

# Christian Lorenzi, Ph.D., HDR

DOB: 15 April 1968

**Current position:** Full Professor in Experimental Psychology (PREX2), Ecole normale supérieure, Université Paris Sciences & Lettres, Paris, France

## Current affiliation:

- (1) Département d'Etudes Cognitives, LabEx IEC (Institut d'Etude de la Cognition), EUR Frontcog Ecole normale supérieure, Paris Sciences & Lettres Univ., 29 rue d'Ulm. 75005 Paris, France
- (2) Laboratoire des Systèmes Perceptifs, CNRS UMR LSP 8248 Ecole normale supérieure, Paris Sciences & Lettres Univ., 29 rue d'Ulm, 75005 Paris, France.  
<http://www.cognition.ens.fr/> ; <https://lsp.dec.ens.fr/>

## Training:

- 2000 : Habilitation à Diriger les Recherches, HDR (Psychology), Univ Paris Descartes, Paris, France
- 1995 : Ph.D. in Experimental Psychology, Univ Lyon II Lumière, Lyon, France
- 1986-1991: Degree and Master degree in Psychology, Univ Lyon II Lumière, Lyon, France

## Academic positions:

- 2011- ... : Full Professor in Experimental Psychology (PREX2), Ecole normale supérieure, Université Paris Sciences & Lettres, Paris
- 2001-2011 : Full Professor in Experimental Psychology, UFR Institut de Psychologie, Univ Paris Descartes (now : Université Paris Cité), Paris
- 1997-2001 : Assistant Professor in Psychology & Computational modelling (Maître de Conférences en Psychologie Cognitive & Modélisation), UFR Institut de Psychologie, Univ Paris Descartes (now : Université Paris Cité), Paris
- 1996-1997: Junior Scientist, Institute of Hearing Research, MRC, Royal Glasgow Infirmary, Glasgow, UK
- 1995-1996: Post-doctoral scientist (grant from the Fyssen Foundation), Applied Psychology Unit, Medical Research Council (MRC), Cambridge, UK

## Awards:

- 2020-21 : Accueil en délégation au CNRS (2 semesters)
- 2019: Chevalier des Palmes Académiques
- 2008: Elected Fellow of the Acoustical Society of America (FASA)
- 2001-2006 : Institut Universitaire de France (Junior member)
- 2007 : Accueil en délégation au CNRS (1 semester)
- 2006 : Congé de Recherche (CRCT) au titre du CNRS (1 semester)
- 2001- ... : Titulaire de la Prime d'Encadrement Doctoral

## Invited positions:

- 2011: Bloedel Traveling Scholar Award (1 month) Visiting scholar. Virginia Merrill Bloedel Hearing Research Center, Dept of Otolaryngology, Univ. of Washington, Seattle, USA
- 2007-2014: Visiting scholar & Associate Member (1 month/year). Auditory Laboratory. Dept of Experimental Psychology, Univ. of Cambridge, UK
- 2007: Visiting Scholar (2 months). Parnly Hearing Institute. Loyola Univ. Chicago, USA
- 2000: Visiting Scholar (1 month). Dept of Physiological Sciences. Newcastle Univ. Medical School, Newcastle Upon Tyne, UK

## Teaching:

- Creation and coordination of the training program (M1) in Experimental Psychology of the "Master de Recherche en Sciences Cognitives: *Cogmaster*" (Ecole normale supérieure, Univ. Paris Descartes, Ecole des Hautes Etudes en Sciences Sociales) between 2005 and 2011
- 2005-present: Advanced courses in Experimental Psychology, Psychoacoustics and Audiology at the undergraduate, Master and doctoral levels
- Student advisor for 26 students (Master degree, M1, M2) in Psychology or Cognitive Sciences (Master in cognitive sciences (Cogmaster), Ecole normale supérieure; UFR de psychologie, Univ. Paris Descartes) and 22 (undergraduate) students in Audiology (Ecoles d'Audioprothèse de Fougère, Lyon, Nancy, Paris)
- Member (co-chair) of the Graduate Faculty of Purdue Univ., Dept of Speech, Language and Hearing Sciences (USA) – (special appointment, member, co-chair; 2010-2015)

