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LEFORT-BESNARD Jérémy

Currently postdoc at Empen team, INRIA, Rennes, France

· **Brain imaging**   · **Quantitative neuroscience**   · **Reproducibility**

EDUCATION

2015-2019	**Ph.D** in computational neuroscience (Magna Cum Laude)	*RWTH Aachen, Germany*
	Supervision: Prof. Danilo Bzdok, RWTH University	
	Prof. Danielle S. Bassett, UPENN	
	Scholarship: International Research Training Group (DFG-IRTG 2150)	

2015	**Master** "Neurosciences, Cognition and Psychology" (with honors)	
	Psychologist title, supervision by the Master "Child psychology"	*University of Tours, France*

2013	**Bachelor** in Psychology (with honors)	*Bucknell University, USA*
		and University of Tours, France

SELECTED PUBLICATIONS
All codes are hosted on my Github account

- Peer reviewed journal –

Lefort-Besnard J., Naveau M., Delcroix N., Cignetti M., Decker L.
> *Grey matter volume and CSF biomarkers predict neuropsychological subtypes of MCI.*
> **Neurobiology of Aging**. 2023.
> In charge of the full scans preprocessing downloaded from the ADNI database + statistical workflow
> (clustering + benchmark analyses + multiclass algorithms)
> OHBM 2022 Glasgow abstract presentation

Lefort-Besnard J., Clemens B., Ritter C., Smith E., Votinov M., Derntl B., Habel U., Bzdok D.
> *Accurate machine-learning prediction of sexual orientation based on brain morphology and intrinsic functional connectivity.*
> **Cerebral Cortex.** 2022.
> In charge of the full statistical workflow (stacking pipeline with classification models)

Chechko N, Lefort-Besnard J, Eickhoff S, Stickel S, Goecke T, Frensch M, Habel U, Lang J, Bzdok D.
> *Restless legs syndrome in pregnancy: Striatum structure explains most behavioral differences.*
> **Nature: Scientific Reports**. 2021
> My technical responsibilities included the regularized regression and the CCA analyses.

Lefort-Besnard J., Vogeley K, Schilbach L, Varoquaux G, Thirion B, Dumas G, Bzdok D.
> *Patterns of Autism Symptoms: Hidden Structure in the ADOS and ADI-R instruments.*
> **Nature: Translational Psychiatry**. 2020
> In charge of the full statistical workflow (clustering and sparse regression analyses)

Lefort-Besnard J., Varoquaux G., Derntl B., Gruber O., Aleman A., Jardri R., Sommer I., Thirion B., Bzdok D.
> *Patterns of Schizophrenia Symptoms: Hidden Structure in the PANSS Questionnaire.*
> **Nature: Translational Psychiatry.** 2019
> In charge of the full statistical workflow (clustering, linear and non-linear analyses)
> OHBM 2019 Roma abstract presentation

Lefort-Besnard J., Bassett S.D., Smallwood J., Margulies S.D., Derntl B., Gruber, O., Aleman A., Jardri R., Varoquaux G., Thirion B., Eickhoff B.S., Bzdok D.
> *Different shades of default mode disturbance in schizophrenia: Subnodal covariance estimation in structure and function.*
> **Human Brain Mapping.** 2017. 39:644–661

In charge of the full statistical workflow (sparse inverse covariance)
OHBM 2018 Singapor abstract presentation + awarded of the DAAD travel grant

- Conference paper –
<u>Lefort-Besnard J.</u>, Wan-Ting Hsieh, Hao-Chun Yang, Li-Wei Kuo, Chi-Chun Lee.
Behavior Score-Embedded Brain Encoder Network for Improved Classification of Alzheimer Disease Using Resting State fMRI.
IEEE EMBC. 2020.
In charge of the full scans preprocessing + statistical workflow (Convulational Neural Network and autoencoder)
42nd Annual International Conference IEEE EMBC 2020 Montreal presentation

RELEVANT EXPERIENCE

2023	**Panelist for the round-table "Future of Meta-Analysis" and poster presentation**	
	at Cogbases-2023 conference at Institut Pasteur	Paris, France
2023	**Talk** Glioma MR imaging 2.0, 4th meeting	Porto, Portugal
	Presentation of the project "Sharing MRI data under compliance of the GDPR"	
2023	**Talk** Glioma MR imaging 2.0, 4th meeting	Porto, Portugal
	Presentation of the project "Sharing MRI data under compliance of the GDPR"	
2022	**Talk** Pint of Science + fête de la science about science reproducibility	Caen, France
2022	**Poster Presentation** OHBM conference	Glasgow, UK
Since 2021	<u>**Postdoctoral researcher**</u> on identifying underlying processes of cognitive decline	
	Teacher Python class and machine learning class	Caen, France
	Full access to all videos of my courses on my website ('Français' Tab)	
2020	**Data scientist** with an autoentrepreneur status working (mostly) for Melio company based in the US. I worked on implementing a Google Chrome extension that would list Amazon items based on CO_2 emissions to manufacture and transport the items. The main idea is to guide the buyer to select the least polluting product.	
2019-2020	<u>**Postdoctoral researcher**</u> on learning predictive models based on behaviors,	
	brain-region and brain-network priors	NTHU, Taiwan
2018+2020	**Project presentation** IRTG 2150 conference	RWTH Aachen, Germany
2020	**Teacher** "HTML, CSS and JS"	NTHU, Taiwan
2019	**Sys Admin** Gitlab instance on Ubuntu server	NTHU, Taiwan
2019	**Teacher** "Using Git, Github and creating a science portfolio"	NTHU, Taiwan
2018 Germany,	**Teacher** "Using Git, Github and creating a science portfolio"	RWTH Aachen,
2018	**Hackaton** Focus on Pytorch	Zurich, Swiss
2018	**Poster Presentation** OHBM conference	Suntec, Singapore
2017+2018	**Teacher assistant** "Machine learning crash course"	RWTH, Germany
2017+2018	**Teacher** "Introduction to Python"	RWTH, Germany
2017	**Hackaton** Focus on Pycortex and Pandas hacks	Max Plank Leipzig
2017	**Project Presentation** IRTG 2150 conference	UPENN, USA
Since 2016	**Blog** *https://losangebleu.site* scripted from scratch using html/CSS/JS/PHP + MySQL/phpMyAdmin	
2016-2018	**Writer** on Quora @Jeremy-Lefort-Besnard (800.000 content views in English, 300.000 in French)	
2013-2015	**Founder and President** of Erasmus Student Network Tours (10.000 Euros annual budget)	
Previously Department	GO ClubMed, Mc Donalds, GSM antenna welder, Assistant at the International Relations	

SKILLS & MISCELLANEOUS INFORMATION

Computer	| Mostly Python but also R, Matlab and Bash
Statistics	| Scikit learn, PyTorch
Neuroimaging	| SPM, Afni, Fmriprep, Mriqc, Dcm2bids, Mango, DSI studio, Nibabel, Nilearn, Nipype,
Website	| JS, PHP, MySQL, PhpMyAdmin
Android	| Kotlin (Android Studio)

Daily use | Git version control, Jupyter notebooks, Linux machine
Language | French native, English full working proficiency, some German and Chinese
Hobbies | Home automation (w. Arduino), I ran a few marathons and half marathons, volunteering, chess