Ladislas Nalborczyk

RESEARCH SCIENTIST

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Research interests

I am a computational cognitive neuroscientist interested in the conscious experience of inner speech and its neural underpinnings. My research combines experimental (e.g., psychophysics, EMG, M/EEG, TMS) and computational (e.g., mathematical modelling, machine learning) methods to understand how complex patterns of neural activity implement algorithms supporting the mental simulation of speech (inner speech) and other actions (motor imagery). In parallel, I also work on the development and dissemination of rigorous experimental and statistical methods.

Current academic position

CNRS, Laboratoire Parole et Langage (UMR 7309) *Aix-en-Provence, France*

RESEARCH SCIENTIST (CRCN) *January 2025 – Present*

Phenomenology, diversity, development, and neural mechanisms of inner speech and mental imagery.

Previous academic positions

CEA, NeuroSpin, UNICOG & INSERM, Paris Brain Institute *Gif-sur-Yvette, France*

POSTDOCTORAL RESEARCHER (ANR FUNDING) *May 2023 – December 2024*

Neural correlates and dynamics of silent reading and ticker-tape synesthesia (MEG). Supervised by Laurent Cohen (APHP) & Stanislas Dehaene (CEA, Collège de France).

CNRS, CRPN, ILCB, Aix-Marseille University *Marseille, France*

POSTDOCTORAL RESEARCHER (INDIVIDUAL FELLOWSHIP FROM THE ILCB) *April 2021 – March 2023*

Behavioural and neural correlates of inhibitory processes underlying imagined speech and typing (TMS, EMG, modelling). Supervised by F.-Xavier Alario (LPC, CNRS) & Marieke Longcamp (LNC, AMU).

CNRS, GIPSA-lab (UMR 5216) *Grenoble, France*

POSTDOCTORAL RESEARCHER (ANR FUNDING) *March 2020 – February 2021*

Decoding the neural correlates of overt and covert speech using deep artificial neural networks (ECoG, DNNs). Supervised by Thomas Hueber (GIPSA-lab, CNRS) & Laurent Girin (GIPSA-lab, CNRS).

Univ. Grenoble-Alpes (LPNC) & Ghent University (PANLAB) *Grenoble (France) & Ghent (Belgium)*

PHD STUDENT (INDIVIDUAL FELLOWSHIP FROM UGA) *October 2015 – September 2019*

Psychophysiological correlates of mental rumination and involvement of the speech motor system (EMG, modelling). Supervised by Hélène Lœvenbruck (LPNC, CNRS), Marcela Perrone-Berttolotti (LPNC, UGA), & Ernst Koster (PANLAB, UGent).

Education

Univ. Grenoble Alpes (France) & Ghent University (Belgium)

Joint PhD in Clinical, Experimental, and Cognitive Psychology, October 2015 – October 2019
Thesis title: Understanding rumination as a form of inner speech 🗁
Supervisors: Dr. Hélène Lœvenbruck (UGA), Dr. Marcela Perrone-Bertolotti (UGA), & Pr. Ernst Koster (UGent)

Grenoble Institute of Technology (France)

MSc in Cognitive Science, June 2015
Supervisors: Dr. Hélène Lœvenbruck (UGA) & Dr. Marcela Perrone-Bertolotti (UGA)

Pierre-Mendes France University (France)

BA in Psychology, June 2013

Publications

Publication summary: 22 publications in international peer-reviewed journals (13 of them as first or last author), with 1118 citations, h-index: 14 (h articles cited at least h times, source Google Scholar). When applicable, preregistration, preprint, data, code, and supplementary materials are available online by clicking on the 🗁 icon. Shared first or last authorship is indicated with an asterisk. Names of supervised *students* are italicised.

In the pipeline

[6] **Nalborczyk, L.**, Hauw, F., *de Torcy, H.*, Dehaene, S., & Cohen, L. (in preparation). Uncovering the neural and representational dynamics of silent reading and ticker-tape synesthesia.

[5] **Nalborczyk, L.** & Bürkner, P.-C. (in preparation). Precise temporal localisation of M/EEG effects with Bayesian generalised additive multilevel models.