- Jury member for 57 French and Foreign PhDs (UK, Belgium, Netherlands, Germany, DK, USA, Australia, India), and jury member for 14 “habilitations à Diriger les Recherches” (HDR) in France

### Research topics:

My research program focuses on the processing of the *temporal structure of complex sounds* (e.g., speech, natural soundscapes) by the normal and impaired auditory system in humans. I study the auditory perception of two types of temporal modulations of the acoustic signal, the temporal envelope and temporal fine structure, using various approaches (psychophysics, clinical audiology, computer modeling, machine learning and signal processing, developmental psychology, neuropsychology, brain imaging, electrophysiology).

### Bibliometrics and other numbers:

- Total number of publications: 99 in referred journals since 1995; 11 book chapters
- Total number of citations: >3100 citations (ISI-Web of Science, Dec 2023); >5400 citations (Google scholar, Dec 2023)
- h-factor: 29 (ISI-Web of Science, Dec 2023); 37 (Google scholar, Dec 2023)
- ResearcherID profile: <https://publons.com/researcher/2723012/christian-lorenzi/>
- Google Scholar profile: <http://scholar.google.com/citations?user=aQhDgGEAAAJ>
- ORCID ID: <http://orcid.org/0000-0001-7240-1653>
- Number of supervised advanced students: 11 Ph.D. students, 11 post-docs  
Ph.D. Students, current position: Frédéric Apoux (scientist, Univ Columbia, USA); Christian Füllgrabe (scientist, UCL, UK); Dan Gnansia (Head of clinical research, Neurelec Oticon Medical); Marine Ardoit (clinical research assistant, Neurelec Oticon Medical), Agnès Léger (Lecturer, Univ Manchester, UK), Laurianne Cabrera (postdoc scientist, Univ Washington, Seattle, USA; Univ College London, UK; now CR CNRS scientist); Nihaad Paraouty (postdoc scientist, NYU), Nicolas Wallaert (audiologist), Sarah Attia (audiologist), Nicole Miller (Ph.D. in progress), Elie Grinfeder (Ph.D. in progress).  
Postdocs: Gaetan Gilbert, David T. Ives, Willemijn Heeren, Arkadiusz Stasiak, Perrine Brusini, Andrew King (now Lab Manager, DUT, Denmark), Léo Varnet (now CR2 CNRS scientist), Dorothee Arzounian, Axelle Calcus (now Assistant Professor, ULB, Brussels), Frédéric Apoux, Richard McWalter.

### Fundings/Grants

#### Major Grants:

- 2023-2027: ANR “AUDIECO”, PI and network co-ordinator (€ 480 784)
- 2020-2023: ANR “HEARBIODIV”, ANR-20-CE28-0011, PI and network co-ordinator (€ 315,000)
- 2019-2020: Effort d’écoute & Implant cochléaire, Oticon Medical/Neurelec, PI (€ 119,000)
- 2017-2020: AUDIN, Collège national des audioprothésistes; Entendre SAS , PI (€ 100,000)
- 2017-2021: DEV-ORL/DIDEROT, Industrial collaboration; Advanced Bionics, USA-France, PI (€ 460,000)
- 2015-2018: ANR “SPEECHCODE”, ANR-15-CE37-0009-01, Co-PI (€ 68,640)
- 2015-2017: ANR “HEART”, ANR-14-CE30-0019-01 PI and network co-ordinator (€ 261,000)
- 2011-2013: ANR “HEARFIN”, ANR-11-BSH2-0004 PI and network co-ordinator (€ 250,000)
- 2010-2013: Industrial collaboration; Starkey, USA-France, PI (€ 213,680)
- 2008-2009: FP7-SME-2007-1 FP7-SME-222291 “DUALPRO” #2967, Network co-ordinator (€ 125,500)
- 2011-2013: Coordinator of the Labex IEC (Institut d’Etude de la Cognition) project (€ 8 500,000 for 9 yrs)

