

8th DCLDE Workshop

Marine Mammals and Acoustics

Official Program

4 – 8 June 2018 – FRANCE

<http://sabiod.univ-tln.fr/DCLDE/>



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Tuesday 5 June

8:00 – 8:50am	Registration
8:50 – 9:00am	Welcome from Prof Olivier Adam, Organizer, Sorbonne University, France
Oral session #1	Topic: New Technology Chair: Marie Roch
9:00 – 9:20am	Florent Le Courtois: <i>Sparse hypothesis for time-frequency representation: application to the detection of the vocalization of marine mammals</i>
9:20 – 9:40am	Dave Mellinger: <i>Enhancements to Software for Detection, Classification, and Localization</i>
9:40 – 10:00am	Douglas Gillespie: <i>PAMGuard: New features and future directions</i>
10:00 – 10:20am	Peter Dugan: <i>The Raven-X Software Package: A scalable high performance computing framework for the analysis of large bioacoustic sound archives</i>
10:20 – 10:40am	<i>Coffee break</i>
Oral session #2	Topic: Detection Chair: Flore Samaran
10:40 – 11:00am	Ana Širović: <i>Detection of blue whale D calls from long-term recordings in southern California</i>
11:00 – 11:20am	Maëlle Torterotot: <i>Automated detection of non-stereotyped whale calls using dictionary-based representations: application to blue whale D-calls</i>
11:20 – 11:40am	Lea Bouffaut: <i>Passive Stochastic Matched Filter for Antarctic Blue Whale call detection: performance analysis on highly variable SNR ground-truth dataset</i>
11:40 – 12:00pm	Franck Malige: <i>Joint analysis of pulsation and peak frequency : a model for examining frequency decrease in pulsed blue whale song</i>
12:00 – 12:20pm	Rose Wade: <i>Characterizing Blue and Fin Whale Populations Using a Large Ocean-Bottom Seismometer Array</i>
Poster session #1	Topic: Detection and communication (Authors have 2 min to orally pitch their poster)
12:20 – 12:22pm	Elena Papale: <i>Year-round acoustic patterns of bottlenose dolphins and interaction with anthropogenic activities in the Central Mediterranean Sea</i>
12:22 – 12:24pm	Juliana Lopez Marulanda: <i>Who is vocalizing? an innovative detection-localization system to study dolphins communications and social behaviours</i>
12:24 – 12:26pm	Marion Poupard: <i>Ethoacoustics: a new model based on automatic clustering, applications on Pantropical Spotted dolphin whistles during whale watching</i>
