

Atlas Thébault Guiochon

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RESEARCH INTEREST

As a research engineer specialising in cognitive and data sciences, my current work focuses on developing an experimental protocol that combines cognitive control tasks with ECG-based neurophysiological measures, aimed at investigating autonomic responses in a clinical context. My solid background in statistical analysis and programming enables me to develop qualitative experiments and apply advanced statistical modeling. This multidisciplinary approach is complemented by a strong dedication to intersectional perspectives, as evidenced by my latest project on sex and gender differences in moral emotions.

EDUCATION

Master in Cognitive Science 2023

Université Lumière Lyon 2, Lyon

1st year of a Master's Degree

Thesis: 'Nonverbal behavioral cues and personality traits in concealing hostile intentions'

Ranking: Class Salutatorian, *Magna cum Laude*

Extra curriculars: Class President

University Degree in Innovative Scientific Communication 2022

Learning Planet Institute, Université Paris Cité, Paris

Ranking: *Summa cum Laude*

Bachelor in Mathematics and Informatics applied to Cognitive Science 2018 - 2021

Université Lumière Lyon 2, Lyon

Thesis: 'Eye movements as behavioral markers of food avoidance in patients with restricting Anorexia Nervosa'

Ranking: Class Valedictorian, *Summa cum Laude*

Extra curriculars: Class President

RESEARCH EXPERIENCE

Unité Mixte de Recherche Physiopathologie et Traitement des Maladies Hépatiques (UMR 1350), Université Claude Bernard Lyon 1 *April 2025 - Present*

Research Engineer

- Dr [Emilie Favre](#) and Dr [Romain Parent](#)
- Project: PSYLIVER
- Funding: SHAPE-Med@Lyon (Structuring one Health Approach for Personalized Medicine in Lyon).
- Combined neuropsychological and neuro-hepatological approaches for studying the evolution towards hepatocarcinoma.
- Designing and programming a cognitive task integrating physiological measures, collecting and analyzing healthy subjects data, documenting all procedures in a written protocol guide.

Laboratoire d'Étude des Mécanismes Cognitifs (EMC), Université Lumière Lyon 2 *October 2023 - December 2024*

Research Engineer

- Dr [Hakim Djeriouat](#) (Team: *NeuroCognition & Criminality*)
- Project MORALEM
- Funding: French National Research Agency.

- Appraisal perspective on third-party morality: situational and dispositional factors on moral emotions and social behaviors.
- Designed and preregistered experimental paradigms, drafted projects for ethics committees, programmed and conducted experiments, collected and analyzed data, presented at an international conference, participated in the writing of scientific papers (one as first author), and participated in the drafting and management of research grants.

Laboratoire d'Étude des Mécanismes Cognitifs (EMC)

October 2022 - June 2023

Research Intern

308h

- Dr Geoffrey Duran (Team: *NeuroCognition & Criminality*)
- Personality traits, non-verbal behaviors and the detection of criminal intentions.
- Implemented experimental tasks, participated in the drafting of projects for ethics committees, developed a web application for data collection, analyzed data, presented at national and international conferences, and participated in the writing of a scientific paper (as first author).

Laboratoire Entrepôt, Représentation, Ingénierie des Connaissances (ERIC) *March 2022 - July 2022*

Research Intern

525h

- Pr Stéphane Chrétien (Team: *Data Mining & Decision*)
- Topological analysis and signature theory applied to time series (functional brain imaging).
- Developed and programmed applications of topological analysis and Machine Learning to neuroscience, co-supervised undergraduate trainees, teaching Python & Machine Learning.

Institut des Sciences Cognitives Marc Jeannerod (ISCMJ), CNRS

December 2020 -

December 2021

Research Intern

300h

- PI Léon Tremblay (Team: *Basal Ganglia*)
- Project: SEVIALANO.
- Funding: French National Research Agency.
- Serotonin modulation of cortical-Basal Ganglia circuits involved in food intake and anxiety: Multi-modal brain imaging investigation on anorexic patients.
- Design and implementation of experimental tasks, acquisition and analysis of clinical, behavioral (eye-tracker) and imaging (PET-MRI) data.

