

Monday, 8 July			
08.20	08.50	<b>Welcome</b>	Organisers
08.50	09.30	<b>Keynote: The concept of soundscape from the human and terrestrial perspective</b>	Brigitte Schulte-Fortkamp
<b>Session 1 - Soundscapes</b>			
09.30	09.45	Monitoring fish spawning locations and marine mammal sounds with passive acoustic recorder on a wave glider	Joseph Luczkovich
09.45	10.00	An opportunistic quiet ocean experiment	Christine Erbe
10.00	10.30	<b>COFFEE BREAK</b>	
10.30	10.45	The importance of underwater sounds to gadoid fishes	Anthony Hawkins
10.45	11.00	The contribution of shipping noise to the underwater soundscape: past, present and future	H. Özkan Sertlek
11.00	11.15	Coral chorus: reef soundscape conditions influence corals of diverse life stages	Amy Apprill
11.15	11.30	An atlas of Canada's changing ocean soundscape	Oliver Kirsebom
11.30	11.45	Changes in the use of a winter breeding area revealed by male humpback whale chorusing	Marc Lammers
11.45	12.00	<b>Discussion</b>	
12.00	13.15	<b>LUNCH BREAK</b>	
<b>Session 2 - Hearing, Masking and Effects on Sound Communication</b>			
13.15	13.30	Functional anatomy of extreme hearing from bats and elephants to belugas and bowheads: commonalities, differences, and data gaps	Darlene R. Ketten
13.30	13.45	Differences in measured middle ear transfer functions between cetaceans and mysticetes	Aleksandrs Zosuls
13.45	14.00	Broadband ship noise and its potential impacts on indo-pacific humpback dolphins	Songhai Li
14.00	14.15	Birds of a feather: hearing and behavioural responses to sonar and white noise in Alcid seabirds	Aran T. Mooney
14.15	14.30	Hearing in black sea bass ( <i>Centropristis striata</i> ) and the effects of pile driving signals on their behaviour in controlled environments	Jenni Stanley
14.30	14.45	<b>Discussion</b>	
<b>Session 3 – Effects on Behaviour and Physiology</b>			
14.45	15.00	Controlled experiments of northern bottlenose whales exposed to close and distant navy sonar signals in a pristine environment	Alexander von Benda-Beckmann
15.00	15.15	Physical effects of underwater blast exposure on fishes	Peter Dahl
15.15	15.30	Exposing pearl oysters ( <i>Pinctada maximus</i> ) to a seismic air-gun array source	Mark Meekan
15.30	15.45	<b>Discussion</b>	
15.45	16.15	<b>COFFEE BREAK</b>	

<b>Monday, 8 July</b>		
16.15	18.05	<b>SPEED TALKS / All Non-Coates</b>
18.05		<b>End of Day 1</b>

**Social Program: 18:30 Boot camp on the beach**

<b>Tuesday, 9 July</b>			
08.20	09.00	<b>Keynote: Perception and Acoustic Ecology</b>	Georg Klump
<b>Session 4 - Hearing, Masking and Effects on Sound Communication</b>			
09.00	09.15	Listening space reduction – a measure of the relative reduction of space over which sounds can be detected and recognized in the presence of increased masking noise	David Hannay
09.15	09.30	Minke whales exhibit Lombard effect during natural changes in ocean noises conditions	Tyler Helble
09.30	09.45	Auditory studies with bearded seals: sound sensitivity and the effects of noise	Jillian Sills
09.45	10.00	The peripheral auditory system of mysticetes: sensitivity and directionality	Ted Cranford
10.00	10.15	<b>Discussion</b>	
10.15	10.45	<b>COFFEE BREAK</b>	
<b>Session 5 - Effects on Behaviour and Physiology</b>			
10.45	11.00	The symbiotic relationship between the red hermit crab and its sea anemone is challenged by sound exposure	Marta Solé
11.00	11.15	Respirometry as a tool for assessing metabolic responses of fish to anthropogenic noise	Craig Radford
11.15	11.30	Gentoo penguins ( <i>Pygoscelis papua</i> ) react to underwater sounds	Kenneth Sørensen
11.30	11.45	Startle and avoidance reactions of Cuvier's beaked whales to sudden onset sounds	Vincent Janik
11:45	12.00	Dolphin self-mitigation of noise	James Finneran
12.00	12.15	<b>Discussion</b>	
12.15	13.30	<b>LUNCH BREAK</b>	
<b>Session 6 - Impacts and long-term effects</b>			
13.30	13.45	The marine mammal stress response and its relationship to noise exposure	Dorian Houser
13.45	14.00	Airgun impact agent-based modelling of humpback whale behaviour	Frank Thomsen
14.00	14.15	A population consequences of disturbance model for humpback whales migrating through a commercial seismic survey	Rebecca Dunlop
14.15	14.30	A decision framework to identify populations that may be vulnerable to the population level effects of disturbance	Catriona M. Harris
14.30	14.45	Exposure of marine mammals in the California current: towards an understanding of the population consequences of disturbance	Daniel Costa
14.45	15.00	<b>Discussion</b>	

