



ILCB



Understanding language and communication as a dynamic and complex system.

The ILCB is an interdisciplinary institute studying the cerebral and cognitive bases of language and communication. Its aim is to explain these complex, dynamic systems using an experimentally validated theoretical framework that combines the neuronal, behavioural, ontogenetic (developmental) and phylogenetic (evolutionary) dimensions. The models and methods used are at the crossroads of linguistics, neuroscience, psychology, mathematics, ethology, medicine and computer science. The ILCB comprises 11 research units, 6 experimental platforms and an experimentation and analysis resource centre. The institute's training programme includes a master's degree in cognitive science, a PhD programme and a summer school.

Forming a community

10 research units

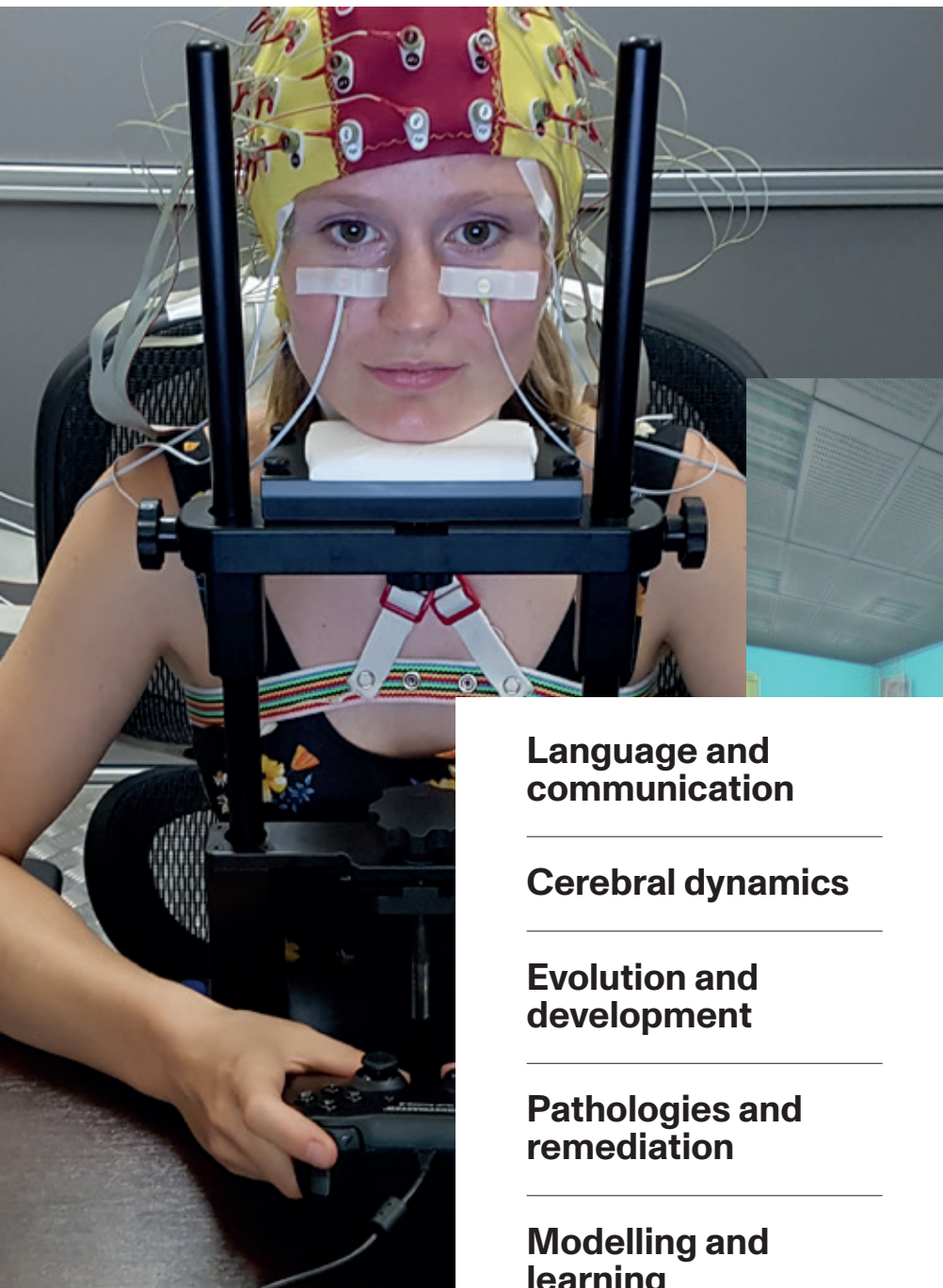
**5 ILCB
crossdisciplinary
teams**

4 doctoral schools

