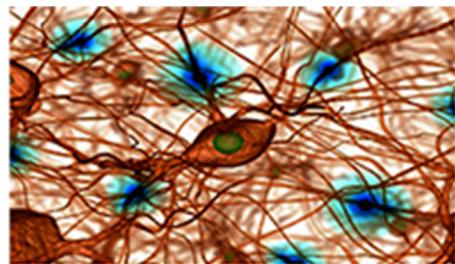
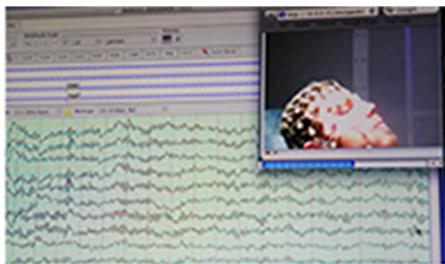




**DEC**  
DÉPARTEMENT  
D'ÉTUDES COGNITIVES



# / DEPARTEMENT D'ÉTUDES COGNITIVES

2018-2019

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## 1. A word from the director



Cognitive science as a field focuses on higher level mental functions like perception, memory, reasoning, language, emotions, movement, and decision making. Its main goal is the joint study of the formal and algorithmic properties of these mental functions, their underlying psychological mechanisms, and the biological mechanisms that make them possible (from genes to networks and regions in the nervous system).

More generally, the goal of cognitive science is to understand the complex interweaving of our species' competences and culture, in the largest sense of the word, including influence of cultural variation on humans' abilities, the development of these abilities in infancy and childhood, how they are affected in certain neurological, psychiatric, and developmental pathologies, and of course their equivalents and precursors in animals.

Cognitive science therefore draws on a wide range of disciplines, which each contribute to our scientific understanding of the human mind: experimental psychology, neuroscience, information technology, mathematical modeling, but also linguistics, philosophy, social science, and economics.

*Sharon Peperkamp,  
Director of the Department of Cognitive Studies*



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## 2. Introduction

The *Département d'Etudes Cognitives* (DEC) of *Ecole Normale Supérieure* (ENS) is an interdisciplinary department of cognitive science at the crossroads of the humanities and social sciences, life sciences, and engineering. Training and research at DEC focus on higher mental functions such as perception, attention, decision-making, reasoning, language, emotions, action, and social skills.

The department in a few numbers:

- > 60 faculty and adjunct faculty
- > 50 postdocs
- > 100 doctoral students
- > 50 master students

## 3. Training

Academic programs



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DEC offers a unique training opportunity in Cognitive Science to students with diverse backgrounds. Interdisciplinary by its very nature, DEC welcomes students from the humanities as well as those from the sciences. They are selected at the undergraduate, Master and PhD levels through a highly competitive examination.

DEC hosts the PSL graduate program “Frontiers in Cognition” (<https://www.psl.eu/en/front-cog>), which offers highly selective 5-year grants to a small number of graduate students.

DEC is a partner in two master programs:

The “Cogmaster” (master in cognitive science, <http://www.cogmaster.net>) of ENS, EHESS and University Paris Descartes, which has majors in Linguistics & logic, Philosophy & social science, Mathematics & modeling, Experimental psychology, and Cognitive neuroscience.

The “Philmaster” (master in contemporary philosophy, <http://j.dokic.free.fr/philmaster/>) of ENS and EHESS.

DEC also hosts students for a research internship in the [Dual Master in Brain and Mind Sciences](#) of ENS and UCL, the neuroscience track of the [Master of Integrative Biology](#) of University Pierre and Marie Curie (UPMC), and the [Ecole des Neurosciences Paris \(ENP\)](#).

Finally, DEC coordinates the pre-doctoral Cognitive Engineering track of the [Institute of Technology and Innovation](#) of PSL Research University.

DEC offers a large number of possibilities to participate in research internships in the Department's laboratories. Moreover, it is part of a wider, dense network of laboratories and research teams throughout the Paris region and beyond, which provides an ideal environment for a complete education in cognitive science, and from the very start puts students in direct contact with cutting-edge research.

## Career prospects

After completing their master's degree, most DEC students pursue a fully-funded PhD, either in France, or abroad, typically with the goal of working towards a career in research. Other prospects outside of scientific research for holders of either an MA or a PhDs degree include jobs in engineering, industry, consulting, and public policy.