<b>Tuesday, 9 July</b>			
<b>Session 7 - Acoustics</b>			
15.00	15.15	Using kurtosis and effective quiet to classify human marine sounds as impulsive or continuous	Bruce Martin
15.15	15.30	Application of kurtosis to underwater sound exposure	Roel Müller
15.30	15.45	Measurements of particle motion near the seafloor during construction and operation of the block island wind farm	Gopu Potty
15.45	16.00	Particle motion and sound propagation near boundaries	Mark W. Sprague
16.00	16.15	New marine seismic energy sources for oil exploration: tuned pulse source, marine vibroseis, and wolf spar	Hsing-Zen Lee
16.15	16.30	<b>Discussion</b>	
16.30	18.30	<b>POSTER SESSION and COFFEE BREAK</b>	
18.30		<b>End of Day 2</b>	

**19:00 Public lecture**

<b>Wednesday, 10 July</b>			
<b>Session 8 - Effects on Behaviour and Physiology</b>			
08.20	08.35	Do humpback whales have a startle reflex?	Julie N. Oswald
08.35	08.50	The effect of impulse noise produced by air guns on zooplankton	Robert McCauley
08.50	09:05	The Effects of seismic air gun signals on the statocyst and righting reflex of southern rock lobster ( <i>Jasus edwardsii</i> )	Ryan Day
09.05	09.20	Behavioural effects of sound from marine geophysical surveys on marine mammals; a literature review	Bob Gisiner
09.20	09:30	<b>Discussion</b>	
<b>Session 9 - Soundscapes</b>			
09.30	09.45	Underwater sound mapping: statistics and uncertainty	Christ de Jong
09.45	10.00	Ocean ambient sound trends across the northern hemisphere	Ana Širović
10.00	10.15	Ship noise mapping in UK waters	Adrian Farcas
10.15	10.30	Assessing the contribution of an ocean mapping sonar to the local soundscape	Jennifer Miksis-Olds
10.30	10.45	Assessing cetacean presence and ocean noise in and around one of the busiest waterways in the world: the New York harbour	Melinda Rekdahl
10.45	11.15	<b>COFFEE BREAK</b>	
11.15	11.30	Relationships between bowhead whale source level, calling rates, and wind-driven ambient noise levels	Aaron Thode
11.30	11.45	Long-term soundscape monitoring in the Ross Sea and its marine protected area	Giacomo Giorli
11.45	12.00	<b>Discussion</b>	
12.00	13.30	<b>SPEED TALKS / Coates I</b>	
13.30		<b>End of Day 3</b>	

