Valentin Guigon

CURRENT POSITION

Postdoctoral researcher
Social Learning and Decisions Lab
UMD | March 2024 – ongoing

Affiliate researcher
Artificial Intelligence Interdisciplinary Institute at Maryland

Neuroscience and Cognitive Science (NACS) program, UMD

RESEARCH AND PERSONAL INTERESTS

Beliefs
Emotions
Information
Social learning
Decision-making
Computational psychiatry
Computational neuroscience
NeuroAI

Social sciences
Public policies
Epistemology

CONTACT

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EDUCATION

Doctorate degree – Biology: Cognitive neuroscience
2018–2022 | Neurosciences and Cognition Doctorate School, Lyon 1, France

Master degree – Cognitive science
2016–2018 | Psychology Faculty, Lyon 2, France

Licence degree – Physiology & Neuroscience (Cognitive and Adaptative)
2015–2016 | Sciences Faculty, Marseille Saint-Charles, France

Licence degree – Psychology
2012–2015 | Human Sciences Faculty, Aix-en-Provence, France

RESEARCH EXPERIENCE

Post-doctorate | Social Learning and Decisions Lab
Department of Psychology, University of Maryland, MD, USA
March 2024 – ongoing | Social decision making
Studies: Neurocomputational mechanisms underlying neurotypical and neuroatypical learning in social contexts. Individual differences in dynamic belief updating during trust learning.
Tools: Matlab (SPM), R, Python (PyMC), fMRIprep
Project management: Behavioral and neuroimaging studies, Lab Operations, Lab Automatization
Management: Joshua Berman, Atharv Umap, Gaurav D. Mahajan
PI: Caroline Charpentier

Post-doctorate | Neuroeconomics (ISCMJ & GATE)
CNRS UMR 5229 & CNRS UMR 2824, France
March 2023 – October 2023 | Social decision making
Studies: Neurocognitive mechanisms underlying transmission of uncertain information in humans. Beliefs updating in social networks.
Tools: Matlab (VBA toolbox, SPM), R (JAGS, BRMS)
Project management: Behavioral study
PIs: Marie Claire Villeval, Jean-Claude Dreher

PhD | Neuroeconomics (ISCMJ & GATE)
CNRS UMR 5229 & CNRS UMR 2824, France
October 2018 – December 2022 | Social decision making
Studies: Neurocognitive mechanisms underlying transmission of uncertain information in humans.
Tools: Matlab (VBA toolbox, SPM), R (JAGS, BRMS)
Project management: Behavioral and neuroimaging studies
PhD directors: Marie Claire Villeval, Jean-Claude Dreher

Research Internship | Neuroeconomics lab. (ISCMJ)
CNRS UMR 5229, France
February – July 2018 | Decision making & rewarding
Study: gPPI analysis of testosterone–induced effects on orbitofrontal-amygdala relationships during anticipation of primary and secondary rewards.
Tools: Matlab (SPM, CONN)
Missions: Brain functional connectivity analysis
PI: Jean-Claude Dreher

SKILLS

Project management
Statistics analysis
Computational modelling
Experimental design
Teaching & mentoring

FELLOWSHIPS

LabEX CORTEX fellowship (2022–2023)
LabEX CORTEX fellowship (2021–2022)
IDEX INDEPTH PhD fellowship (2018–2021)

CONTRIBUTIONS

Cortex-magazine, editorial board member
(January 2023 – January 2024)

AFFILIATIONS

Affiliate, AI Interdisciplinary Institute at Maryland (2024–ongoing)
Affiliate, Neuroscience and Cognitive Science (NACS) program (2025–ongoing)

RESEARCH EXPERIENCE

Research Internship | Neuroeconomics lab. (ISCMJ)
CNRS UMR 5229, France
June – August 2017 | Decision making & rewarding
Studies: Functional connectivity analysis in rewarded tasks and implementation of moral norms in tDCS disrupted decision-making behaviors.
Tools: Matlab (SPM, CONN)
Missions: fMRI analysis; research and ethics protocols
PI: Jean-Claude Dreher

Additional early experiences (summary)
Integrative and Adaptative Neurosciences Laboratory (CNRS UMR 7260, 2016): vestibular cortex; complex systems modelling.

Cognitive Psychology Laboratory (CNRS UMR 7290, 2015); La Poste: nudging risky behaviors and ecological transition.

Speech and Language Laboratory (CNRS UMR 7309, 2014): theory of mind; schizophrenia; data collection and behavioral analysis.

TEACHING EXPERIENCE

Teacher | NACS 645 Cognitive Science (U. of Maryland)
September–December 2025 | 11 PhD students
Content: Foundational debates in cognitive science.
Classes: Concepts; Modularity; Embodied cognition; Brain architecture; Cognitive architecture; Innateness; Methods; Social cognition; Intercultural cognition; Cognitive systems; Thinking; NeuroAI.