[4] Nguyen, N., Lancia, L., Shen, Q., Diard, J., & **Nalborczyk, L.**, (in preparation). Convergence between listeners in the categorization of speech sounds.

[3] Leclerc, A., **Nalborczyk, L.**, Kauffman, L., Berkovitch, L., Houenou, J., & Favre, P. (under review). Predictive biases in emotional perception: Differential influence of mood and affective primes in individuals with and without mood disorders. 🗁

[2] Dondé, C., Pereira, M., **Nalborczyk, L.**, Roux, P., Faivre, N., & Brunelin, J. (under review). Characterizing early auditory deficits in schizophrenia using drift-diffusion modeling.

[1] *Delem, M.*, *Stauffert N.*, Debarnot, U., Guillot, A., & **Nalborczyk, L.** (in-principle accepted as a Stage-1 registered report). Does the corollary discharge provide the sensory content of inner speech? A preregistered direct replication and extension of Scott (2013). *Psychological Science.* 🗁

Peer-reviewed journal articles

[22] **Nalborczyk, L.**, Longcamp, M., & Alario, F.-X. (2025). Motor inhibition prevents motor execution during typing imagery: evidence from an action-mode switching paradigm. *Cognition, 254, 105997.* `https://doi.org/10.1016/j.cognition.2024.105997` 🗁

[21] **Nalborczyk, L.**, Longcamp, M., Gajdos, T., Servant, M. & Alario, F.-X. (2024). Towards formal models of inhibitory mechanisms involved in motor imagery: A commentary on Bach et al. (2022). *Psychological Research*, 1-4. `https://doi.org/10.1007/s00426-023-01915-8` 🗁

[20] **Nalborczyk, L.** (2023). When randomization hurts. Journal club in *Nature Reviews Psychology, 2*, 131. `https://doi.org/10.1038/s44159-023-00155-2` 🗁

[19] **Nalborczyk, L.**, Longcamp, M., Bonnard, M., *Serveau, V.*, Spieser, L., & Alario, F.-X. (2023). Distinct neural mechanisms support inner speaking and inner hearing. *Cortex, 169*, 161-173. `https://doi.org/10.1016/j.cortex.2023.09.007` 🗁

[18] Coretta, S., Casillas, J., … **Nalborczyk, L.** … & Roettger, T. B. (2023). Multidimensional signals and analytic flexibility: Estimating degrees of freedom in human speech analyses. *Advances in Methods and Practices in Psychological Science, 6*(3), 1-29. `https://doi.org/10.1177/25152459231162567` 🗁

[17] Hoogeveen, S., Sarafoglou, A., Aczel, B., Aditya, Y., Alayan, A., … **Nalborczyk, L.** … & Wagenmakers, E.J. (2022). A Many-Analysts Approach to the Relation Between Religiosity and Well-being. *Religion, Brain, and Behaviour*. `https://doi.org/10.1080/2153599X.2022.2070255` 🗁

[16] Danna, J., Longcamp, M., **Nalborczyk, L.**, Velay, J.-L., Commengé, C., & Jover, M. (2022). Interaction between orthographic and graphomotor constraints in learning to write. *Learning and Instruction, 80*, 101622. `https://doi.org/10.1016/j.learninstruc.2022.101622` 🗁

[15] **Nalborczyk, L.** (2022). Re-analysing the data from Moffatt et al. (2020): What can we learn from an under-powered absence of difference? *Collabra: Psychology, 8*(1), 33059. `https://doi.org/10.1525/collabra.33059` ⬈

[14] **Nalborczyk, L.**, Debarnot, U., Longcamp, M., Guillot, A., & Alario, F.-X. (2022). The role of motor inhibition during covert speech production. *Frontiers in Human Neuroscience, 16:804832*. `https://doi.org/10.3389/fnhum.2022.804832` ⬈

[13] **Nalborczyk, L.**, Perrone-Bertolotti, M., Baeyens, C., Grandchamp, R., Spinelli, E., Koster, E.H.W., & Lœvenbruck, H. (2022). Articulatory suppression effects on induced rumination. *Collabra: Psychology, 8*(1), 31051. `https://doi.org/10.1525/collabra.31051` ⬈

