

**Mardi 10 mai - Axe 2 - Unités  
Multimodales/Multicomposants**

**8h45** - Welcome café

**9h-9h30** - Situer la question du jour  
(multimodalité) - Marie Montant

**9h30 - 10h** - Studying multimodal  
communication in the wild - Francesca  
Cagnacci

**10h - 10h30** - Multimodalité des signaux  
de communication monkeys - Juliette  
Aychet

**10h30 - 11h** - Comment traiter le  
chevauchement/l'onset des signaux  
multimodaux ? - Lise Habib Dassetto

**11h - 12h** - Discussion

Déjeuner

**13h30h-14h** - Boucle perception-action et  
rôle des rythmes moteurs dans la  
perception de la parole humaine-  
Benjamin Morillon

**14h-14h30** - Anatomie du tractus vocal et  
production de la parole humaine :  
variations inter-individuelles et variations  
inter-linguistiques - Dan Dediu

**14h30 - 15h15** - Preliminaries to non-human  
primate vocalizations analysis (in relation  
to the anatomy of the vocal tract) - Louis  
Jean Boë

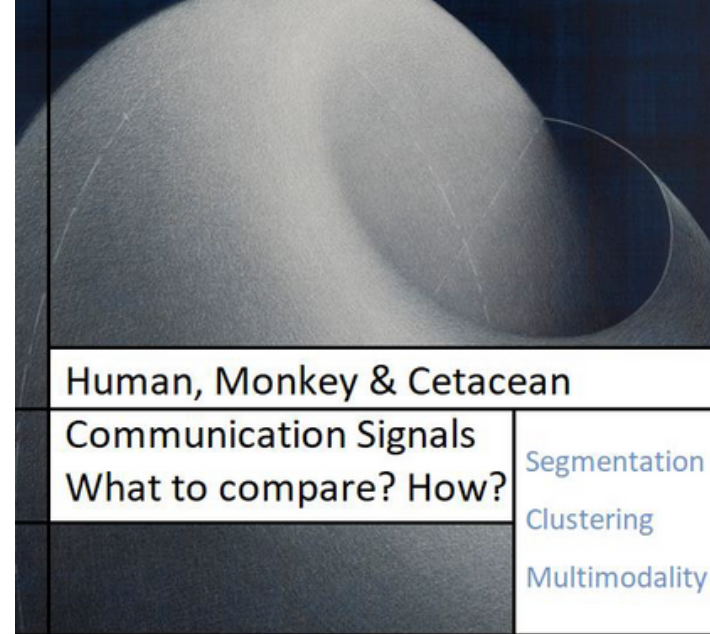
Pause café

**15h45- 16h15** -Reconnaissance cross-  
modale de formes proto-symboliques  
(audio-visuelles) - Konstantina  
Margiotoudi

**16h15 - 16h45** - La reconnaissance  
multimodale d'objets - des principes et  
des lois exportables aux signaux de  
communication ? - Anne Kavounoudias

**16h45-17h15** - Multimodalité, intermodalité  
et binding. Clarification de ces notions -  
Salomé Fazi

**17h30- 18h30** - Discussion finale  
Qu'a-t-on appris ? Que peut-on  
transposer d'un champ à un autre ?  
Qu'est-ce qu'une unité (grain)/répertoire  
? Rôle du corps ? Rôle des silences, du  
rythme ? Umwelten et pragmatique ...  
What's next ?



Human, Monkey & Cetacean

Communication Signals  
What to compare? How?

Segmentation  
Clustering  
Multimodality

**TRANSDISCIPLINARY  
WORKSHOP  
(FRENCH/ENGLISH)**

**9 & 10TH OF MAY, 2022**

**INSTITUT D'ETUDES AVANCEES  
D'AIX-MARSEILLE UNIVERSITE  
(IMERA), 2 PLACE LEVERRIER,  
13004, MARSEILLE**

# ABOUT THIS MEETING

The complexity of animal communication signals (including humans) can be evaluated on the basis of the combinatorics of the units that make up these signals (property also referred to as “double articulation”). The first articulation concerns the arrangement of the semantic units (words) into sentences and the second corresponds to the arrangement of elementary sounds (e.g. human phonemes) into meaningful units (e.g. human words). The possibility to build different combinations at each level allows to produce an exponential number of new statements.

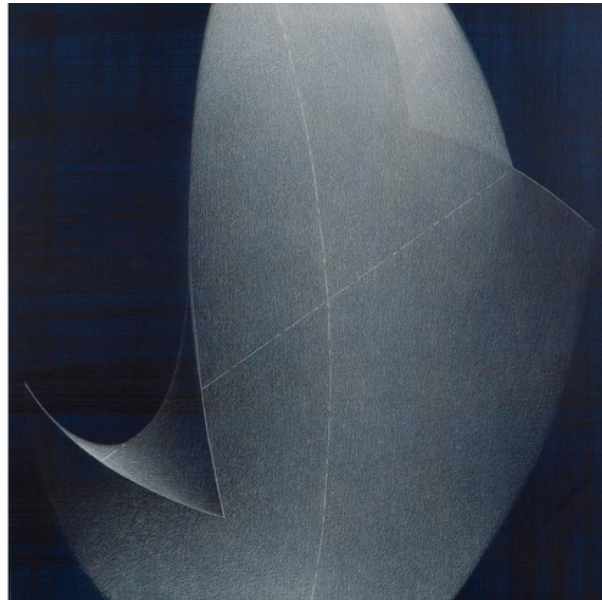
To compare the complexity of the vocal communication signals of different animal species, including humans, we propose to investigate possible combinatorial units in non-human animals.

For this, we intend to address two principal issues:

1-The segmentation and clustering methods / principles used in the study of human and non-human vocalizations (mainly non-human primates and cetaceans).

2-The association/combinability of units from different sensory channels (acoustic, visual, tactile) and the processing of these multimodal/multicomponent units

This will be done using the tools and concepts from linguistics, psycholinguistics, comparative psychology, philosophy, bioacoustics, neurosciences, computer sciences and ethology.



# PROGRAM

**Lundi 9 mai - Axe 1 - Segmentation et Unités sonores**

**8h45** - Welcome café

**9h-9h30** - Situer de la question du jour (segmentation comparée) - Marie Montant

**9h30-10h** - Segmentation/clustering de la parole humaine - Noel Nguyen, Christine Meunier (Thierry Legou)

**10h-10h30** - Unité de son, unité de sens, rôle de la prosodie dans la segmentation de la parole humaine - Cristel Portes  
Pause café

**11h- 11h30** - Segmentation/clustering vocalisations monkeys -Manon Obliger, Charly Lamothe (Pascal Belin)

**11h30-12h** - Unité structurelle/unité fonctionnelle monkeys - Alban Lemasson

**12h - 13h** - Discussion  
Déjeuner

**14h30 - 15h00** - Segmentation/clustering vocalisation des baleines - Julie Patris & Franck Malige

**15h - 15h30** - Vocalisations et répertoire des dauphins - Fabienne Delfour  
Pause café

**16h - 17h** - Marine sound-landscapes and repertoires (cetaceans) - Gianni Pavan (introduced by Fran Cagnacci)

**17h- 18h30** - Discussion, synthèse de la journée, pistes et idées