12:26 – 12:28pm	Tess Gridley: <i>Acoustic signalling predicts surface behaviour in common bottlenose dolphins (<i>Tursiops truncatus</i>)</i>
12:28 – 12:30pm	Odile Gérard: <i>Acoustic Presence of True's Beaked Whale in Eastern Atlantic Ocean, Southwest of Portugal?</i>
12:30 – 12:32pm	Fabio Cassiano: <i>Introducing DeteClic: a user-friendly and comprehensive automated click detector to monitor odontocetes</i>
12:32 – 12:34pm	Julien Ricard: <i>DyniClick: open-source toolbox for stereo click detection, analysis and tracking</i>
12:34 – 12:36pm	Jennifer Wladichuk: <i>Ambient soundscape of grey whale feeding grounds in British Columbia, Canada</i>
12:36 – 1:50pm	<i>Lunch</i>
Oral session #3	Topic: Density Estimation Chair: Len Thomas
1:50 – 2:10pm	Len Thomas: <i>Evaluation of methods for estimating call density from static acoustic sensors: bowheads in the Beaufort</i>
2:10 – 2:30pm	Tiago Marques: <i>Estimating density of fin whales and beaked whales outside Navy Ranges</i>
2:30 – 2:50pm	Danielle Harris: <i>Estimating cetacean detection probabilities using slow-moving autonomous ocean vehicles: an example with Blainville's beaked whales</i>
2:50 – 3:10pm	Kalliopi Gkikopoulou: <i>Go Deep to get High – Depth dependent detectability of Blainville's beaked whales and the use of underwater autonomous vehicles as an acoustic platform for density estimation – A simulation approach</i>
3:10 – 3:30pm	Gerald D'Spain: <i>Environmental Calibration for Density Estimation using Directional Sensor Systems</i>
3:30 – 3:50pm	<i>Coffee break</i>
Oral session #4	Topic: Classification Chair: Dorian Cazau
3:50 – 4:10pm	Mark Thomas: <i>Marine mammal species classification using Convolutional Neural Networks</i>
4:10 – 4:30pm	Randall Balestrieri: <i>WaveLetNet: Deep learning of chirplet and other wavelet for optimal marine mammals bioacoustical representation</i>
4:30 – 4:50pm	Daniel Wolff: <i>Heuristic Classification of Hydrophone Recordings</i>
4:50 – 5:10pm	Tyler Helble: <i>Improving marine mammal classification using context from multiple hydrophones</i>
5:10 – 5:30pm	Peter Achi: <i>Using Gaussian Discriminative Analysis and Neural Networks to Classify Odontocete Acoustic Encounters</i>
IceBreaking evening	
7:00 – 10:00pm	Invitation to the IceBreaking evening at Sorbonne University, Jussieu, Zamansky Tower, 24 ^e floor