[12] Geiger, S. J., Brick, C., **Nalborczyk, L.**, Bosshard, A., & Jostmann, N. B. (2021). More Green Than Gray? Toward a Sustainable Overview of Environmental Spillover Effects: A Bayesian Meta-Analysis. *Journal of Environmental Psychology, 78*, 101694. `https://doi.org/10.1016/j.jenvp.2021.101694` ⬈

[11] Lacroix, A., **Nalborczyk, L.**, Dutheil, F., Kovarski, K., Chokron, S., Garrido, M., Gomot, M., & Mermillod, M. (2021). High spatial frequency information in primes hastens happy faces categorization in autistic adults. *Brain and Cognition, 155*, 105811. `https://doi.org/10.1016/j.bandc.2021.105811` ⬈

[10] Rouy, M., Saliou, P., **Nalborczyk, L.**, Pereira, M., Roux, P.*, & Faivre, N.* (2021). Systematic review and meta-analysis of metacognitive abilities in individuals with schizophrenia spectrum disorders. *Neuroscience and Biobehavioral Reviews, 126*, 329-337. `https://doi.org/10.1016/j.neubiorev.2021.03.017` ⬈

[9] Beffara Bret, B., Beffara Bret, A., & **Nalborczyk, L.** (2021). A fully automated, transparent, reproducible, and blind protocol for sequential analyses. *Meta-Psychology, 5*. `https://doi.org/10.15626/MP.2018.869` ⬈

[8] **Nalborczyk, L.***, *Banjac, S.**, Baeyens, C., Grandchamp, R., Koster, E.H.W., Perrone-Bertolotti, M., & Lœvenbruck, H. (2021). Dissociating facial electromyographic correlates of visual and verbal induced rumination. *International Journal of Psychophysiology, 159*, 23-36. `https://doi.org/10.1016/j.ijpsycho.2020.10.009` ⬈

[7] **Nalborczyk, L.**, Grandchamp, R., Koster, E.H.W., Perrone-Bertolotti, M., & Lœvenbruck, H. (2020). Can we decode phonetic features in inner speech using surface electromyography? *PLOS ONE, 15*(5): e0233282. `https://doi.org/10.1371/journal.pone.0233282` ⬈

[6] Molto, L., **Nalborczyk, L.**, Palluel-Germain, R., & Morgado, N. (2020). Action effects on visual perception of distances: A multilevel Bayesian meta-analysis. *Psychological Science, 31*(5), 488-504. `https://doi.org/10.1177/0956797619900336` ⬈

[5] Landy, J. F., Jia, M., Ding I. L., Viganola, D. Tierney, W., … **Nalborczyk, L.** … Uhlmann, E. L. (2020). Crowdsourcing hypothesis tests: Making transparent how design choices shape research results. *Psychological Bulletin, 146*(5), 451-479. `https://doi.org/10.1037/bul0000220`

[4] **Nalborczyk, L.**, Batailler, C., Lœvenbruck, H., Vilain, A., & Bürkner, P.-C. (2019). An introduction to Bayesian multilevel models using brms: A case study of gender effects on vowel variability in standard Indonesian. *Journal of Speech, Language, and Hearing Research, 62*(5), 1225-1242. `https://doi.org/10.1044/2018_JSLHR-S-18-0006` ⬈

[3] **Nalborczyk, L.**, Bürkner, P.-C., & Williams, D. (2019). Pragmatism should not be a substitute for statistical literacy, a commentary on Albers, Kiers, and van Ravenzwaaij (2018). *Collabra: Psychology, 5*(1): 13. `https://doi.org/10.1525/collabra.197` ⬈

[2] Trafimow, D., Amrhein, V., Areshenkoff, C. N., Barrera-Causil, C., Beh, E. J., Bilgic, Y., … **Nalborczyk, L.** … Marmolejo-Ramos, F. (2018). Manipulating the alpha level cannot cure significance testing. *Frontiers in Psychology, 9:699*. `https://doi.org/10.3389/fpsyg.2018.00699`

