CÉDRIC FOUCAULT

cedric.foucault@gmail.com | cedricfoucault.github.io

EDUCATION AND PROFESSIONAL EXPERIENCE

2020 – present   **PhD student in Cognitive Computational Neuroscience at NeuroSpin**
supervised by Florent Meyniel
Cognitive Neuroimaging Unit, NeuroSpin, CEA, Gif/Yvette, France
& Sorbonne University, Paris, France

2018 – 2020   **M.S. of Research in Cognitive Science (CogMaster)**
highest honors (mention très bien)
École Normale Supérieure de Paris & University of Paris, France

2019 – 2020   **M.S. Research Intern at NeuroSpin**
supervised by Florent Meyniel
Cognitive Neuroimaging Unit, NeuroSpin, CEA, Gif/Yvette, France

2018 – 2019   **M.S. Research Intern at Integrative Neuroscience & Cognition Center**
supervised by Claire Sergent
Integrative Neuroscience & Cognition Center, Paris, France

2015 – 2018   **iOS Software Engineer at Apple**
Core User Interface Team (Maps)
Apple, Cupertino, California, USA

2012 – 2014   **M.S. of Research in Computer Science & Human-Computer Interaction**
highest honors (mention très bien)
École Normale Supérieure Paris-Saclay & University Paris-Saclay, France

2014 (7 mos)   **M.S. Research Intern at Siemens Corporate Research**
supervised by Sam Zheng
User Experience Group, Siemens Corporate Research, Princeton, USA

2013 (5 mos)   **M.S. Research Intern at UC Santa Cruz**
supervised by Sri Kurniawan
ASSIST Lab, University of California Santa Cruz, USA

2011 – 2012   **B.S. in Computer Science**
highest honors (mention très bien)
École Normale Supérieure Paris-Saclay & University of Paris, France

2012 (3 mos)   **B.S. Research Intern at Inria Grenoble**
supervised by Radu Patrice Horaud
Perception Group, Inria Grenoble, France

2010 – 2011   **B.S. in Electrical & Telecommunications Engineering**
highest honors (mention très bien)
École Normale Supérieure Paris-Saclay & University Paris-Saclay, France

2008 – 2010   **Classes Préparatoires: MPSI, PSI***
Lycée Fénelon Sainte-Marie, Paris, France
2 years of intensive Maths/Physics preparing the competitive entrance to top French "Grandes Écoles"

GRANTS AND FELLOWSHIPS

2020 – 2023   PhD fellowship from École Normale Supérieure Paris-Saclay
(Contrat Doctoral Spécifique Normalien, 3 years)

2010 – 2014   École Normale Supérieure Paris-Saclay (Normalien, 4 years)

PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED JOURNALS AND CONFERENCES

Foucault, C., & Meyniel, F. (2021). "Gated recurrence enables simple and accurate sequence prediction in stochastic, changing, and structured environments". *eLife*. doi: 10.7554/eLife.71801.
code: github.com/cedricfoucault/networks_for_sequence_prediction

Zheng, X. S., **Foucault, C.**, Matos da Silva, P., Dasari, S., Yang, T., & Goose, S. (2015). "Eye-wearable technology for machine maintenance: Effects of display position and hands-free operation". In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (pp. 2125-2134).

Zheng, X. S., Matos da Silva, P., **Foucault, C.**, Dasari, S., Yuan, M., & Goose, S. (2015). "Wearable solution for industrial maintenance". In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 311-314).

Foucault, C., Micaux, M., Bonnet, D., & Beaudouin-Lafon, M. (2014). "SPad: a bimanual interaction technique for productivity applications on multi-touch tablets". In *CHI'14 Extended Abstracts on Human Factors in Computing Systems* (pp. 1879-1884).

In preparation, planned for submission by the end of the thesis (mid 2023):

[fMRI project] **Foucault C.***, Bounmy T.*, Demortain S., Thirion B., Eger E., Meyniel F. "A neural code for probabilities". *co-first authors.

[Behavioral experiment] **Foucault C.**, Meyniel F. "Trial-by-trial updating of human probability estimates in changing environments".

POSTER PRESENTATIONS AT INTERNATIONAL CONFERENCES

Foucault C.*, Bounmy T.*, Demortain S., Thirion B., Eger E., Meyniel F. "A neural code for probabilities". *Conference on Cognitive Computational Neuroscience* (San Francisco, USA), August 2022. *co-first authors.

Foucault C. & Meyniel F. "Learning to make Bayes-optimal predictions with recurrent neural networks" [Poster, Video, and Conference abstract]. *Bernstein Conference* (online), September 2020. doi [Conference abstract]: 10.12751/nncn.bc2020.0101

INVITED TALKS

Invited seminar speaker at the Parietal team, NeuroSpin, Inria-CEA, Gif/Yvette, France, February 2022.

Invited seminar speaker at the Halassa Lab (online), MIT Department of Brain and Cognitive Sciences, Cambridge, MA, USA, October 2021.

TEACHING

2021 – 2022   Teaching assistant for the "Programming for Cognitive and Brain Sciences" graduate course at the CogMaster (ENS). Lectures+Tutorials: 42h.

2020 – 2021   Teaching assistant for the "Programming for Cognitive and Brain Sciences" graduate course at the CogMaster (ENS). Lectures+Tutorials: 39h.

SUMMER SCHOOLS

08-2021 (3 wks) Neuromatch Academy Deep Learning Summer School.

07-2020 (3 wks) Neuromatch Academy Computational Neuroscience Summer School.