

CURRICULUM VITAE

ANA P. PINHEIRO

Revised February 2018

Faculdade de Psicologia

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EDUCATION

- 2010: **Ph.D.**, Psychology, University of Minho, Portugal
- 2006: **M.S.**, Psychology, University of Minho, Portugal

Postdoctoral training:

- 2010-2015: Post-Doctoral Fellow, EEG Frequency Analysis Training Program, Neural Dynamics Laboratory, Department of Psychiatry, *Harvard Medical School*.
- 2010-2015: Post-Doctoral Fellow, Cognitive Neuroscience Research Training Program, Neuroscience Laboratory, Department of Psychiatry, *Harvard Medical School*.

ACADEMIC POSITIONS

- 2015: Assistant Professor – Faculty of Psychology, University of Lisbon
- 2013: IF Investigator – School of Psychology, University of Minho

CURRENT RESEARCH INTERESTS

As a continuation of my Ph.D. and Post-Doctoral studies, my goal is to advance knowledge on the neurofunctional mechanisms underlying auditory verbal hallucinations. With a focus on translational research and preventive interventions, I expect to contribute to society by improving the understanding of the nature of neurocognitive impairments in schizophrenia-spectrum disorders and by translating scientific evidence into clinically relevant information. This long-term goal has been approached by two main lines of research. The first aims to probe the influence of abnormal salience detection on self-generated voice processing, and the role of these interactions in the development of auditory verbal hallucinations. The second focus on another critical type of information conveyed by the voice, i.e. the emotional state of the speaker. The study of vocal emotional perception in individuals at different stages of the psychosis continuum aims to inform the specific contributions of sensory-based and higher-order operations to abnormal prosody processing in schizophrenia-spectrum disorders, as well as to identify biomarkers of risk to psychosis to increase the likelihood that the course and outcome of schizophrenia is favorably altered.

RESEARCH GRANTS

As Principal Investigator:

- 2017-2018: “*When prediction errs: Examining the brain dynamics of altered saliency in self-voice perception*” (238/16 – BIAL).
- 2016-2019: “*I predict, therefore I do not hallucinate: a longitudinal study testing the neurophysiological underpinnings of auditory verbal hallucinations*” (PTDC/MHC-PCN/0101/2014 – Portuguese Science and Technology Foundation [Fundação para a Ciência e a Tecnologia-FCT]).
- 2013-2015: “*Examining abnormalities in auditory emotional processing in schizophrenia: an electrophysiological investigation with high-risk, early-stage and chronic patients*” (PTDC/MHN-PCN/3606/2012– funded by FCT).
- 2012-2015: “*Electrophysiological investigation of auditory affective processing in schizophrenia and its relationship with self-monitoring: a window into auditory hallucinations?*” (PTDC/PSI-PCL/116626/2010– funded by FCT).

As Co-Investigator:

- 2014-2015: “*To see or not to see? Hallucinations in multidisciplinary perspective*”, funded by BIAL (BIAL Grant 60/12 – PI: Dr. Mattia Riccardi, Philosophy Institute, Faculty of Humanities, University of Oporto, Portugal).
- 2009-2013: “*Neurophysiological studies of schizophrenia*”, funded by NIMH (NIMH RO1 MH 040799 Grant – PI: Dr. Robert W. McCarley, Harvard Medical School, Boston, USA).
- 2009-2012: “*The Neuropsychophysiological Basis of Empathy: The role of neuroendocrine; autonomic and central nervous system variables*”, funded by BIAL (PI: Professor Óscar F. Gonçalves, School of Psychology, University of Minho, Portugal).
- 2006-2007: “*Narrative production and neuroanatomic organization in Williams Syndrome*” – funded by Science and Technology Foundation-FCT (POCTI/PSI 58364/2004 – PI: Professor Óscar F. Gonçalves).

Research Scholarships and Contracts:

- 2016: FCT Investigator Consolidating Grant (IF/00830/2015), funded by FCT.
- 2013-2015: FCT Early Investigator Grant (IF/00334/2012), funded by FCT.
- 2010-2013: Post-Doctoral Fellowship (SFRH/BPD/68967/2010), funded by FCT.
- 2007-2010: Ph.D. Scholarship (SFRH/BD/35882/2007), funded by FCT.
- 2006-2007: Research Scholarship (POCTI/PSI 58364/2004), project “Narrative production and neuroanatomic organization in Williams Syndrome” –funded by FCT (POCTI/PSI 58364/2004).

