

CÉCILE VULLINGS, Ph.D.

Curriculum Vitae

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Education

2018 **Doctorate in Psychology**, University of Lille (France) – Dissertation title: “Saccadic latencies depend on functional relations with the environment”, under the supervision of Pr. Laurent Madelain.

2015 **Master in Psychology**, specialization in Experimental and Applied Behavior Analysis, University of Lille (France) – obtained with First Class Honors. Licensed as practicing psychologist.

2013 **Bachelor in Social Science**, major in Psychology, University of Lille (France) – obtained with Honors.

Funding and Awards

2020-2022 Rachel C. Atkinson & C.V. Starr postdoctoral fellowship.

2019-2020 Fulbright Visiting Scholar laureate for a one-year postdoctoral fellowship.

2019-2020 Supplemental postdoctoral grant from the Smith-Kettlewell Eye Research Institute.

2015-2018 Full Ph.D. grant from the French Ministry for Research.

2015-2018 International mobility grant from the Doctoral School, University of Lille.

2015-2018 International mobility funding from the French National Research Agency (ANR).

2016 2nd prize (committee's favorite) at Challenge Doc' 2016 for the development of an innovative project for the company Cediac.

Professional Experience

2019-Present **POSTDOCTORAL FELLOW** at The Smith-Kettlewell Eye Research Institute (USA) under the supervision of Dr. Preeti Verghese. Project title: “Training eye movements to recover hidden information in age-related macular degeneration”. Funded by the Fulbright Program and Rachel C. Atkinson & C.V. Starr fellowship.

Skills: eye movements, clinical research, Optos OCT/SLO, Age-Related Macular Degeneration

2015-2018 **PH.D. CANDIDATE** at University of Lille (France), SCALab UMR CNRS 9193, under the supervision of Pr. Laurent Madelain. Funded by a full grant from the French Ministry.

Skills: eye movements, collect and analysis of large data sets, programming, international collaborations, writing ethical protocol, autonomy, innovative thinking,

organizational skills, time management, teamwork

2015-2018 **TEACHER'S ASSISTANT IN PSYCHOLOGY** at University of Lille: Descriptive statistics (BS), Experimental and differential psychology (BS), Behaviorism and learning (MS), Applied behavior analysis (BS).
Skills: pedagogy, training, course organization

2017 **RESEARCH INTERN** (3 months) at Animal Learning and Behavior Laboratory, University of Minho (Portugal) under the supervision of Dr. Armando Machado. Assignment: collect and analysis of large data sets with animals (pigeons). Funded by ANR.
Skills: animal experimentation, collect and analysis of large data sets, teamwork

2015 **RESEARCH ASSISTANT** (1 month) at SCALab, UMR CNRS 9193, University of Lille, under the supervision of Pr. Laurent Madelain. Assignment: collect and analysis of large data sets with eye-tracker. Funded by ANR.
Skills: eye movements, collect and analysis of large data sets, teamwork

2013-2015 **RESEARCH INTERN** (500h) at SCALab, UMR CNRS 9193, University of Lille, under the supervision of Pr. Jean-Claude Darcheville and Dr. Francis Mekkass.
Skills: programming, writing ethical protocol, cell force sensing apparatus, running experiments with children

2013-2015 **PSYCHOLOGIST INTERN** (1000h) among children and adults with intellectual disabilities, pervasive development disorders and autistic spectrum disorder, teenagers in an adapted educational middle school, and adults suffering from senile dementias.
Skills: working with clinical populations, management, supervision

Scientific and Academic Responsibilities

2019-Present Member of the postdoctoral fellow service and outreach committee of the Smith-Kettlewell Eye Research Institute.

2019-Present Member of the Low Vision Support Group of the Smith-Kettlewell Eye Research Institute.

2019 Invited speaker for the “Women in STEM” IGNITE panel at Lowell High School, San Francisco, April 8, 2019.

2017-2018 Representative of doctoral students and post-docs at SCALab, University of Lille.

2017-2018 Representative of doctoral students and post-docs at the users’ council of the Doctoral School, University of Lille.

2016-2018 Co-supervisor of students in psychology for their Bachelor’s thesis.

2016-2018 Co-supervisor of students (Bachelor and Master) in psychology for research internships.

2016 Co-organizer of the 11th edition of « Journée Scientifique des Jeunes Chercheurs » symposium, at University of Lille, December 1st, 2016.

2015-2017 Member of the organization committee of the 9th international conference « Association for Behavior Analysis International » in Paris, November 13-14th, 2017.

Publications

Davison, M., Cowie, S., **Vullings**, C., Ott, L., & Madelain, L. (in preparation). Modeling the effects of reinforcement location on temporal choice.

Vullings, C., & Verghese, P. (in revision). Mapping the binocular scotoma in macular degeneration. *Journal of Vision*.

Verghese, P., **Vullings**, C., & Shanidze, N. (in press). Eye movements in macular degeneration. *Annual Review of Vision Science*.

López-Moliner, J., **Vullings**, C., Madelain, L., & van Beers, R. (2019). Prediction and final temporal errors are used for trial-to-trial motor corrections. *Scientific Reports*, 9(1), 1-15.

