

Fifth International Workshop on Detection, Classification, Localization, and Density Estimation of Marine Mammals using Passive Acoustics

Timberline Lodge, Mt. Hood, Oregon, USA

SCHEDULE

Saturday 20-Aug-11		Hotel check-in for early arrivals	Front Desk
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Sunday 21-Aug-11	07:00-08:30	breakfast buffet			
	07:30-08:30 12:00-13:00 19:00-21:00	Registration			
Tutorials (concurrent)	08:30-10:00	Ullman Hall Introduction to Detection, Classification, and Localization: Mellinger, Klinck, Roch, Nosal	Barlow Room Introduction to Density Estimation: Thomas, Marques, Harris	Ullman Hall & Barlow room	
	10:00-10:20	coffee break	coffee break	Ullman foyer	
	10:20-12:15	Introduction to DCL, continued	Introduction to DE, continued	Ullman & Barlow	
	12:30-13:30	lunch	lunch	Raven's nest	
	13:30-15:20	Introduction to DCL, continued	Introduction to DE, continued	Ullman & Barlow	
	15:20-15:40	coffee break	coffee break	Ullman foyer	
	15:40-18:00	Introduction to DCL, continued	Introduction to DE, continued	Ullman & Barlow	
	18:30-20:00	dinner buffet for tutorial attendees			

Monday	06:30-08:15		breakfast buffet	Raven's
22-Aug-11	08:30-12:00	Registration		
	08:30		Detection and Classification session. Chair: Y. Simard	Ullman
	08:30-08:40	Mellinger	Introductory comments	Ullman
	08:40-09:00	Simard	Automatic detection and classification of wild beluga whale clicks: performance of a click detecting instrument under various conditions	Ullman
	09:00-09:20	Yack	Automated detection and classification of Dall's porpoise in the California Current ecosystem	Ullman
	09:20-09:40	Oswald	Automatic detection and classification of bowhead and beluga whale calls in the Eastern Chukchi Sea	Ullman
	09:40-10:00	Birleanu	Recurrence Plot Analysis (RPA): a new tool for click detection and clustering clicks into trains	Ullman
	10:00-10:20	Azzara	Assessment of large vessel noise impacts on sperm whales in the Gulf of Mexico	Ullman
	10:20		coffee break	Ullman
	10:40		Detection and Classification session. Chair: M. Weise	Ullman
	10:40-11:00	Moretti	The detection of Cuvier's beaked whales (Ziphius cavirostris) across ocean basins	Ullman
	11:00-11:20	Gérard	Analysis of various beaked whale recordings in eastern Atlantic	Ullman
	11:20-11:40	Ward	Mesoplodon densirostris click characteristics for passive acoustic monitoring	Ullman
	11:40-12:00	DiMarzio	Temporal and spatial distribution of Blainville's beaked whales using passive acoustic detection data	Ullman
DCLDE	12:00-12:20	Abeille	Robust bi-density automatic determination of the inter-pulse interval of the <i>Physeter macrocephalus</i> click	Ullman
Workshop:	12:30		lunch buffet	Raven's
Detection and Classification	13:40		Detection and Classification session. Chair: W. Zimmer	Ullman
Talks	13:40-14:00	Zimmer	Detection and classification of delphinids using clicks and whistles	Ullman
	14:00-14:20	Frasier	Odontocete species identification by analysis of whistle component shape and sequence	Ullman
	14:20-14:40	Johansson	High-resolution whistle detection and frequency tracking using adaptive notch filters	Ullman
	14:40-15:00	Hager	Marine mammal monitoring during a Navy explosives training event off the coast of Virginia Beach, Virginia	Ullman
	15:00-15:20	Freitag	Reducing mutual interference between marine mammals and acoustic modems	Ullman
	15:20		coffee break	Ullman
	15:40		Detection and Classification session. Chair: A.Thode	Ullman
	15:40-16:00	Thode	Automated detection and localization of bowhead whale sounds in the presence of seismic airgun surveys, 2007-2010	Ullman
	16:00-16:20	Mouy	Automatic detection of underwater walrus sounds in the eastern Chukchi Sea	Ullman
	16:20-16:40	Denes	A comparison of marine mammal detections from co-located sub-sampling passive acoustic monitors	Ullman
	16:40-17:00	Renken	An approach to generalized marine mammal vocalization detection based on spectrogram representations	Ullman
	17:00-17:20	Bougher	Improved band-limited marine mammal detector using signal excess	Ullman
	18:30-20:00	d	inner buffet (followed by an outdoor bonfire in amphitheater)	Head house

