YSEULT HÉJJA-BRICHARD

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Doctoral Research

2015-Present – PhD candidate - Université Paul Sabatier and CerCo (CNRS), Toulouse, France.
Supervisor: Benoit Cottereau, CNRS researcher, Eco-3D team.
Title of the thesis: Adaptation to the 3D properties of the visual environment in primates.

Brief synopsis:
The main purpose of this project is to provide a better understanding of how the visual system in primates adapts to the 3D properties of our environment. The relation between the 3D properties of natural scenes and cortical responses to those properties are investigated at a macroscopic level by conducting functional neuroimaging studies. I am also conducting psychophysics studies to have an insight into the link between visual perception, natural statistics and brain activity.

- **Teaching Experience**
  Teaching assistant (64hr per year) for Bsc Biology students (2nd and 3rd year), Department of behavioural science and neuroscience, Université Paul Sabatier, Toulouse, France.
  Practical and lab works, tutorial classes: Behavioural ecology, behavioural neuroscience, nervous and cerebral functions, neurophysiology.
  Creation of original course content and new assessment methods; completion of extra-training in pedagogy to improve personal teaching methods

- **Scientific Production**
  Publications
  Cottereau, B.R., Smith, A.T., Rima, S., Fize, D., Héjja-Brichard, Y., Renaud, L., … Durand, J.-B. (2017). Processing of Egomotion-Consistent Optic Flow in the Rhesus Macaque Cortex. Cerebral Cortex, 1-14. https://doi.org/10.1093/cercor/bhw354

  Oral presentation
  Héjja-Brichard, Y. & Cottereau, B.R. (2017). Adaptation to spatial regularities of the visual environment in stereovision systems. Talk presented at the PhD student Day (Journée des doctorants), Université Toulouse III Paul Sabatier, France

  International conferences attended
  Poster: Héjja-Brichard, Y., Rima, S., Durand, J.-B., Cottereau, B.R. (2017, August). Stereomotion processing in the non-human primate brain. European Conference on Visual Perception, Berlin, Germany

- **Additional competences**
  - Computing skills: Matlab, SPM12, R programming, EventIDE (stimulus presentation software), LaTeX, Adobe Illustrator, Photoshop.
  - Workshops in statistical analyses and ethics
  - Animal experimentation training and authorisation to conduct research projects in NHP
  - Co-Supervision of a Master's student in Neuroscience (2017-2018)

- **Lab Community Involvement**
  Student representative at the Lab Council (2017-present)
  Organisation of the students' Lab Winter School; Co-organisation of the Annual Lab Meeting Day; Ambassador for the Center for Open Science (2018)

  Development of an open and slow science associative laboratory with other young scientists (http://slowpen.science/)

- **Personal Implication in Science Popularisation**
  - Public presentation concerning 3D vision in animals and how to study it (Feb. 2017) "En tête à tête avec un jeune chercheur", Museum de Toulouse: "La vision 3D : mieux qu'au cinéma !"
  - Article (March 2017, in French) about the evolution of 3D vision in animals, written for Muséum Toulouse (Museum of Natural sciences) - Yseult Héjja-Brichard & Benoit R. Cottereau "Evolution et vision : le vivant a de la profondeur !"

  Member of InCOGnu, an organisation of students and young researchers in cognitive science in Toulouse area, France. We organise monthly conferences, workshops for the general public (adults and children) and we take part in various events of science popularisation (Pint of Science, ESOF, Brain Awareness Week, National Forum of Cognitive Science, . . .).
  More precisely, I am involved in communicating about the events and am a member of the board.

Education

- **Master's degree (2nd year)**
  2014-2015: M2 Neuroscience Cognition Behaviour - Université Paul Sabatier, Toulouse, France
  Attended classes: Cognition, spatial cognition, sensory systems, neuroethology, collective behaviour, behavioural ecology, applied statistics
  - Research project: "Characterisation of the cortical networks involved in 3D orientation processing in primates." at CerCo, Toulouse. Supervised by Benoit R. Cottereau & Jean-Baptiste Durand.

- **Master's degree (1st year)**
  2013-2014: M1 Cognitive Psychology - Université de Grenoble, France
  Attended classes: Visual cognition, memory, neurology and neuropsychology, psycholinguistics, movement planning and control, applied statistics
  - Research project: "Role of the eyes in face categorisation: Interracial eye change impacts on the other-race effect in a categorisation task." at LPNC, Grenoble. Supervised by Olivier Pascalis.
  - Internship in Neuropsychology at the Hospital of Grenoble, France (January-February 2014)
  Clinical interviews and cognitive assessments of patients with movement disorders

- **Bachelor's degree**
  2011-2013: Bsc in Psychology – Université de Grenoble, France & Universität Leipzig, Germany *(Erasmus year: 2012-2013)*
  - Research assistant at the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany - Department of social neuroscience (April-July 2013). Supervised by Natacha Mendes.
  In charge of the coding of chimpanzees' vocalisations and statistical analysis.

Interests

- **Languages –** French (native), English (Toefl iBT: 104/120), German (good command in speaking, level B2), Spanish (good command in speaking, level B1).
- **Sports –** Cycling, running, swimming (regular practice), Nordic skiing, hiking.
- **Hobbies –** Reading (literature, poetry, theatre), arts and crafts (drawing, sewing), learning languages, traveling.