amU Institute of language, communication and the brain
Aix Marseille Université

9th edition

ILCB SUMMER SCHOOL

From August 24th to 28th 2026

Le cube, Campus Schuman, amU
Aix-en-Provence, France

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Index

Introduction

The Institute of Language, Communication and the Brain (ILCB) brings together experts in linguistics, psychology, neuroscience, mathematics, and computer science to foster an interdisciplinary approach to the study of language and communication. Each year, we organize a Summer School that offers week-long, in-depth multidisciplinary courses and single-session presentations, focusing on cutting-edge research aligned with the Institute's goals. The courses and lectures are delivered by experts from the Institute and renowned international speakers.

This year, the 9th ILCB Summer School will take place from Monday, August 24th to Friday, August 28th, 2026, in Aix-en-Provence at Le Cube, a modern venue on the Aix-Marseille University campus. Participants will have the opportunity to engage in a variety of theoretical and methodological courses covering diverse topics such as brain imaging techniques, neural networks and memory, auditory cognition, language development, computational modeling, language pathologies, the neural basis of language, and innovative approaches in Machine Learning and Deep Learning.

The program also includes special events such as a keynote session by an international speaker, Prof. Inbal Arnon, presentations in tribute to Prof. Friedemann Pulvermüller, speed networking, and interactive science activities.

We welcome participants from relevant academic backgrounds and at various career stages, including PhD students, postdocs, academics, and exceptionally motivated Master's students.

Schedule

	Monday 24	Tuesday 25	Wednesday 26	Thursday 27	Friday 28
8:45	Welcome				
9:00 - 10:15	1a The Predictive Brain - D. Schön, J. Pesnot, B. Morillon				
	1b Associative Memory and Priming in Neural Networks - E. Köksal Ersöz				
	1c Language & Pathology - F.-X. Alario, J. Ziegler, S. Pinto, A. Trébuchon				
10:15 -10:45	Coffee Break				
10:45 - 12:00	2a Neurodevelopment of Language - C. Kabdebon, O. Kepinska				
	2b Language, Brain and Artificial Neural Networks - C. Pallier				
	2c Modern Methods for Brain Imaging - V. Lopez, J. Drevet, P. Guilleminot, J. Pesnot				
12:00 - 14:00	Lunch				
14:00 - 15:15	3a From Bees' Dance to Baboons' Gestures - A. Meguerditchian				
	3b From Sound to Auditory Cognition - B. Morillon, P. Belin, E.Thoret				
	3c Deep Learning for a Theory of Language Development - A. Fourtassi, T. Schatz				
15:15-15:45	Coffee Break				
15:45 - 16:45/17:10	CREx Demonstrations & Social Event @ Laboratoire Parole et Langage	Keynote : Bio-Cultural Framework for the Study of Language Evolution I. Arnon	Speed Networking @Le Cube	Presentations in Tribute to Prof. Friedemann Pulvermüller	
From 17:10			Dinner @Laboratoire Parole et Langage	Scientific show «La prédiction des Oscillations» @Le Cube	

Titles & Abstracts

Titles & abstracts

Keynote

A bio-cultural framework for the study of language evolution

Human language is one of our species' most distinctive traits. Yet the origins of language are not yet understood. I will present an empirical framework that draws on synergies across scientific disciplines to facilitate robust studies of language evolution. The framework, developed together by scientists from a broad range of disciplines, is multifaceted, seeing language emergence as dependent on convergence of multiple capacities, each with their own evolutionary trajectories. It is explicitly biocultural, recognizing and incorporating the importance of both biological preparedness and cultural transmission as well as interactions between them. Biocultural and multifaceted perspectives are increasingly appreciated, but there remains a need to integrate them within a unified framework and demonstrate how this advances understanding. I will introduce the framework, and then illustrate its utility by looking at the emergence of two core statistical properties of language: having statistically coherent parts and having those parts follow a particular frequency distribution. If such structure is found in language because of the way it is learned and transmitted across generations, we may expect to find similar structures in other culturally transmitted communication systems. The final part of the talk will discuss evidence for language-like structure in humpback whale song and Bengalese Finch song, both culturally transmitted. Throughout the talk I will highlight open questions at the intersection of developmental psychology, language evolution, and comparative cognition, and point to ways in which cross-species and cross-method collaborations can promote our understanding of the origin of complex communication.