2 faculties

**more than
350 staff**

**more than
270 students
(master's and
doctoral)**



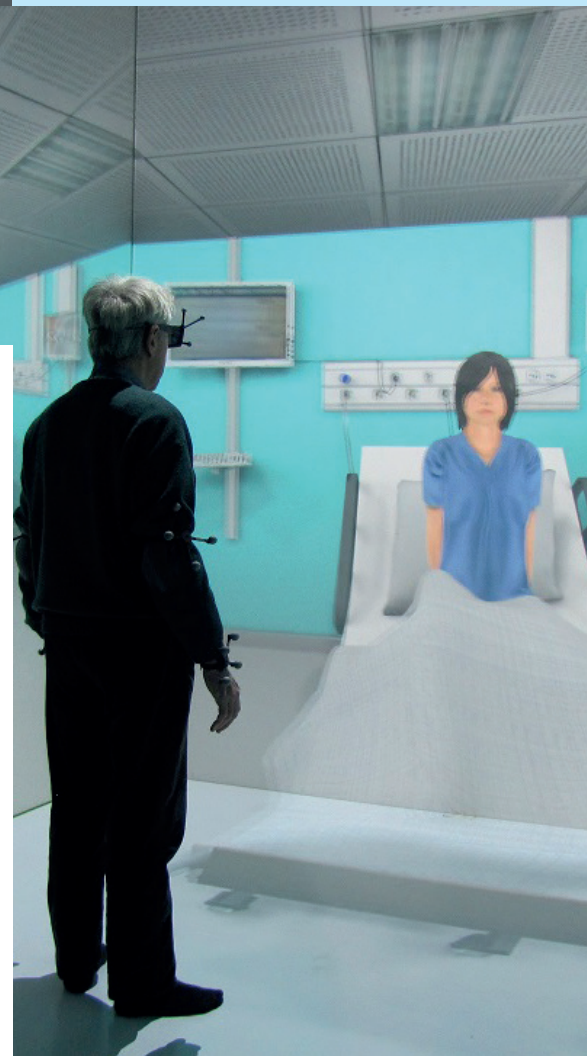
**Language and
communication**

Cerebral dynamics

**Evolution and
development**

**Pathologies and
remediation**

**Modelling and
learning**



Bringing disciplines closer together

Linguistics Mathematics
Neuroscience Ethology
Psychology Medicine
Computer
science

Shared facilities

Incentive calls for projects

Innovative interdisciplinary
projects



Training through and for research

Summer schools

Research placements in laboratories
or private companies

Interdisciplinary PhD programme

Acting internationally

Organising and hosting
international seminars
and conferences

International missions to/from
around fifteen countries



Strengthening partnerships

- CNRS
- Inserm
- AP-HM
- Iméra, Aix-Marseille institute for advanced study
- Carnot Cognition
- CreativLab of the AMPIRIC pilot cluster
- ...