Vullings, C., Harwood, M. R., & Madelain, L. (2019). Reinforcement reduces the size-latency phenomenon: a cost-benefit evaluation of saccade triggering. *Journal of Vision*, 19(4):16, 1-9.

Vullings, C., & Madelain, L. (2019). Discriminative control of saccade latencies. *Journal of Vision*, 19(3):16, 1-15.

Vullings, C., & Madelain, L. (2018). Control of saccadic latency in a dynamic environment: allocation of saccades in time follows the matching law. *Journal of Neurophysiology*, 119, 413-421.

Communications

- **Oral presentations**

Davison, M., Cowie, S., **Vullings**, C., & Madelain, L. (2020, August). *Modeling the effects of location on choice*. New Zealand Association for Behavior Analysis, Hamilton, New Zealand.

Vullings, C., & Verghese, P. (2019, September). *Mapping the binocular scotoma in macular degeneration*. Bay Area Vision Research Day, Berkeley, USA.

Vullings, C., & Madelain, L. (2018, May). *One can choose one's own saccadic reaction times*. Association for Behavior Analysis International, San Diego, USA.

Vullings, C., & Madelain, L. (2017, November). *Control of saccadic latencies in a concurrent interval reinforcement schedule*. Association for Behavior Analysis International, Paris, France.

Vullings, C., Harwood, M., & Madelain, L. (2017, October). *Reinforcement can reduce the size-latency phenomenon*. Forum annuel du Groupement De Recherche Vision, Lille, France.

Vullings, C., & Madelain, L. (2016, November). *Reinforcement contingencies affect the allocation of saccades in time*. Forum annuel du Groupement De Recherche Vision, Toulouse, France.

- **Poster presentations**

Lively, Z., **Vullings**, C., & Verghese, P. (2020, September). *Do saccade characteristics in macular degeneration adapt to compensate for the binocular scotoma?* Bay Area Vision Research Day, Berkeley, USA.

Vullings, C., & Verghese, P. (2020, May). *Mapping the binocular scotoma in macular degeneration.* Vision Sciences Society, St. Pete Beach, USA.

Vullings, C., & Verghese, P. (2019, September). *Mapping the binocular scotoma in macular degeneration.* Bay Area Vision Research Day, Berkeley, USA.

Vullings, C., & Verghese, P. (2019, July). *Binocular scotoma mapping and eye movement patterns in central field loss.* Gordon Research Conference on Eye Movements, Lewiston, USA.

Vullings, C., & Madelain, L. (2018, May). *Classical conditioning of saccadic latencies using gap and overlap paradigms.* Vision Sciences Society, St. Pete Beach, USA.

López-Moliner, J., **Vullings**, C., Madelain, L., & van Beers, R. J. (2018, May). *Different ways for correcting for previous temporal errors in interception tasks.* Vision Sciences Society, St. Pete Beach, USA.

Vullings, C., & Madelain, L. (2017, August). *Contextual control of saccadic reaction times using a latency-contingent paradigm.* European Conference on Visual Perception, Berlin, Germany.

Vullings, C., & Madelain, L. (2017, May). *Discriminative control of saccadic reaction times using a latency-contingent visual search task.* Society of Quantitative Analysis of Behavior, Denver, USA.

Vullings, C., Harwood, M., & Madelain, L. (2017, May). *Effect of reinforcement on the size-latency phenomenon.* Vision Sciences Society, St. Pete Beach, USA.

Vullings, C., & Madelain, L. (2016, August). *Control of saccadic latencies in a choice paradigm.* European Conference on Visual Perception, Barcelona, Spain.

Vullings, C., & Madelain, L. (2016, May). *Saccadic latency and choice in a concurrent random interval reinforcement schedule.* Vision Sciences Society, St. Pete Beach, USA.

Vullings, C., & Madelain, L. (2015, December). *Choice and saccadic latency in a concurrent random interval reinforcement program.* Forum annuel du Groupement De Recherche Vision, Grenoble, France.

Teaching Experience

- **2017-2018**

Experimental and differential psychology (1st-year Bachelor in psychology, 18h)

Experimental and differential psychology (3rd-year Bachelor in psychology, 22h)

Descriptive statistics (1st-year Bachelor in psychology, 24h)

- **2016-2017**

Experimental and differential psychology (1st-year Bachelor in psychology, 18h)

Experimental and differential psychology (3rd-year Bachelor in psychology, 22h)

Descriptive statistics (1st-year Bachelor in psychology, 24h)

- **2015-2016**

Behaviorism and learning (1st-year Master in psychology, 8h)

Applied behavior analysis (3rd-year Bachelor in psychology, 12h)

Descriptive statistics (1st-year Bachelor in psychology, 24h)

Membership

Association for Behavior Analysis International (ABAI)

Association for Research in Vision and Ophthalmology (ARVO)

Vision Sciences Society (VSS)

Skills

Language	French (native speaker), English (fluent), Spanish (good command), Portuguese (basic communication skills).
Programming *** <i>Expert</i> ** <i>Advanced</i> * <i>Beginner</i>	Matlab ** (experiment programming using the psychtoolbox, graph plotting, data analysis and statistics), Eyelink **, Python * (graph plotting), RStudio * (graph plotting, data analysis and statistics), ABET ** (experiment programming), Excel ** (data analysis).