Inbal Arnon
University of Edinburgh
The Hebrew University of Jerusalem

Presentations in tribute to Prof. Friedemann Pulvermüller

This session honors Prof. Friedemann Pulvermüller (1960-2025), a pioneering neuroscientist of language whose groundbreaking work transformed our understanding of the brain's linguistic mechanisms. The four presentations in this session, inspired by his ideas, showcase how his scientific legacy continues to shape research at the ILCB, exploring themes such as materialism, brain plasticity, and the integration of language processes. This is an opportunity to celebrate his enduring influence on our community.

Wiring and Firing Words: How Friedemann Pulvermüller Changed Our View of the Mental Lexicon - Johannes Ziegler

In his landmark 1999 paper "Words in the Brain's Language", Friedemann Pulvermüller proposed a transformative idea: words are not stored as isolated symbolic units, but as distributed cell assemblies linking sensory, motor, and associative cortices. Inspired by Hebbian learning ("what fires together wires together"), this framework explained both the cortical organization and the dynamics of word representations. As a tribute to his remarkable scientific creativity and contribution, this talk revisits that proposal and its lasting impact on theories of word recognition. Moving beyond mechanistic models in which words function as switch-like lexical entries, Pulvermüller's work promoted a dynamic network view in which meaning emerges from coordinated neural activity. I will illustrate how this perspective shaped subsequent findings — including embodied effects for action words and the influence of orthography on spoken word recognition — and how it profoundly influenced my own research and a generation of students seeking to understand how words and their meanings live in the brain.

Johannes Ziegler
ILCB, CRPN, amU & CNRS

The representation of words in language comprehension versus production - Kristof Strijkers

In this talk I will give an overview of the research project I conducted with Friedemann Pulvermüller prior to his untimely passing. The objective of our research project was to compare the spatiotemporal dynamics of word processing in comprehension and production to investigate whether words in the brain rely on the same representations or modality-specific ones. While traditional brain language models assume at least some degree of temporal and spatial separation when processing words to produce compared to comprehend language, integration models following Pulvermüller's application of Hebbian-based learning predict that the same neural representations underpin the activation of words across the language modalities. I will discuss three recent neuroimaging studies we have conducted that aimed to address this question of modality-specificity versus modality-integration for semantic, phonological and pragmatic aspects of word processing.

Kristof Strijkers
LPL, amU & CNRS

Presentations in tribute to Prof. Friedemann Pulvermüller

Materialism, verbal rationality, and fire - Arnaud Rey

Friedemann Pulvermüller's contribution is part of the associationist school of thought (Rey, 2024). Today, more than ever, it is necessary to have a detailed and precise analysis of the concept of association (Chartier, Fagot, & Rey, 2026). His project is eminently materialistic, as it attempts to bridge mental and neuro-cerebral activity. He aims to embed language, the imperfect central tool of our rationality, within the populations of neurons that support and shape our thoughts. Although Hebb's formula "fire together, wire together" is undoubtedly too simplistic, Pulvermüller's ambition builds on Hebb's work by attempting to give a precise mechanical form to the development of our memory and representations of the world—an ambition that the future will likely fulfill.

Arnaud Rey
CRPN, amU & CNRS

Pulvermüller: the art of zooming in and out in the brain dictionnary - Marie Montant

Pulvermüller built a multi-level (from cells to behavior) and integrated theoretical framework for word semantics. This was made possible thanks to his remarkable ability to navigate across various disciplines: cellular biology, neurophysiology, experimental psychology, linguistics, and computer science. His work contributed significantly to the success of the embodied conception of language. Importantly, it resonates with highly influential notions such as motor imagery (Jeannerod), network simulation (Gallese), neural reuse (Anderson), and affordances (Gibson). Pulvermüller had the makings of great scientists, never losing sight of the big picture of what science is meant to be.

Marie Montant
CRPN, amU & CNRS

Week-long courses

The Predictive Brain: from historical roots to contemporary models

Daniele Schön
INS, amU & CNRS

Prediction and Bayesian inference are central notions in contemporary cognitive neuroscience, yet they are rarely taught systematically. This 5-day course will provide an integrative and critical overview of the "predictive brain" framework, from its historical and epistemological origins to its current computational and neurobiological implementations. We will explore how predictive principles manifest across cognitive domains, including perception, action, learning, and language, and how they relate to current developments such as predictive coding, reinforcement learning, and large language models.