Videos



Video presentation of the ILCB institute



Our executive office

The entire governance team: <https://www.ilcb.fr/members/organization-chart/>



Director:
Johannes Ziegler



Deputy research
director:
François-Xavier Alario



Deputy training
director:
Noël Nguyen



Administrative and
financial manager:
Nadéra Bureau



Deputy research
director:
Agnès Trébuchon



Deputy training
director:
Abdellah Fourtassi



Operations manager:
Lilia Mena



Deputy training
director:
Elin Runnqvist

Contact

Director:
Johannes Ziegler
contact@ilcb.fr
www.ilcb.fr



Ilcb Blri



Institut ILCB



@ilcb.bsky.social

Focus on the experimentation resource centre and our network of platforms

The implementation of highly interdisciplinary projects is facilitated by the **Experimentation Resource Centre**, a team of engineers specialising in scientific computing, neuroimaging, electrophysiology, eye movements, man machine interfaces, statistics and machine learning. This service is shared and fully dedicated to supporting ILCB interdisciplinary projects, both in terms of research and training.

ILCB members have privileged access to a unique set of platforms including neuroimaging (MRI, MEG, EEG, NIRS), Transcranial Magnetic Stimulation (TMS), virtual reality, primatology, speech analysis and IT facilities. The ILCB directly supports all these platforms. Access to these platforms and methodological, mathematical and technical support encourages the emergence of projects that would never have been possible otherwise.

Training at ILCB



*Training for, through and in research, with
continuity from master's to doctorate level*



Our training ecosystem

**more than 200
master's students***

2 partner faculties

Faculty of arts, letters, languages
and humanities (ALLSH)

Faculty of sciences (FS)

**more than 60
PhD students***

**4 partner doctoral
schools**

Cognition, language and
education (ED 356)

Life sciences (ED 658)

Biomedical research (ED 659)

Marseille mathematics and
computer sciences (ED 184)

**1 interdisciplinary
PhD programme**

6 key master's

Cognitive Sciences
(created by the ILCB)

Neuroscience

Language sciences

Computer science |
IAAA specialisation

Applied Mathematics, Statistics
| Data Sciences specialisation

Psychology |
PNPC specialisation
Ergonomics specialisation

* These figures include students enrolled in master's specialisations affiliated with the institute and PhD students enrolled in our partner doctoral schools.

Explore our
full range of
training offers:





Our key actions

Summer school

Research placements
in laboratories or
private companies

Financial support for
training students in the
Cognitive Sciences Master's
programme and for doctoral
and postdoctoral students in
the ILCB PhD programme

Funding for interdisciplinary
postdoctorates and theses

PhD interdisciplinary
programme

Annual figures:

**40 PhD students
in the ILCB PhD
programme**

**2 postdoctoral
grants**

**10 research
internships**

6 lunch talks

**150 summer
school
participants**

"Funding from the ILCB meant that I could complete a four-month internship in the Multicomp Lab at Carnegie Mellon University, an internationally renowned research laboratory. I also had the opportunity to do my PhD at the ILCB."

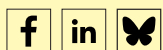


Auriane Boudin
Postdoctoral researcher,
amU-Laboratory for speech
and language (LPL)

