

LEFORT-BESNARD Jérémie

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**Ph.D. candidate in computational neuroscience
and associate doctoral researcher (IRTG 2150)**

EDUCATION

Since December 2015, RWTH university of Aachen, Germany

Ph.D. student in computational neuroscience and associate doctoral researcher for the IRTG 2150

"Data-driven approaches to structure and function in schizophrenia"

Supervision: Prof. Danilo Bzdok, RWTH University

& Prof. Danielle S. Bassett, University of Pennsylvania (UPENN)

Thesis defense coming soon (january/February 2019)

2015 François Rabelais University, Tours, France

Master 2 Research "Neurosciences, Cognition and Psychology"

with honours, Rank: 2/19

Psychologist title, supervision by the Master 2 "Child psychology"

2013 Bucknell University, USA (senior year) and François Rabelais University, Tours, France

Bachelor's Degree in Psychology

with honours

CURRENT INVESTIGATIONS AND PUBLICATIONS

-As a first author-

2018, *Translational Psychiatry*

"Patterns of schizophrenia symptoms: hidden structure underlying the PANSS questionnaire", Lefort-Besnard et al.

We predicted schizophrenia severity based on the hidden structure of a clinical questionnaire (PANSS) using a broad machine learning toolbox including multilayer perceptron, sparse logistic regression, and latent-factor approaches

2018, *Human Brain Mapping*

"Different shades of the default mode in schizophrenia, subnodal covariance estimation in structure and function", Lefort-Besnard et al.

We quantified the importance of the dysfunction of each segregated default mode network subregions in the pathophysiology of schizophrenia using sparse inverse covariance on structural and resting-states functional brain imaging modalities

OHBM 2018 Singapor abstract presentation + awarded of the DAAD travel grant

-As a co-author-

2017, *Autism*

"What do parents of children with autism expect from participation in research? A community survey about early autism studies", Fletcher-Watson et al.

2016, *Autism*

"Attitudes of the autism community to early autism research", Fletcher-Watson et al.

PREVIOUS INTERNSHIPS

-As a graduate researcher-

2014-2015, Tours

Autism Team of the INSERM U930 laboratory (EAR Project)

Master 2 Research Thesis: "Effect of the Exchange and Development Therapy on joint engagement, nonverbal communication, emotional, and perception areas" (with honours)

2013, Tours

INSERM U930, Team 4: Affective Disorders

Master 1 thesis: « Involvement of hippocampal neurogenesis in regulating stress responses » (with honours)

-As a psychologist-

2014-2015, Tours

Child Psychiatry Services at the Hospital Bretonneau

Master 2 Psychology thesis: "From diagnosis to patient care"

Quotation, rating and clinical interpretation of various psychiatric scales and tests.

Psychological examinations and assessments, development of personalized support projects for children or adolescents

TEACHING EXPERIENCE

2018

Teacher: "Using Git, Github and creating a science portfolio"

[IRTG 2150 Uniklinik RWTH Aachen](#)

2017 + 2018

Teacher: "Introduction to Python in neuroscience"

[IRTG 2150 Uniklinik RWTH Aachen](#)

2016-2017

Teacher assistant: "Machine learning crash course"

[Uniklinik RWTH Aachen](#)

OTHER EXPERIENCE

2016-2017

Volunteer

First aid worker, intervention during public events in the NRW, Germany

[Die Johanniter, Aachen](#)

2014-2015

President of ESN Tours

Creation and management of the non-profit organization ESN Tours « Erasmus Student Network» (around 10.000 euros annual budget), aiming to improve the integration of foreign students in Tours

2013-2014

Manager of cultural programming for exchange students

[International Relations, Tours](#)

SKILLS

Python

Data manipulation (Numpy, Pandas, etc...)

Data visualization (Matplotlib, Seaborn, etc....)

Data analysis (Nilearn, Scipy, Scikit-learn)

Machine learning

Clinical interviews, psychometric and neuropsychological tests

RELEVANT COURSEWORK

Nilearn Workshops

Focus on Nilearn (Python): understand, perform and exploit standard analyses for multivariate pattern analysis in neuroimaging

Brainhack session 2017, Max Plank Institute Leipzig, Germany. Focus on flat brain visualisation (Pycortex)