[1] **Nalborczyk, L.**, Perrone-Bertolotti, M., Baeyens, C., Grandchamp, R., Polosan, M., Spinelli, E., … Lœvenbruck, H. (2017). Orofacial electromyographic correlates of induced verbal rumination. *Biological Psychology, 127*, 53-63. `https://doi.org/10.1016/j.biopsycho.2017.04.013` ⬈

Book chapters

[2] Lœvenbruck, H., Grandchamp, R., Rapin, L., **Nalborczyk, L.**, Dohen, M., Perrier, P., Baciu, M., & Perrone-Bertolotti, M. (2018). A cognitive neuroscience view of inner language: to predict and to hear, see, feel. In Langland-Hassan, P. & Vicente, A. (eds.), Inner Speech: new voices. Oxford University Press.

[1] Lœvenbruck, H., **Nalborczyk, L.**, Perrone-Bertolotti, M., Baeyens, C., & Grandchamp, R. (2018). Un cas d'incarnation linguistique: implication du système moteur orofacial dans les ruminations mentales. Recherches sur la philosophie et le langage, numéro special "Cognition incarnée".

Conference proceedings

[1] Molto, L., **Nalborczyk, L.**, Palluel-Germain, R., & Morgado, N. (2018). Action-specific effects on distance perception: A multilevel Bayesian meta-analysis. *Cognitive processing, 19*(S1), 1-76. https://doi.org/10.1007/s10339-018-0884-3

PhD thesis

Nalborczyk, L. (2019). Understanding rumination as a form of inner speech: probing the role of motor processes. Univ. Grenoble Alpes & Ghent University. ⊟

Presentations

Invited Talks

[22] **Nalborczyk, L.** (2025). Using reverse correlation to unveil the mental representation of self-produced speech. FEMTO-ST Institute, Besançon, France.

[21] **Nalborczyk, L.** (2025). Neural and representational dynamics of ticker-tape synesthesia. CENIR day, Paris Brain Institute, France.

[20] **Nalborczyk, L.** (2024). Phenomenology, diversity, and neural mechanisms of inner speech. Invited (online) seminar at the Interdisciplinary Reading Club on Aphantasia (IRCA).

[19] **Nalborczyk, L.** (2024). Uncovering and modelling the format(s) of inner speech: Towards a neurocomputational theory of inner speech. Invited (online) seminar at Aarhus University's department of Linguistics, Cognitive Science, and Semiotics.

[18] **Nalborczyk, L.** (2024). Moving to a World beyond $p < .05$ (and BF > 3): Why and how? Joint Neuroschool-INS seminar, Marseille, France.

[17] **Nalborczyk, L.** (2024). Uncovering and modelling the format of inner speech: Towards a neurocomputational theory of inner speech. Invited seminar at EMC lab, Lyon, France.

[16] **Nalborczyk, L.** (2023). Uncovering and modelling the format of inner speech: Towards a neurocomputational theory of inner speech. Invited seminar at LPNC, Grenoble, France.

[15] **Nalborczyk, L.** (2023). Uncovering the origins of inner speech sensory content: role of the speech motor system and neural mechanisms. French group of young researchers in speech, online seminar. ⊟

[14] **Nalborczyk, L.** (2022). The sound of your inner voice: Combining psycholinguistics and psychophysics to unveil the auditory content of inner speech. Laboratory of Cognitive Neuroscience, EPFL, Geneva, Switzerland.

[13] **Nalborczyk, L.** (2022). The sound of your inner voice: Combining psycholinguistics and psychophysics to unveil the auditory content of inner speech. FEMTO-ST Institute, Besançon, France.

[12] **Nalborczyk, L.** (2022). Bayesian multilevel models in R using brms. Brown bag meeting, Louvain-La-Neuve, Belgium.

[11] **Nalborczyk, L.** (2022). Towards an integrated account of covert verbal actions. Neuromod institute seminars, Nice, France.