Contact

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Our international training

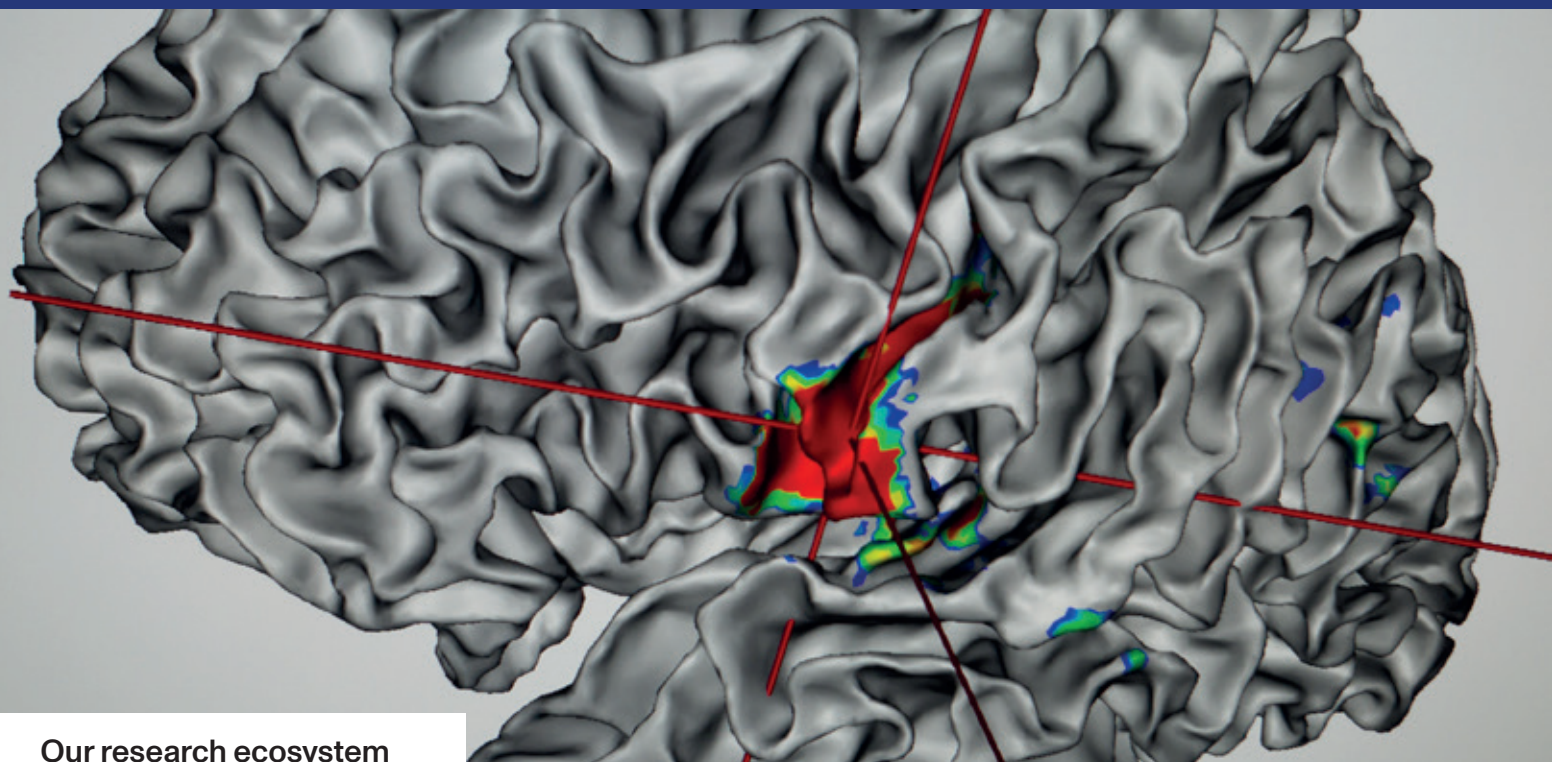
CIVIS alliance,
European civic university

VOCS
Voice Communication
Sciences,
a European Training
Network funded by a
Marie Skłodowska-
Curie Action.
www.vocs.eu.com

Research at ILCB



*Bringing together multiple areas of expertise
in language and communication to build
knowledge and contribute to national and
international scientific debates*



Our research ecosystem

10 research units

Health and life sciences

Institute for systems neuroscience (INS)
Timone neuroscience institute (INT)
Research centre for psychology
and neuroscience (CRPN)

Humanities

Laboratory for speech and language (LPL)
Psychology of knowledge, language
and emotion (PSYCLÉ)

Advanced science and technology

Marseille institute for mathematics (I2M)
Institute for movement science
- Étienne Jules Marey (ISM)
Computer science and
systems laboratory (LIS)
Computer science Avignon
laboratory (LIA)
Perception, representations,
image, sound, music (PRISM)

more than 350 staff

Aix Marseille Université
Inserm
CNRS
University of Avignon
AP-HM



Our key actions

Contribution to conducting and funding research projects

Funding and organising scientific events (conferences, workshops, seminars, lunch talks, etc.)