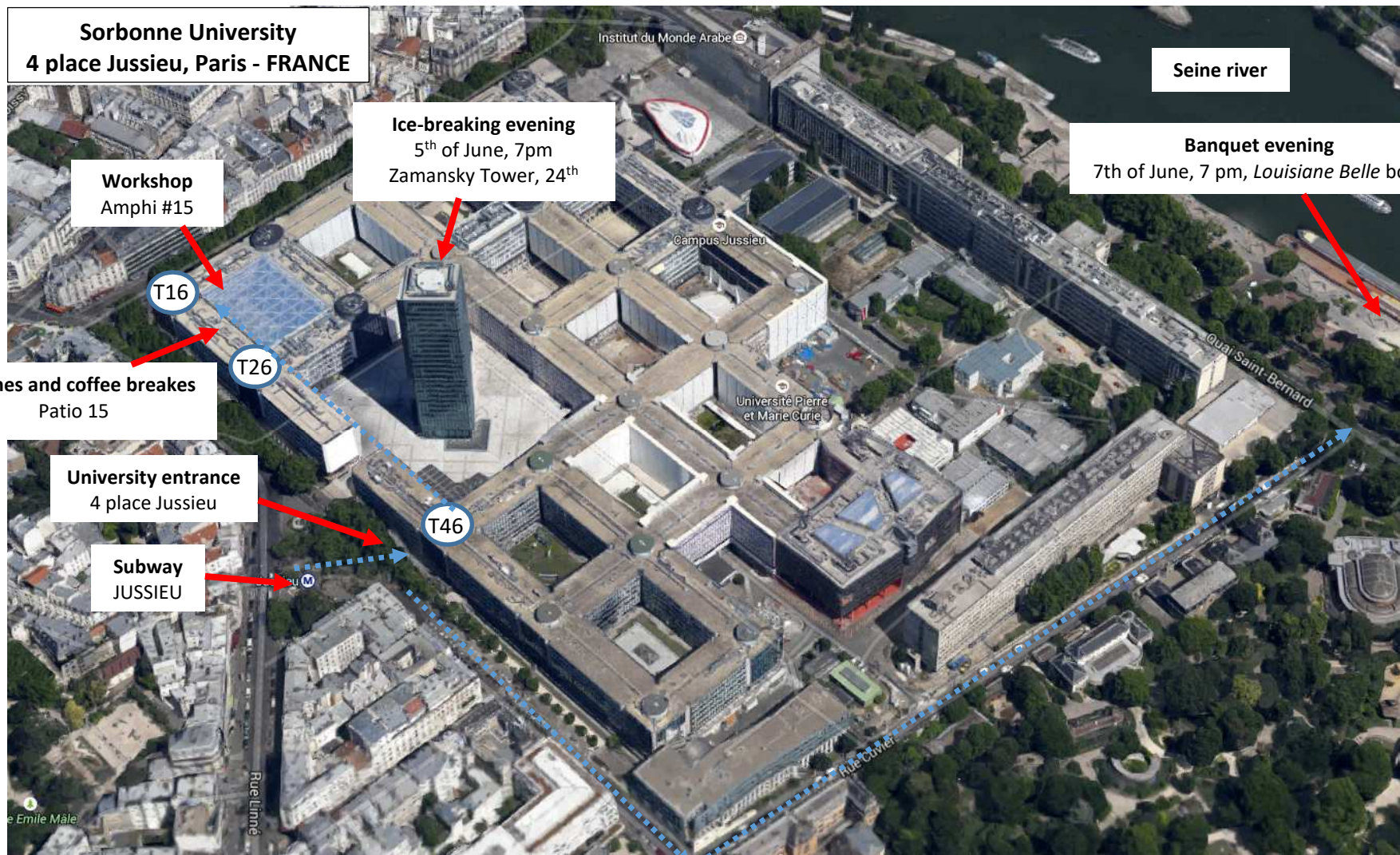
Oral session #5	Topic: Localization	Chair: Hervé Glotin
9:00 – 9:20am	Alexander Conrad: <i>Use of the Double-Difference Method to Improve Bowhead Whale Localizations from Autonomous Vector Sensor Recorders</i>	
9:20 – 9:40am	Ludovic Tenorio-Hallé: <i>A double-difference method for high-resolution acoustic tracking using a deep-water vertical array</i>	
9:40 – 10:00am	Alfie Anthony Treloar: <i>Towed array shape estimation for passive acoustic monitoring from a wave-propelled USV</i>	
10:00 – 10:20am	David Lechner: <i>Comparison of Error Sources in TDOA Algorithms</i>	
10:20 – 10:40am	Hervé Glotin: <i>1 MHz SR high definition 3D tracking of wild amazon river dolphins with JASON tiny array, results and perspectives</i>	
10:40 – 11:00am	Yvonne Barkley: <i>Improving location estimates for sperm whales from towed linear array data</i>	
11:00 – 11:20am	<i>Coffee break</i>	
Oral session #6	Topic: Baleen whales	Chair: Kate Stafford
11:20 – 11:40am	Denise Risch: <i>Acoustic detections of minke whales in Northeast Scotland</i>	
11:40 – 12:00pm	Mark Baumgartner: <i>Near real-time delivery of baleen whale acoustic presence information collected with long-endurance autonomous platforms</i>	
12:00 – 12:20pm	Thomas Guilment: <i>Joint detection-classification of baleen whale sounds using sparse representations</i>	
12:20 – 12:40pm	Michelle Tanalega: <i>Application of machine learning techniques to identify foraging calls of baleen whales</i>	
Poster session #2	Topics: Detection, Classification, Soundscapes (Authors have 2 min to orally pitch their poster)	
12:40 – 12:42pm	Aaron Thode: <i>Using nonlinear time warping to estimate North Pacific Right Whale calling depths in the Bering Sea</i>	
12:42 – 12:44pm	Ann Allen: <i>Optimization of a general power law algorithm for detection of humpback whale calls in heterogeneous acoustic datasets</i>	
12:44 – 12:46pm	Vincent Roger: <i>AutoEncoder for Marine Mammal Bioacoustics</i>	
12:46 – 12:48pm	Divna Djokic: <i>Humpback whale song theme recognition tool</i>	