#### Other Grants:

- 2017-2018 : Industrial collaboration; Starkey, USA-France, PI (€ 65,540)
- 2017-2018 : Collège national des audioprothésistes, France, PI (€ 35,000)
- 2013-2017 : Industrial collaboration, Consortium Entendre SAS, PI (€ 240,573)
- 2013-2017 : Industrial collaboration, Neurelec Oticon Medical, PI (€ 83,000)
- 2010-2011: The Royal Society / International Joint Project 2009R3 (PI : BCJ Moore ; Co-PI : C. Lorenzi) (€ 13,500)
- 2010 : Industrial collaboration, Neurelec , PI (€ 25,000)
- 2009-2012 : ANR MNP Presbyacousie ANR-08-MNPS-0028 (PI : C. Petit ; Co-PI: C. Lorenzi) (€ 39,520)
- 2009 : RTRS-Fondation Voir & Entendre (PI: C. Petit ; Co-PI: C. Lorenzi) (€ 13,500)
- 2007 : Industrial collaboration, Advanced Bionics, PI (€ 8000)
- 2007 : Industrial collaboration, Consortium Entendre SAS, PI (€ 57,810)
- 1999-2001 : Ministère de la Recherche / Programme Cognitique (C. Drake & C. Lorenzi, co-PIs) (€ 91,500)
- 1999-2001 : "Bonus Qualité Recherche" (BQR) - Université Paris Descartes, PI (€ 3000)
- 1998 : Fondation de l’Avenir pour la Recherche Médicale Appliquée, Etude N°ET8244, PI (€ 25,000)

## **Main professional contributions:**

### **Local responsibilities:**

- Director of Scientific Studies at Ecole normale supérieure, Paris (2014 - 2020) [Direction of studies and life on campus at ENS is equivalent to 'dean of scientific studies' or "adjunct head (Vice-President) of CFVU (Conseil Formation & Vie Universitaire)" in French universities; Direction of scientific studies coordinates the scientific curriculum at ENS and teaching delivered by the 7 scientific depts of ENS: physics, chemistry, mathematics, geosciences, computer sciences, biology, cognitive sciences]
- Head of the Département d'Etudes Cognitives, Ecole normale supérieure, Paris (2009-2013) [HoD is equivalent to head of UFR/Depts in French Universities]
- Head of the 'Institut d'Etude de la Cognition (LabEx IEC, ranked A+, 2011, Investissements d'avenir program)" of Ecole normale supérieure (2011-2013: Budget: € 8.5 M)). IEC hosts 6 CNRS/INSERM research units, 70 PIs (permanent scientists), and a teaching (Master degree) program in Cognitive Sciences (Cogmaster: 100 students/year).
- Founder and Leader of the "Audition" team of UMR CNRS 8158 (2004-2007; 3 PIs, 1 Technician, ~ 10 PhD students/postdocs)
- Member of the Conseil d'Orientation Stratégique (COS), Univ. Paris Descartes (2008 - 2011)
- President of the 'Commission Pédagogique de DEUG (Transferts & Equivalences)', UFR Psychologie, Univ. Paris Descartes (2002-2006)

### **National responsibilities:**

- Member of the International Scientific Advisory Board (SAB) of the "Centre de recherche en neurosciences de Lyon" CRNL (Univ Lyon 1, CNRS, INSERM, Univ St Etienne) (2013-2019)
- Founder (2005) and director (2005-2009) of the national consortium for research in audiology affiliated to CNRS: GDR GRAEC (CNRS GDR 2967, ~27 partners)
- Member of Section 16 "Psychologie" of the Conseil National des Universités, CNU" (2007-2011)
- Member of the "Commission nationale d'attribution des Primes d'Encadrement Doctoral (PEDR) et des Primes d'Excellence Scientifique PES" (2008, 2009)
- Member of the "Comité Opérationnel d'Ethique (COPE ; CNRS Ethics committee) » du CNRS" (2006)
- Member of the Bureau de l'Institut Universitaire de France (IUF) (2006)