Creation of interdisciplinary project teams

Recruitment of postdoctoral students

Platform funding (MEG, MRI, virtual reality, etc.)

Annual figures:

34 research projects

2 Iméra chairs (Institute for Advanced study)

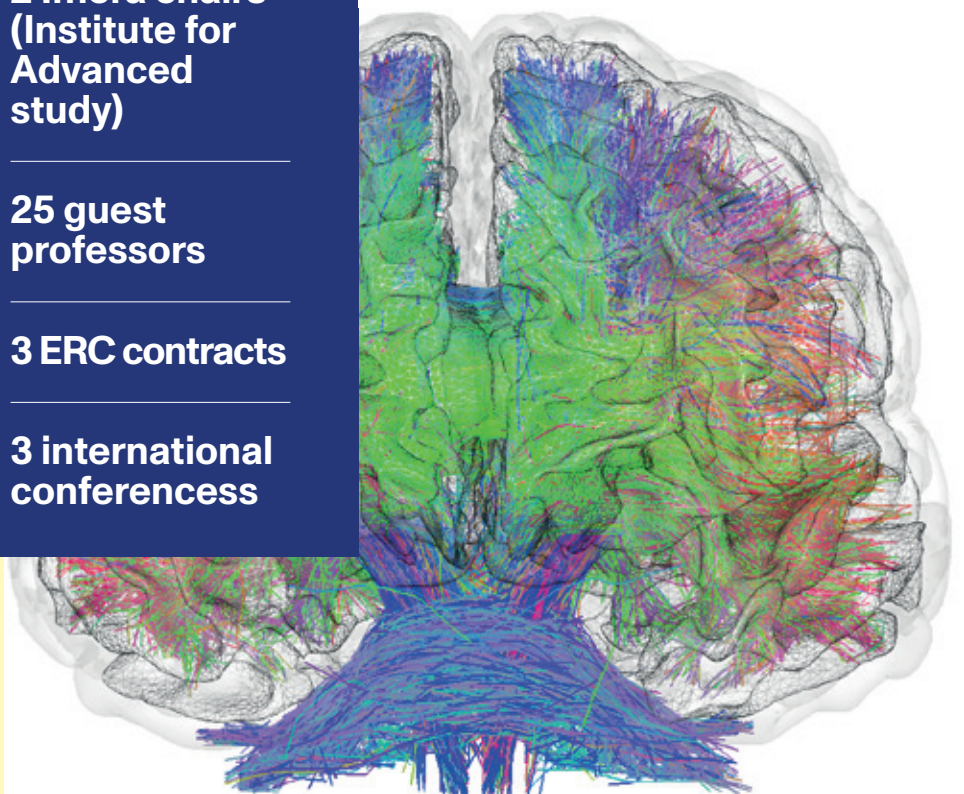
25 guest professors

3 ERC contracts

3 international conferences

Our main areas of research

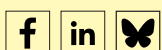
- **Evolution and development:** origins of language and communication in the individual (ontogeny) and in the species (phylogeny)
- **Language, conversation and neural dynamics:** phenomena of synchronisation, convergence and interaction in an interdisciplinary multi-scale approach extending from the syllable to the conversation
- **Modelling and interactions:** computational and mathematical tools and methods to understand the complexity of these phenomena
- **Language and communication disorders:** diagnostic tools, remediation and training programmes in the field of education and health