Teacher | Cortecs Critical Thinking Summer School (France)
July 2025 | 20 students
Content: Information; Beliefs; Predictions.

Mentor | UMD PhD (U. of Maryland)
September 2024–April 2025 | 1 student

Mentor | Neurosciences Master 1 (U. Claude Bernard Lyon 1)
January–June 2023, 2024 | 2 × 3 students

Teacher | SPM fMRI preprocessing & contrasts (U. Claude Bernard Lyon 1)
June 2023 | 20 PhD students
Content: fMRI preprocessing and first-level modeling with SPM.

Teaching assistant | Cognitive Psychology (U. Lumière Lyon 2)
September–December 2018, 2019, 2020 | 4 × 40 students
Course: Cognitive psychology, Licence 2
Classes: Research methodology; Emotions; Working memory; Executive functions; Language.
Supervisor: Gaën Plancher.

Teaching assistant | Intro. to cognitive psychology (U. Lumière Lyon 2)
September–December 2017 | 2 × 40 students
Course: Introduction to cognitive psychology, Licence 1
Classes: Research methodology; Theoretical and experimental paradigms.
Supervisor: François Osiurak.

EXTERNAL TRAINING

2024

Hugging Face AI Agents, 28h

Hugging Face Deep RL, 28h Certified

Reproducible Research, INRIA (FUN-MOOC), 24h Certified

ML with scikit-learn, INRIA (FUN-MOOC), 36h Certified

Structural Equation Modeling, CenterStat, 18h Certified

Game Theory, Stanford U. (Coursera), 17h

2023

Hugging Face NLP Course, 49h

CS50, Harvard U. (edX), 30h

ML with Python, IBM (Coursera), 15h

2022

Bayesian Statistics in Evolutionary Biology, LBBE, UCBL1, 27h Certified

2021

Statistical Bayesian Modelling, L. Nalborczyk, MaiMoSiNe, 20h Certified

2019–2021

Integrity and Ethics in Research Careers, UDL (FUN-MOOC), 30h Certified

2020–2019

Model Thinking, S.E. Page (Coursera), 27h

2019

Noninvasive Brain Stimulation Workshop, 14h Certified

Leaders of Learning, Harvard U. (FUN-MOOC), 15h Certified

Intro. to Neuroeconomics (Coursera), 31h

2018

Principles of fMRI I & II, M. Lindquist (Coursera), 17h

PUBLICATIONS

Guigon, V., Villeval, M. C., & Dreher, J. C. (2024). Metacognition biases information seeking in assessing ambiguous news. *Communications Psychology*, 2(1), 122.

Hu, Y., Philippe, R., **Guigon**, V., Zhao, S., Derrington, E., Corgnet, B., … & Dreher, J. C. (2022). Perturbation of Right Dorsolateral Prefrontal Cortex Makes Power Holders Less Resistant to Tempting Bribes. *Psychological Science*, 33(3), 412–423.

O'Connor, D. A., Janet, R., **Guigon**, V., Belle, A., Vincent, B. T., Bromberg, U., … & Dreher, J. C. (2021). Rewards that are near increase impulsive action. *iScience*, 24(4), 102292.

MANUSCRIPTS IN PREPARATION

Guigon, V., Geay, L., Charpentier, C. J. Rethinking the Fight Against Misinformation: from truth detection to plausibility evaluation.

Guigon, V., Topel, S., Charpentier, C. J. Individual differences in dynamic belief updating during trust learning.

Guigon, V., Philippe, R., Benistant, J., Villeval, M. C., Dreher, J.-C. Neurocomputational processes of inferring others' preferences for information and fake news.

Guigon, V., Dunne, S., Pazderska, A., Frodl, T., Nolan, J. J., Clairis, N., O'Doherty, J. P., Dreher, J.-C. Testosterone causes decoupling of orbitofrontal cortex–amygdala relationship while anticipating primary and secondary rewards.

Benistant, J., **Guigon**, V., Nicolas, A., Derrington, E., & Dreher, J. C. (2025). Dynamic valuation bias explains social influence on cheating behavior. *bioRxiv*.

SCIENCE DISSEMINATION

Valentin Guigon Substack

Valentin Guigon Medium

V. Guigon (2025). La sphère publique et la chambre d'écho. Cortecs.org.

S. Tremblay & CheeseNaan Productions (2024). Au-delà des écrans : comprendre la désinformation en ligne.

V. Guigon (2023). Notre société est-elle de plus en plus polarisée ? Cortex-mag.net.

A. Sorce (2021). L'invité de la semaine Valentin Guigon, fake news et théories du complot. Pharefm.com.

O. Mollaret (2021). À Lyon : les victimes de fake news « fonctionnent comme tout le monde ». Rue89lyon.fr.

Yanis (2021). Comment ne pas se faire avoir par les fake news ? Alveole.media / Cognitif.

A. Gabert (2020). Pourquoi les théories du complot plaisent à notre cerveau. Cortex-mag.net.