

Monday June 3

Session	Tutorial/ mini-workshop sessions	room
08:30 - 10:00	Array Beamforming for Passive Acoustic Monitoring	nhow 1
	Updates for using the Low-Frequency Detection and Classification System (LFDCS)	nhow 2
	The DE part: marine mammal density estimation from passive acoustic monitoring data	nhow 3
	Pamguard: updates on Tethys database and Machine Learning	nhow 7
10:00 - 10:30	<i>COFFEE BREAK</i>	
10:30 - 12:00	Array Beamforming for Passive Acoustic Monitoring (cont'd)	nhow 1
	Updates for using the Low-Frequency Detection and Classification System (LFDCS) (contd')	nhow 2
	The DE part: marine mammal density estimation from passive acoustic monitoring data (contd')	nhow 3
	Pamguard: updates on Tethys database and Machine Learning (contd')	nhow 7
12:00 - 13:30	<i>LUNCH</i>	
12:30 - 15:00	Introduction to dive depth detection (3D) method	nhow 1
	Updates for using the Low-Frequency Detection and Classification System (LFDCS) (contd')	nhow 2
	The DE part: marine mammal density estimation from passive acoustic monitoring data (contd')	nhow 3
	Pamguard: updates on Tethys database and Machine Learning (contd')	nhow 7
15:00 - 15:30	<i>COFFEE BREAK</i>	
15:30 - 17:30	Introduction to dive depth detection (3D) method (contd')	nhow 1
	Updates for using the Low-Frequency Detection and Classification System (LFDCS) (contd')	nhow 2
	The DE part: marine mammal density estimation from passive acoustic monitoring data (contd')	nhow 3
	Pamguard: updates on Tethys database and Machine Learning (contd')	nhow 7
19:00 - 21:00	<i>ICEBREAKER</i>	loft 3

