

# Alexis DEHAIS- UNDERDOWN



## CONTACT

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Dehais-Underdown, A.

My main areas of research are the phonetics of *Human Beatboxing*, experimental phonetics, and language and society:

- Human Beatboxing: articulatory analyses (quantification of laryngeal postures, fPCA analyses of MRI contours), aerodynamic analyses (intraoral pressure, oral and nasal airflow rates, averages, GAMM), acoustic analyses (formants, F0, intensity, harmonics, spectral slope, inverse filtering)
- Experimental Phonetics: qualitative analyses (data description, hypothesis formulation), quantitative analyses (hypothesis testing). Without a description of the data, their quantification is meaningless.
- Language and society: What is the role of social variation in the functioning and structure of sound systems? The case of the /t+r/ cluster in Chilean Spanish (description and quantification of allophone realizations).

## DIPLOMAS

|                              |                                                                                 |
|------------------------------|---------------------------------------------------------------------------------|
| 2023                         | PHD in phonetics, phonology and speech science                                  |
| Université Sorbonne Nouvelle |                                                                                 |
| 2018                         | Master of language sciences                                                     |
| Université Sorbonne Nouvelle |                                                                                 |
| 2016                         | Bachelor in Linguistics Litterature and Civilization of Spain and Latin America |
| Université Sorbonne Nouvelle |                                                                                 |
| 2012                         | Baccalauréat général littéraire                                                 |
| Lycée Saint Pierre Fourier   |                                                                                 |

## EMPLOYMENT

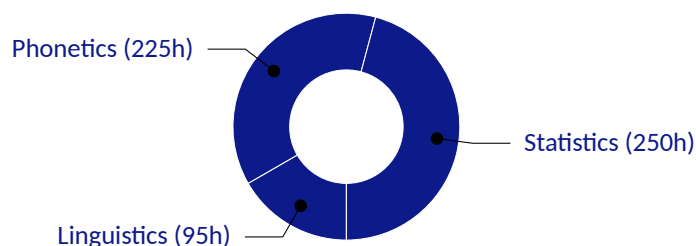
|                                               |                                                                      |
|-----------------------------------------------|----------------------------------------------------------------------|
| 09/2023-08/2025                               | Temporary Teaching and Research Associate in Phonetics and Phonology |
| Université Sorbonne Nouvelle                  |                                                                      |
| 11/2022-01/2023                               | Research engineer                                                    |
| Laboratoire de Phonétique et Phonologie (LPP) |                                                                      |
| 09/2022-12/2022                               | Lecturer                                                             |
| Conservatoire National des Arts et Métiers    |                                                                      |
| 09/2019 - 31/2021                             | Lecturer                                                             |
| Université Sorbonne Nouvelle                  |                                                                      |
| 09/2018 - 31/2022                             | Doctoral researcher                                                  |
| Université Sorbonne Nouvelle                  |                                                                      |

## CONTINUING EDUCATION

|                                                       |                                                                                       |
|-------------------------------------------------------|---------------------------------------------------------------------------------------|
| 2025                                                  | Media Training                                                                        |
| Coop Paname / Laboratoire de Phonétique et phonologie |                                                                                       |
| 2019                                                  | Statistics and linear mixed models                                                    |
| Bodo Winter / Laboratoire de Phonétique et phonologie |                                                                                       |
| 2019                                                  | Basics of programming                                                                 |
| CNRS                                                  |                                                                                       |
| 2019                                                  | Initiation to electroencephalography and and to evoked potentials analysis            |
| Université Paris Cité                                 |                                                                                       |
| 2018                                                  | Academic teaching and pedagogy                                                        |
| Université Paris Cité                                 |                                                                                       |
| 2017                                                  | Training on the physiological platform of the Laboratoire de Phonétique et Phonologie |
| LPP                                                   |                                                                                       |

## TEACHING

Teaching hours of language sciences since 2019:



### UNIVERSITÉ SORBONNE NOUVELLE

*Institut de Linguistique et de Phonétique Générales et Appliquées*

|           |                                                |                   |      |
|-----------|------------------------------------------------|-------------------|------|
| 2019-2025 | Phonetics 1                                    | 1st year students | 117h |
|           | Introduction to Language Sciences              | 1st year students | 93h  |
|           | Statistics                                     | 1st year students | 229h |
|           | Statistics                                     | Master            | 21h  |
|           | Comparative phonetics of the world's languages | 3rd year students | 48h  |
|           | Introduction to Praat                          | Master            | 12h  |
|           | Ethics and deontology of scientific research   | PhD               | 2h   |
|           | Introduction to Praat and visible vowels       | PhD               | 2h   |
|           | Total                                          |                   | 524h |

### AFRICAN LINGUISTICS SCHOOL 6

*Porto Novo (Bénin)*

|       |                     |             |     |
|-------|---------------------|-------------|-----|
| 2022  | Fieldwork Phonetics | Master, PhD | 10h |
| Total |                     |             | 10h |

### CONSERVATOIRE NATIONAL DES ARTS ET MÉTIERS (CNAM)

*Centre de préparation au diplôme d'état d'audioprothésiste*

|           |                           |  |     |
|-----------|---------------------------|--|-----|
| 2022-2023 | Linguistics and Phonetics |  | 36h |
| Total     |                           |  | 36h |

**CUMULATIVE TOTAL: 570H**

### RESEARCH SUPERVISION

|           |                                                                                                                                             |  |  |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 2024-2025 | Co-supervisor of the MA dissertation of Iliana Messadi The acoustics of subharmonics in singing.<br>(co-supervisor : Claire Pillot-Loiseau) |  |  |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|--|--|

## COLLECTIVE RESPONSIBILITIES

### TEACHING

|           |                                                                    |
|-----------|--------------------------------------------------------------------|
| 2022      | In charge of the course Linguistics and Phonetics at the CNAM      |
| 2023-2025 | In charge of the course Comparative Phonetics of World's Languages |

### ELECTIVE MANDATE

|           |                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------|
| 2019-2021 | PhD students representative elected to the Doctoral School Council                            |
| 2021-2023 | PhD student representative elected to the council of the Phonetics and Phonology Laboratory   |
| 2021-2023 | PhD student representative elected at the Research Commission of Université Sorbonne Nouvelle |

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### ORGANIZATION OF SCIENTIFIC EVENTS

|           |                                                                                                                                       |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------|
| 2019      | Rencontres Jeunes Chercheurs, Variation in Language Sciences: approaches, data and uses - ED 622, Université Sorbonne Nouvelle        |
| 2019      | 'R-atics 6: Phonetics, Phonology et Sociophonetics of rhotics - Laboratoire de Phonétique et Phonologie, Université Sorbonne Nouvelle |
| 2019-2021 | Organizing Committee for methodological doctoral workshops, Sorbonne Nouvelle University                                              |
| 2023      | Experimental phonetics: an interdisciplinary journey through time and space                                                           |
| 2024      | The larynx in all its states: from the clinic to phonetics                                                                            |

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### SCIENTIFIC PROJECTS

|           |                                                                                                                                                                                                                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2020-2023 | Language and Music, Speech and Human Beatboxing: Theoretical issues for research in general and applied linguistics; a mono-centric exploratory study" project (ID-RCB: 2020-A00246-33) in partnership with the ENT and Cervical/Facial Surgery Department & the Clinical Research and Innovation Delegation at Hôpital Foch (Suresnes) |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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### AWARDS

|      |                                                                                                  |
|------|--------------------------------------------------------------------------------------------------|
| 2019 | Student Award from the International Phonetic Association (ICPhS 2019).                          |
| 2021 | Best Paper Award - Speech Communication (2nd prize) awarded by the Acoustical Society of America |

