MOÏRA-PHOEBÉ HUET, PhD

Assistant Research Scientist, Johns Hopkins University

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Auditory neuroscientist combining experimental and computational approaches to investigate how cognitive goals and task demands modulate cortical representations of complex sounds. My research integrates EEG neural tracking, psychophysics, and spectrotemporal modeling to examine how higher-level cognitive processes interact with acoustic structure to influence auditory perception.

EDUCATION

2020	**PhD**, Acoustics, University of Lyon, France
2018	**Master**, Statistics, KU Leuven, Belgium
2013	**Master**, Clinical neuropsychology and cognitive psychology, Université libre de Bruxelles, Belgium
2012	**Master**, Consumers, work and organizational psychology, Université libre de Bruxelles, Belgium
2010	**Bachelor**, Pedagogy and psychological sciences, Université libre de Bruxelles, Belgium

RESEARCH EXPERIENCE

2025–Present **Assistant Research Scientist**, Laboratory for Computational Audio Perception (LCAP), Johns Hopkins University, USA

Developing independent research programs investigating how higher-level cognitive processes modulate cortical representations of complex sounds, combining experimental design, EEG neural tracking, and spectrotemporal modeling.

2020–2025 **Postdoctoral Fellow**, Laboratory for Computational Audio Perception (LCAP), Johns Hopkins University, USA

Mentor: Prof. Mounya Elhilali. Investigated how working memory constraints and cognitive goals shape auditory and speech processing. Developed task-dependent neural tracking frameworks and advanced computational modeling approaches linking behavioral and electrophysiological data.

2016–2020 **PhD Candidate**, University of Lyon, France

Supervisors: Dr. Etienne Gaudrain & Prof. Etienne Parizet. PhD Thesis: Voice mixology at a cocktail party : Combining behavioural and neural tracking for speech segregation. Studied auditory scene analysis and voice separation in cocktail party environments using behavioral paradigms and neural tracking methods.

2011 **Research Assistant,** Consciousness, Cognition & Computation Group (CO3), Université libre de Bruxelles, Belgium

Supervisor: Prof. Axel Cleeremans. Investigated implicit valuation of consumer products using behavioral paradigms.

TEACHING EXPERIENCE

University

2021, 2023 **Guest Lecturer** (single session), Audio Signal Processing (Graduate Level), Department of Electrical & Computer Engineering, Johns Hopkins University.

Lecture topic: Psychoacoustics

Fall 2018 **Instructor**, Applied Statistics (Undergraduate level), Psychology Department, University Lyon 2, France.

Delivered lectures, designed and assessed assignments for an undergraduate cognitive sciences course.

Additional Teaching Experience

Spring 2014   **Substitute Teacher**, Social Sciences, Philosophy, Ethics, and French, Athénée Royal (Secondary Education), Brussels, Belgium, Spring 2014

2009-2011   **Support Instructor**, Secondary-Level Mathematics and English, Schola ASBL, Brussels, Belgium.

2003–2015   **Private Tutor**, Mathematics and Statistics, Belgium

PUBLICATIONS

Journal papers

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2022). Vocal and semantic cues for the segregation of long concurrent speech stimuli in diotic and dichotic listening The Long-SWoRD test. *J. Acoust. Soc. Am. 151*(3). Pp. 1557-1574. doi:10.1121/10.0007225

Huet M.-Ph., Micheyl C., Parizet E., Gaudrain E. (2021). Behavioral account of attended stream enhances neural tracking. *Front. Neurosci.* 15:674112. doi: 10.3389/fnins.2021.674112

Peer-reviewed conferences

Huet, M.-Ph., Micheyl, C., Gaudrain, E., & Parizet, E. (2018). Who are you listening to? Towards a dynamic measure of auditory attention to speech-on-speech. In *proceedings of Interspeech 2018*, Hyderabad, India. pp. 2272-2275. doi:10.21437/Interspeech.2018-2053.

Book Chapter

Gaudrain, E., & **Huet, M.-Ph** (2022). Perception de la parole en contexte et rôle des oscillations cérébrales. In S. Samson, B. Tillmann, C. Jourdan, & V. Brun (Eds.), Audition and cognition (pp. 91-102). Sauramps Médical. ISBN 9791030302578.

Manuscripts Under Review

Huet, M.-Ph., & Elhilali, M. (2025). The shape of attention reflects flexible filtering of natural speech modulations. *Under review at Communications Biology.* Preprint available at bioRxiv: https://doi.org/10.1101/2025.05.22.655464

INVITED TALKS

Huet M.-Ph. (April 2023). Exploring Speaker Segregation and Task Demand Effects in Human Neural Tracking, Center of Hearing and Balance, Baltimore, US

Huet M.-Ph. (January 2022). The neural tracking of speakers in psychoacoustics, UMons University, Mons, Belgium

Huet M.-Ph. (February 2019). Brain's temporal response function: Can it be improved with behavioral account of attended stream, Labex CeLya, Lyon, France

Huet M.-Ph. (April 2018). Who are you listening to? Towards a dynamic measure of auditory attention to speech-on-speech, University Medical Center Groningen, Groningen, Netherlands.