## 4. Research

### Overview

Research at DEC covers the full breadth of human cognitive abilities in four strategic research programs:

1. Language and communication
2. Social and collective cognition
3. Perception, attention and consciousness
4. Decision making and rationality

These cognitive abilities are investigated using the concepts, methods and techniques from a wide variety of disciplines: analytical philosophy, theoretical and experimental linguistics, anthropology, cognitive psychology, neuropsychology, neuro-economics, cognitive neuroscience, integrative

neuroscience, and computational neuroscience. DEC is thus one of the rare departments in the world where research bridges the gap between the so-called hard sciences on the one hand and the social sciences and humanities on the other hand.

Research at DEC integrates the richest possible palette of theoretical tools (conceptual analysis, logic, mathematics, computational modeling) and experimental techniques (experimental psychology, developmental psychology, psychophysics, brain imaging, neuropsychology).

## Research units

DEC hosts **six research units** that are each affiliated to ENS and to one or more other institutions in research or higher education, and **two transversal teams**:

### Research units

**Institut Jean Nicod (IJN):** Philosophy of language, Philosophy of mind, Philosophy of cognitive science, Linguistics, Social science

<http://www.institutnicod.org>

institutional affiliations: ENS, EHESS, CNRS

**Laboratoire de Neurosciences Cognitives (LNC):** Cognitive neuroscience

<http://iec-inc.ens.fr>

institutional affiliations: ENS, INSERM

**Laboratoire de Sciences Cognitives et Psycholinguistique (LSCP):** Cognitive psychology, Developmental psychology, Psycholinguistics