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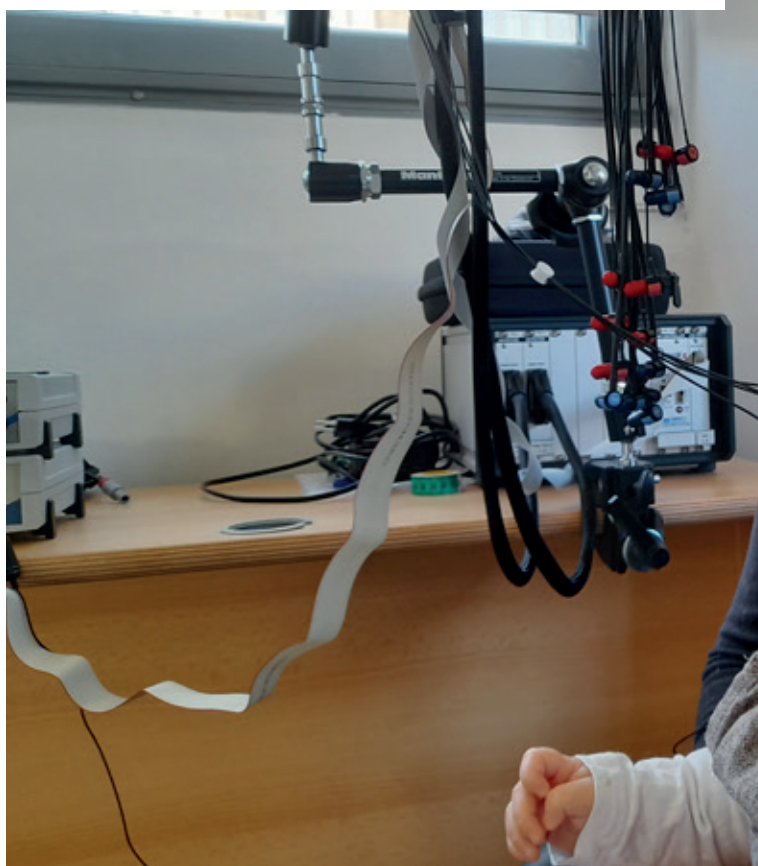




"Two grants as a postdoctoral student at the ILCB meant I could pursue my intrinsically interdisciplinary research, combining computer science and signal processing to answer fundamental questions in auditory neuroscience. This enabled me to establish my research activity in a unique way and obtain a position as a research fellow at the CNRS."



Étienne Thoret
Research fellow at the CNRS



ILCB partnerships



*Strengthening and developing special links with
academic and institutional players and the
socio-economic and cultural world*