[10] **Nalborczyk, L.** (2022). Moving to a World beyond *p* < .05 (and BF > 3): Why and how? Neuropsycholinguistics Lab seminar, University of Geneva, Switzerland. 🗁

[9] **Nalborczyk, L.** (2021). Moving to a World beyond *p* < .05. ILCB summer school, Marseille, France. 🗁

[8] **Nalborczyk, L.** (2021). Bayesian multilevel models in R using brms. Lab seminar, LIP, Grenoble, France. 🗁

[7] **Nalborczyk, L.** (2021). A gentle introduction to deep learning in R using Keras. Vendredi Quanti seminar, PACTE laboratory, Grenoble, France. 🗁

[6] **Nalborczyk, L.** (2020). Introduction to the Open Science Framework. "Open November" open science webinar, RJC ACAPS. 🗁

[5] **Nalborczyk, L.** (2020). Understanding covert verbal actions as simulated verbal actions. LPC online seminar. 🗁

[4] **Nalborczyk, L.** (2020). Bayesian multilevel models in R using brms. PPC seminar, GIPSA-lab, Grenoble, France. 🗁

[3] **Nalborczyk, L.** (2019). An introduction to Bayesian multilevel models using R, brms, and Stan. R in Grenoble working sessions, Grenoble, France. 🗁

[2] **Nalborczyk, L.** (2018). How to avoid common misinterpretations of *p*-values and Bayes factors. ENTPE seminars, Lyon, France. 🗁

[1] Beffara, B., **Nalborczyk, L.**, Héjja-Brichard, Y., & Bret, A. (2017). Open, slow, and sustainable science. PhD student day, LPNC, Grenoble, France.

Workshop Talks

[3] **Nalborczyk, L.** (2020). Introduction to Bayesian Statistical Modelling in R. Semaine DATA-SHS, MSH-Alpes, Grenoble, France. 🗁

[2] Beffara, B., Beffara Bret, A., **Nalborczyk, L.**, Héjja-Brichard, Y., & Beffara Bret, B. (2020). Introduction to the Open Science Framework. CRNL Workshop, "Publishing differently: new ways to evaluate and disseminate the scientific knowledge in the digital area", Lyon, France. 🗁

[1] **Nalborczyk, L.** (2018). Introduction to Bayesian Statistical Modelling. UGent specialist (doctoral) course on Bayesian statistical modelling, Ghent, Belgium. 🗁

Conference Talks

[16] Grasso, C., **Nalborczyk, L.**, & van Wassenhove, V. (2025). Representational dynamics of subjective duration in the human brain. Timing Research Forum, Tokyo, Japan.

[15] **Nalborczyk, L.**, Longcamp, M., Bonnard, M., *Serveau, V.*, Spieser, L., & Alario, F.-X. (2024). Evidence for motor simulation during inner speaking. European Society for Cognitive and Affective Neuroscience (ESCAN) bi-annual meeting, Ghent, Belgium.

[14] **Nalborczyk, L.** (2024). The sound of your inner voice: Using reverse correlation to unveil the mental representation of self-produced overt and covert speech. European Society for Cognitive and Affective Neuroscience (ESCAN) bi-annual meeting, Ghent, Belgium.

[13] **Nalborczyk, L.**, Longcamp, M., Bonnard, M., *Serveau, V.*, Spieser, L., & Alario, F.-X. (2023). Evidence for motor simulation during inner speaking. International conference of the "Research in imagery and observation" group, University of Limerick, Ireland. 🗁

[12] **Nalborczyk, L.**, Longcamp, M., & Alario, F.-X. (2022). Motor inhibition prevents motor execution during imagined typing: evidence from an action-mode switching paradigm. Embodied and Situated Language Processing (ESLP) conference, Tourcoing, France.

[11] **Nalborczyk, L.**, Spieser, L., Longcamp, M., & Alario, F.-X. (2021). Distinct neural mechanisms support different forms of inner speech, a registered report. Lightning talk. International Workshop on Language Production, online. ⌂

[10] Geiger, S. J., Brick, C., **Nalborczyk, L.**, & Jostmann, N. B. (2021). More Green Than Gray? Toward a Sustainable Overview of Environmental Spillover Effects: A Bayesian Meta-Analysis. International Conference on Environmental Psychology, Siracusa, Italy.