12:48 – 12:50pm	Dorian Cazau: <i>Bi-class classification of humpback whale sound units against complex background noise with deep convolution neural network</i>	
12:50 – 12:52pm	Charles Vanwynsberghe: <i>Labeling method of the South Indian Ocean marine soundscape and associated database</i>	
12:52 – 12:54pm	Franck Malige: <i>Acoustical analyses of submarine explosions in northern Chile on long term continuous recordings</i>	
12:54 – 1:50pm	<i>Lunch</i>	
Oral Session #7	Topic: Beaked whales	Chair: Odile Gérard
1:50 – 2:10pm	Shannon Rankin: <i>Beaker BANTER: Application of Compound Classification to Beaked Whales</i>	
2:10 – 2:30pm	Natalia Sidorovskaia: <i>Unsupervised clustering approach to classify beaked whale's clicks</i>	
2:30 – 2:50pm	Susan Jarvis: <i>The Spatio-Temporal Distribution of Cuvier's Beaked Whale Buzz Detections off San Clemente Island, California</i>	
2:50 – 3:10pm	Alba Solsona Berga: <i>Gaussian mixture models for automatic classification of Cuvier's beaked whale echolocation clicks</i>	
3:10 – 3:30pm	Jay Barlow: <i>3D acoustic dive tracking of Cuvier's beaked whales using a nested array of drifting hydrophone recorders</i>	
3:30 – 3:50pm	Simone Baumann-Pickering: <i>Geographic differences in Blainville's beaked whale echolocation clicks</i>	
3:50 – 4:10pm	<i>Coffee break</i>	
Oral Session #8	Topic: Odontocete clicks	Chair: Yann Doh
4:10 – 4:30pm	Jennifer Keating: <i>An acoustic survey of beaked whale and Kogia in the main Hawaiian Islands using drifting recorders</i>	
4:30 – 4:50pm	Karlina Merckens: <i>Kogia click characteristics: new recordings, new locations, new instruments, new detectors</i>	
4:50 – 5:10pm	Jens Koblitz: <i>Toothed whale classification- incorporating echolocation click properties and global distribution</i>	
5:10 – 5:30pm	John Hildebrand: <i>A method for annotation of odontocete echolocation clicks</i>	
5:30 – 5:50pm	Kaitlin Frasier: <i>Machine learning methods to guide odontocete echolocation insights from large datasets</i>	
5:50 – 6:10pm	Tina Yack: <i>Inter and Intra Specific Variation in Echolocation Signals Among Odontocete Species in Hawaii, the Northwest Atlantic and the Temperate Pacific</i>	