Objectives:

- Understand the historical and theoretical foundations of prediction in cognition.
- Examine computational approaches to prediction (Bayesian inference, predictive coding, RL).
- Discuss neural implementations
- Explore predictive processes across cognitive domains (perception, learning, communication...).
- Critically evaluate the scope and limits of predictive models.

Level: Advanced

Benjamin Morillon
INS, amU & INSERM

Jacques P. Lerousseau
INS, amU & INSERM

Week-long courses

Associative Memory and Priming in Neural Networks

Elif
Köksal Ersöz
CNRL, Inria de lyon

Associative memory is the ability to link pieces of information (memory items) together, enabling goal-directed behavior, language processing, musical performance, thinking, decision-making, and prediction. Research on associative memory has its roots in Pavlov's conditioning experiments in the 19th century, evolved with Donald Hebb's principles of learning in 1945, and gained computational significance through John Hopfield's models in the 1980s.

This course begins with an introduction to the biological and computational principles of associative memory. It then delves into the cell ensemble theory and the modeling of memory dynamics, focusing on sequences of encoded memory items in continuous neural networks. Key topics include how neural gain, inhibition, and noise shape the sequential activation of memory items, prediction, and adaptation to changing environments. Practical exercises will reinforce these concepts, offering hands-on experience with memory dynamics in both discrete and continuous neural networks.

Level: Beginners. Familiarity with basic Python programming is recommended.

Week-long courses

Language & Pathology

Day 1 - F-X. Alario

Connecting healthy and pathological language processing

How different are healthy and pathological language processing? Can the study of patients inform our understanding of the general population? Can theories describing “canonical” unimpaired language processing reliably inform clinical decisions? At what level of description should the pathological aspect of processing be described? How should remediations be conceived and implemented for these impairments? This segment of the “Language & Pathology” course will present some broad concepts and invite an interactive discussion of the links between healthy and pathological language processing. It will provide a reading-grid to guide you through the following segments.

François-Xavier Alario
CRPN, amU & CNRS

Day 2 - Serge Pinto

Studying speech motor control from its impairment: a general introduction to dysarthrias

Motor Speech Disorders refer to a set of signs affecting the control and production of speech consequent to neurological impairment. They are characterized by an approach which dichotomizes motor speech disorders in two modalities: apraxia of speech and dysarthria, which can be distinguished on at least two fundamental points: (1) dysarthria is the consequence of motor dysfunctions also involving the limbs (rigidity, akinesia, ataxia, dystonia, etc.) and of which a specific pathophysiology is determined; dysarthric disorders are constant, predictable, whereas this is not the case for patients suffering from apraxia of speech; (2) verbal dysfluency, marked in apraxic patients, is not characteristic of dysarthric speech. After presenting the classification and pathophysiology of dysarthrias associated with specific movement disorders, I will briefly introduce the relevance of targeting research on dysarthria, and mainly hypokinetic dysarthria in Parkinson’s disease, as a model for a better understanding of the involvement of cortico-basal ganglia-cortical pathways in speech motor control.

Serge Pinto
LPL, amU & CNRS

Week-long courses

Language & Pathology (continued)

Day 3 - Agnès Trébuchon

Language pathology and epilepsy

In case of drug-résistant epilepsy the surgery procedure consisting in the resection of the "seizure generator" is considered as the treatment of choice. However, this procedure may induce language deficits, particularly after left temporal surgery. In this context, counseling at the individual level patients about the risks and benefits of surgery can be challenging. The functional exploration of the language network is by consequent crucial.

Agnès Trébuchon
AP-HM,INS, amU & INSERM

Day 4 - Johannes Ziegler

Learning to read and dyslexia: from theory to intervention

How do children learn to read? How do deficits in various components of the reading network affect learning outcomes? How does remediating one or several components change reading performance? In this talk, I will quickly summarize what we know about how children learn to read. I will then present developmentally plausible model of reading acquisition. The model will be used to understand normal and impaired reading development (dyslexia). In particular, I will show that it is possible to simulate individual learning trajectories and intervention outcomes on the basis of three component skills: orthography, phonology, and vocabulary. The work advocates a multi-factorial approach of understanding reading that has practical implications for dyslexia and intervention.

Johannes Ziegler
ILCB, CRPN, amU & CNRS

Day 5 - François-Xavier Alario, Serge Pinto

On the diversity of language pathologies

Following the week-long course, this final segment will invite students to summarize what they have learned. The reading grid presented in the first segment will be used to discuss what has been presented and what might be missing. You will be expected to speak out, not only listen and write.