Thursday, 11 July			
08.20	09.00	<b>Keynote: If you can't hear it, it can't harm you? Ultrasound impacts on humans</b>	Tim Leighton
09.00	10.15	<b>SPEED TALKS – Coates II</b>	
10.15	10.45	<b>COFFEE BREAK</b>	
<b>Session 10 - Effects on Behaviour and Physiology</b>			
10.45	11.00	Characterization of the performance of a fish and human torso physical model to underwater impulse acoustics	Brandon Casper
11.00	11.15	Temporary hearing threshold shifts in harbour porpoises and harbour seals	Ron Kastelein
11.15	11.30	Behavioural responses and sound source avoidance of bottlenose dolphins during multiple exposures to vibratory pile driving sound	Victoria Bowman
11.30	11.45	Effects of sound exposure from a seismic airgun on heart rate, acceleration and depth use in free-swimming Atlantic cod and saithe	Mathias Andersson
11.45	12.00	Influences of pile driving noise exposure on feeding and reproductive behaviours of longfin inshore squid ( <i>Doryteuthis pealeii</i> )	Ian Jones
12.00	12.15	<b>Discussion</b>	
12.15	13.30	<b>LUNCH BREAK</b>	
<b>Session 11 - Acoustics</b>			
13.30	13.45	Application of damped cylindrical spreading to impact pile driving risk assessment	Michael Ainslie
13.45	14.00	Key factors of influence in estimating impact ranges for seismic surveys	Francesca Marubini
14.00	14.15	Underwater noise characterisation of a tidal stream turbine	Denise Risch
14.15	14.30	Particle motion from shipping noise in relation to the auditory sensitivity of fish	Victoria Greenhalg
14.30	14.45	<b>Discussion</b>	
<b>Session 12 - Regulation, Monitoring and Management</b>			
14.45	15.00	Trends and developments in the regulation of impacts of noise on aquatic habitats	Benjamin Colbert
15.00	15.15	Seismic surveys and gray whales near Sakhalin island: the next chapter	Roberto Racca
15.15	15.30	Developing marine environmental quality measures to manage underwater ocean noise and other pressing marine ecosystem stressors	Neville Johnson
15.30	15.45	Auditory thresholds in fishes: towards international standard measurement procedures	Michele B. Halvorsen
15.45	16.00	Discovery of sound in the sea: communicating underwater acoustics research to decision makers	Kathleen Vigness-Raposa
16.00	16.15	<b>Discussion</b>	
16.15	18.15	<b>POSTER SESSION and COFFEE BREAK</b>	

<b>Thursday, 11 July</b>	
18.15	<b>End of Day 4</b>

**Social Program: 21:00 Disco**

<b>Friday, 12 July</b>			
<b>08.20</b>	<b>Keynote: Harmony and discord in international regulation of underwater sound</b>		Jill Lewandowski
<b>Session 13 - Regulation, Monitoring and Management</b>			
09.00	09.15	The importance of sound science for evidence-based decision-making	Tim Carter
09.15	09.30	Progress since the 2016 national marine fisheries service's marine mammal technical guidance	Amy Scholik-Schlomer
09.30	09.45	Comparing the communication and listening space methods to characterise auditory masking for management.	Matthew Pine
09.45	10.00	The effects of vessel slowdowns on foraging habitat of the southern resident killer whales	Krista Trounce
10.00	10.15	<b>Discussion</b>	
10.15	10.45	<b>COFFEE BREAK</b>	
<b>Session 14 - Impacts and long-term effects</b>			
10.45	11.00	The impact of ocean noise pollution on fish and invertebrates	Lindy Weilgart
11.00	11.15	The effects of increased long-term noise as a stress factor for whitefish aquaculture	Yulia Sapozhnikova
11.15	11.30	Effects of human activities on the acoustic habitats and behaviour of bottlenose dolphins	Sarah Marley
11.30	11.45	Assessing the effects of shipping noise on St. Lawrence estuary Beluga: a three-layer, five-year research program	Yvan Simard
11.45	12.00	<b>Discussion</b>	
12.00	13.15	<b>LUNCH BREAK</b>	
<b>Session 15 - Effects on Behaviour and Physiology</b>			
13.15	13.30	Exposure to seismic air gun signals alters behaviour and physiology in the scallop <i>Pecten fumatus</i>	Jayson Semmens
13.30	13.45	The effects of seismic exploration on snow crab movement observed with positioning telemetry on the continental slope of Atlantic Canada	Bruce Martin
13.45	14.00	Exposing fish to a seismic air-gun array source	Miles Parsons
14.00	14.15	Effects of seismic sound on the movement and behaviour of Atlantic cod ( <i>Gadus morhua</i> ) in the Belgian part of the North Sea	Inge van der Knaap
14.15	14.30	Noise alters chemical search behaviour: studying cross-modal effects on behaviour	Louise Roberts
14.30	14.45	<b>Discussion</b>	
14.45	15.00	<b>COFFEE BREAK</b>	
15.00	<b>COATES AWARD &amp; END OF MEETING</b>		