[9] **Nalborczyk, L.** (2021). The Open Science revolution will fall short of its goals without a Slow Science revolution. Lightning talk. Open, slow, and sustainable science conference. Nantes, France. ⌂

[8] Rouy, M., Saliou, P., **Nalborczyk, L.**, Pereira, M., Roux, P., & Faivre, N. (2020). Systematic review and meta-analysis of the calibration of confidence judgments in individuals with schizophrenia. Neuromatch 3.0 online conference. ⌂

[7] **Nalborczyk, L.** (2019). Modelling potential biases in sequential analyses procedures. Lightning talk at the meeting of the Society for the Improvement of Psychological Science, Rotterdam, The Netherlands. ⌂

[6] **Nalborczyk, L.** (2018). Using information-theoretic approaches for model selection: moving from explanation toward prediction. Lightning talk at the meeting of the Society for the Improvement of Psychological Science, Grand Rapids, MI. ⌂

[5] Molto, L., **Nalborczyk, L.**, Palluel-Germain, R. & Morgado, N. (2018). Action-specific effects on distance perception: A multilevel Bayesian meta-analysis. 7th International Conference on Spatial Cognition, Rome, Italy.

[4] **Nalborczyk, L.** (2018). Sequential testing with information criteria and evidence ratios. *Bayes@Lund*, Sweden. ⌂

[3] **Nalborczyk, L.**, Perrone-Bertolotti, M., Baeyens, C., Grandchamp, R., Spinelli, E., Koster, E.H.W., & Lœvenbruck, H. (2017). Verbal rumination as simulated speech. Embodied and Situated Language Processing conference. Moscow, Russia. ⌂

[2] **Nalborczyk, L.**, Perrone-Bertolotti, M., Baeyens, C., Keracheva, E., Grandchamp, R., Spinelli, E., Koster, E.H.W., & Lœvenbruck, H. (2016). Rumination at the crossroads of embodied inner speech and emotion: facial electromyographic correlates. Consortium of European Research on Emotion (CERE). Leiden, Netherlands. ⌂

[1] **Nalborczyk, L.**, Lœvenbruck, H., Perrone-Bertolotti, M., Baeyens, C., & Grandchamp, R. (2016). Verbal rumination as an embodied orofacial action. International conference Language and Enaction. Clermont-Ferrand, France. ⌂

Conference Posters

[14] **Nalborczyk, L.**, & Grasso, C. (2025). Modelling the timing properties of motor imagery. Timing Research Forum, Tokyo, Japan.

[13] Sarzedas, J., Pinheiro, A.P, Aucouturier, JJ., & **Nalborczyk, L.** (2025). Uncovering the mental representation of one's own-voice. *Psycholinguistics in Flanders*, Lille, France.

[12] **Nalborczyk, L.**, & Grasso, C. (2024). Modelling the timing properties of motor imagery. French association for timing (FAsT), Saclay, France.

[11] **Nalborczyk, L.**, Longcamp, M., *Lévêque, E.*, Gajdos, T., Servant, M. & Alario, F.-X. (2024). Modelling the onset and duration of motor imagery: Assessing a novel algorithmic model of motor imagery. European Society for Cognitive and Affective Neuroscience (ESCAN) bi-annual meeting, Ghent, Belgium.

[10] **Nalborczyk, L.**, Hauw, F., *de Torcy, H.*, Dehaene, S., & Cohen, L. (2024). Uncovering the neural dynamics of silent reading and ticker-tape synesthesia. European Society for Cognitive and Affective Neuroscience (ESCAN) bi-annual meeting, Ghent, Belgium.