Tuesday June 4

Opening	Topic:	Opening & Welcome		
08:30 -	09:00	Sander von Benda-Beckmann		
Session	Topic:	Baleen whale detection and classification	chair: Holger Klinck	co-chair: Clea Parcerisas
09:00 -	09:15	Dawn Parry: <i>Latent Diffusion Model Based Spectrogram Augmentation for Improved Baleen Whale Call Detector Robustness</i>		
09:15 -	09:30	Marlene Meister: <i>A Convolutional Neural Network to detect bowhead whale vocalizations in passive acoustic data from the Arctic Ocean</i>		
09:30 -	09:45	Xavier Mouy: <i>Using deep learning and dynamic visualizations to efficiently detect minke whales across the Atlantic Ocean</i>		
09:45 -	10:00	Andrea Napoli: <i>Domain Shift in Passive Acoustic Monitoring</i>		
10:00 -	10:30	COFFEE BREAK		
Session	Topic:	Detection, classification of echolocation clicks	chair: Tina Yack	co-chair: Isha Bopardikar
10:30 -	10:45	Karlina Merkens: <i>Classification updates for Kogia spp., compared to Narrow-Band High Frequency (NBHF) clicks from other species, and across multiple instrument types.</i>		
10:45 -	11:00	Emily T. Griffiths: <i>Automatic detection of spectra-banded echolocation clicks in Skagerrak, North Sea</i>		
11:00 -	11:15	Thomas Webber: <i>Diving into Deep Learning to find Risso's dolphins Echolocation Clicks in Scottish Waters</i>		
11:15 -	11:30	Taiki Sakai: <i>Beyond performance - advanced techniques and lessons learned from training a neural network to classify visual representations of beaked whale echolocation clicks</i>		
11:30 -	11:45	David Mellinger: <i>Near-real-time detection of odontocete echolocation clicks from a glider</i>		
Poster Speed T	Topic:	Detection, classification of echolocation clicks	chair: Tina Yack	co-chair: Isha Bopardikar
11:45 -	12:00	Marissa Garcia: <i>Evaluation of an abbreviated, fully unsupervised approach for classification of odontocete echolocation clicks</i>		
		Yasmin Viana: <i>Classification performance in different signal types across odontocete's mixed species groups</i>		
		Guy Gubnitsky: <i>Fully Automatic Detection and Classification of Sperm Whale Codas</i>		
		Julie Béésau: <i>Comparing F-POD delphinid and porpoise click detections with ground truth manual annotation</i>		
		Caroline Haas: <i>Using passive acoustic monitoring to investigate northern bottlenose whale (Hyperoodon ampullatus) migration theories within the eastern North Atlantic</i>		
		Lara Berkenbaum: <i>Analysis of cachalot dialogues, click by click, an ethoacoustical approach</i>		
		Franck Malige: <i>Tools for the classification of small NBHF species in southern Chile</i>		
12:00 -	13:30	LUNCH & POSTER SESSIONS		
Session	Topic:	Detection, classification of North Atlantic Right Whales	chair: Susan Parks	co-chair: Kamden Thebeau
13:30 -	13:45	Liz Ferguson: <i>Bounding Box-Based Object Detection for Whale Vocalizations</i> (online)		
13:45 -	14:00	Susan Jarvis: <i>Automated detection and classification of North Atlantic right whale calls using an ensemble of pair-wise classifiers</i>		
14:00 -	14:15	Fabio Frazao: <i>An open-source deep learning model for North Atlantic right whale gunshot identification</i> (online)		
14:15 -	14:30	John Tatarowicz: <i>Neural Network-Based Detection and Classification for North Atlantic Right Whale Upcalls: Performance, Deployment, and Generalization to Unseen Environments</i>		
14:30 -	14:45	Rebecca Cohen: <i>Learning from birds to find whales: Efficacy of transfer learning for detection and classification of North Atlantic right whale upcalls</i>		
Session	Topic:	Novel sensor systems & Applications of DCL (1)	chair: Susan Parks	co-chair: Kamden Thebeau
14:45 -	15:00	Andreia Pereira: <i>A GAM-based classification of ranges of fin whale calls obtained from single seismic sensors</i>		
		Vince Premus: <i>Observations Regarding Pile Driving Noise Measurements on a Towed Hydrophone Array</i>		
		Maëlle Torterotot: <i>CETIROISE : a cetacean passive acoustic observatory in a French Marine Natural Park</i>		
		Mathieu Dupont: <i>Using passive acoustic to better understand dolphins' behaviour around fishing nets in bycatch context</i>		
		Justine Girardet: <i>Passive acoustic in Arctic and Mediterranean seas to compare nictemeral rhythms of cetaceans and anthropophony</i>		
		Ann Allen: <i>Geographical and seasonal occurrence of minke whale boings in the central and western tropical North Pacific</i> (online)		
15:00 -	15:30	COFFEE BREAK		
Session	Topic:	Detection, classification of Odontocetes using mixed call types	chair: Chi-Fang Chen	co-chair: Emily T. Griffiths
15:30 -	15:45	Selene Fregosi: <i>Considerations when applying classification models across recording platforms: A case study with Hawaiian false killer whales</i>		
15:45 -	16:00	Tristan Kleyn: <i>Cumulative prediction yields accurate species ID: presenting new acoustic classifiers for delphinids of the northeast Atlantic</i>		
16:00 -	16:15	Ellen White: <i>Can one model do it all? Exploring the application of multi-sound source detection algorithms to new marine soundscapes</i>		