**Social Program: 18:30 Banquet**

<b>SPEED TALKS Monday</b>		
Marta	Bolgan	Biophonical characterization of a Mediterranean submarine canyon using static acoustic monitoring and gliders, a preliminary investigation.
Eran	Brokovich	Strategic environmental assessment as a tool to shape the policy of offshore seismic surveys in Israel
Karen	de Jong	How could we predict effects of noise on fish reproduction
Lucia	Di Iorio	Eco-acoustic scores of biodiversity at the level of the western Mediterranean basin and their implications for large-scale ecosystem monitoring
Lucia	Di Iorio	Understanding the noise exposure profile by marine mammals in the Mediterranean Sea: modelling and measurement with a glider at a basin scale
Paulo	Fonseca	Boat noise effects on meagre ( <i>Argyrosomus regius</i> ): masking and vocal behaviour
Elizabeth	Henderson	Blainville's beaked whales reduce foraging dives prior to the onset of hull-mounted sonar during navy training events
Erwin	Jansen	On the conversion between sound pressure and particle motion
Sergio	Jesus	Acoustic particle velocity measurements near a rocky shore off Cabo Frio island
Oliver	Kirsebom	Acoustic detection and classification using deep neural networks
Anu	Kumar	NOAA and Navy sound monitoring in sanctuaries
Mickaël	Landais	Underwater sound study induced by a seismic marine vibrator source; field test in the North Sea
Klaus	Lucke	Quantitative comparison of noise exposure criteria for cetaceans
Tetyana	Margolina	Reducing uncertainty in passive acoustic recordings: effect of passing ships on vocal behaviour of fin whales
Kaustubha	Raghukumar	Characterization of near-bed particle motion by the noise spotter: a three-dimensional vector sensor array
Andreas	Ruser	Seal scarers can impair harbour porpoise hearing
Andria	Salas	Modelled ontogenetic change in acoustic pressure sensitivity in larval red drum ( <i>Sciaenops ocellatus</i> )
Natalia	Sidorovskaia	Seismic source characterization experiment
Erica	Staaterman	Apparent sensitization to boat noise in wild reef fish
Nelly	Tremblay	Effects of low-frequency noise and temperature on copepod and amphipod performance
Brooke	Vetter	Role of the lagena in fish hearing and its susceptibility to anthropogenic noise

<b>SPEED TALKS COATES 1 Wednesday</b>		
Jennifer	Amaral	Characterization of an impulsive pile driving signal with range during installation of offshore wind turbines
Karthik	Ashok	Comparative study on the anthropogenic noise masking effect on the vocal repertoire of <i>Delphinus delphis</i> and <i>Stenella coeruleoalba</i> in the eastern Aegean Sea, Greece
Edward	Bolger	Effects of acute and chronic ship noise playbacks on the early life stages of the Norway lobster, <i>Nephrops norvegicus</i>
Lukas	Breizler	Unravelling the auditory function of zebrafish otolithic end organs using noise
Daniel	Campbell	Underwater soundscape pattern during high season of nautical tourism in Cabo Frio island, Brazil
Helen	Currie	Group behavioural responses of juvenile common carp ( <i>Cyprinus carpio</i> ) to pulsed tonal stimuli in the presence of masking noise
Sara	De Clerck	Effects of noise on the acoustic behaviour of killer whales, <i>Orcinus orca</i> , in Iceland
Steffen	De Vreese	Comparative morphology of the external ear canal in several species of odontocetes
Ubirajara	Gonçalves de Melo Júnior	Characterization of the acoustic activity of bivalve <i>Perna perna</i> (Linnaeus, 1758)
Annebelle	Kok	Does local variation in acoustic experience affect noise impact on anti-predator behaviour in sand gobies?
Caroline	Magnier	Monitoring of a coastal environment: from the creation of maritime traffic map in a by image processing to the ambient noise analysis and the correspondence with the distribution of boats
Andrew	Meneses	Physiological responses in neotropical fish, produced by changes in the sound pressure level
Muhammad Saladin	Prawirasasra	Underwater monitoring of pinniped vocalisations in the gulf of Riga
Francisca	Rocha Goncalves	Ecoacoustics as tool for environmental awareness
Paula Andrea	Ruiz Ruiz	Anthropogenic noise disrupts sexual behaviour and oxygen consumption in the rock shrimp <i>Rynchocinetes typus</i> (H. Milne Edwards, 1837)
Saeed	Shafiei Sabet	The effects of sound and light on zebrafish and water flea behaviour
Emily	Weigel	The biogenic soundscape: temporal patterns of an estuarine creek near Savannah, Georgia
Fabio	Xavier	The influence of the upwelling regime in rocky shore bioacoustic signature off Cabo Frio Island