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### SCIENTIFIQUE EXPERTISE

Peer review for the *Journal of Language and Speech*  
Scientific Projects – LABEX Persyval, Université de Grenoble

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### SCIENTIFIC COMMUNICATIONS

|                                  |           |
|----------------------------------|-----------|
| <b>Articles</b>                  | <b>10</b> |
| <i>Book chapters</i>             | 1         |
| <i>Proceedings</i>               | 7         |
| <i>Journal articles</i>          | 2         |
| <b>Other</b>                     | <b>21</b> |
| <i>Talks &amp; posters</i>       | 8         |
| <i>Seminars</i>                  | 2         |
| <i>Invited speaker</i>           | 4         |
| <i>Popularization of science</i> | 7         |

**TOTAL : 31**

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## PUBLICATIONS

### BOOK CHAPTERS

1. Non pulmonics in Human Beatboxing

 **Dehais-Underdown, A.**



à  B. Sands, M. Percival, A.-M. Fehn, & J. Coburn (Eds.),  
paraître *Non-Pulmonic Consonants*. University of Toronto.

### JOURNAL ARTICLES

2. Human Beatboxing: ejectives, implosives and the pharyngeal initiation mechanism

 **Dehais-Underdown, A.**, Crevier-Buchman, L., Demolin, D., Vuissoz, P. A., & Laprie, Y



Accepté  Journal of the International Phonetics Association

3. In and out: production mechanisms in Human Beatboxing

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L. & Demolin, D.

 2021

 Proceedings of Meetings on Acoustics, Vol. 45, 060005.

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## PROCEEDINGS

4. Are glottalic mechanisms in Human Beatboxing really glottalic?

 **Dehais-Underdown, A.**, Crevier-Buchman, L., Demolin, D., Vuissoz, P. A., Fauvel, M, Laprie, Y & Felblinger, J.

 2024

 13th International Seminar of Speech Production.

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5. Non-pulmonic initiation in human Beatboxing: a real-time MRI study

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L., Demolin, D., Vuissoz, P. A., Isaieva, K, Fauvel, M, Laprie, Y & Felblinger, J.

 2023

 Proceedings of the 20th International Congress of Phonetic Sciences (pp. 1176–1180)

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6. Speed rate effects on human Beatboxing: an aerodynamic study

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L. & Demolin, D.

 2023

 Proceedings of the 20th International Congress of Phonetic Sciences (pp. 1176–1180)

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7. Human Beatboxing: A preliminary study on temporal reduction

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L. & Demolin, D.

 2020

 12th International Seminar on Speech Production

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8. Rythme et contrôle articulatoire : étude préliminaire du Human Beatbox

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L. & Demolin, D.

 2020

 Journées d'Études sur la Parole (331e édition)

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9. Acoustico-Physiological coordination in the Human Beatbox: A pilot study on the beatboxed Classic Kick Drum

 **Dehais-Underdown, A.**, Crevier-Buchman, L. & Demolin, D.

 2019

 Proceedings of the 19th International Congress of Phonetic Sciences

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10. Étude acoustique du cluster /tr/ et de ses allophones à Santiago du Chili

 **Dehais-Underdown, A.** & Demolin, D.

 2018

 32e journées d'études sur la Parole (JEP)

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## TALKS & POSTERS

11. Affricating and hypercorrecting: a sociophonetic study on Spanish r in Chile

 **Dehais-Underdown, A.**, & Demolin, D.

 2025

 r-atics 8

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12. Human Beatboxing: Laryngeal Articulations

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L., & Demolin, D.

 2022

 14th Pan-European Voice Conference

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13. Human Beatboxing: Linking articulation, aerodynamics and acoustics of phonation types

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L., & Demolin, D.

 2022

 14th Pan-European Voice Conference

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14. Human Beatboxing: Physiological aspects of drum imitation

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L., & Demolin, D.