Level: Beginners with some familiarity with neuropsychological, neuroscientific or linguistic concepts.

Week-long courses

Neurodevelopment of Language

Language acquisition is a remarkable process that begins before birth and unfolds through intricate interactions between biological predispositions and environmental inputs. This course will discuss the neurodevelopment of language starting from in-utero development and the primordial language abilities of fetuses. We will continue by discussing the importance of sensitive periods for language acquisition, and exploring various cognitive mechanisms laying foundations for mastering a language.

Olga Kepinska
LPL, amU & CNRS

Day 1 - Olga Kepinska

Fetal brain development and the emergence of auditory and language networks Neurodevelopment of language starts in utero.

This class will discuss the development of the fetal brain, with particular attention to the ontogeny of the auditory networks and the emergence of the language network. We will discuss the concept of developmental programming and the importance of the environmental inputs for shaping the developing brain.

Day 2 - Olga Kepinska

Auditory and language processing in utero

What do fetuses hear and how does their brain process the inputs they receive? This class will discuss studies exploring sound and speech processing abilities in fetuses, as well as evidence that the fetal language environment is related to behavioral and neural indices of later language processing (in newborns). We will also discuss studies on prematurely born infants that suggest that the prenatal language environment and its characteristics scaffold early language acquisition.

Week-long courses

Neurodevelopment of Language (continued)

Day 3 - Claire Kabdebon

Early brain plasticity and sensitive periods

This course explores how the developing brain learns from experience, with a focus on the mechanisms of neural plasticity and the concept of sensitive periods in language acquisition. We will highlight the wonderful capacity of the infant brain for constrained reorganization after lesions and we will examine how environmental input shapes brain organization, particularly during critical windows, to yield lifelong cognitive and linguistic consequences.

Day 4 - Claire Kabdebon

Learning mechanisms

This course explores the learning mechanisms supporting early language acquisition and their neural underpinnings. We will delve into infants' abilities to compute statistical regularities from the input, to extract its underlying structure, to form predictions about upcoming events, and we will examine how sleep modulates learning outcomes.

Day 5 - Claire Kabdebon and Olga Kepinska

Interactive session

Level: Beginners

Claire Kabdebon
CRPN, amU & CNRS

Week-long courses

Language, Brain and Artificial Neural Networks

For 150 years, our knowledge of the cerebral basis of the faculty of language was essentially based on observation of the consequences of cerebral lesions in aphasic patients. Then, since the early 1990s, the development of brain imaging (PET, fMRI) has enabled us to explore, in vivo, in healthy subjects, the areas involved in language comprehension and production. The experimental paradigms employed, inspired by linguistics and psycholinguistics, placed participants in situations that were nonetheless rather artificial (reading individual words, ill-formed sentences, etc.). Assessing the comprehension of spoken or written language in more natural situations (e.g. listening to a story) was largely out of reach. The advent of deep learning-based language models, with their remarkable performance on natural language processing tasks, has made it possible to start tackling these issues. In this series of lectures, I will present the evolution over the last 30 years of the paradigms and our associated knowledge, and detail the methods used to analyze brain activations during text listening with language models.

Christophe Pallier
INSERM-CEA, CNRS

Week-long courses

Modern Methods for Brain Imaging

This course offers a deep dive into the latest methods used to study brain function through imaging techniques such as EEG, MEG, and fMRI. We will cover five key topics, each addressing fundamental questions and practical tools for analyzing neural data.

We'll begin with source localization, a critical challenge in neuroimaging: how can we estimate where brain signals originate? After a brief recap of the main imaging techniques and their trade-offs in temporal and spatial resolution, we will explore different approaches to solve the inverse problem. From simple dipole models to distributed source techniques, beamforming, and independent component analysis (ICA), we will discuss how these methods help identify the origins of neural activity in the brain.

Next, we'll focus on connectivity, which investigates how different brain regions interact. We'll address the important conceptual distinction between correlation versus causation. We will present methods based on frequency decomposition such as coherence and phase-locking value (PLV), but also methods coming from information theory, such as mutual information, transfer entropy and Granger causality.

The third part of the course will examine encoding models, which link external stimuli or events to brain responses. We'll cover classic approaches like event-related potentials (ERPs) and more advanced methods such as regression ERPs (rERPs), temporal receptive fields (TRFs), and mutual information measures. We'll also discuss emerging tools such as Echo State Networks (ESNs) and reduced rank regression (RRR).