## SPEED TALKS COATES 2 Thursday

Laura	Adams	Long-term exposure to anthropogenic noise affects the shore crabs' ( <i>Carcinus maenas</i> ) response to a novel environment
Rafael	Ayala Lara	Noise effects on development of larval zebrafish: impacts of sound exposure on survivability, physiology, stress and behaviour.
Charlotte	Findlay	Predicting potential impacts to marine mammals from acoustic deterrent devices (adds) used in aquaculture
Jeroen	Hubert	Effects of seismic airgun playbacks on Atlantic cod equipped with acoustic tag and accelerometer
Lilla	Jimmerson	The link between sonar and mass strandings of cetaceans
Hilary	Kates Varghese	The effect of multibeam mapping activity on beaked whale foraging in southern California
Giridhar	Malla	Understanding the impacts of anthropogenic noise on the behaviour of fishing cat in the Godavari mangroves
Kelsie	Murchy	Impacts of noise on the behaviour and physiology of marine invertebrates: a meta-analysis
Dominik	Nachtsheim	Behavioural responses of harbour seals to vessel noise in the North Sea
Tobias	Schaffeld	Effects of multiple exposure to pile driving noise on harbour porpoise hearing during simulated flights – a risk evaluation tool
Renee	Schoeman	Where mother-calf pairs go: relative distribution of southern right and humpback whale mother-calf pairs in relation to the soundscape in Algoa Bay, Eastern Cape, South Africa
Craig	Stenton	Effects of pile-driving noise and cadmium co-exposure on the early-life-stage development of the Norway lobster, <i>Nephrops norvegicus</i>
Leah	Trigg	Estimating cumulative sound exposure levels for diving grey seals exposed to shipping noise
Katherine	Whyte	Behavioural responses of seals to pile driving during offshore wind farm construction

## POSTERS Sunday-Tuesday

Gabriela	Alongi	Cetacean response to broadband explosive noise in Kauai
Benoit	Berges	Use of upward active acoustic devices to investigate pelagic communities in offshore wind farms during sound exposure to seismic survey and pile driving
Marta	Bolgan	Biophonical characterization of a Mediterranean submarine canyon using static acoustic monitoring and gliders, a preliminary investigation.
Tetienne	Box	Impulsive noise pressure in UK marine waters: a 4-year time series 2015 – 2018
Heather	Breeze	Fishing for spectrograms: acoustic monitoring in coastal nova scotia, Canada
Eran	Brokovich	Strategic environmental assessment as a tool to shape the policy of offshore seismic surveys in Israel
Elke	Burkhardt	Capturing variability marine soundscapes: elephant island, Antarctica – a case study
Giuseppa	Buscaino	Effect of water gun on echinoderms: biochemical changes in sea urchin ( <i>Arbacia lixula</i> ) and sea cucumber ( <i>Holothuria tubulosa</i> )
Sarah	Canning	Unexploded ordinance clearance – challenges when advising on risk assessment and mitigation
Francesco	Caruso	An array of acoustic platforms to investigate indo-pacific humpback dolphin ( <i>Sousa chinensis</i> ) distribution in a coastal construction zone of China, Hainan island
Maria	Ceraulo	Boat noise and black drum communication in mar Chiquita coastal lagoon (Buenos Aires, Argentina)
Chi-Fang Chen	Chen	Study of Taiwan integrated marine mammal monitoring network (TIMMAMN)
Clément	Chion	Can beluga exposure to shipping noise be reduced despite a traffic increase? an individual-based model to inform a noise abatement process in the St. Lawrence estuary and the Saguenay river
Daniel	Costa	The ocean soundscape of the Anthropocene
Jaclyn	Daly	Acoustic monitoring during a pipeline installation project in cook inlet, Alaska
Karen	de Jong	How could we predict effects of noise on fish reproduction
Giovanni	de Vincenzi	Behavioural changes in small-spotted catshark ( <i>Scyliorhinus canicula</i> ) exposed to shipping and biological sounds in aquarium
Lucia	Di Iorio	Eco-acoustic scores of biodiversity at the level of the western Mediterranean basin and their implications for large-scale ecosystem monitoring
Lucia	Di Iorio	Understanding the noise exposure profile by marine mammals in the Mediterranean Sea: modelling and measurement with a glider at a basin scale
Francisco	dos Santos	Passive acoustic monitoring of a seismic survey in the Brazilian equatorial margin
Jillian	Duggan	Underwater noise levels around the port of Saint John
Ewan	Edwards	Broad-scale acoustic monitoring for cetaceans and underwater noise in relation to offshore wind farm construction in Scotland
Jesper	Elzinga	The full line of mitigation: van Oord's underwater noise mitigation philosophy
Rebecca	Faulkner	Recent advances and challenges in underwater noise impact Assessment
Thomas	Folegot	Agescic: achieve good environmental status for coastal infrastructures construction
Paulo	Fonseca	Boat noise effects on meagre ( <i>Argyrosomus regius</i> ): masking and vocal behaviour
Sylke	Frahnert	Hearing abilities in penguins ( <i>Spheniscidae</i> ): 3d-visualization of the ear morphology
Gisela	Giardino	The final call: signature whistles of dying common dolphin in Argentina (South America)
Martina	Gregoriotti	Can whistles be a tool to discover temporal trends of dolphins'