### **Ad Hoc reviewer for international journals:**

Journal of the Acoustical Society of America (JASA); Hearing Research; Perception & Psychophysics; Journal of Research in Otolaryngology (JARO); Ear and Hearing; Audiology and NeuroOtology; International Journal of Audiology; Journal of Speech, Language and Hearing Research; Frontiers in Neuroscience; Trends in Hearing; IEEE Transactions on Biomedical Engineering; Acta Acustica; Audiology; Speech Communication; Developmental Science; Current Pediatric Reviews; Biological Cybernetics; Current Biology; Neuroimage; Journal of Neuroscience; Brain Research; Behavioral and Brain Functions; Plos One; PNAS; Nature Communications; Scientific Reports, eLife.

### **Editorial Board of international journals:**

*Trends in Hearing*

*Journal of Research in Otolaryngology (JARO)*

*Journal of the Acoustical Society of America (JASA)*

### **Ad Hoc reviewer for grant applications:**

- Ministère de l'Enseignement Supérieure et de la Recherche, France
- RNTS (Réseau National Technologies pour la Santé). Ministère de l'Economie, des Finances et de l'Industrie, France
- ANR (Agence nationale de la recherche). Programme EMCO 2011 (Emotion, Cognition, Comportement), France
- ANRT, CIFRE program, France
- IRBA (Institut de Recherche biomédicale des Armées), France
- NSERC, CRSNG (Conseil de recherches en sciences naturelles et en génie du Canada). Programme RGPIN, Ottawa, Ontario, Canada
- Royal National Institute for Deaf People, RNID (International Grants), London, UK.
- Royal Society (Royal Society Leverhulme Trust Senior Research Fellowship application), London, UK

- Wellcome Trust. Review for the 'Principal Research Fellowship Application' (2011), UK
- Medical Research Council ; progress review of MRC Units (the Institute of Hearing Research), UK; Research Grant review (Neuroscience & Mental Health Board)
- CERG (System of Research Grant Council), Hong-Kong, China
- ERC ("ERC Starting Grant 3rd Call - 2010". "Ideas" Programme of the 7<sup>th</sup> Framework Programme 2007-2013)
- FNRS, Fond de la recherche scientifique, Belgium
- FWO, Research Foundation - Flanders (FWO), Belgium
- New Zealand Ministry of Science and Innovation (MSI), New Zealand
- Action on Hearing Loss, London, UK
- The Netherlands Organisation for Scientific Research (NWO), Netherlands

### **International scientific advisor :**

- 2020- ...: External Advisory Committee du programme ITN Comm4CHILD (PIs : Cecile Colin, Jacqueline Leybaert, Université Libre de Bruxelles, Belgique : <https://comm4child.ulb.be/>).
- 2012-2017: Sensory Communication Group (L Braidia, C Reed), Research Laboratory of Electronics, Massachusetts Institute of Technology, MIT, Cambridge MA, USA). NIH R01 Grant #1 R-1 DC000117 "Hearing Aid Research"
- 2009-2013: Dr.W.F.L Heeren; Leiden Univ Centre for Linguistics. Research project on: "Prosody in whispered speech" supported by the Netherlands Organisation for Scientific Research (NWO)
- 2008: Prof. S. Sheft & V. Shafiro, Loyola Univ Chicago, & Com. Disorders and Sciences, Rush University Medical Center, Chicago, USA. "Relationship between Ability to Discriminate Stochastic Patterns of Frequency Modulation and Speech Perception in Hearing-Impaired and Elderly Listeners". Supported by the National Organization for Hearing Research Foundation (NOHR)

### **Expertise (external reviewer) for promotion & recruitments (Foreign universities):**

Univ Washington, Seattle (USA); Dept of Machine Intelligence at Peking University (PKU); Arizona Univ. (USA); Minnesota Univ. (USA); Purdue Univ. (USA). IRSST, Université de Montreal (Canada); Groningen Univ. (Netherlands); The Netherlands Organization for Scientific Research (NWO), Vici domain Life Sciences (Netherlands); FWO (Research Foundation - Flanders (Belgium)); KU Leuven (Belgium); Cambridge Univ (UK); Manchester Univ (UK).