Victor José
Lopez Madrona
INS, amU & INSERM

Jacques
P. Lerousseau
INS, amU & INSERM

Week-long courses

Modern Methods for Brain Imaging (continued)

In the fourth section, we'll explore decoding models – predicting cognitive states or behaviors from brain activity patterns. This includes understanding the concept of population coding and the need of multivariate analyses. We will cover tools such as linear models and multivariate pattern analysis (MVPA). We will also provide practical tips for interpreting results, in particular the distinctions between filters and patterns in linear models.

Finally, we'll turn to model-based approaches, which use computational models to understand neural processes. We'll discuss how regression techniques combined with computational models can reveal hidden variables and representations. We will also discuss techniques for analyzing neural geometry, including representational similarity analysis (RSA) and multidimensional scaling (MDS).

This course will provide participants with both conceptual insights and hands-on approaches for tackling key challenges in neuroimaging research.

Julie Drevet
INS, amU & INSERM

Pierre Guilleminot
INS, amU & INSERM

Week-long courses

From bees' dance to baboons' gestures: An epidemiological journey on the origins of language through the long (hi)story of primate and animal research

Adrien Meguerditchian
CRPN, amU & CNRS

This course—richly illustrated with archival video footage—traces the long history of primate (and other animal) research aimed at exploring their communicative abilities and the evolutionary roots of human language. I will begin by reviewing the diverse and sometimes divergent ancient philosophical conceptions of animal behavior and the human species, from Aristotle and Descartes to Darwin, as well as the first research schools and methods in animal communication, including behaviorism, objectivist ethology, and behavioral biology.

Next, I will revisit the emergence of the first comparative approaches to primate communication in the 19th century, highlighting famous experiments with "enculturated" apes, experimental psychology in captivity, and groundbreaking field discoveries. This includes the first experimental studies on problem-solving "insight" in the 1920s, attempts to raise a chimpanzee and a human baby together in the 1930s, efforts to teach them speech in the 1950s, documentation of their natural vocal and gestural repertoires and tool use in the wild during the 1960s, sign language training in the 1970s, field tests of the referential functions of vocal calls in the 1980s, and symbolic keyboard training in the 1990s.

Finally, I will present the most recent contributions from the golden age of cognitive sciences in the 20th century, including ethology, comparative psychology, neuropsychology, and neuroimaging research. These advances have directly addressed the question of the primate mind and its neural foundations, shedding light on the evolutionary story of language origins.

Level: Beginners

Week-long courses

From Sound to Auditory Cognition

Etienne Thoret
INT, amU & CNRS

Benjamin Morillon
INS, amU & INSERM

Pascal Belin
INT, amU & CNRS

This course provides a comprehensive introduction to how sounds are processed by the human brain. Auditory perception is fundamental for human communication, and sound signals—whether speech, music, or environmental noises—carry rich temporal, linguistic, semantic, and emotional information.

Across five days, participants will explore the acoustic dimensions of sound, the mechanisms through which cognitively relevant cues are extracted, and how these representations are organized in the cortex. The course bridges psychoacoustics, computational approaches, and cognitive neuroscience to offer an integrated overview of auditory cognition.

Days 1 & 2 — Étienne Thoret

Computational Audition: from Psychoacoustics to Deep Neural Networks

Day 3 — Benjamin Morillon

Neural Dynamics of Auditory and Speech Perception

Days 4 & 5 — Pascal Belin

Cerebral Processing of Voice-Specific Information

Level: Beginners with basic knowledge of neurophysiology and signal processing

Week-long courses

Deep Learning for a Theory of Language Development

Theories of language development seek to explain how linguistic knowledge emerges over the course of development, yet they have long struggled to provide explicit accounts of learnability—that is, of how language can in fact be acquired under children's natural learning conditions. Classical debates have highlighted fundamental challenges, questioning how poor input can give rise tosophisticated knowledge in phonology, syntax, semantics, and beyond. However, these challenges were most often addressed at a conceptual level, rather than through explicit mechanistic models of learning.

Recent advances in deep neural networks (DNNs) make it possible to revisit these theoretical questions by providing concrete learning systems that can be trained on realistic data and evaluated quantitatively. This opens new avenues for integrating learnability constraints directly into theories of language development.