## POSTERS Sunday-Tuesday

		population?
Thomas	Guilment	Modelling the acoustic repertoire of Cuvier's beaked whale clicks
Danielle	Harris	Using passive acoustic monitoring to measure noise impacts: the importance of quantifying animal detection probability
David	Hedgeland	Offshore drilling sound characterisation - operations and logistics
Floor	Heinis	Assessing the cumulative effects of Dutch offshore windfarm development on the harbour porpoise population of the North Sea and resulting limits for pile driving sound – an update
Elizabeth	Henderson	Blainville's beaked whales reduce foraging dives prior to the onset of hull-mounted sonar during navy training events
Darren	Ireland	Comparison of potential acoustic impacts from marine vibrator technology and air guns
Erwin	Jansen	On the conversion between sound pressure and particle motion
Sergio	Jesus	Acoustic particle velocity measurements near a rocky shore off Cabo Frio island
Guillermo	Jiménez-Arranz	Sound level analysis for an offshore oil and gas drilling activity
Francis	Juanes	Characterizing the anthropogenic soundscapes of fisheries closure areas to inform the recovery of at-risk fish stocks
Ron	Kastelein	Signal detection by harbor seals and harbor porpoises in amplitude-modulated noise
Oliver	Kirsebom	Acoustic detection and classification using deep neural networks
Anu	Kumar	NOAA and Navy sound monitoring in sanctuaries
Stanley	Labak	An overview of the status of the Bureau of Ocean Energy management's (BOEM) projects to characterize the sound fields of oceanographic and high resolution geophysical (HRG) survey sources in shallow water
Frans-Peter	Lam	Effects of continuous active sonar – status update of the 3s3-BRS project
Christine	Lamont	Sounds similar? taking a strategic approach to seismic surveys
Mickaël	Landais	Underwater sound study induced by a seismic marine vibrator source; field test in the North Sea
Kristy	Lawton	Cavitation-induced hearing loss in larval zebrafish: a laboratory model for underwater noise damage
Noam	Leader	"The sea was angry that month": mass stranding of sea turtles on the coast of Israel
Hsing-juh	Lin	Ecosystem effects of an offshore wind farm in the Taiwan coastal zone
Klaus	Lucke	Quantitative comparison of noise exposure criteria for cetaceans
Patrick	Lyne	Habituation of common dolphins to a seismic source
Michael	Macrander	Observations on bowhead whale ( <i>Balaena mysticetus</i> ) movements and behaviour in relation to oil and gas exploration activities
Tetyana	Margolina	Reducing uncertainty in passive acoustic recordings: effect of passing ships on vocal behaviour of fin whales
Manuela	Mauro	Low frequencies noise effects on behaviour of <i>Sparus aurata</i> juveniles
Vincent	Médoc	Assessing the ecological impact of anthropogenic noise from functional response analysis: a case study with freshwater fish
Andrew	Meneses	Acoustic landscape downstream of hydroelectric dams: the case of Luis Eduardo Magalhães power plant
Michael	Noad	Seismic air guns can reduce humpback whale singing effort
Thomas	Norris	The 3-d-v array: a volumetric, digital, towed hydrophone array system capable of sound source bearing and location estimation in 3-D space
Daniel	Nyqvist	Behaviour of spawning cod in relation to marine seismic surveys
Kaustubha	Raghukumar	Characterization of near-bed particle motion by the noise spotter: a three-dimensional vector sensor array
Andreas	Ruser	Seal scarers can impair harbour porpoise hearing
Andria	Salas	Modelled ontogenetic change in acoustic pressure sensitivity in larval red drum ( <i>Sciaenops ocellatus</i> )
Renee	Schoeman	Maintaining marine resources in a country set to unlock its ocean economy
Renee	Schoeman	Southern right and humpback whale mother-calf pair behaviour in