TEACHING & SUPERVISION

Lectures & Seminars

December 2022 - Present

Bachelor courses (130h)

- Cognitive Neuroscience (*Lecture*) – Université Lumière Lyon 2 *4h*
- Cognitive Science & Neuromyths (*Lecture*) – Université Lumière Lyon 2 *4h*
- Cognitive Science in the Professional World (*Lecture*) – Université Lumière Lyon 2 *4h*
- Inferential Statistics (*Seminar*) – Université Lumière Lyon 2 *18h*
- Inferential Statistics (*Seminar*) – Université Catholique de Lyon *100h*

Master courses (52h)

- Applied Cognitive Science (*Lecture*) – Université Lumière Lyon 2 *2h*
- Introduction to Python (*Seminar*) – Université Lumière Lyon 2 *12h*
- Programming for Psychology Experiments (*Seminar*) – Université Lumière Lyon 2 *38h*

Undergraduates

- 1 student in Cognitive Science – Université Lumière Lyon 2
- 4 students in Psychology – Université Lumière Lyon 2
- 12 students in Data Science – Université Lumière Lyon 2

Master's students

- 3 students in Cognitive Science – Université Lumière Lyon 2
- 4 students in Psychology – Université Lumière Lyon 2

PUBLICATIONS

Articles

- Chrétien, S., Gao, B., **Thébault Guiochon, A.**, Vaucher, R. (Preprint). Time Topological Analysis of EEG using Signature Theory. <https://doi.org/10.48550/arXiv.2404.15328>
- Thébault Guiochon, A.**, Vives, E., Revillard, V., Trémolière, B., Djeriouat, H. (Under Review). Seeing and Hearing Moral Outrage: Gender Differences in Multimodal Emotion Processing.
- Vives, E., **Thébault Guiochon, A.**, Trémolière, B., Michael, G.A., Falco, A., Peyroux, E., Djeriouat, H. (Under Review). Moral Anger and Disgust: Examining the Recipient vs. Initiator Focus in the Moral Evaluation of Transgressions. <https://osf.io/preprints/psyarxiv/3dzip4>
- Falco, A., **Thébault Guiochon, A.**, Vives, E., Trémolière, B., Djeriouat, H. (Under Review). The Effects of Eugenic Bias and Moral Emotions on Lay Legal Judgments in a Sterilization Case Involving Intellectual Disability. http://dx.doi.org/10.31234/osf.io/yqfd2_v2

Conference proceedings

- Chrétien, S., Gao, B., **Thébault Guiochon, A.**, Vaucher, R. (2024). Leveraging the Power of Signatures for the Construction of Topological Complexes for the Analysis of Multivariate Complex Dynamics. In: Cherifi, H., Rocha, L.M., Cherifi, C., Donduran, M. (eds) Complex Networks & Their Applications XII. COMPLEX NETWORKS 2023. *Studies in Computational Intelligence*, vol 1141. Springer, Cham. https://doi.org/10.1007/978-3-031-53468-3_24 {hal-04590221}

ORAL COMMUNICATIONS

Conference talks

- Thébault Guiochon, A.**, Djeriouat, H., Trémolière, B. (2024, July 10-12). *Moral Anger and Disgust: Recipient vs. Initiator Focus in Moral Transgressions*. Annual Conference of the European Association of Psychology and Law (EAPL), Egas Moniz School of Health & Science, Caparica, Portugal. {hal-04748077}
- Thébault Guiochon, A.**, Mortier-Mourzelas, M., Hannoah, M., Duran, G. (2023, May 20). *Non-verbal behavioral cues and personality traits in intention concealment*. Colloque des Jeunes Chercheur-euses en Sciences Cognitives (CJC-SCo), École Normale Supérieure, Paris, France.