The course offers a structured introduction to this emerging and fast-growing research program, which uses DNNs as a framework for studying learnability in language development. Through lectures and hands-on coding labs, it equips participants with both the conceptual background and practical tools needed to navigate this interdisciplinary landscape. It examines how DNNs learn, what forms of knowledge they acquire, and how they can account for learning in the child's multimodally and socially grounded environment.

Abdellah Fourtassi
LIS, amU & CNRS

Week-long courses

Deep Learning for a Theory of Language Development (continued)

Day 1 - Abdellah Fourtassi

The learnability challenges

We review historical debates on language learnability in syntax (poverty of the stimulus), word meaning (the indeterminacy of reference), and speech units (the lack-of-invariance problem). We show how these challenges can be unified as an induction problem, formalized within a probabilistic framework. We then examine how this formalization has been pursued in previous work and, crucially, why DNNs promise to overcome limitations that have so far prevented learnability research from scaling to children's natural environments.

Lab. Become familiar with collaborative code editing using Colab notebooks and with Python libraries fordeep learning.

Abdellah Fourtassi
LIS, amU & CNRS

Day 2 - Abdellah Fourtassi

Cognitive plausibility

We examine whether DNNs can be considered cognitively plausible, focusing in particular on Language Models (LMs). We review psycholinguistic work evaluating LMs as models of language processing (e.g., prediction-based accounts) and discuss to what extent optimization driven by prediction error can be viewed as a plausible learning mechanism.

Lab. Explore an LM pre-trained on child-directed language and examine its next-word prediction process step by step.

Day 3 - Abdellah Fourtassi

Measuring linguistic knowledge

Lecture. Whether DNNs acquire genuine linguistic knowledge is a central question. We review major evaluation approaches, including: (a) behavioral testing (e.g., forced-choice tasks), (b) probing methods that assess the organization and accessibility of internal representations, and (c) causal interventions that test whether internal representations are mechanistically linked to observed behavior.

Lab. This lab closely mirrors the lecture, with hands-on implementations of behavioral testing, linear probing, and causal intervention methods.

Week-long courses

Deep Learning for a Theory of Language Development (continued)

Day 4 - Thomas Schatz

Learning from the speech signal

Lecture. Much existing work on language learning with DNNs relies on symbolic representations, notably transcriptions of child-directed speech. In natural development, however, linguistic units are not given in advance: they must be learned from a continuous and highly variable acoustic signal. We review research on DNNs trained directly on speech data relevant to children's environments, highlighting key challenges for speech-based learning relative to text-based models.

Lab. Explore a speech model pre-trained on children's speech data and evaluate its emerging linguistic representations.

Thomas Schatz
LIS, amU & CNRS

Day 5 - Abdellah Fourtassi & Thomas Schatz

Learning beyond linguistic input

For DNNs to provide a viable framework for theories of language development, they must account for learning resources beyond linguistic input alone. These include inductive biases, multisensory information, and communicative interaction, all of which have been emphasized by multiple traditions in language acquisition research. We review work that incorporates such resources into DNNs and examine how they affect learning outcomes.

Lab. Explore a language–vision model pre-trained on children's multimodal environments and evaluate its emerging linguistic knowledge.

Level : Beginners with basic familiarity with Python programming. No prior background in deep learning is required. Relevant concepts will be introduced as needed during the lectures and labs.

CREx Demo

Tools and Innovations for Your Research

Explore how the CREx (Center of Experimental Resources) at ILCB supports research in language, speech, and cognition. Their team of engineers specializes in data analysis and scientific computing, creating tools for experimental design, data preparation, and multimodal research.

This demo will showcase their applications and provide insights to inspire your own projects.

Thierry Legou
CREx, ILCB, amU & CNRS

Valérie Chanoine
CREx, ILCB, amU & CNRS

Deidre Bolger
CREx,ILCB, amU & CNRS

Ambre Denis-Noel
CREx, ILCB, amU & CNRS

Speed networking

Connecting Minds, Inspiring Collaboration

As part of our 5-day summer school programme, we propose a speed networking session — a structured yet informal way to connect with your peers, exchange ideas, and explore potential collaborations across disciplines.

What to Expect?

In this interactive session, you will have a series of short, timed conversations with other participants. Think of it as a catalyst for:

- Meeting researchers from diverse fields—linguistics, neuroscience, cognitive science, and beyond.
- Sharing your research interests and discovering overlapping goals with participants from around the world.
- Identifying opportunities for future projects, feedback, or partnerships.
- Expanding your academic network in a relaxed, engaging environment.