CONFERENCE PRESENTATIONS

Huet M.-Ph. & Elhilali M. (2025). Task-dependent cortical encoding of spectrotemporal modulations in human auditory cortex. *189th Meeting of the Acoustical Society of America*, Honolulu, USA. Presentation by M. Elhilali

Huet M.-Ph. & Elhilali M. (2025). The shape of attention: How cognitive goals sculpt cortical representation of speech. *CogHear 2025*, College Park, USA. Poster.

Huet M.-Ph. & Elhilali M. (2025). Neural representation of auditory sound categories across cognitive tasks in electroencephalography. *188th Meeting of the Acoustical Society of America*, New Orleans, USA. Poster. doi:10.1121/10.0038060

Huet M.-Ph. & Elhilali M. (2024). Neural tracking of different cognitive tasks in human EEG. *47th ARO Mid-Winter meeting*, Anaheim, USA. Presentation.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2019). Decoding listener's attention: Can it be improved with behavioral measure of selective attention? *177th Meeting of the Acoustical Society of America*, Louisville, USA. Poster. doi:10.1121/1.5101314.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2019). Brain's temporal response function: Can it be improved with behavioral account of attended stream? *11th Speech in Noise Workshop*, Ghent, Belgium. Poster.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Who are you listening to? Towards a dynamic measure of auditory attention to speech-on-speech. *19th Interspeech*, Hyderabad, India. Presentation.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Who are you listening to? Behavioral measure for decoding listener's attention. *4th Symposium on cutting-edge methods for EEG research*, Paris, France. Poster.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Who are you listening to? Behavioral measure for decoding listener's attention. *11èmes Journées Jeunes Chercheurs en audition, acoustique musicale et signal audio*, Brest, France. Poster.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Who are you listening to? Behavioral measure for decoding listener's attention. *1st Auditory EEG Signal Processing symposium*, Leuven, Belgium. Poster.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Qui écoute-t-elle? Vers une mesure dynamique de l'attention auditive à la parole. *14ème Congrès Français d'Acoustique*, Le Havre, France. Presentation.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Vers une mesure dynamique de l'attention auditive dans un scenario de Cocktail Party. *Journée des doctorants CeLyA*, Lyon, France. Presentation.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2018). Who are you listening to? Towards a dynamic measure of auditory attention to speech-on-speech. *10th Speech in Noise Workshop*, Glasgow, United-Kingdom. Poster.

Huet M.-Ph., Micheyl C., Gaudrain E., Parizet E. (2017). Qui écoute-t-elle, maintenant? Vers une mesure dynamique de l'attention auditive à la parole. *3èmes Journées Perception Sonore*, Brest, France. Poster.

Huet M.-Ph., Atas A., Gevers W., Cuny C. Cleeremans, A. (2011). Can product value be represented implicitly? *21th Annual Meeting of the Belgian Association for Psychological Sciences*, Ghent, Belgium. Poster.

FUNDING

Pending

Huet, M.-Ph. (PI). *Neural processing of auditory attention during meditation.* Johns Hopkins Discovery Award, $175,000, 07/2026–06/2028. Pending (submitted 02/2026).

Huet, M.-Ph. (PI). *Modulation of auditory representations by internal cognitive states in aging.* Simons Foundation, $220,000, 09/2026–08/2028. Pending (submitted 01/2026).

Huet, M.-Ph. (PI). *Exploring meditation's role in managing auditory attention.* National Institutes of Health (NIH), $1,006,400, 07/2026–06/2031. Pending (submitted 11/2025).

Huet, M.-Ph. (PI). *Meditation and the interplay of bottom-up and top-down auditory attention.* National Science Foundation (NSF), $651,303, 07/2026–06/2029. Pending (submitted 08/2025).

MENTORSHIP & SUPERVISION

2 Master's Students (Research Mentor), Johns Hopkins University, 2025–Present

4 Undergraduate Researchers (Research Mentor), Johns Hopkins University, 2021–Present

10 Master's Research Interns (Short-term internship), Lyon Neuroscience Research Center, 2016–2018

PROFESSIONAL SERVICE

Peer Review Activities:

Reviewer: Neuron; Journal of the Acoustical Society of America; Hearing Research; Cortex; Frontiers in Neuroscience

Leadership & Event Organization:

Co-President, Homewood Postdoctoral Association, Johns Hopkins University, 2023–2024

Secretary, Homewood Postdoctoral Association, Johns Hopkins University, 2022–2023

Organizer & **Session Chair**, CeLyA Doctoral Research Day, Lyon, France, 2018

Outreach Achievements

Co-creator & **Facilitator,** Interactive Workshop, Science Festival, 2017–2018

HONORS & AWARDS

Winner, Coding Challenge Competition, Johns Hopkins University, 2024

Regional **Finalist**, My Thesis in 180 Seconds (MT180), Lyon, France, 2018

Best Poster Award, Journées Jeunes Chercheurs en audition, Brest, France, 2018