, ISVR, University of Southampton, UK* 15:00 - 15:15 Propagation loss analysis using ship radiated noise in shallow water *Yezhen Pang, China Ship Scientific Research Center, China*	Ocean noise monitoring for the North Sea: standards for project JOMOPANS *Jake Ward, National Physical Laboratory, UK* Errors in estimating the arrival direction of sonar signals due to turbulence *Peter Dobbins, UK* Investigating high frequency acoustic doppler current profiler (ADCP) capabilities in measuring vertical turbulence in tidal channels *Emma Shouldice, Defence Research and Development Canada, Canada* Estimating the spatial coherence of narrowband underwater acoustic signals *Roald Otnes, Norwegian Defence Research Establishment, Norway* Opportunities and prospects of using standard telecom cables for long-range distributed real-time underwater acoustic research and applications *Mohammad Belal, National Oceanography Centre Southampton, UK*
15:15 - 15:30	Coffee Break	

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