[9] **Nalborczyk, L.**, Longcamp, M., & Alario, F.-X. (2022). Motor inhibition prevents motor execution during imagined typing: evidence from an action-mode switching paradigm. 22nd meeting of the European Society for Cognitive Psychology (ESCoP), Lille, France. ⌂

[8] Garnier, M., *Karam, C.*, **Nalborczyk, L.**, Botter, A., & Boudaoud, S. (2022). Towards an HD-sEMG mask to measure orofacial muscle activity during speech production. 8th International Conference on Speech Motor Control (SMC), Groningen, the Netherlands.

[7] Beffara, B., Bret, A., & **Nalborczyk, L.** (2019). A practical tutorial for safe sequential analyses. International Convention of Psychological Science, Paris, France. ⌂

[6] Molto, L., **Nalborczyk, L.**, Palluel-Germain, R., & Morgado, N. (2019). A Bayesian multilevel meta-analysis of action constraints effects on distance perception. International Convention of Psychological Science, Paris, France. ⌂

[5] **Nalborczyk, L.**, Perrone-Bertolotti, Baeyens, C., Grandchamp, R., Spinelli, E., Koster, E.H.W., & Lœvenbruck, H. (2018). Can articulatory suppression disrupt repetitive negative thinking? The 16th European Workshop on Imagery and Cognition, Padua, Italy. ⌂

[4] Molto, L., **Nalborczyk, L.**, Palluel-Germain, R., & Morgado, N. (2018). Action-specific effects on distance perception: A multilevel Bayesian meta-analysis. The 16th European Workshop on Imagery and Cognition, Padua, Italy. ⌂

[3] Lœvenbruck, H., Grandchamp, R., Rapin, L., **Nalborczyk, L.**, Dohen, M., Perrier, P., Baciu, M., & Perrone-Bertolotti, M. (2018). A neurocognitive predictive model of willful inner speech production. The Probabilistic Brain Workshop, Durham, England. ⌂

[2] **Nalborczyk, L.**, Lœvenbruck, H., *Keracheva, E.*, Koster, E.H.W., Baeyens, C., Grandchamp, R., & Perrone-Bertolotti, M. (2017). Articulatory suppression effects on verbal rumination. Cognitive Science Arena. Brixen, Italy. ⌂

[1] **Nalborczyk, L.**, Baeyens, C., Grandchamp, R., Lœvenbruck, H., Perrone- Bertolotti, M., & Polosan, M. (2015). Orofacial electromyographic correlates of induced verbal rumination. Embodied and Situated Language Processing conference. Lyon, France. ⌂

Software

[4] Pallier, C., & **Nalborczyk, L.** (2024). *openlexicon.fetcher: Fetches lexical databases from the openlexicon project*. R package version 1.0.0, available on Github.

[3] **Nalborczyk, L.** (2024). *meeg_decoding: Open source tools for M/EEG multivariate pattern analyses and state-space analyses*. Python package version 0.0.1, available on Github.

[2] **Nalborczyk, L.** (2023). *momimi: Models of Motor Inhibition during Motor Imagery*. R package version 0.0.9, available on Github.

[1] Zarrabi, A. A., **Nalborczyk, L.**, & Aucouturier, J.-J. (2023). *palin: Convert your PAs in INs*. R and Python package, available on Github.

Fellowships, grants, and awards

DOCTORAL AND POSTDOCTORAL FELLOWSHIPS

Two-year post-doctoral fellowship, Institute of Language, Communication and the Brain (2021–2023)
Two-year post-doctoral fellowship, Fyssen foundation (2020–2022), 60k€ (*declined*)
Three-year doctoral fellowship to pursue a joint PhD, Univ. Grenoble Alpes (2015–2018)

RESEARCH FUNDINGS

Paris Brain Institute, Brain specialization for words and numbers: A high-resolution fMRI-MEG precision imaging study (2024), collaborator on a project awarded to Laurent Cohen (APHP, INSERM), 199k€
Institut Carnot Cognition, The Social Listener (2023), collaborator on a project awarded to Noël Nguyen (CNRS), 3480€
ILCB research funding to support the organisation of an international workshop on temporal cognition (2022), 1200€

ILCB research funding to support the "InnerSpeaking" project (2022), 5000€

Grant from the Flemish government to organise a doctoral course on Bayesian statistical modelling (2018), ~1000€

