# Raphael Vallat

# Curriculum Vitae



# Education and diploma

2009 Scientific baccalaureate, cum laude

2012 Bachelor degree of Cognitive Sciences, ranked 1st, Lyon 2 University

2014 Master degree in Neuroscience, cum laude, Lyon 1 University

2014–17 PhD program in Cognitive Neurosciences, ongoing (CRNL)

Lyon Neuroscience Research Center (CRNL) - PhD defense in December 2017

## Fellowship and awards

2012–14 Two-year merit scholarship, from the French Ministry of Education

2014–17 Three-year PhD fellowship, from the French Ministry of Higher Education and Research

# Teaching activities

# **Teacher in Neuroscience** (200h), since October 2014 (Lyon 1 University)

Neurobiology / Neuroanatomy, 1st and 2nd year of Bachelor Degree

Social science, 1st year of Medicine

Neuro-imaging, Master degree in Neuroscience

Supervision of two master students (Research master in Neuroscience)

Elected representative of the non-permanent members in CRNL council

## Specific skills

#### Software development

2017-pres Sleep: an open-source Python software for visualization, analysis and staging of sleep data. [ Link ]

#### Neurosciences

Methodology Polysomnography and sleep studies, combined EEG-fMRI, resting-state fMRI, behavioural studies

Analysis Signal processing, Sleep scoring and ERP analyses

Functional and connectivity MRI analyses (CONN Toolbox, SPM, FSL, Nipype)

Programming Python, Matlab, LATEX, HTML, Shell, R, Presentation

#### **Formations**

2016 fMRI course (3 days) organized by the Neuroscience and Cognition Doctoral School, Lyon, FR

2015 Second Brain Connectivity course (4 days) organized by the Grenoble Institute of Neuroscience, FR

2014 EEG-fMRI workshop (2 days) organized by Brain Products GmbH, Lyon, FR

#### Outreach

2016 Organizer of the Doctoral Day of the Lyon Federative Research Structure in Health

2015 Invited oral presenter for a general public conference on sleep and dreams (1h, at Lyon town hall)

Organizer of a thematic week on neuroscience for 6 high-school students

Organizer and chairman of "Les Saisons du CRNL" conference on neurosciences and society

## Languages

French Mother tongue

English Fluent

## **Publications**

#### **Articles**

2017 <u>Vallat R.</u>, Lajnef T., Eichenlaub J.-B., Berthomier C., Jerbi K., Morlet D., and Ruby P. (2017). Increased Evoked Potentials to Arousing Auditory Stimuli during Sleep: Implication for the Understanding of Dream Recall. Frontiers in Human Neuroscience, 11. https://doi.org/10.3389/fnhum.2017.00132 - [ PDF ]

<u>Vallat R.</u>, Chatard B., Blagrove M. & Ruby P. Characteristics of the memory sources of dreams: a new version of the content-matching paradigm to take mundane and remote memories into account *(under revision, Plos One)* 

<u>Vallat R.\*</u>, Combrisson E.\*, Eichenlaub J-B., O'Reilly C., Lajnef T., Guillot A., Ruby P. & Jerbi K. Sleep: an open-source python software for visualization, analysis and staging of sleep data (submitted to Frontiers in Neuroinformatics)

<u>Vallat R.</u>, Meunier D., Turker B., Nicolas A. & Ruby P. Functional connectivity at awakening: the cerebral correlates of sleep inertia assessed using combined EEG-fMRI (in preparation)

<u>Vallat R.</u>, Eskinazi M., Nicolas A. & Ruby P. Sleep habits and dream recall frequency in a representative sample of French students. *(in preparation)* 

Ruby P., Chatard B., <u>Vallat R.</u>, Hoyer R. & Bidet-Caulet A. Top-down and bottom-up attentional processes in high and low dream recallers: an EEG study (in preparation)

Plailly J., Villalba M., <u>Vallat R.</u>, Nicolas A. & Ruby P. Recalling a dream related to a recent experience: does it help episodic memory consolidation? *(in preparation)* 

#### Oral presentations and posters

2016 <u>Vallat R.</u>, Meunier D., Turker B., Nicolas A & Ruby P. Sleep inertia and functional connectivity between brain regions at awakening: an EEG-fMRI study. *Poster/abstract for ESRS conference (Italy) and FENS conference (Denmark)* 

<u>Vallat R.</u>, Meunier D., Turker B., Nicolas A & Ruby P. Sleep inertia and functional connectivity between brain regions at awakening: an EEG-fMRI study. *Oral presentation for IASD conference (Netherlands)* 

2015 <u>Vallat R.</u>, Eichenlaub J-B., Morlet D. & Ruby P. Macro and micro structure of sleep in high and low dream recallers. *Oral Presentation for NPSA conference (Netherlands) and IASD conference (USA)* 

<u>Vallat R.</u>, Eichenlaub J-B., Morlet D. & Ruby P. Macro and micro structure of sleep in high and low dream recallers. *Poster for ASSC conference (France)* 

2014 <u>Vallat R.</u>, Eichenlaub J-B., Morlet D. & Ruby P. Macro and micro structure of sleep in high and low dream recallers. *Oral presentation for IASD conference (USA)* 

#### Review

- 2017 Co-reviewer for Journal of Cognitive Neuroscience
- 2017 Reviewer for International Journal of Dream research

# Interests

Music Guitar and bass (10 years, self-learner), composition

Sports Swimming (10 years), martial arts (7 years), ski, hiking, climbing

# List of referees

Center director: Olivier Bertrand (olivier.bertrand@inserm.fr)

PhD supervisor: Perrine Ruby (perrine.ruby@inserm.fr)