### **Organization of scientific events:**

Organization of 17 scientific events between 1999-2019: *"The Wikipedia project for Hearing sciences: Concepts of temporal envelope and temporal fine structure"* (Ecole normale supérieure, Paris, 2017), *"Nuit des Sciences" Ebullitions* (3300 participants, Ecole normale supérieure, Paris, 2014), *ARCHES (Audological Research Cores in Europe, 7<sup>th</sup> workshop, Paris, 2013; 2019)*, *EFAS (European Federation of Audiology Societies, special session of the 11<sup>th</sup> congress, Budapest, Hungary, 2013)*, *New Ideas in Hearing (2 meetings of Labex IEC, Ecole normale supérieure, Paris, 2009, 2012)*, *ASA (Acoustical Society of America, special session of the 155<sup>th</sup> meeting, Paris, 2008)*, *National consortium GDR CNRS GRAEC (6 meetings, Paris, 2006-2008)*, *ALPC (Association pour la promotion du langage parlé complété, Nantes, 2003)*, *SFA (Société Française d'Acoustique, 2 journées d'étude, Paris, 1999, 2000)*

### **Invited Seminars (2010-2023)**

41 invited seminars between 2010-2023:

2023

- Les lundis de la Femis, Paris, France
- Hearing4all, Carl von Ossietzky University, Germany
- Shizuoka Graduate School of Public Health, Japan
- Nottingham Hearing Sciences Seminar series, UK,

2022

- Dept. Information Technology, Ghent University
- Dept of Health Technology, Technical University of Denmark, Denmark
- Hearing4all, Carl von Ossietzky University, Germany
- Ear Institute, University College London, UK
- Institut des Neurosciences de l'Université Paris Saclay / Neuropsy, France
- Institut de l'Audition & Institut Pasteur, Paris, France

- Pôle Parole et Cognition, Laboratoire Grenoble Images Parole Signal et Automatique (GIPSA), Université de Grenoble-Alpes & Grenoble INP, France
- Psychology dept, Univ Minnesota, USA
- Dept of Brain & Cognitive Sciences, Massachusetts Institute of Technology, USA
- 2021
- Comm4Child, Hannover, Germany
- 2020
- Hearing4all, Oldenburg, Germany
- 2019
- ENES, NeuroPSI, Université St Etienne, France
- Arizona Univ, USA
- Beijing Institute of Otolaryngology, Beijing Tongren Hospital, Capital Medical University, Beijing, China
- 2018
- Hearing4all, Universitaet Oldenburg, Germany
- Université Aix Marseille, UMR LPC, Marseille, France
- 2017
- Speech, Hearing and Phonetic sciences Dept, University College London, UK
- 2016
- Faculty of Music, Kyoto City University of Arts, Kyoto, Japan.
- NTT Communication Science Laboratories, Atsugi, Kanagawa, Japan.
- Manchester Centre for Audiology and Deafness, University of Manchester, UK.
- 2015
- Institute of Hearing Research, Medical Research Council, Nottingham, UK
- 2014
- Beijing Institute of Otolaryngology, Beijing Tongren Hospital, Capital Medical University, Beijing, China
- University Medical Center Groningen, University of Groningen, Groningen, Netherlands
- 2013
- ExpORL, Dept of neurosciences, KU Leuven, Leuven, Belgium
- Dept of Neuroscience, University Medical Center, Geneva, Switzerland
- Dept of Otorhinolaryngology - Head & Neck Surgery, Shanghai Jiaotong University, Shanghai, China
- Centro Ricerche e Studi, Amplifon & Università di Milano & Modena, Milan, Italia
- Electronics Research Labs, Massachusetts Institute of Technology (MIT), Cambridge, USA.
- 2012
- UNESCOG, Université Libre de Bruxelles, Bruxelles, Belgium
- 2011
- House Research Institute, Los Angeles, USA
- Bloedel Hearing Research Center, Univ of Washington, Seattle, USA
- Dept of Psychology, Univ of Minnesota, Minneapolis, USA
- Starkey Laboratories, Minneapolis, USA
- 2010
- Dept of Speech, Language and Hearing Sciences, Purdue University, USA
- Institut Fédératif de Neurosciences de Lyon, France
- Ear Club Colloquium, University of California, Berkeley, Dept of Psychology, USA
- Starkey Laboratories, Berkeley, USA