16:15 - 16:30	Yvonne Barkley: <i>Fine-tuning acoustic classifiers for false killer whale populations: Insights from sensitivity analyses</i>
Session	Topic: Distributed acoustic sensing and autonomous sensors chair: Ana Širović co-chair: Andreia Pereira
16:30 - 16:45	Léa Bouffaut: <i>First glimpses into the frequency response of Distributed Acoustic Sensing to blue and fin whale calls as a function of gauge length</i>
16:45 - 17:00	Quentin Goestchel: <i>Comparison of Detection Techniques for Fin Whale Calls in a Distributed Acoustic Sensing Dataset: A Step Towards Automated Localization</i>
17:00 - 17:15	Matthew Hyer: <i>Robust real-time detection of right whale upcalls using the Medusa acoustic buoy</i>
Poster Speed T Topic:	Novel sensor systems & Applications of DCL (2) chair: Ana Širović co-chair: Andreia Pereira
17:15 - 17:30	Erfan Horeh: <i>A Comparison of Two Distributed Acoustic Sensing Systems for Recording Marine Mammal Vocalizations</i> (online)
	Hervé Glotin: <i>OPALE : a high resolution multistream audiovisual mobile antenna for cetacean ethoacoustics</i>
	Gemma Bekki: <i>Detection and localisation of Sperm Whales using multiple hydrophones on several gliders</i>
	Denise Risch: <i>Glider-based passive acoustic monitoring of marine mammals</i>
	Flore Samaran: <i>Glider and Whales: using acoustic glider to monitor marine mammals</i>
	Theo Bertet: <i>SERCCEL QuietSea, Development and testing of a harbour porpoise detection buoy in Ramsay Sound, Wales</i>
	Justine Girardet: <i>Passive acoustic in Arctic and Mediterranean seas to compare nictemeral rhythms of cetaceans and anthropophony</i>

Wednesday June 5

Session	Topic:	Detection, classification of odontocete whistles	chair: Vincent Janik	co-chair: Yasmin Viana	
08:30 - 08:45		Aexandra Constaratas: <i>Classification of dolphin whistles from the Adriatic Sea</i>			
08:45 - 09:00		Roe Diamant: <i>Robustness assessment of a dolphin whistle detector in the Red Sea and on the DCLDE11 dataset</i>			
09:00 - 09:15		Charlie Hargrave: <i>Bottlenose dolphins show clear geographic variation in whistles when controlling for repeated, stereotypical signals</i>			
09:15 - 09:30		Holly LeBlond: <i>The MIRROR classifier for PAMGuard: Using music information retrieval (MIR) techniques and metadata to differentiate whale calls from shipping noise</i>			
09:30 - 09:45		Christina Day: <i>Use of machine learning and dynamic time warping to categorise large datasets of bottlenose dolphin whistles</i>			
Poster Speed T	Topic:	Detection, classification of odontocete calls	chair: Vincent Janik	co-chair: Yasmin Viana	
09:45 - 10:00		Julie Oswald: <i>How can we improve acoustic classifier performance? A meta-analysis of acoustic species classifiers for odontocetes</i>			
		Nienke van Geel: <i>A preliminary description of Atlantic white-sided dolphin (<i>Lagenorhynchus acutus</i>) vocalisations</i>			
		Arvid Berg: <i>Phase Locked Loops to track harmonic calls in frequency and space</i>			
		Hannah Worthington: <i>A transfer learning approach for unsupervised whistle categorisation</i>			