Tuesday 23-Aug-11	06:30-08:15		breakfast buffet	Raven's
	08:30	Detection and Classification session. Chair: M. Roch		
25-Aug-11	08:30-08:40	Roch	Introductory comments	Ullman
	08:40-09:00	Roch	Recent improvements to the Silbido graph-based whistle detector	Ullman
	09:00-09:20	Eshafanian	Classification of dolphin whistle types using an eigen-whistle algorithm	Ullman
	09:20-09:40	Binder	Passive classification of marine mammal vocalizations using an automatic aural classifier	Ullman
	09:40-10:00	Caillat	A Bayesian approach to study the uncertainty generated by miss-classified acoustic detections	Ullman
	10:00-10:20	Yang	Noise reduction for better detection of beaked whale clicks	Ullman
	10:20	coffee break		
	10:40		Detection and Classification session. Chair: J. Oswald	Ullman
	10:40-11:00	Oswald	Are there species-specific whistle types that can be used to increase classification success?	Ullman
	11:00-11:20	Cholewiak	Description and classification of humpback whale "social" sounds	Ullman
	11:20-11:40	Helble	A normalized event detection algorithm for humpback vocalizations	Ullman
	11:40-12:00	Pace	Classification of humpback whale (<i>Megaptera novaeangliae</i>) calls using Hidden Markov Models	Ullman
	12:00-12:20	Razik	Dictionary learning for automatic humpback song units analysis	Ullman
DCLDE	12:30	lunch buffet		
Workshop:	13:40		Detection and Classification session. Chair: D. Gillespie	Ullman
Detection and Classification	13:40-14:00	Gillespie	Whistle classification using fragmented and partially detected whistle contours	Ullman
Talks	14:00-14:20	Roy	Non-stereotyped wild beluga whale clicks and buzzes: patterns of diversity in frequency, duration, amplitude and time intervals	Ullman
	14:20-14:40	Stevens	Two offshore autonomous acoustic recorders in the northwest Atlantic: analysis and results	Ullman
	14:40-15:00	Chmelnitsky	Beluga whale, <i>Delphinapterus leucas</i> , vocalizations and their relation to behaviour in the Churchill River, Manitoba, Canada	Ullman
	15:00-15:20	Monnin	Acoustic monitoring of <i>Physeter macrocephalus</i> : does the moon impact the number of clicks?	Ullman
	15:20	coffee break		Ullman
	15:40	Detection and Classification session. Chair: R. Gisiner		Ullman
	15:40-16:00	Klinck	Passive autonomous acoustic monitoring of beaked whales using Seaglider™	Ullman
	16:00-16:20	Matsumoto	QUEphone: An acoustic float for marine mammal monitoring	Ullman
	16:20-16:40	Robbins	A software engine for low-power remote-deployable real-time acoustic detection and classification of marine mammals using open-source tools	Ullman
	16:40-17:00	Rankin	Practical considerations for acoustic detection, classification, and localization of marine mammals during shipboard line-transect surveys	Ullman
	18:30-20:00		dinner buffet	Raven's

Posters

Posters will be on display all week in the BARLOW room Designated poster sessions, when authors will be with their posters, are:

Wednesday 15:20 - 16:20

Thursday 10:00 - 11:00

Barklev	ROCCA 'n Rollin: Real-time species identification of false killer whales	
- ,	during a cetacean survey of the Hawaiian Islands in 2010	
Capurro	Vocal behavior of killer whales in Punta Norte, Argentina	
Dodge	Ishmael 2.0: An improved software package for detection and localization of marine mammal vocalizations	
Doh	Radial velocity estimation using doppler effect on sperm whale clicks	
Doh	Modeling sperm whale sound emission by Green's function	
Hager	Acoustic detection of Atlantic bottlenose dolphin (<i>Tursiops truncatus</i>) vocalizations using SSQ53F sonobuoys modified for autonomous data	
Harris	Estimating the abundance of Balaenoptera musculus in the northern Indian Ocean using vocalizations recorded by a single hydrophone	
Hurst	DMON as the basis of a low-power, low-noise passive acoustic detection and monitoring system	
Jacobson	Evaluation of an automated beaked whale detector using multiple validation and assessment methods	
Kumar	Using passive acoustics to monitor the presence of marine mammals during naval exercises	
Miller	Blue and fin whale abundance and acoustics in the Southern Ocean	
Nieukirk	Increase in peak Fin whale calling levels observed in the mid-Atlantic ocean	
Unger	Analyzing and Layering Multiple Sensors Using Streams-Based Analytics for Real Time High Probability Results	
Oswald	Whistle contour extraction and classification using ROCCA (Real-time Odontocete Call Classification Algorithm), a new module	
Ward	Passive acoustic sperm whale density estimation in the Tongue of the Ocean, Bahamas	
Weirathmueller	Automatic detection methods for fin whale calls at different locations in the NE Pacific Ocean	
Wennerberg	Novel approaches to calculating a C-POD detection function for the harbour porpoise (<i>Phocoena phocoena</i>)	
	Dodge Doh Doh Hager Harris Hurst Jacobson Kumar Miller Nieukirk Unger Oswald Ward Weirathmueller	Capurro Vocal behavior of killer whales in Punta Norte, Argentina Dodge Ishmael 2.0: An improved software package for detection and localization of marine mammal vocalizations Doh Radial velocity estimation using doppler effect on sperm whale clicks Doh Modeling sperm whale sound emission by Green's function Hager Acoustic detection of Atlantic bottlenose dolphin (Tursiops truncatus) vocalizations using SSQ53F sonobuoys modified for autonomous data Estimating the abundance of Balaenoptera musculus in the northern Indian Ocean using vocalizations recorded by a single hydrophone Hurst DMON as the basis of a low-power, low-noise passive acoustic detection and monitoring system Evaluation of an automated beaked whale detector using multiple validation and assessment methods Kumar Using passive acoustics to monitor the presence of marine mammals during naval exercises Miller Blue and fin whale abundance and acoustics in the Southern Ocean Nieukirk Increase in peak Fin whale calling levels observed in the mid-Atlantic ocean Analyzing and Layering Multiple Sensors Using Streams-Based Analytics for Real Time High Probability Results Oswald Whistle contour extraction and classification using ROCCA (Real-time Odontocete Call Classification Algorithm), a new module Ward Passive acoustic sperm whale density estimation in the Tongue of the Ocean, Bahamas Automatic detection methods for fin whale calls at different locations in the NE Pacific Ocean Novel approaches to calculating a C-POD detection function for the harbour