### **Conferences: Congress, Meeting, Workshop, Symposia (2010-2023)**

111 presentations (posters/oral presentations) between 2010-2023 (France, Germany, Italy, Spain, UK, Netherlands, Switzerland, Hungary, Poland, Denmark, Israel, USA, China, Japan, Australia), e.g.:

- Lorenzi, C. (2023, December). *Human auditory ecology* : Extending hearing research to the perception of natural soundscapes. 185th meeting of the Acoustical Society of America, 4-8 Dec, Sydney, Australia [invited talk].
- Lorenzi, C. (2023, April). *Auditory perception of natural soundscapes by normal-hearing and hearing-impaired listeners*. Urban Sound Symposium, 19-21 April, Barcelona, Spain. [Invited talk].
- Lorenzi, C. (2021, September). *Efficient processing of AM and FM cues: Effects of age and hearing loss*. Conference on Sound Perception (CSP), Special session "Auditory processing of the temporal envelopes of sounds", 3<sup>rd</sup> September, Poznan, Poland (videoconference) [Invited talk].
- Lorenzi, C. (2018, May). *The contribution of Neal Viemeister to the modulation theory of hearing*. The 175<sup>th</sup> meeting of the Acoustical Society of America, 7-12 May, Minneapolis, USA.

- Lorenzi, C. (2017, October). *Modulation processing by the normal and impaired auditory system: Insights from integration and interference effects*. The Third Annual USC Hearing and Communication Neuroscience Symposium, USC Health Science Campus, 6<sup>th</sup> October, Los Angeles, USA [Invited Talk].
- Lorenzi, C., (2017, June). *What is auditory temporal processing and how to measure it*. XI Jornadas Internacionales sobre Avances en Audiología. 8-10 June, Salamanca, Spain [Invited talk].
- Lorenzi, C. (2016, July). *Processing time with our auditory system*. 31<sup>th</sup> International Congress of Psychology. 24-29 July, Yokohama, Japan [Invited talk].
- Lorenzi, C. (2015, May). *Developmental time course of auditory perception of modulation speech cues*. 169<sup>th</sup> Meeting of the Acoustical Society of America. 18-22 May, Pittsburgh, USA [Invited talk].
- Lorenzi, C. (2014, May). *Novel paradigms to investigate temporal fine structure processing?* 167<sup>th</sup> Meeting of the Acoustical Society of America, 04-09 May, Providence, Rhode Island, USA. [Invited talk]
- Lorenzi, C. (2013, October). *Abnormal auditory processing in regions of normal or near normal hearing: A limiting case of encoding fidelity*. XXXIV National Meeting of the Italian Society of Audiology and Phoniatrics (SIAF), October 16-19<sup>th</sup> 2013, Venezia, Italy [Invited talk]
- Lorenzi, C. (2013, July). *Abnormal auditory processing in regions of normal or near normal hearing: A limiting case of encoding fidelity*. Third International Forum on Otorhinolaryngology-Head & Neck Surgery, Shanghai Jiaotong University, July 25 to 29<sup>th</sup> 2013, Shanghai, China [Invited talk]
- Lorenzi, C. (2012, January). *Temporal envelope reconstruction for normal-hearing and hearing-impaired listeners*. "The separation of envelope and fine structure for auditory research: How and Why" Meeting; St John's College, Cambridge, UK, Jan 31, 2012 [Invited talk]
- Lorenzi, C. (2011, January). *Auditory mechanisms of robust speech perception*. Third Workshop on speech in noise: Intelligibility and quality, Lyon, France [Invited talk]
- Lorenzi, C. (2010, October). *Auditory mechanisms of robust speech perception*. Second France-Israel symposium on mid-level audition, LEA FILN, Hebrew University, Jerusalem, Israel [Invited talk]
- Lorenzi, C. (2010, March). *Role of temporal envelope and temporal fine structure cues in speech perception for normal-hearing and hearing-impaired listeners*. 2010 Meeting of the American Auditory Society, March 4-6, 2010, Scottsdale, AZ, USA [Keynote "Translational Lecture"]