<http://www.lscp.net>

institutional affiliations: ENS, EHESS, CNRS

**Laboratoire des Systèmes Perceptifs (LSP):** Perception, Vision, Audition

<http://www.iec-lsp.ens.fr>

institutional affiliations: ENS, CNRS

**Logic, Life and Cognition (LLC-IHPST):** Logic, Decision theory, Philosophy of cognitive science

<http://www.ihpst.cnrs.fr/>

institutional affiliations: ENS, University Paris 1, CNRS

## NeuroPsychologie Interventionnelle (NPI): Cognitive neuropsychology

<http://iec-npi.ens.fr>

institutional affiliations: University Paris-Est Créteil ENS, INSERM

### Transversal teams

**Dec Linguistics:** theoretical and experimental linguistics

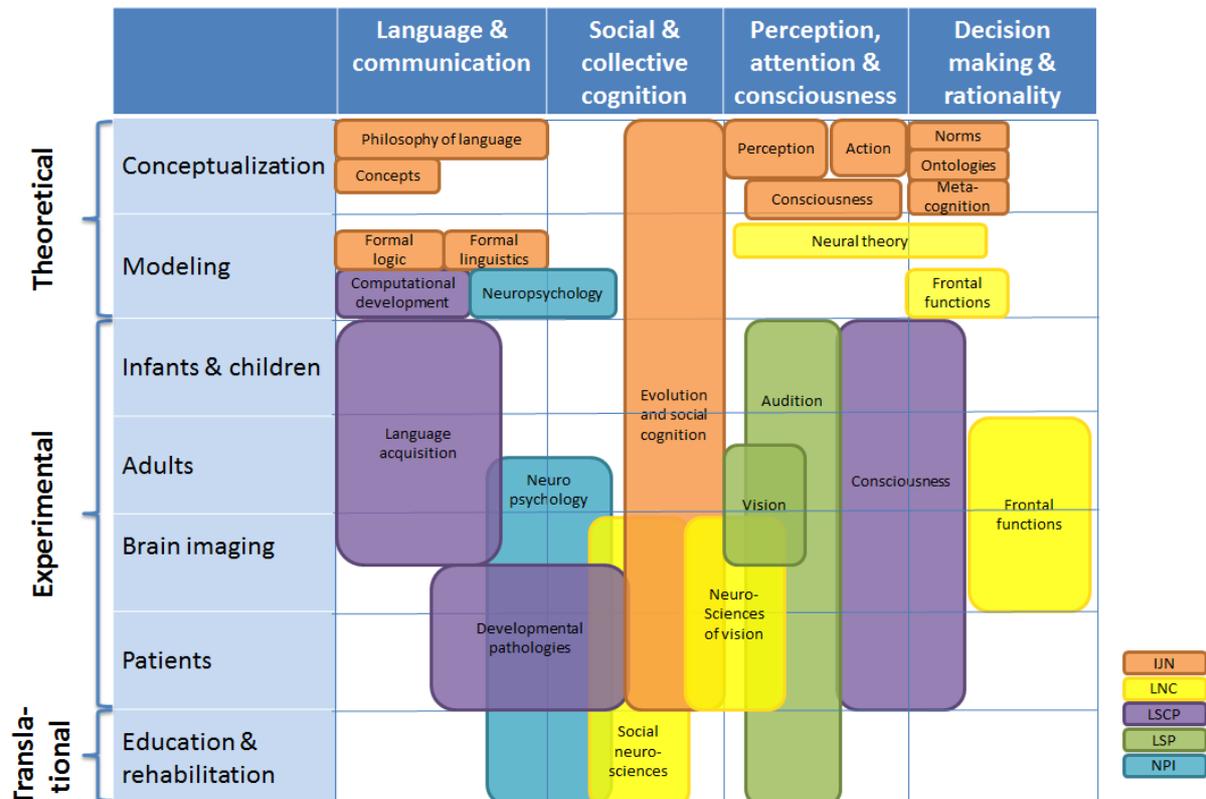
<http://iec-ling.ens.fr>

**Evolution & Social Cognition (ESC):** evolutionary biology, social cognition

<https://esc.dec.ens.fr/en>

## The Cogmatrix

A graphic illustration of the overall scientific project of DEC is shown below in the so-called “Cogmatrix”. It crosses the four strategic research programs with seven methodologies, and the activities of each of the six units are indicated by a unique color. (Note: the size of the rectangles is not proportional to the number of researchers involved.)



The “Cogmatrix”: strategic research programs and methodologies used to study them in the different research units at DEC.

## Experimental platforms



DEC has several experimental platforms at *Ecole Normale Supérieure*, *Hôpital Mondor* and *Hôpital Cochin Port-Royal* for testing infants (<http://sapience.dec.ens.fr/babylab/>), children, and both healthy and brain-lesioned adults. These platforms are equipped with eye-trackers, as well as with EEG and NIRS recording systems.

## International collaborations



The Labex IEC supports nine thematic New Ideas programs to foster international collaborations. In particular, these programs fund conferences, workshops, and thematic schools held at DEC, as well as multilateral conventions.

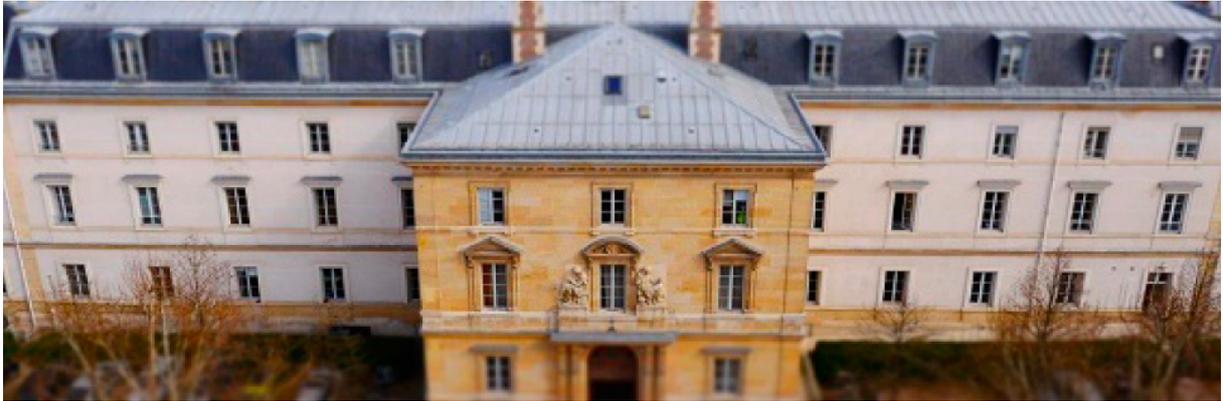
The **New Ideas programs** are:

- New Ideas in Hearing and Seeing
- New Ideas in Computational Neuroscience
- New Ideas in Cognitive Neuroscience
- New Ideas in Mathematical Philosophy
- New Ideas in in the Philosophy of Mind and Language
- New Ideas in Linguistics
- New Ideas in Neuropsychology
- New Ideas in Cognitive development
- New Ideas in Social Cognition

## 4. Living environment

ENS

DEC is a department in a unique setting: the Rue d'Ulm Campus of *Ecole Normale Supérieure* (ENS) in the heart of the Quartier Latin. The main ENS campus is the center of a vibrant academic community composed of an exceptional student community and a distinguished faculty of international scholars and researchers. At ENS, living and learning are intimately connected.