Conference posters

- Thébault Guiochon, A.**, Mortier-Mourzelas, M., Hannoah, M., Duran, G (2023, July 4-7). *Non-verbal behavioral cues and personality traits in concealing hostile intentions*. Annual Conference of the European Association of Psychology and Law (EAPL). Babeş-Bolyai University, Cluj-Napoca, Romania. {hal-04590202}

Work presented by co-authors

- Duran, G., **Thébault Guiochon, A.**, Mortier-Mourzelas, M., Michael, G.A., (2024, July 10-12). *The truth behind the screen: Ability to detect lies on dating app*. Annual Conference of the European Association of Psychology and Law (EAPL), Egas Moniz School of Health & Science, Caparica, Portugal.
- Chrétien, S., Gao, B., **Thébault Guiochon, A.**, Vaucher, R. (2024, June 20). *Time Topological Analysis of EEG, a novel approach to unveil pre-critical behavior of epileptic seizure*. Data Science for Mental Health seminar, Alan Turing Institute, London, United Kingdom (delivered remotely via Zoom).
- Chrétien, S., Gao, B., **Thébault Guiochon, A.**, Vaucher, R. (2024, May 27-31). *Time Topological Analysis of EEG using Signature Theory*. Journées de Statistique, Université de Bordeaux, Bordeaux, France. <https://doi.org/10.48550/arXiv.2404.15328>
- Chrétien, S., Gao, B., **Thébault Guiochon, A.**, Vaucher, R. (2023, November 28-30). *Leveraging the Power of Signatures for the Construction of Topological Complexes for the Analysis of Multivariate Complex Dynamics*. Conference on Complex Networks and their Applications, Menton, France. https://doi.org/10.1007/978-3-031-53468-3_24
- Thébault Guiochon, A.**, Mortier-Mourzelas, M., Hannoah, M., Duran, G. (2023, September 6-9). *Nonverbal behavioral cues and personality traits in concealing hostile intentions*. Conference of the European Society for Cognitive Psychology (ESCoP), Center for Psychology, Porto, Portugal.
- Geandrot-Zemmahi, A., Ségalen, L., Breisse, A., David, J., Roullot, M., Météreau, E., Debatisse, J., **Thébault Guiochon, A.**, Hammour, A., Germain, N., Massoubre, C., Villeval, M.-C., Galusca, B., Tremblay, L (2023, May 24-26). *Food avoidance in Anorexia Nervosa patients: a gaze control study associated with food evaluation and preference tasks*. Congrès NeuroFrance, Centre de Convention, Lyon, France. [⟨hal-04983931v1⟩](#)

OUTREACH AND PUBLIC ENGAGEMENT

Written material

- Pourquoi a-t-on la sensation de tomber avant de s'endormir ?** *The Conversation*, March 2025. [TheConversation.com](#) [⟨hal-05006801v1⟩](#)
- Why do we yawn when we see someone else yawn?** *The Conversation*, September 2024. [TheConversation.com](#) [⟨hal-04760078v1⟩](#)
- Pourquoi a-t-on envie de bâiller lorsque l'on voit quelqu'un bâiller ?** *The Conversation*, September 2024. [TheConversation.com](#) [⟨hal-04748059v1⟩](#)
- Tous ensemble à l'école.** Serie of illustrated stories for children, parents and teachers on neurodiversity (ASD, ADHD, etc.) with *Cogni'Junior*, March 2024. cognijunior.org/portfolio/serie-de-contes-tous-ensemble-a-lecole/
- Gazette Festival Pop'Sciences.** Editor and member of the editorial board of the magazine of *Pop'Sciences 2023*, Université de Lyon, May 2023. calameo.com/read/007401580d3af19309e50
- La "bosse" des maths, on l'entraîne comment ?** Illustrated popularization of a peer-reviewed published neuroscience article on neural responses to Arabic numerals in children for *Papier Mâché*, February 2023. papiermachesciences.org [⟨hal-05005960⟩](#)

Geoffrey Duran, traqueur de mensonges. Interviewed an associate professor in criminology for *Cortex Mag*, *Laboratoire d'Excellence Cortex*, November 2022. www.cortex-mag.net/geoffrey-duran-traqueur-de-mensonges/

Perspectives. A review of French perspectives on cognitive science, *Fédération Fresco*, July 2022. fr.calameo.com/read/007072654fda4d195be72

Workshops

Mystère à l'Université. Escape game to discover profiling and cognitive biases in investigations. *Fête de la Science 2024*, *Université Lumière Lyon 2*, October 2024.