### Refereed Journal Publications

1. Lorenzi, C., Apoux, F., Grinfeder, E., Krause, B., Miller-Viaca, N., Sueur, J., (2023). Human auditory ecology : Extending hearing research to the perception of natural soundscapes by humans in rapidly-changing environments. *Trends in Hearing*, 27, 1-28. doi: 10.1177/23312165231212032
2. Miller-Viacava, N., Lazard, D., Delmas, T., Krause, B., Apoux, F., & Lorenzi, C. (2023). Sensorineural hearing loss alters auditory discrimination of natural soundscapes. *International Journal of Audiology*, 1-10. doi: 10.1080/14992027.2023.2272559
3. Apoux, F., Miller-Viacava, N., Fériere, R., Dai, H., Krause, B., Sueur, J. & Lorenzi, C. (2023). Auditory discrimination of natural soundscapes. *Journal of the Acoustical Society of America*, 153, 2706-2723.
4. Grinfeder, E., Lorenzi, C., Hauptert, S., & Sueur, J. (2022). What do we mean by "soundscape"? A functional description. *Frontiers in Ecology and Evolution*, 10, 894232 doi: 10.3389/fevo.2022.894232
5. Varnet, L., & Lorenzi, C. (2022). Probing temporal modulation detection in white noise using intrinsic envelope fluctuations: a reverse-correlation study. *Journal of the Acoustical Society of America*, 151, 1353-1366.
6. Cabrera, L., Lorenzini, I, Rosen, S., Varnet, L., & Lorenzi, C. (2022). Temporal integration for amplitude modulation in childhood: Interaction between internal noise and memory. *Hearing Research*, 415, 108403.
7. Attia, S., King, A., Varnet, L., Ponsot, E., & Lorenzi, C. (2021). Double-pass consistency for amplitude- and frequency-modulation detection in normal-hearing listeners. *Journal of the Acoustical Society of America*, 150, 3631-3647.
8. Varnet, L., Léger, A.C., Boucher, S., Bonnet, C., Petit, C., & Lorenzi, C. (2021). Contributions of Age-Related and Audibility-Related Deficits to Aided Consonant Identification in Presbycusis: A Causal-Inference Analysis. *Frontiers in Aging Neuroscience*, 13: 640522. doi: 10.3389/fnagi.2021.640522.
9. Souffi, S., Lorenzi, C., Huetz, C., & Edeline, J-M. (2021). Robustness to noise in the auditory system: A distributed and predictable property. *eNeuro*, 8(2), doi: 10.1523/ENEURO.0043-21.2021
10. Ponsot, E., Varnet, L., Wallaert, N., Daoud, E., Shamma, S., Lorenzi, C. & Neri, P. (2021). Mechanisms of spectrotemporal modulation detection for normal- and hearing-impaired listeners. *Trends in Hearing*, 25, 1-19, DOI 10.1177/2331216520978029.
11. Souffi, S., Lorenzi, C., Varnet, L., Huetz, C., & Edeline, J-M. (2020). Noise-sensitive but more precise subcortical representations co-exist with robust cortical encoding of natural vocalizations. *Journal of Neuroscience*, 40, 5228-5246.