*No preparation is needed—just bring a sheet of paper if you'd like to illustrate your work or jot down ideas! Above all, bring your enthusiasm and an open mind. Let's make the most of this inspiring global exchange!

Scientific Show

The Prediction of Oscillations

As a special highlight of our summer school program, we are thrilled to present an innovative art-science performance in French: The Predictions of Oscillations. This unique creation is the result of a collaboration between composer and director Benjamin Dupé and neuroscientist Daniele Schön.

What to Expect?

The Prediction of Oscillations is an unclassifiable form, an unidentified stage and musical object, the fruit of a meeting between composer and director Benjamin Dupé and neuroscience researcher Daniele Schön. Widely acclaimed when it premiered at the Musica festival in Strasbourg, the show weaves together scientific discourse on the workings of our brains, contemporary musical creation and original theatrical situations with a subtle sense of balance. Imbued with humour, a desire to share and poetry, the performance eschews any didactic spirit to combine sensibility with knowledge, playfulness with discourse, and so create joyful spaces of resonance.

From the history of cerebral metaphors to laboratory experiments transposed to the stage and requiring audience participation, not forgetting the importance of chance in scientific research, The Prediction of Oscillations questions our representation of the brain and in particular our unfortunate tendency to regard it as a super-computer. Contrary to this ready-made thinking dictated by the tech and AI industries, another neural theory emerges, a musical theory in essence, made up of oscillations, synchronisations and predictions. It's a new way of looking at things that opens up as many perspectives on who we are as it does new gestures and new artistic interactions.

Application Procedure

Non-ILCB members

The registration fees for the summer school are 350 euros. This amount covers access to all scientific activities, as well as five lunches, the social event on Monday evening, and the dinner on Thursday evening.

Please note that travel expenses and accommodation costs are the responsibility of the participants.

STEP 1

Apply before Friday, 22nd May, 2026 (anywhere on earth)
Apply to our ILCB summer school 2026.

The link will direct you to the application form.

STEP 2

By the end of May, the summer school organizing committee will review your application. In June, you will be notified whether it has been accepted, waitlisted, or declined.

STEP 3

Once your application has been accepted, you will receive an acceptance email containing all the necessary details to finalize your registration. To confirm your participation, you will need to pay the registration fees and select your classes.

Venue

Aix-en-Provence & The Cube

Aix-en-Provence, nestled in the heart of Provence, is a city where history, culture, and Mediterranean charm blend seamlessly. Known for its vibrant markets, elegant fountains, and sun-drenched streets, Aix is also a dynamic academic and cultural hub. With its rich artistic heritage—inspired by Cézanne—and its proximity to the stunning landscapes of the Luberon and the Calanques, the city offers an inspiring setting for learning, networking, and exploration.

Source: Pixabay/djedj


Photothèque amU/Lea Ropiot

Our Summer School will take place at Le Cube, a modern and innovative space located on the Aix-Marseille University campus. Designed to foster creativity and collaboration, Le Cube offers state-of-the-art facilities, including modular rooms, cutting-edge technology, and a stimulating environment tailored for academic events. Its central location in Aix-en-Provence makes it easily accessible, ensuring a seamless experience for all participants.

Accommodation in Aix-en-Provence

During your stay in Aix-en-Provence, you'll find a wide range of accommodation options to suit every preference and budget, including hotels, guesthouses, apartments, and student residences. For detailed information and to explore available lodging, please visit the official tourism website: Aix-en-Provence Accommodation. This resource will help you find the perfect place to stay while enjoying all that the city has to offer.

Photothèque amU/Léa Ropiot

Venue

Aix-en-Provence & The LPL

Laboratoire Parole et Langage

The Laboratoire Parole et Langage (LPL), founded in 1972, is a leading CNRS-Aix-Marseille University joint research unit specializing in the study of speech and language. Located at 5 Avenue Pasteur, Aix-en-Provence, the LPL brings together experts in phonetics, linguistics, psychology, computer science, and neuroscience to explore the mechanisms of spoken and written language production, perception, and comprehension.


Source: Pixabay/djedj

Facilities and events at the LPL

The Laboratoire Parole et Langage (LPL) will host some of the ILCB Summer School 2026's key events, including the CREx Demonstration, Monday's social event, and Thurday's dinner. These will take place in the LPL's garden, a charming and relaxed outdoor space perfect for networking and informal discussions.