## Paris

It's impossible to talk about DEC and ENS without mentioning the remarkable and cosmopolitan city where they are located. Paris's impressive scientific intellectual and cultural heritage makes the city itself a living classroom.



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## 5. Student community

The community of students at DEC represents a remarkably diverse population. Students with backgrounds in various disciplines come from France and a wide variety of other countries to pursue their training in cognitive science. A student association, “DEC-Life”, promotes the social, cultural, and scientific atmosphere of the department. It coordinates several on-site activities,

including language conversation groups, a movies club, a soccer team, and board game evenings. Every two years, it co-organizes a two-day retreat for all the members of DEC.

A diverse range of cultural, artistic, and sporting activities is also proposed by ENS, and campus-wide social events are regularly organized by the Social Activities Organizing Committee. More information on the ENS website: <http://www.ens.fr/campus/cadres-de-vie/>

## 6. Organization and government



## 7. Contact and map

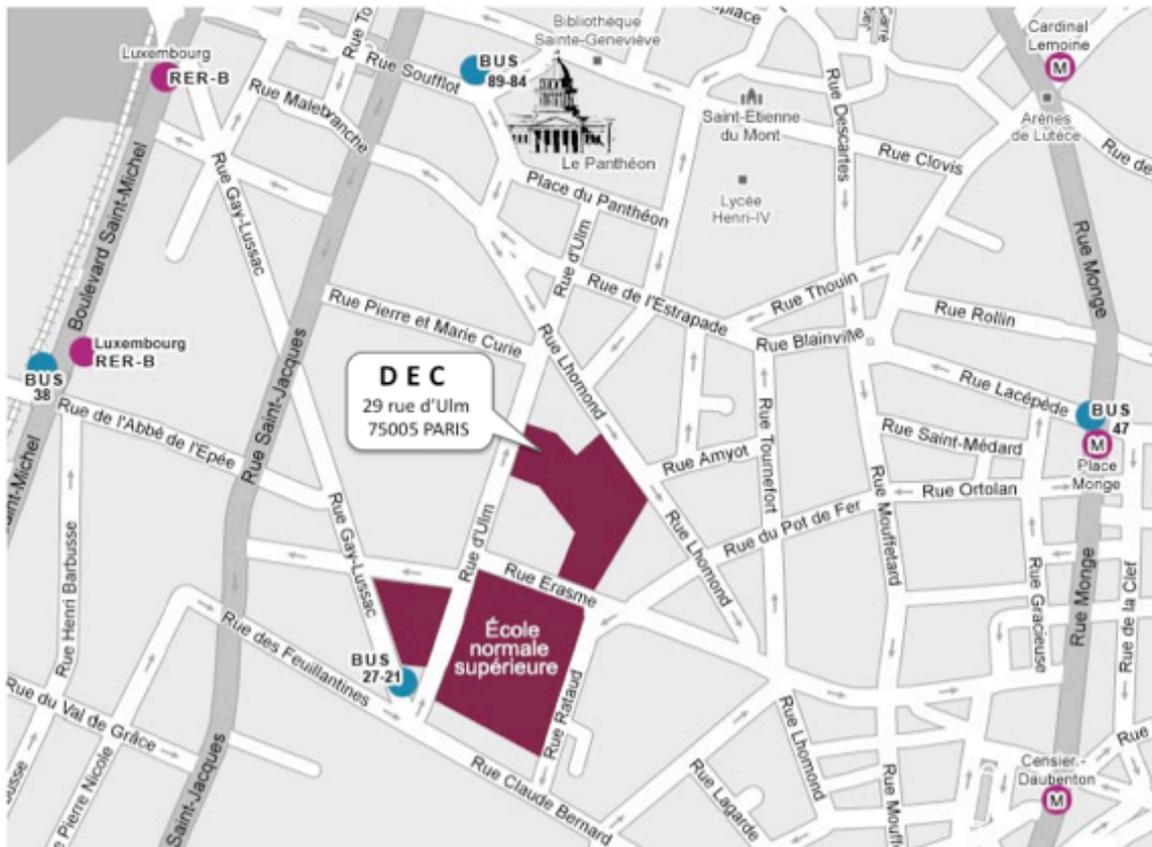
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