12. Thoret, E., Varnet, L., Boubenec, Y., Ferriere, R., Le Tourneau, F.-M., Krause, B. & Lorenzi, C. (2020). Characterizing amplitude and frequency modulation cues in natural soundscapes: A pilot study in four habitats of a biosphere reserve. *Journal of the Acoustical Society of America*, *147*, 3260-3274.
13. Cabrera, L., Varnet, L., Buss, E., Rosen, S. & Lorenzi, C. (2019). Development of temporal auditory processing in childhood: Changes in efficiency rather than temporal-modulation selectivity. *Journal of the Acoustical Society of America*, *146*, 2415-2429.
14. Varnet, L., Langlet, C., Lorenzi, C., Lazard, D., & Micheyl, C. (2019). High-frequency sensorineural hearing loss alters cue-weighting strategies when discriminating stop consonants in noise despite restored audibility. *Trends in Hearing*, *23*, 1-18.
15. King, A., Varnet, L., & Lorenzi, C. (2019). Accounting for the masking of frequency modulation by amplitude modulation using the modulation-filterbank concept. *Journal of the Acoustical Society of America*, *145*, 2277-2293.
16. Buss, E., Lorenzi, C., Cabrera, L., Leibold, L. & Grose, J. (2019). Amplitude modulation detection and modulation masking in school-age children and adults. *The Journal of the Acoustical Society of America*, *145*, 2565-2575.
17. Wallaert, N., Varnet, L., Moore, B.C.J. & Lorenzi, C. (2018). Sensorineural hearing loss impairs sensitivity but spares temporal integration for detection of frequency modulation. *Journal of the Acoustical Society of America*, *144*, 720-733.
18. Buss, E., Leibold, L.J., & Lorenzi, C. (2018). Speech recognition for school-age children and adults tested in multi-tone vs multi-noise band-maskers. *Journal of the Acoustical Society of America*, *143*, 1458. doi: 10.1121/1.5026795
19. Paraouty, N., Stasiak, A., Lorenzi, C., Varnet, L., & Winter, I. M. (2018). Dual coding of frequency modulation in the ventral cochlear nucleus. *Journal of Neuroscience*, 20107-20117. doi: 10.1523/JNEUROSCI.2107-17.2018
20. Ewert, S., Paraouty, N., & Lorenzi, C. (2018). A two-path model of auditory modulation detection using temporal fine structure and envelope cues. *European Journal of Neuroscience*. doi: 10.1111/ejn.13846.
21. Aushana, Y, Souffi, S., Edeline, J.M., Lorenzi, C., & Huetz, C. (2018). Robust neuronal discrimination in primary auditory cortex despite degradations of spectro-temporal acoustic details: comparison between guinea pigs with normal hearing and mild age-related hearing loss. *Journal of the Association for Research in Otolaryngology*. doi: 10.1007/s10162-017-0649-1
22. Goodman, D.F.M., Winter, I.M., Léger, A.C., de Cheveigné, A., & Lorenzi, C. (2017). Modelling firing regularity in the ventral cochlear nucleus: mechanisms, and effects of stimulus level and synaptopathy. *Hearing Research*, *358*, 98-110.
23. Varnet, L., Ortiz-Barajas, M. C., Guevara Erra, R., Gervain, J., & Lorenzi, C. (2017). A cross-linguistic study of speech modulation spectra. *Journal of the Acoustical Society of America*, *142*, 1976-1989.
24. Wallaert, N., Moore, B.C.J., Ewert, S., & Lorenzi, C. (2017). Sensorineural hearing loss enhances auditory sensitivity and temporal integration for amplitude modulation. *Journal of the Acoustical Society of America*, *141*, 971-980.
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