PUBLICATIONS

Journal articles (peer-reviewed) (International)

1. **Pinheiro, A. P.**, Barros, C., Dias, M., & Kotz, S. A. (2017). Laughter catches attention! *Biological Psychology*, 130, 11-21. doi:10.1016/j.biopsycho.2017.09.012

2. Castiajo, P., & **Pinheiro, A. P.** (2017). On “hearing” voices and “seeing” things: Probing hallucination predisposition in a Portuguese nonclinical sample with the Launay-Slade Hallucination Scale-Revised. *Frontiers in Psychology*, 8, 1138. doi: 19.3389/fpsyg.2017.01138
3. **Pinheiro, A. P.**, Barros, C., Dias, M., & Niznikiewicz, M. (2017). Does emotion change auditory prediction and deviance detection? *Biological Psychology*, 127, 123-133. doi:10.1016/j.biopsycho.2017.05.007
4. Vasconcelos, M., Dias, M., Soares, A. P., & **Pinheiro, A. P.** (2017). What is the melody of that voice? Probing unbiased recognition accuracy of nonverbal vocalizations with the Montreal Affective Voices. *Journal of Nonverbal Behavior*, 41(3), 239-267. doi:10.1007/s10919-017-0253-4
5. **Pinheiro, A. P.**, Rezaii, N., Rauber, A., Nestor, P. G., Spencer, K. M., & Niznikiewicz, M. (2017). Emotional self-other voice processing in schizophrenia and its relationship with hallucinations: ERP evidence. *Psychophysiology*, 54(9), 1252-1265. doi: 10.1111/psyp.12880
6. **Pinheiro, A. P.**, Barros, C., Vasconcelos, M., Obermeier, C., & Kotz, S. A. (2017). Is laughter a better vocal change detector than a growl? *Cortex*, 92, 233-248. doi: 10.1016/j.cortex.2017.03.018
7. **Pinheiro, A. P.**, Dias, M., Pedrosa, J., & Soares, A. P. (2017). Minho Affective Sentences (MAS): Probing the role of sex, mood and empathy in affective ratings of verbal stimuli. *Behavior Research Methods*, 49, 698-716. doi:10.3758/s13428-016-0726-0
8. **Pinheiro, A. P.**, Rezaii, N., Rauber, A., & Niznikiewicz, M. (2016). Is this my voice or yours? The role of emotion and acoustic quality in self-other voice discrimination in schizophrenia. *Cognitive Neuropsychiatry*, 21(4), 335-353. doi: 10.1080/13546805.2016.1208611
9. Carneiro, D., **Pinheiro, A. P.**, & Novais, P. (2017). Context acquisition in auditory emotional recognition studies. *Journal of Ambient Intelligence and Humanized Computing*, 8, 191. doi:10.1007/s12652-016-0391-2
1. Liu, T., **Pinheiro, A. P.**, Nestor, P. G., McCarley, R. W., & Niznikiewicz, M. (2016). Simultaneous face and voice processing in schizophrenia. *Behavioural Brain Research*, 305, 76-86. doi: 10.1016/j.bbr.2016.01.039
0. Conde, T., Gonçalves, O. F., & **Pinheiro, A. P.** (2016). A Cognitive Neuroscience view of voice processing abnormalities in schizophrenia: a window into auditory verbal hallucinations? *Harvard Review of Psychiatry*, 24(2), 148-163. doi: 10.1097/HRP.0000000000000082.
1. **Pinheiro, A. P.**, Rezaii, N., Nestor, P. G., Rauber, A., Spencer, K. M., & Niznikiewicz, M. (2016). Did you or I say pretty, rude or brief? An ERP study of the effects of speaker's identity on emotional word processing. *Brain and Language*, 153-154, 38-49. doi:10.1016/j.bandl.2015.12.003
2. **Pinheiro, A. P.**, Barros, C., & Pedrosa, J. (2016). Salience in a social landscape: electrophysiological effects of task-irrelevant and infrequent vocal change. *Social Cognitive & Affective Neuroscience*, 11(1), 127-139. doi: 10.1093/scan/nsv103
- 3.