Grants and awards

Newly established researcher award from the city of Marseille (2021), 2000€

Travel grant, Society for the Improvement of Psychological Science (2019), 350€

Travel grant to attend the SIPS 2018 conference, FWO (2018), ~1000€

Teaching and supervision

Lectures, courses

Bachelor courses

Data Analysis, UGA, 2016 (36h)
Introduction to Cognitive Psychology, UGA, 2016 (50h)
Cognitive Psychology: Perception, Action and Categorisation, UGA, 2016 (42h)

Master courses

Introduction to Bayesian statistical modelling, M2R in Cognitive Sciences, UGA, 2025 (30h)
Introduction to the philosophy of statistics, MASCO, AMU, 2022 (2h)
Introduction to Bayesian statistics in jamovi, M2R in Cognitive Sciences, UGA, 2022 (2h)
Introduction to Bayesian statistics in jamovi, M2R in Cognitive Sciences, UGA, 2021 (2h)

Doctoral courses

Introduction to Bayesian statistical modelling in R, Stan, and brms, Basel University, 2023 (8h), website
Introduction to Bayesian statistical modelling in R, UGA, 2017–2022 (>100h), website

Co-supervision of Master students

Vincent Pauline, Master 2 in Computational Neurosciences, Paris Saclay & Centrale Supélec, 2023–2024
Élodie Lévêque, Master 2 in Computational Neurosciences, Paris Saclay, 2023–2024
Hermine de Torcy, Master 2 in Integrative Neurosciences, Sorbonne Université, 2023–2024
Deliane Bechar, Master 1 in Cognitive Sciences (CogMaster), ENS, 2023–2024
Maël Delem, Master 1 in Cognitive Sciences, UL2, 2021–2022
Nina Stauffert, Master 1 in Cognitive Sciences, UL2, 2021–2022
Clara Grégoire, Master 2 in Cognitive Sciences, AMU, 2021–2022
Victor Serveau, Master 2 in STAPS (FHIE), AMU, 2021–2022
Christophe Karam, Master 1 in Data Analysis: Linking Experiments to Theory (DALETh), UGA, 2020–2021
Sonja Banjac, Master 2 in Cognitive Science, UGA, 2017–2018
Myriam El-Helou, Master 1 in Applied Mathematics and Informatics, UGA, 2016–2017
Elena Keracheva, Master 1 in Clinical Psychology, UGA, 2015–2016

External examiner of PhD thesis

Served as an external examiner for the PhD defense of Aynaz Adl Zarrabi, FEMTO-ST, July 2025

Academic services

Co-organiser of an international workshop on temporal cognition, June 2022 (Marseille, France)
Co-organiser of a national conference on open, slow, and sustainable science, July 2021 (Nantes, France)
Co-organiser of the doctoral school course *Introduction to Bayesian statistical modelling*, June 2018, UGent (Belgium)
Elected representative of the PhD students at the UGA academic council and research committee (2015–2017)

Ad hoc reviewing

I have reviewed papers for the following journals: *Behavior Research Methods; Brain and Cognition; Collabra: Psychology; Psychological Science; Cognition and Emotion; Consciousness and Cognition; Language, Cognition and Neuroscience; International Review of Social Psychology; Quarterly Journal of Experimental Psychology; Annals of Physical and Rehabilitation Medicine; Psychology of Consciousness: Theory, Research, and Practice; Recommender for Peer Community In (PCI) Health & Movement Sciences*.

I have also reviewed papers for the following conferences: *Interspeech2025*.

Other contributions

Local associations for scientific communication

Member of the organising team of the 6th edition of *Pint Of Science France*, Grenoble, 2016
Member of the organising team of the 9th edition of the *ArtScienceTechnologie* event, Grenoble, 2015

Popularisation talks

Et si penser était une action ? *15th cognitive sciences forum, science slam*, Paris, 2016

Press coverage

"Not Everyone Has an Inner Voice Streaming Through Their Head", interview given to the The Scientific American (July 2024)

"À la recherche de la petite voix intérieure", interview given to Epsiloon (November 2023)