 2021

 The Journal of the Acoustical Society of America, 150, A189-A189

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15. Video-fiberscopic laryngopharyngeal examination in Beatboxing

 Crevier-Buchman, L., **Dehais-Underdown, A.**, Amelot, A., Demolin, D., & Pillot-Loiseau, C.

 2021

 13th Congress of the European Laryngological Society

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16. Human Beatboxing: A multi-instrumental pilot

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L., & Demolin, D.

 2019

 The Journal of the Acoustical Society of America, 146(4), 3082-3082

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17. Embodying Human Beatboxing

 **Dehais-Underdown, A.**, Vignes, P., Crevier-Buchman, L., & Demolin, D.

 2019

 Embodied Speech International Workshop

18. Oral and nasal vowels effects on subglottal pressure

 Demolin, D., **Dehais-Underdown, A.**, Trouville, R. Wang, R., Hassid, S. & Signorello R.

 2017

 The Journal of the Acoustical Society of America, 142(4), 2582-2582

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## SEMINARS

19. Ejectives and implosives in Human Beatboxing

 **Dehais-Underdown, A.**

 2025

 Séminaires de Recherches en Phonétique et Phonologie

20. Human Beatboxing: A physiological approach to voice production

 **Dehais-Underdown, A.**, Vignes, P., Buchman, L. C., & Demolin, D.

 2022

 Séminaires de Recherches en Phonétique et Phonologie

## INVITED SPEAKER

21. Le larynx articulateur : illustrations beatboxées

 **Dehais-Underdown, A.**

 2026

 Regards croisés autour de la voix chantée

22. Crescendo : du chant au Beatbox

 Julien-Laferrrière, A. & **Dehais-Underdown, A.**

 2025

 Le larynx dans tous ses états : de la clinique à la phonétique

### 23. Apports du Human Beatbox pour la phonétique clinique

 **Dehais-Underdown, A.**

 2025

 50 ans du Laboratoire de Phonétique et Phonologie

### 24. Physiologie du Human Beatbox

 **Dehais-Underdown, A.**, Vignes, P., Buchman, L. C., & Demolin, D.

 2022

 Arts Sciences Santé - Beatboxday

## POPULARIZATION OF SCIENCE

### 25. Le Human Beatbox

 **Dehais-Underdown, A.**

 2024

 Rencontres de la recherche 2024 de l'Université Sorbonne Nouvelle

### 26. Ondes Lyriques : Spectacle conférence-concert sur les ondes, la voix et le chant lyrique

 Nutarelli, D. & **Dehais-Underdown, A.**

 2023

 Fête de la science, Bruyères Le Châtel

### 27. Le Human Beatbox

 **Dehais-Underdown, A.**, Crevier-Buchman, L., Pillot-Loiseau, C.

 2022

 Interview pour le magazine de la santé, France 5

### 28. Beatboxers : Comment ils imitent les instruments avec leur voix

 **Dehais-Underdown, A.**

 2022

 Reportage de Laura Brunet pour E=M6

### 29. Beatbox : un moyen pour rééduquer les personnes opérées de la langue ?

 **Dehais-Underdown, A.**

 2022

 Reportage de d'Adrien Lac pour le 1245 de M6

### 30. Beatbox, voix et comportements laryngés

 **Dehais-Underdown, A.**

 2022

 Reportage de France 3 Île de France

### 31. Le beatbox, quand l'art rencontre la phonétique

 **Dehais-Underdown, A.**

 2022

 Vox : La linguistique sous toutes ses formes (Podcast de Maxime Hébert pour le Labex EFL)

## IN PREPARATION

Human Beatboxing: speed rate effect on ejectives

 **Dehais-Underdown, A.**

 in prep.

 Journal of phonetics

## AUTRE

I also run a (French) blog called “Sur le bout de la langue” (On the tip of the tongue) on my website, where I discuss (psycho)linguistics and phonetics for dissemination purposes: <https://www.alex-under.fr/blog/>