Our key actions

IMéRA ILCB Chair - every
year a chair is awarded to an
international researcher

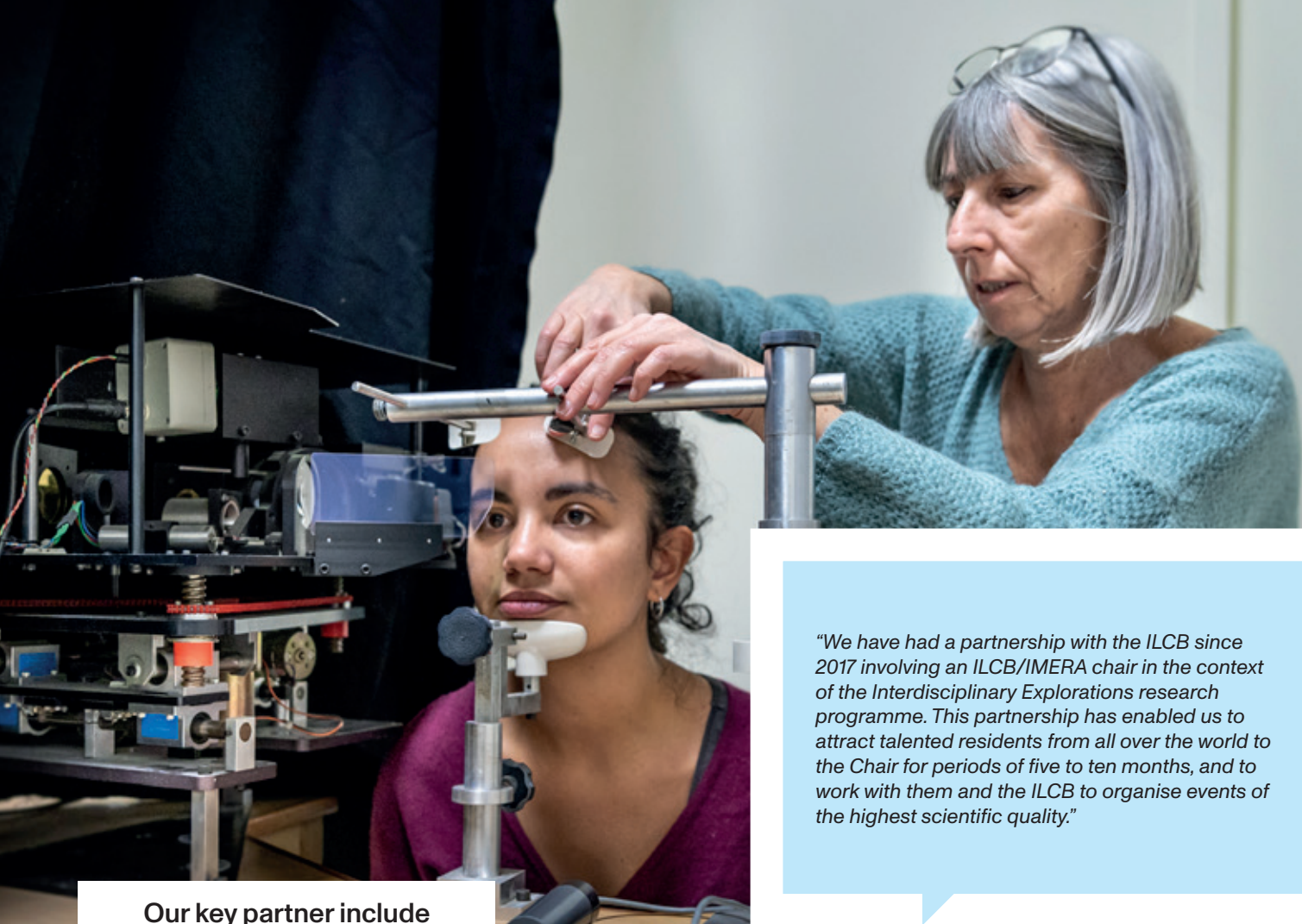
**Organisation of an annual Summer
School.**

21 nationalities represented

**Hosting international workshops and
events:**

20th edition of the IWoLP Series,
an international multidisciplinary
workshop on language production
in the brain, held in Marseille





Our key partner include

Internationally

The Basque Center on Cognition,
Brain and Language

Haskins Laboratories

Max Planck Institute for Psycholinguistics

Society for the Neurobiology of Language

In France

CNRS

Inserm

Carnot Cognition

Innovations, Data and Experiments
in Education (IDEE)

In the Aix-Marseille area

AP-HM

Iméra - Institute for Advanced Study

France 2030 AMPIRIC project

NeuroMarseille Institute

"We have had a partnership with the ILCB since 2017 involving an ILCB/IMERA chair in the context of the Interdisciplinary Explorations research programme. This partnership has enabled us to attract talented residents from all over the world to the Chair for periods of five to ten months, and to work with them and the ILCB to organise events of the highest scientific quality."