## POSTERS Sunday-Tuesday

		relation to the local soundscape in the Eastern Cape, South Africa
Natalia	Sidorovskaia	Seismic source characterization experiment
Erica	Staaterman	Apparent sensitization to boat noise in wild reef fish
Frank	Thomsen	Agent based models lead to reduction of takes in impact assessments of underwater noise
Frank	Thomsen	State-of-the-science of methods to mitigate impacts of underwater noise from pile driving
Nelly	Tremblay	Effects of low-frequency noise and temperature on copepod and amphipod performance
Brooke	Vetter	Role of the lagena in fish hearing and its susceptibility to anthropogenic noise
Fabio	Xavier	A nonlinear model for rocky shore bioacoustic signature off Cabo Frio Island

## POSTERS Wednesday-Friday

Laura	Adams	Long-term exposure to anthropogenic noise affects the shore crabs' ( <i>Carcinus maenas</i> ) response to a novel environment
Michael	Ainslie	International standardization in underwater bioacoustics
Jennifer	Amaral	Characterization of an impulsive pile driving signal with range during installation of offshore wind turbines
Karthik	Ashok	Comparative study on the anthropogenic noise masking effect on the vocal repertoire of <i>Delphinus delphis</i> and <i>Stenella coeruleoalba</i> in the eastern Aegean Sea, Greece
Rafael	Ayala Lara	Noise effects on development of larval zebrafish: impacts of sound exposure on survivability, physiology, stress and behaviour.
Benoit	Berges	Quantifying harbour porpoise foraging behaviour in CPOD data
Edward	Bolger	Effects of acute and chronic ship noise playbacks on the early life stages of the Norway lobster, <i>Nephrops norvegicus</i>
Lukas	Breizler	Unravelling the auditory function of zebrafish otolithic end organs using noise
Daniel	Campbell	Underwater soundscape pattern during high season of nautical tourism in Cabo Frio island, Brazil
Helen	Currie	Group behavioural responses of juvenile common carp ( <i>Cyprinus carpio</i> ) to pulsed tonal stimuli in the presence of masking noise
Sara	De Clerck	Effects of noise on the acoustic behaviour of killer whales, <i>Orcinus orca</i> , in Iceland
Steffen	De Vreese	Comparative morphology of the external ear canal in several species of odontocetes
Lucia	Di Iorio	Polar coastal soundscapes: mapping benthic biophony, tracking of drifting iceberg sounds & simulation of long-range cracking glaciers using a compact sensor array
Charlotte	Findlay	Predicting potential impacts to marine mammals from acoustic deterrent devices (adds) used in aquaculture
Ubirajara	Gonçalves de Melo Júnior	Characterization of the acoustic activity of bivalve <i>Perna perna</i> (Linnaeus, 1758)
Jeroen	Hubert	Effects of seismic airgun playbacks on Atlantic cod equipped with acoustic tag and accelerometer
Lilla	Jimmerson	The link between sonar and mass strandings of cetaceans
Ron	Kastelein	Harbor porpoise fish-catching ability in relation to offshore pile driving
Hilary	Kates Varghese	The effect of multibeam mapping activity on beaked whale foraging in southern California
Niels	Kinneging	Joint monitoring programme for ambient noise in the North Sea
Annebelle	Kok	Does local variation in acoustic experience affect noise impact on anti-predator behaviour in sand gobies?
Laura	Leiva	Shelter preference and antipredator responses of European lobster juvenile ( <i>Homarus gammarus</i> ) under noise and predation exposure
Caroline	Magnier	Monitoring of a coastal environment: from the creation of maritime traffic map in a by image processing to the ambient noise analysis and the correspondence with the distribution of boats
Giridhar	Malla	Understanding the impacts of anthropogenic noise on the behaviour of fishing cat in the Godavari mangroves
Andrew	Meneses	Physiological responses in neotropical fish, produced by changes in the sound pressure level
Kelsie	Murphy	Impacts of noise on the behaviour and physiology of marine invertebrates: a meta-analysis
Dominik	Nachtsheim	Behavioural responses of harbour seals to vessel noise in the North Sea
Elena	Papale	The soundscape of green turtle foraging grounds: acoustic cue for local ecological condition?
Susan	Parks	Extended duration acoustic tags provide insight into variation in behavioural response to noise by marine mammals
Chiao-Ming	Peng	Impact of Taichung harbor noise on Chinese white dolphins
Marta	Picciulin	The noisy coastal areas of the transboundary northern Adriatic Sea