Thursday 7 June

Oral session #9	Topic: Detection	Chair: Julie Patris
9:00 – 9:20am	Harald Yurk: <i>The effects of ambient noise and propagation loss on the acoustic detection of killer whales in inshore waters in British Columbia, Canada</i>	
9:20 – 9:40am	Julien Ricard: <i>Long term Cachalot and noise monitoring on stereo sonobuoy Bombyx</i>	
9:40 – 10:00am	Kristian Beedholm: <i>Finding a needle in a whole bunch of needles: targeted species discrimination based on differential template outputs</i>	
10:00 – 10:20am	Pina Gruden: <i>Automated extraction of dolphin whistles in the presence of missed detections and false alarms</i>	
10:20 – 10:40am	Daniel Wolff: <i>Heuristic Classification of Hydrophone Recordings</i>	
10:40 – 11:00am	<i>Coffee break</i>	
Oral session #10	Topic: Humpback whales	Chair: Isabelle Charrier
11:00 – 11:20am	Olivier Adam: <i>From anatomy to sounds: description of the sound generator</i>	
11:20 – 11:40pm	Anjara Saloma: <i>Humpback whale calves' vocal repertoire in the Sainte Marie channel breeding ground</i>	
11:40 – 12:00pm	Eduardo Mercado: <i>Spectral spacing by singing humpback whales</i>	
Poster session #3	Topics: Methods, Detection, Localization (Authors have 2 min to orally pitch their poster)	
12:00 – 12:02pm	Abel Ho: <i>Sound Source Separation of Overlapping Signals through High-resolution Beamforming</i>	
12:02 – 12:04pm	Paul Nguyen: <i>Using Deep Learning method to classify marine mammals</i>	
12:04 – 12:06pm	Valentin Gies: <i>Qualilife-JASON 1 MHz SR multichannel recorder, luxmeter and low power wake-up detector</i>	
12:06 – 12:08pm	Taiki Sakai: <i>Automated burst pulse detection using Pamguard Whistle & Moan Detectors</i>	
12:08 – 12:10pm	Flore Samaran: <i>Using acoustic glider to explore seamont in western Indian Ocean and looking for baleen whales</i>	
12:10 – 12:12pm	Ilse Van Opzeeland: <i>On the reliability of acoustic annotation and automatic detections of Antarctic blue whale calls under different acoustic condition</i>	
12:12 – 12:14pm	Sonia Español Jiménez: <i>An automatic method for a detection of blue whale calls</i>	
12:14 – 12:16pm	Marie Sauvêtre: <i>Acoustic analyses of Sperm whales vocalizations: indication of vocal signature and cultural transmission of vocal repertoire</i>	
12:16 – 12:18pm	Maxence Ferrari: <i>Cachalot ultra high frequency near field multichannel analysis</i>	
12:18 – 12:20pm	Pierre Cauchy: <i>Monitoring of the distribution of sperm whales using PAM gliders</i>	
12:20 – 1:30pm	<i>Lunch</i>	
Oral Session #11	Topic: Density estimation	Chair: Danielle Harris
1:30 – 1:50pm	Carlos de Obaldía: <i>Abundance Estimation for Passive Acoustic Monitoring of Cetaceans using Click-based Correspondence Analysis</i>	
1:50 – 2:10pm	Erin Oleson: <i>Progress in phases: using passive acoustics to estimate false killer whale abundance in Hawaiian waters</i>	
2:10 – 2:30pm	Jamie Macaulay: <i>Fine scale harbour porpoise distribution and density in a tidal rapid habit using PAM</i>	
2:30 – 2:50pm	Goldie Phillips: <i>Estimating the density of blue whales in the Southern California Bight: reducing uncertainty in cue rate and detection probability</i>	
2:50 – 3:10pm	<i>Coffee break</i>	
Oral Session #12	Topic: Right whales	Chair: Tiago Marques
3:10 – 3:30pm	Hansen Johnson: <i>Probability of passive acoustic detection of right whales from autonomous platforms equipped with a real-time monitoring system</i>	
3:30 – 3:50pm	Kaitlin Palmer: <i>WhaLeNet: Using a standard neural network to improve the generalisability of a right whale upcall detector</i>	
3:50 – 4:10pm	Christopher Chin: <i>Supervised vs unsupervised feature learning for right whale upcall detection in convolutional neural networks</i>	
Challenge Session #1	Topic: Challenge	Chair: Hervé Glotin
4:10 – 5:30pm	Presentation of the results obtained by the participants to the challenge	
Banquet evening		
7:00 – 1am	Cruise on the Seine river. Come on board (before 7:45pm) on the <i>Louisiane Belle</i> boat, on <i>Quai St Bernard</i> , in front of the <i>rue Cuvier</i>	