Located near the heart of Aix-en-Provence, the LPL benefits from a prime location—close to the city center's vibrant atmosphere, cafés, restaurants, and cultural sites.

How to get from Le Cube to the LPL

The Laboratoire Parole et Langage (LPL) is located 2.2 km from Le Cube. Here's how you can make the trip:

On Foot (25-30 minutes)

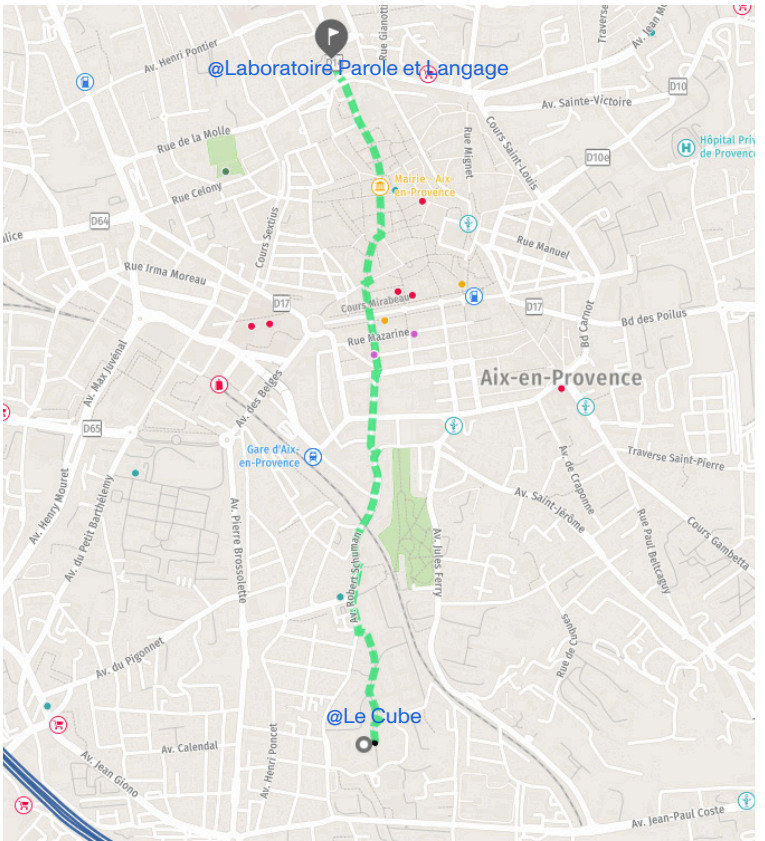
A pleasant walk through the streets of Aix-en-Provence. Map from Le Cube to LPL

Map from Le Cube to LPL

By Bus (21-23 minutes)

Check the local bus network for the most convenient lines connecting Le Cube to the LPL.

Normally the lines A + line 7 ou 5 will be able to approach you to the LPL.



Travel Information

How to Reach Aix-en-Provence and Le Cube

By Plane:

If you are arriving by plane, the closest airport is Marseille Provence Airport (MRS), located about 25 km from Aix-en-Provence. From the airport, you can reach Aix-en-Provence:

By shuttle bus (Lignes Express Régionales, line 40), which takes approximately 30-40 minutes and drops you off at the Aix-en-Provence TGV train station or the Aix bus station.

By taxi or ride-sharing services (such as Uber or Bolt), which take around 25 minutes depending on traffic.

From the TGV Train Station:

If you arrive at Aix-en-Provence TGV station, you can easily reach Le Cube by bus. Upon exiting the train, head to Porte Sud to find the L40 bus stop toward Aix-en-Provence. Tickets can be purchased directly from the bus driver. The journey takes about 30 minutes, and you should get off at the Aix-en-Provence Gare Routière (the terminus). From there, walk 1 minute to the Gare Routière Belges bus stop and take bus A in the direction of P+R Krypton. Get off at the Schuman stop, which is the closest to Le Cube, located on the Aix-Marseille University campus.

By Car or Motorway:

If you are driving, Aix-en-Provence is easily accessible via the A8 (La Provençale) and A51 motorways. Exit at Aix-en-Provence Centre or Aix-en-Provence Est and follow signs for the city center. Parking is available near the university campus, and Le Cube can be easily reached on foot or by bus from the city center.

Organizing Committee

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