	06:30-08:15		breakfast buffet	Raven's
Wednesday 24-Aug-11	08:30		Localization session. Chair: E. Nosal	Ullman
	08:30-08:40	Nosal	Introductory comments	Ullman
	08:40-09:00	Nosal	Tracking minke whales: Results from the 2011 DCL localization dataset	Ullman
	09:00-09:20	Glotin	Physeter distance estimation using sub-band Leroy transmission loss model	Ullman
	09:20-09:40	Gassmann	Three dimensional localization of odontocetes using seafloor multi-channel acoustic recording packages	Ullman
	09:40-10:00	Urazghildiiev	Detection, classification, and localization of marine mammals	Ullman
	10:00		coffee break	Ullman
	10:20		Localization session. Chair: T. Norris	Ullman
	10:20-10:40	Norris	A semi-automated, interactive tool for reviewing acoustic data collected during towed hydrophone, line-transect surveys for density estimation	Ullman
	10:40-11:00	Macaulay	Fine scale passive acoustic tracking of narrow band high frequency clicks	Ullman
	11:00-11:20	Wilcock	Application of double-difference earthquake relocation techniques to refining marine mammal tracks	Ullman
	11:20-11:40	Valtierra	A simple autocorrelation method for multipath localization techniques	Ullman
DCLDE	11:40-12:00	Josso	Dolphin localization and motion estimation with a single hydrophone multipath propagation	Ullman
Workshop: Localization	12:15		lunch buffet	Raven's
Talks	13:40		Localization session. Chair: H. Glotin	Ullman
& Poster Session	13:40-14:00	Glotin	Sparse coding of minke whale boings for particle filtering tracking from bottom mounted hydrophones	Ullman
1	14:00-14:20	Urazghildiiev	Statistical properties of a TDOA-bsed localization algorithm	Ullman
	14:20-14:40	von Benda- Beckmann	Comparative study of towed array baselines for instantaneous localization of marine mammals	Ullman
	14:40-15:00	Mathias	Depth and range tracking of sperm whales in the Gulf of Alaska using a two- element vertical array, satellite and bioacoustic tags	Ullman
	15:00-15:20	Yack	Real-Time detection and tracking of beaked whales using a towed hydrophone	Ullman
	15:20-16:20	coffee break & poster session 1 (see page 4 for titles)		
	16:20		Data session. Chair: M. Roch	
	16:20-17:20	open	Discussion of Workshop Data Set Results	Ullman
	18:30-20:00	di	nner buffet (followed by an outdoor bonfire in amphitheater)	Ullman

Thursday	07:00-08:30		breakfast buffet	Raven's	
25-Aug-11	08:30	Density Estimation session. Chair: J. Barlow			
	08:30-08:40	Barlow	Introductory comments	Ullman	
	08:40-09:00	Barlow	Use of tagging data to estimate trackline probabilities for beaked whales on line-transect surveys with towed hydrophones	Ullman	
	09:00-09:20	Moretti	The efficacy of towed array based line transect survey of Blainville's beaked whales using baseline data from the AUTEC array	Ullman	
	09:20-09:40	Küsel	Detection function estimation by means of propagation modeling for population density estimation studies	Ullman	
	09:40-10:00	Prieto González	Estimating the density of Antarctic blue whales (Balaenoptera musculus intermedia) using their calls	Ullman	
	10:00-11:00		coffee break & poster session 2 (see page 4 for titles)	Barlow room	
DCLDE	11:00		Density Estimation session. Chair: W. Au	Ullman	
Workshop: Density	11:00-11:20	Au	Distribution of deep diving echolocating odontocetes around the island of Kauai, Hawaii	Ullman	
Estimation Talks	11:20-11:40	Martin	Towed and fixed passive acoustic density estimation for minke whales in Hawaii	Ullman	
& Poster Session	11:40-12:00	Akamatsu	Direct counting of porpoises using stereo acoustic event recorders	Ullman	
2	12:00-12:20	Theriault	Sorting out numbers: How many animals are clicking?	Ullman	
	12:20		lunch buffet	Raven's	
	13:40		Density Estimation session. Chair: L. Thomas	Ullman	
	13:40-14:00	Thomas	Correcting for bias due to animal depth in passive acoustic line transect estimates of density	Ullman	
	14:00-14:20	Harris	'Cheap DECAF': Estimating density from fixed passive acoustic sensors when you can estimate distance to detections	Ullman	
	14:20-14:40	Marques	Estimating cetacean density: If you can't see them then listen!	Ullman	
	14:40-15:00	Castellote	Developing a model for an MPA network for the conservation of cetaceans based on passive acoustic montinoring technologies	Ullman	
	15:00-15:20	Leary	Deriving call counts from automated classifiers in challenging noise conditions	Ullman	
	15:20-15:40	Ponce	Observed nonlinear relationship between visual counts and call detection rates of gray whales (<i>Eschrichtus robustus</i>) in Laguna San Ignacio, Mex.	Ullman	
	16:00		end of workshop		

Friday 26-Aug-11	6:00 AM	Hood-to-Coast Race in Timberline's front parking lot and all down the mountain	
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