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		beluga whale auditory system
Claire	Powell	Drivers of soundscape variability in English and Welsh waters
Muhammad Saladin	Prawirasasra	Underwater monitoring of pinniped vocalisations in the Gulf of Riga
Rosalyn	Putland	Effects of sound at navigational locks on fish
Amalis	Riera	Discovery of unexpected high frequency "rasp" sounds produced by sablefish illustrates how little is known about the deep-sea soundscape
Francisca	Rocha Goncalves	Ecoacoustics as tool for environmental awareness
Marcos R.	Rossi-Santos	Acoustic ecology of the humpback whale in Brazil: where anthropogenic sounds overlap complex whale songs?
Rodney	Rountree	Passive acoustic monitoring of haddock in the Gulf of Maine
Paula Andrea	Ruiz Ruiz	Anthropogenic noise disrupts sexual behaviour and oxygen consumption in the rock shrimp <i>rynchocinetes typus</i> (H. Milne Edwards, 1837)
Maria Paz	Sal Moyano	Sound production mechanism in the semi terrestrial crab <i>Neohelice granulata</i> ( <i>Brachyura</i> , <i>Varunidae</i> )
Tobias	Schaffeld	Effects of multiple exposure to pile driving noise on harbour porpoise hearing during simulated flights – a risk evaluation tool
Robert	Schick	Accounting for positional uncertainty when modelling received levels for tagged cetaceans exposed to sonar
Carolyn	Schlundt	Using behavioural and auditory brainstem response methods to test frequency-dependent growth and recovery of TTS in bottlenose dolphins
Renee	Schoeman	Where mother-calf pairs go: relative distribution of southern right and humpback whale mother-calf pairs in relation to the soundscape in Algoa Bay, Eastern Cape, South Africa
Donna	Schroeder	Noise versus space-use conflicts: comparing the relative impacts of marine seismic surveys to commercial fishing activities
Lisa	Schwarz	Combining monitoring and modelling for population management: the western gray whale
Patrick	Schwarzbach	D-PORCCA, new detector/classifier system to study harbour porpoises in the wild
Virginia	Sciacca	An acoustic tracking system to assess potential masking effect by ship noise on sperm whale acoustic activity in the Ionian Sea
Saeed	Shafiei Sabet	The effects of sound and light on zebrafish and water flea behaviour
Shashidhar	Siddagangaiah	Evidence of impact of engine and operating windfarm noise on the singing effort of dolphins
Craig	Stenton	Effects of pile-driving noise and cadmium co-exposure on the early-life-stage development of the Norway lobster, <i>Nephrops norvegicus</i>
Michael	Stocker	Damage potential index: a single numeric expression for noise exposure impacts
Evgeniya	Sysueva	An attempt to investigate the noise immunity of the spatial hearing mechanisms in a bottlenose dolphin
Leah	Trigg	Estimating cumulative sound exposure levels for diving grey seals exposed to shipping noise
Corentin	Troussard	Real time acoustic monitoring of offshore & coastal works for protection of mammals activity
Andrew	Tubelli	Critical analyses of input parameters for mysticete and odontocete middle ear models
Nienke	van Geel	Long-term ambient noise monitoring off eastern Scotland, and tidal influence on MSFD measurements
Martine	van Oostveen	Underwater noise in practice: seismic surveys in the North Sea
Raquel	Vasconcelos	Zebrafish as a model system in hearing research: investigating the species adaptation to the natural soundscape and noise-induced hearing loss
Ursula	Verfuss	A review of noise abatement systems for piling noise, and the potential for their application in Scottish waters
Manuel	Vieira	The effect of boat noise on calling activity in the Lusitanian toadfish
Graham	Voysey	Methodology for determining cochlear position related to frequency encoding

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Katherine	Whyte	Behavioural responses of seals to pile driving during offshore wind farm construction
Benno	Woelfing	Unravelling the effect of vessel noise on harbour porpoise behaviour based on static acoustic monitoring data
Jason	Wood	Killer whale noise exposure model
Andrew	Wright	Noise dosage regimens: can physiological noise impacts on marine mammals be managed temporally?
Fabio	Xavier	The influence of the upwelling regime in rocky shore bioacoustic signature off Cabo Frio island
Wei cheng	Yang	Anthropogenic sound exposure-induced stress in captive dolphins and implications for cetacean health