		Emily McCloskey: <i>Inter burst-pulse interval as a species indicator for Pacific delphinids</i>			
		Ramón Miralles: <i>Dolphin whistle contour extraction in a noisy environment using the pyknogram representation</i>			
		Vincent Janik: <i>Intraspecific geographic variation of rough-toothed dolphin whistles and its influence on acoustic classification</i>			
10:00 - 10:30		<i>COFFEE BREAK</i>			
Session	Topic:	Detection and classification of multiple species	chair: Julie Oswald	co-chair: Nienke van Geel	
10:30 - 10:45		Mark Baumgartner: <i>Detection and classification of marine mammal sounds over a wide band of frequencies</i>			
10:45 - 11:00		Lindsey Kitchell: <i>Advancing Automated Acoustic Monitoring through Self-Supervised Learning: Applications in Marine Mammal Detection and Classification</i>			
11:00 - 11:15		Mark Thomas: <i>Not just research: operational use of deep learning models for PAM</i>			
11:15 - 11:30		Gabriel Dubus: <i>Improving automatic detection with supervised contrastive learning: application with low-frequency vocalizations</i>			
11:30 - 11:45		Daniel Woodrich: <i>A generalized deep-learning approach for difficult signal detection challenges in passive acoustic datasets</i>			
Poster Speed T	Topic:	Detection, classification of baleen whales	chair: Julie Oswald	co-chair: Nienke van Geel	
11:45 - 12:00		Dorian Cazau: <i>First attempt at building a mini DCASE-like data challenge for the DCLDE workshop</i>			
		Tina Yack: <i>Evaluating Temporal and Spatial Variability in North Atlantic Right Whale Upcall Detection and Classification Performance Over a 13-Year Period using PAMGuard Software</i>			
		Tim Awbery: <i>The Application of a North Atlantic-wide Minke Whale Detector to a Large-Scale Recording Array on the West Coast of Scotland</i>			
		David Lechner: <i>Evidence of Synchronized Calls of Likely Balaenoptera Musculus</i>			
		Clea Parserisas: <i>A new deep learning model evaluated on the Antarctic benchmark for baleen whale calls</i>			
		Stephane Chavin: <i>Time-Frequency Exploration of the Repertoire and Evolution of Humpback Whale Songs in the Caribbean Sea</i>			
12:00 - 13:30		<i>LUNCH & POSTER SESSIONS</i>			
Session	Topic:	Artificial intelligence, machine learning and data management	chair: Olivier Adam	co-chair: Lindsey Kitchell	
13:30 - 13:45		Simone Baumann-Pickering: <i>Data Management for Detection, Classification, and Localization</i>			Simone?
13:45 - 14:00		Lindsey Transue: <i>Automatic detection of humpback whale calls: a comparison between a machine-learning convolutional neural network (CNN) detector and the Low-Frequency Detection Classification System (LFDCS)</i>			
14:00 - 14:15		Abdullah Olcay: <i>Deep Learning-Based Underwater Sound Classification Using Stacked Cepstral Features</i>			
Discussion	Topic:	Artificial intelligence, machine learning and data management	chair: Simone Baumann-Pickering	co-chair: Gabriel Dubus	new chair?
14:15 - 15:00		Discussion			
15:00 - 15:30		<i>COFFEE BREAK</i>			
15:30 - 17:30		<i>SOCIAL EVENT - BOAT TOUR</i>			



