Matthieu BERNARD

PhD student in
Neuroscience and Cognitive science

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Education:

• 2018- Present : PhD Candidate at the German Center for Neurodegenerative Diseases (DZNE).

• Aging & Cognition Research Group. Otto-von Guericke University of Magdeburg *(Magdeburg, GERMANY)*.

• Supervisors: Prof. Dr. Thomas Wolbers & Dr. Jonathan Shine

• 2016-2018 : Dual Masters in Brain and Mind sciences.

• 2017-2018 : at UPMC and École Normale Supérieure, ENS *(Paris, FRANCE)*. Master obtained with **Honours.**

• 2016-2017 : at University College London *(London, ENGLAND)*. MSc obtained with **65/100**.

• 2013 - 2016 : Biology and mathematics life science degree obtained with **Honours.**

• 2015-2016: at Queen's University *(Kingston, CANADA)*.

• 2013 - 2015: at Université Pierre et Marie Curie, UPMC *(Paris, FRANCE)*.

Expertise:

• Cognitive neuroscience *(Master level)*
• Neuroimaging *(Master level)*
• Computational neuroscience *(Master Level)*

Language:

• English**:** Fluent (2 years abroad)

Computer skills:

• Proficiency of Matlab *(Multi-paradigm)*.
• Proficiency of R *(Procedural paradigm)*.
• Basic knowledge of Haskell *(Functional paradigm)* and Prolog *(Logical paradigm)*.
• Office automation **:** Word, Excel, PowerPoint.

Hobbies:

• 9 years of archery with competion practise.
• Amateur video (writting, directing, post-prod).

Professional experiences:

October 2017 & January to June 2018:

Master project on "Building individual semantic networks and exploring their metrics in relation to creative abilities."

FRONTlab (ICM, FRANCE)
Supervisor: Emmanuelle Volle (emmavolle@gmail.com)

Goal:

To explore the relation between the metrics of semantic networks and creativity.

Methods:

- An associative judgement task was built from a vast semantic network created from a free associations norm dictionary.
- Then, participants undertake this associative task as well as several tasks measuring the creative ability.
- Finally, individual semantic graphs are built and analysed using graph-based methods. The derived metrics will be correlated with creativity measures.

Publication in prep

November 2016 to August 2017:

Research project on "Effects of sleep and reward on memory for pictures associated in a graph network."

Spatial Cognition Lab (UCL, ENGLAND)
Supervisor: Gordon Feld (feld.gordon@gmail.com)

Goal:

To determine the impact of sleep and reinforcement, in the human brain, using an experimental task testing the associative memory through stimuli arranged in a network.

Methods:

- Participants memorize a network of stimuli by moving between neighboring stimuli. Some of the stimuli are associated to a positive or negative reinforcement.
- During the retention interval, participants sleep (learning at night) or continue their day (learning the morning). The recovery is tested 10 hours later.

Publication in prep

January to April 2015 and June 2015:

Tutored project and Internship on "Characterization of conductances on the membranes of human red blood cells."

Tutor: Stéphane Egée (egee@sb-roscoff.fr)