Gabriella Crocco
Epistemologist
University professor

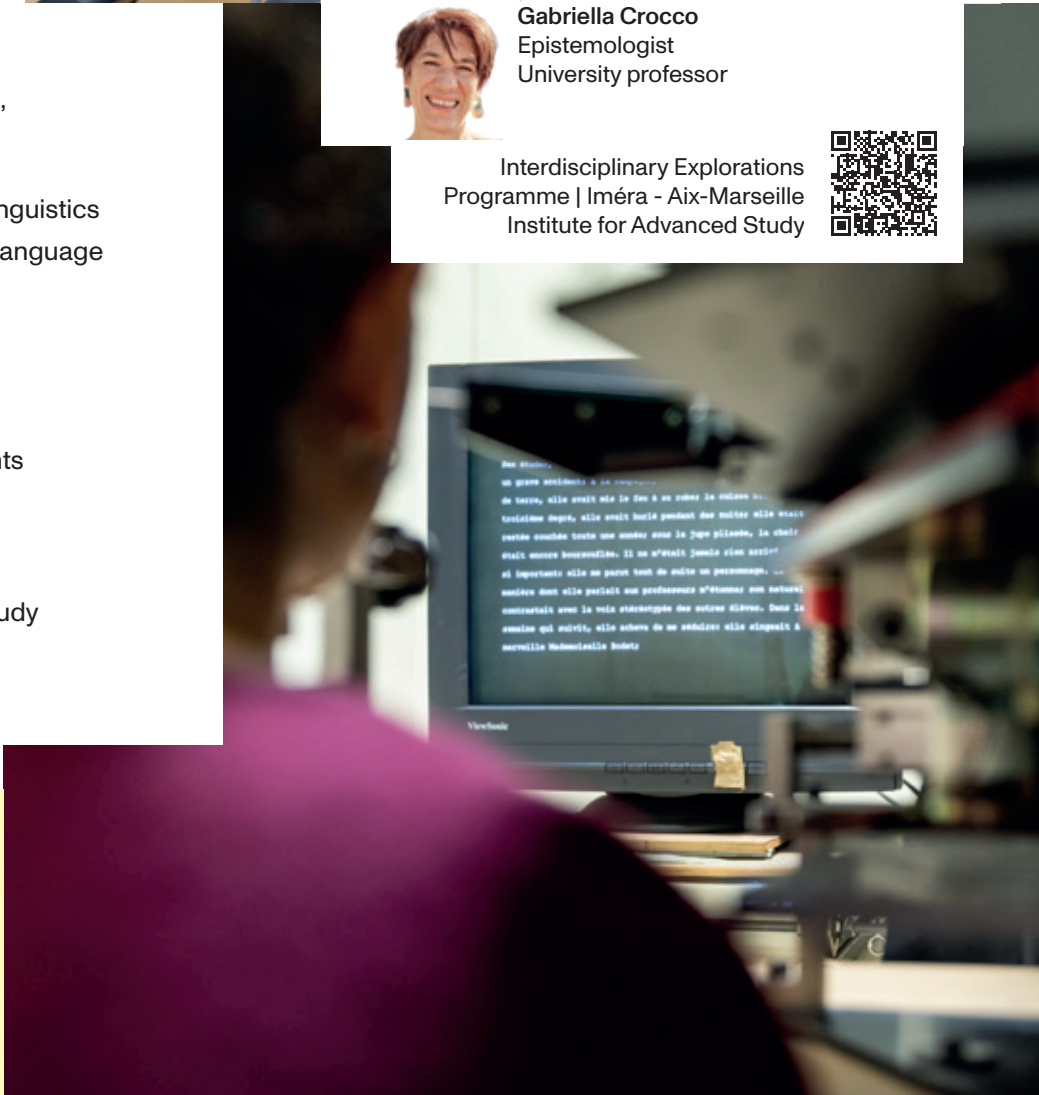
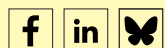
Interdisciplinary Explorations
Programme | Iméra - Aix-Marseille
Institute for Advanced Study



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The ILCB institute
brings together
teams on 8 university
and scientific sites

University of Avignon

Rousset
primatology station

Main site: Saint-Charles



Timone site



Joseph Aiguier site



Aix en Provence



Château-Gombert site



Luminy site



The Aix Marseille Université institutes are coordinated by the Amidex foundation

amidex Aix
Marseille
Université



Aix Marseille Université institutes: facilitators to strengthen the research-training link, interaction with the economic and cultural world, interdisciplinarity and internationalisation around twenty or so strategic fields of research. Their core unifying role: training a new generation of academics to meet the scientific and societal challenges of our time!

The Aix-Marseille Excellence Initiative, a consortium between Aix Marseille Université and 8 partners

amU Aix
Marseille
Université



Inserm



**Centrale
Méditerranée**

sciencespo.aix

**Hôpitaux
Universitaires
de Marseille**

**ap
hm**
INSTITUT PAOLI-CALMETTES
unCancer Marseille