Thursday June 6

Session	Topic:	Special session dedicated to Prof. Gianni Pavan	chair: Dave Mellinger	co-chair: Quentin Goestchel
08:30 -	08:45	Walter Zimmer/Hervé Glotin: <i>Introduction</i>		
08:45 -	09:00	Walter Zimmer: <i>Signal Processing Considerations for use of compact Volumetric Acoustic Sensors</i>		
09:00 -	09:15	Raphael Machado: <i>The first step in the acoustic classification of beaked whales in the Amazon Mouth Basin</i>		
09:15 -	09:30	Laia Garrobé: <i>Using Variational Auto-Encoders and Temporal Convolutional Networks to classify bioacoustics data from a weakly labelled training set</i>		
09:30 -	09:45	Cameron Martin: <i>Rough-toothed dolphin exposures to U.S. Navy mid-frequency active sonar at the Pacific Missile Range Facility, Hawai'i</i> (online)		
Poster Speed T	Topic:	Application of DCL	chair: Dave Mellinger	co-chair: Quentin Goestchel
09:45 -	10:00	Jörg Rychen: <i>Communication of killer whales engaging in carousel feeding recorded with a large baseline hydrophone array</i>		
		Sidney Espirito Santo: <i>An Initiative for whale Detection in the Santos Basin, Brazil: Through Passive Acoustic Methods</i>		
		Xavier Raick: <i>Preliminary investigation of odontocete acoustics in French Polynesia</i>		
		Greta Jankauskaite: <i>Leveraging citizen science in passive acoustic monitoring of cetaceans</i>		
		Wouter Decrop: <i>Classifying vessels and co-occurrence with mammals using CNNs based on underwater acoustics</i>		
		Ronald Morrissey: <i>Deep Ocean Prey Mapping from bottom mounted bidirectional nodes</i>		
		Samuel Tabbutt: <i>CAB Guardian: Detections and Bearings from a 3 Month Deployment</i>		
10:00 -	10:30	<i>COFFEE BREAK</i>		
Session	Topic:	Localisation using large baseline arrays	chair: Selene Fregosi	co-chair: Heloise Frouin-Mouy
10:30 -	10:45	Eva-Marie Nosal: <i>ATDOA (asynchronous time difference of arrival): TDOA-based method to localize multiple sound sources using autonomous receivers</i>		
10:45 -	11:00	Pina Gruden: <i>MAMBAT: a framework to track and localize multiple marine mammals with wide baseline, stationary arrays</i>		
11:00 -	11:15	Ludovic Tenorio-Hallé: <i>Passive acoustic tracking of Rice's whales in the northeastern Gulf of Mexico using a wide-baseline array</i> (online)		
Session	Topic:	Density estimation of odontocetes	chair: Karlina Merkens	co-chair: Len Thomas
11:15 -	11:30	Jamie Macauley: <i>The influence of toothed whale behaviour on detection probability and the implications for passive acoustic monitoring</i>		
11:30 -	11:45	Isha Bopardikar: <i>Density estimation of Indo-Pacific finless porpoises using passive acoustic monitoring off the Sindhudurg coast of India</i>		
11:45 -	12:00	Hannah Myers: <i>Four years of daily acoustic abundance estimates of fish-eating and mammal-eating killer whales in the Gulf of Alaska</i>		
12:00 -	13:30	<i>LUNCH & POSTER SESSIONS</i>		
Session	Topic:	Density estimation of baleen whales	chair: Tiago Marques	co-chair: Léa Bouffaut
13:30 -	13:45	Danielle Harris: <i>Adapting distance sampling to account for non-ranging instruments: an example with Ocean Bottom Seismometer data for baleen whale density surface estimation</i>		
13:45 -	14:00	Yann Doh: <i>Using stereophonic passive acoustics to study humpback singers' interactions</i>		
14:00 -	14:15	Felix Petersma: <i>Using acoustic spatial capture recapture to estimate call density of Bowhead whales when many detections are false positives</i>		
14:15 -	14:30	Susan Parks: <i>Validation of Passive Acoustic Density Estimation Approaches for Southern Right Whales (Eubalaena australis)</i>		
Session	Topic:	Localisation of North Atlantic Right Whales using the DLCDE2024 dataset	chair: Paul White	co-chair: Gabriela Alongi
14:30 -	14:45	Carolyn Binder: <i>Listening to whales from the sky: How Royal Canadian Airforce sonobuoy data contributes to detection, classification, localization, and density estimation research</i> (online)		
14:45 -	15:00	Li-shuang Hsu: <i>Localization of North Atlantic Right Whales (NARWs) in the Gulf of St. Lawrence using Passive Acoustics</i>		
15:00 -	15:30	<i>COFFEE BREAK</i>		
Session	Topic:	Localisation of North Atlantic Right Whales using the DLCDE2024 dataset (contin chair: Paul White	co-chair: Gabriela Alongi	
15:30 -	15:45	Brian Miller: <i>Analysis of the DCLDE 2024 North Atlantic right whale sonobuoy dataset using PAMGuard</i> (online)		
15:45 -	16:00	Kamden Thebeau: <i>Localizing North Atlantic Right Whales Using a Deformable Sonobuoy Grid</i>		
16:00 -	16:15	Romina Gehrman: <i>North Atlantic right whale detection and localisation using deep learning, nonlinear Bayesian inversion, and sound propagation modelling</i> (online)		
16:15 -	16:30	Alexander von Benda-Beckmann: <i>Bayesian localisation of NARW using an autonomous field of sonobuoys</i>		
Discussion	Topic:	Localisation of North Atlantic Right Whales using the DLCDE2024 dataset	chair: Jim Theriault	co-chair: Alison Laferriere
16:30 -	17:30	Discussion		
18:00 -	01:00	<i>DINNER + PARTY</i>		