Le cerveau dans tous ses sens. *Semaine du Cerveau 2024*, *Society for Neuroscience*, March 2024. semaineducerveau.fr/manifestation/le-cerveau-dans-tous-ses-sens/

Qui a tué Larry ? Real and virtual escape game to discover fingerprinting, witness and suspect interviews. *Fête de la Science 2023*, *Université Lumière Lyon 2*, October 2023. view.genial.ly/650d62f98dee9b001185018d/interactive-content-atelier-fds-qui-a-tue-larry

SciQuiz · IA et climat dans tous ses états !. *Ground Control*, June 2023. <https://www.groundcontrolparis.com/project/demain-sera-scientifique/>

Les plus grands neuromythes. *Festival Double-Science*, *Café des Sciences*, *L'Exploratoire & French Physics Society*, May 2023. <http://festivaldoublescience.fr>

1.3kg de machinerie : mais à quoi sert le cerveau ? *Semaine du Cerveau 2023*, *Society for Neuroscience*, March 2023.

Presentations

Conférence post-MIASHS. *BDE MIASHS & Centre d'Orientation, des Stages et de l'Insertion des Étudiant·es (COSIE)*, December 2024.

Rencontre Master x Licence. *Université Catholique de Lyon*, February 2024.

Conférence post-MIASHS. *BDE MIASHS*, February 2024.

Cogni-Tips : valoriser son dossier et réaliser un stage en sciences cognitives. *Association Estigma*, October 2021. <https://www.youtube.com/watch?v=3fPLU5fczt0>

Media

Cerveau, criminalité & citrouille. Interview given to *Nebulae*, July 2024. youtube.com/watch?v=kKo5c8twXJQ

Un parcours atypique. Interview given to *Estigma*, June 2024. youtube.com/watch?v=CA4Fx07wq0Y

Les femmes dans la science. Co-hosted a radio show about women and science on *Recherche en Cours*, *Aligre FM*, March 2022. podcast.ausha.co

ACADEMIC ACTIVITIES

French Federation of Cognitive Science (*Fresco*)
Head of Academic and Professional Relations, Head of Scientific Projects

April 2024 - Present

Cognitive Science Association of Lyon (<i>Estigma</i>) <i>Board Member</i>	<i>June 2024 - Present</i>
French Federation of Cognitive Science (<i>Fresco</i>) <i>Editorial Coordinator of the Perspective Magazine</i>	<i>August 2023 - Present</i>
Cognitive Science for Children Association (<i>Cogni'Junior</i>) <i>Writer</i>	<i>March 2022 - Present</i>
Dissemination Magazine of the Cortex Laboratory of Excellence, Université de Lyon (<i>Cortex Mag</i>) <i>Communication Officer & Graphic Designer</i>	<i>February 2022 - July 2023</i>
French Federation of Cognitive Science (<i>Fresco</i>) <i>Communication Manager</i>	<i>June 2021 - June 2022</i>
MIASHS Student's Office (<i>BDE MIASHS</i>) <i>Tutoring Manager</i>	<i>September 2020 - June 2022</i>
French Federation of Cognitive Science (<i>Fresco</i>) <i>Board Member</i>	<i>September 2019 - June 2022</i>
Cognitive Science Association of Lyon (<i>Estigma</i>) <i>President</i>	<i>May 2019 - June 2022</i>
Cognitive Science Association of Lyon (<i>Estigma</i>) <i>Communication Officer & Graphic Designer</i>	<i>January 2019 - May 2019</i>

OTHER MEMBERSHIPS

Mentorship Association for Youth Professional Integration (<i>Dema1n.org</i>) <i>Mentor</i>	<i>2025 - Present</i>
French Statistics Society (FDS) <i>Member</i>	<i>2024 - Present</i>
European Association of Psychology & Law (EAPL) <i>Member</i>	<i>2023 - Present</i>

TECHNICAL SKILLS

Languages	French (native), English (fluent), German (conversational), French Sign Language (conversational), Dutch (basic), Italian (basic), Spanish (basic)
Collaboration & Reproducibility	L ^A T _E X, Notion, Overleaf, Quarto, RMarkdown, Zotero
Open Science	ArXiv, GitHub, HAL, Open Science Framework
Programming Languages	CLIPS, CSS, HTML, JAVA, JavaScript, Pascal, PHP, Python, QBE, R, SQL, VBA
Software & Tools	G*Power, jamovi, JASP, JATOS, MS Office, OpenSesame, Prolific, PsychoPy, SIFAC