Friday 8 June

Oral session #12	Topic: Behavior	Chair: Olivier Adam
9:00 – 9:20am	Karin Dolan: <i>Beaked whale group deep dive behavior from passive acoustic monitoring</i>	
9:20 – 9:40am	Jennifer Wladichuk: <i>Active communication space for beluga whales in Cook Inlet, Alaska</i>	
9:40 – 10:00am	Mathilde Massenet: <i>Acoustic discrimination of fish versus mammal-eating killer whales by long-finned pilot whales: evidence with playback experiments</i>	
10:00 – 10:20am	Lucie de Barluet: <i>Discrimination of conspecific sounds in Risso's dolphins (Grampus griseus)</i>	
10:20 – 10:40am	Matthias Hoffmann-Kuhnt: <i>Whistling By – Issues with Identifying Moving Vocalising Dolphin</i>	
10:40 – 11:00am	<i>Coffee break</i>	
Oral session #13	Topic: human activities	Chair: Jérôme Sueur
11:00 – 11:20am	Amanda Debich: <i>Contributions of shipping and seismic survey noise to the underwater soundscape of the northern Gulf of Mexico</i>	
11:20 – 11:40am	Nancy Di Marzio: <i>Temporal distribution and abundance of Cuvier's beaked whales with and without mid-frequency active sonar (MFAS) off San Clemente Island, California</i>	
11:40 – 12:00am	Sander von Benda-Beckmann: <i>Using acoustic recorders and satellite tags in controlled sonar exposure experiments – estimating the acoustic dose in relation to behavioural responses</i>	
Poster session #4	Topics: Methods, Detection, Localization (Authors have 2 min to orally pitch their poster)	
12:00 – 12:02pm	Aaron Thode: <i>How the spacing between distributed sensors biases source level distribution and call density estimates, and how to correct for it</i>	
12:02 – 12:04pm	Simon Vallez: <i>Automatic Localization of Sperm Whales and Sei Whales during Marine Seismic Survey</i>	
12:04 – 12:06pm	Maxence Mercier: <i>Dynimax: a browser to stretch, to scrub and to visualize bioacoustical structures</i>	
12:06 – 12:08pm	Thomas Norris: <i>The 3-D-V Array: A volumetric, digital towed hydrophone array system capable of bearing and location estimation in 3-D space</i>	
12:08 – 12:10pm	Michael Reinwald: <i>Bone conducted sound in a dolphins' mandible: Experimental investigation of elastic waves mediating information on source localization</i>	
12:10 – 12:12pm	Jim Theriault: <i>Catching more than lobsters in traps: Can citizen science be used to protect the North Atlantic right whale? human activities</i>	
12:12 – 12:14pm	Jennifer Trickey: <i>Beaked whales use alternating echolocation regimes at the start of foraging dives</i>	
12:14 – 1:50pm	<i>Lunch</i>	
Oral Session #14	Topic: Localization	Chair: Bazile Kinda
1:50 – 2:10pm	Aaron Thode: <i>Using 'azigrams' to display directional information from DIFAR sonobuoys</i>	
2:10 – 2:30pm	Jim Theriault: <i>Correlogram processing for Odontocete click tracking using multiple independent autonomous acoustic sensors</i>	
2:30 – 2:50pm	Dean Hawthorne: <i>Validation of a near-field beamforming acoustic localization algorithm for large baseline marine arrays using in-situ playbacks</i>	
2:50 – 3:10pm	Julie Patris: <i>Monohydrophone 3D localization of baleen whales</i>	
3:10 – 3:30pm	Richard Dréo: <i>Tracking Antarctic Blue Whales over a mountainous area with an Ocean Bottom Seismometers array: dealing with 3D propagation effects</i>	
3:30 – 4:00pm	<i>Coffee break</i>	
Closing session	Topic: Discussion	Chair: Olivier Adam
4:00 – 5:00pm	Closing discussion: <i>Results, next session</i>	



Sorbonne University
4 place Jussieu, Paris - FRANCE

Seine river

Ice-breaking evening
5th of June, 7pm
Zamansky Tower, 24th

Banquet evening
7th of June, 7 pm, *Louisiane Belle* boat

Workshop
Amphi #15

T16

T26

Lunches and coffee breaks
Patio 15

University entrance
4 place Jussieu

T46

Subway
JUSSIEU

Rmq: to access the Amphi #15, you have to walk inside the University

- Use the main entrance (at 4 place Jussieu, in front of tower 46)
- Make a left to the Towers 26 and 16

Rmq: to access the boat, you can walk outside the University

- Exit by the main entrance of the University (in front of tower 46)
- Make a left on rue Jussieu and a left again on rue Cuvier
- Go straight down on rue Cuvier until the red light
- Go across Quai St Bernard, the boat will be right in front of you