Friday June 7

Session	Topic:	Localisation using compact arrays	chair: Pina Gruden	co-chair: Jamie Macauley
08:30 -	08:45	Alison Laferriere: <i>Three-dimensional localization of dolphin sounds from an underwater drifter using short-aperture arrays and acoustic vector sensors</i>		
08:45 -	09:00	Lauren Baggett: <i>Diving Deep: 3D Tracking of Cuvier's Beaked Whale Diving Behavior in Southern California using Fixed Hydrophone Arrays</i>		
09:00 -	09:15	Heloise Frouin-Mouy: <i>Diving behavior and acoustic-based detection range inferred from three-dimensional tracking of beaked whales in the Gulf of Mexico</i>		
09:15 -	09:30	Ildar Urazghildiiev: <i>Estimating the number of animals, animal tracks and the motion parameters of vocalizing marine mammals using compact hydrophone arrays</i>		
Poster Speed T	Topic:	Localisation, calling rates, and density estimation	chair: Pina Gruden	co-chair: Jamie Macauley
09:30 -	10:00	Jim Theriault: <i>North Atlantic Right Whale (NARW) Line-Array Beamformer Performance using Energy Detection and Pitch-Tracking Classification Metrics</i>		
		Loïc Lehnhoff: <i>Free-ranging bearing joint to vocal analysis: application to whistles of short-beaked common dolphins</i>		
		Richard Dréo: <i>Trajectory estimate of baleen whales using a single OBS in the Indian Ocean</i>		
		Jennifer McCullough: <i>Combining visual and acoustic subgroup localization efforts to examine movement of false killer whales</i>		
		Alexandra Carroll: <i>Vocal Behavior of Visually-Verified North Atlantic Minke Whales off Jacksonville, Florida, in Winter</i>		
		Joao Mura: <i>Synchronous aerial and acoustic surveys to estimate porpoise emission rate</i>		
		Irina Tolkova: <i>Localization-Derived Acoustic Detection Function for Cuvier's Beaked Whales Offshore Guam</i>		
		Kalliopi Gkikopoulou: <i>Does the beam pattern matter? Impacts of different assumptions on off axis source level of echolocating clicks for PAM density estimation of deep diving species</i>		
		Len Thomas: <i>Right whale call density estimates from the workshop dataset via spatial capture-recapture</i>		
		Rose Hilmo: <i>Applying distance sampling to estimate densities of fin whale calls recorded by ocean bottom seismometers in the Marianas region</i>		
		Gabrielle Arrieta: <i>Calling Behavior and Localization of Blue Whales in Southern California</i>		
10:00 -	10:30	<i>COFFEE BREAK</i>		
Session	Topic:	Localisation of marine mammals	chair: Eva-Marie Nosal	co-chair: Kallioppi Gkikopoulou
10:30 -	10:45	Gabriela Alongi: <i>Strengths and weaknesses of using DCLDE algorithms to track baleen whales and examine their behavior using long-term acoustic recordings with a large-scale hydrophone array</i>		
10:45 -	11:00	Madalina Matei: <i>Cetacean multi-species detection, classification, localization, and contact collation routine using PAMGuard</i>		
11:00 -	11:15	Luis Matias: <i>A comparison of methods to estimate ranges of fin whale calls using seismic data</i>		
Discussion	Topic:	Contact association in localisation of marine mammals	chair: Doug Gillespie	co-chair: Lauren Baggett
11:15 -	12:00	Discussion		
12:00 -	13:30	<i>LUNCH & POSTER SESSIONS</i>		
Session	Topic:	Density estimation of marine mammals	chair: Danielle Harris	co-chair: Felix Petersma
13:30 -	13:45	Kerri Seger: <i>Bearing method for density estimation: a comparison of performance using CTBTO data at Wake Island and Diego Garcia</i>		
13:45 -	14:00	Ashley Cook: <i>Estimating Rice's Whale (Balaenoptera ricei) Call Density in the Northeastern Gulf of Mexico Using Spatially Explicit Capture-Recapture Analysis</i>		
14:00 -	14:15	Tiago Marques: <i>ACCURATE passive acoustic monitoring density estimation: are we there yet?</i>		
Discussion	Topic:	Density estimation of marine mammals	chair: Danielle Harris	co-chair: Felix Petersma
14:15 -	15:00	Discussion		
15:00 -	15:30	<i>COFFEE BREAK</i>		
Discussion	Topic:	Closing of DCLDE2024 & Outlook to DCLDE2026	chair: Sander von Benda-Beckmann	
15:30 -	16:00	Discussion		
16:00	WORKSHOP CLOSED			