

NEUROGRAD+ SUMMER SCHOOL

Web-based technologies for cognitive science

For last-year bachelor and master students

6th - 9th July 2026

Lyon, France

More info: neurograduate.univ-lyon1.fr/summerschool/

Application deadline: **15th of April 2026**

Day 1 – 6th of July 2026

Open cognitive science & online behavioural testing

- 08h30-09h00 | Registration and coffee break
- 09h00-09h15 | Welcoming words by the organizers and general introduction
- 09h15-11h15 | **Lectures. Introduction to open cognitive science.**
 - 09h15- 09h45 | What lies ahead: the long road from ideas to publication | *Nils Kolling, SBRI, Lyon*
 - 09h45-10h15 | Experimental designs in the lab and online | *Romain Ligneul, CRNL, Lyon*
 - 10h15-10h30 | Break
 - 10h30-11h15 | Fifty shades of open science | *Guillaume Sescousse, CRNL, Lyon (tbc)*
 - 11h15-11h45 | Organize, standardize and share data | *Gaelle Leroux, CRNL, Lyon (tbc)*
- 12h00-12h30 | Flash-talks by participants
- 12h30-14h00 | Lunch with speakers
- 14h00-18h30 | **Practical session. Deploying behavioural experiment**
 - Essential Git commands for version control
 - Virtual environments for Python and Javascript
 - Key principles and implementation of web programming using HTML and Javascript
 - Setting up a web-server to serve a behavioural task using jsPsych and [Express.js](#)

Day 2 - 7th of July 2026

Doing more with more data

- 09h00-11h15 | **Lectures. Large scale online experiments & ecological contexts**
 - 09h00-09h30 | Gamifying experiments for emotional engagement | *Jacqueline Scholl, CRNL, Lyon*
 - 09h30-10h00 | Turning an experiment into an game for smartphone | *Quendera, CCU, Lisbon*
 - 10h00-10h15 | **Break**
 - 10h15-10h45 | *Irene Cogliati, University of Brussels (tbc)*
 - 10h45-11h15 | Studying cognition in ecological settings | *Valerie Godefroy, CRNL, Lyon*
- 11h30-12h30 | **Flash-talks** by local PhD students
- 12h30-14h00 | **Lunch** with speakers and local students
- 14h00-18h30 | **Practical session. Accessing, preprocessing and analysing online data**
 - Getting familiar with Numpy and Pandas
 - Preprocessing and sanity checks
 - Plotting data with Seaborn
 - Frequentist statistics using Pingouin
- 19h00-... | **Social event** with students and speakers near the River Rhône.

Day 3 - 8th of July 2026

Emerging approaches for clinical applications

- 09h30-11h45 | **Lectures. Introduction to computational psychiatry**
 - 09h30-10h00 | *Sami Beaumont, Saint-Anne, Paris (tbc)*
 - 10h00-10h30 | *Franciska Knolle, Technical University, Munich (tbc)*
 - 10h30-10h45 | **Break**
 - 10h45-11h15 | From associative to reinforcement learning | **Philippe Domenech, Saint-Anne, Paris**
 - 11h15-11h45 |

- 12h00-12h30 | **Practical session. Wrapping up**
 - How to make the most out of the material used throughout the school

- 12h30-14h00 | **Lunch** with speakers

- 14h00-15h30 | **Lectures. Virtual Reality (VR) & BCI for cognitive science**
 - 14h00-14h30 | Insights into cognition using BCI | **Jérémie Mattout, CRNL, Lyon**
 - 14h30-15h00 | VR based interventions | **Victoria Brugada, Altoida, Inc., Basel**
 - 15h00-15h30 |

- 15h30-17h00 | **Neuro-immersion (VR) platform visit** at Impact.

- 18h00-... | **Art-science event**

Day 4 - 9th of July 2026 (bonus day)

Computational behavioural modeling

- 09h30-11h45 | **Lectures. Computational models of behaviour**
- 09h30-10h00 | Principles of statistical optimization and their application to behavioural modelling | *Stephano Palminteri, ENS Paris (tbc)*
- 10h00-10h30 | **Matteus Joffily, GATE, Lyon**
- 10h30-10h45 | **Break**
- 10h45-11h15 | Drift diffusion models and economic decisions | *Laura Fontanesi, University of Basel (tbc)*
- 11h15-11h45 | **Sophie Bavard, Paris Brain Institute, Paris**
- 12h00-12h30 | **Flash-talks** by local PhD students

- 12h30-14h00 | **Lunch** with speakers and local students

- 14h00-18h30. **Practical session. Fitting and validating behavioural models**
 - Simulating the task using different reinforcement-learning models
 - Model fitting & model validation
 - Making sense of model comparisons

More information

Scope and format of the event

The Neurograd+ 2026 Summer School is focused on familiarization with essential skills, common techniques and emerging concepts in cognitive neurosciences, with a focus on computation, multimodality and ecological relevance. The program includes talks, practical sessions, visits, complimentary meals and social activities.

Preparatory material and short tutorials will be shared with the selected students to make the best out of the practical sessions. The goal of these sessions is dual: familiarize students with the main concepts and operations required to perform a cognitive neuroscience experiment and provide them with clean boilerplate scripts & functions to start their future projects in the best conditions.

This event is entirely free thanks to generous funding from the SFRI program. We will select 12-16 students (about 50% international) based on their CV and their letter of interest.

All communications are in English.

Eligibility

General prerequisite: students who just completed or are about to complete their master and who wish to embrace a research career in cognitive science, cognitive neuroscience, experimental psychology or computational psychiatry.

The selection committee will favor candidates whose scientific interests and/or ongoing projects align with the scope of the school. Basic knowledge in computer programming is required.

We are committed to fostering an international, inclusive and welcoming environment for all participants.

Neurograduate Summer School Travel grants

We may award up to 7 travel grants to non-local students, covering accommodation and transportation.

The awarded candidates will be housed in a studio residence or in a hotel located between the Neurocampus and the city center of Lyon.