- 1 Conde, T., Gonçalves, O. F., & **Pinheiro, A. P.** (2016). The effects of stimulus
4. complexity on the preattentive processing of self-generated and non-self voices: An
ERP study. *Cognitive, Affective, & Behavioral Neuroscience*, 16(1), 106-123. doi:
10.3758/s13415-015-0376-1
- 1 Soares, A. P., **Pinheiro, A. P.**, Costa, A., Frade, C. S., Comesaña, M., & Pureza, R.
5. (2015). Adaptation of the International Affective Picture System (IAPS) for European
Portuguese. *Behavior Research Methods*, 47(4), 1159-1177. doi: 10.3758/s13428-014-
0535-2
- 1 Conde, T., Gonçalves, O. F., & **Pinheiro, A. P.** (2015). Paying attention to my voice
6. or yours: An ERP study with words. *Biological Psychology*, 111, 40-52. doi:
10.1016/j.biopsycho.2015.07.014
17. **Pinheiro, A. P.**, Vasconcelos, M., Dias, M., Arrais, N., & Gonçalves, O. F. (2015). The
music of language: an ERP investigation of the effects of musical training on emotional
prosody processing. *Brain and Language*, 140, 24-34. doi:
10.1016/j.bandl.2014.10.009
18. **Pinheiro, A.P.**, Del Re, E., Nestor, P.G., Mezin, J., Rezaii, N., McCarley, R.W.,
Gonçalves, O.F., & Niznikiewicz, M. (2015). Abnormal interactions between context,
memory structure, and mood in schizophrenia: An ERP investigation.
Psychophysiology, 52(1), 20-31. doi: 10.1111/psyp.12289
19. **Pinheiro, A.P.**, Rezaii, N., Rauber, A., Liu, T., Nestor, P.G., McCarley, R.W.,
Gonçalves, O.F., & Niznikiewicz, M. (2014). Abnormalities in the processing of
emotional prosody from single words in schizophrenia. *Schizophrenia Research*,
152(1), 253-241. doi: 10.1016/j.schres.2013.10.042
20. Soares, A. P., Medeiros, J. C., Simões, A., Machado, J., Costa, A., Iriarte, A., Almeida,
J. J., **Pinheiro, A. P.**, Comesaña, M. (2014). ESCOLEX: A grade-level lexical database
from European Portuguese Elementary to Middle School school books. *Behavior
Research Methods*, 46, 240-253. doi: 10.3758/s13428-013-0350-1
21. **Pinheiro, A.P.**, Liu, T., Nestor, P.G., McCarley, R.W., Gonçalves, O.F., &
Niznikiewicz, M. (2013). Visual emotional information processing in male
schizophrenia patients: Combining ERP, clinical and behavioral evidence.
Neuroscience Letters, 550, 75-80. doi: 10.1016/j.neulet.2013.06.022
22. Soares, A. P., **Pinheiro, A. P.**, Costa, A., Frade, C. S., Comesaña, M., & Pureza, R.
(2013). Affective auditory stimuli: Adaptation of the International Affective Digitized
Sounds (IADS-2) for European Portuguese. *Behavior Research Methods*, 45(1168-
1181). doi: 10.3758/s13428-012-0310-1
23. Comesaña, M., Soares, A. P., Perea, M., Piñeiro, A., Fraga, I., & **Pinheiro, A. P.** (2013).
ERP correlates of masked affective priming with emoticons :). *Computers in Human
Behavior*, 29(3), 588-595. doi:10.1016/j.chb.2012.10.020
24. **Pinheiro, A. P.**, del Re, E., Mezin, J., Rauber, A., Nestor, P. G., McCarley, R. W.,
Gonçalves, O. F., & Niznikiewicz, M. (2013). Sensory-based and higher-order
operations contribute to abnormal emotional prosody processing in schizophrenia: an
electrophysiological investigation. *Psychological Medicine*, 43(3), 603-618. doi:
10.1017/S003329171200133X

25. **Pinheiro, A. P.**, del Re, E., Nestor, P., McCarley, R. W., Gonçalves, O. F., & Niznikiewicz, M. (2013). Interactions between mood and the structure of semantic memory: Event-related potentials evidence. *Social Cognitive & Affective Neuroscience*, 8(5), 579-594. doi: 10.1093/scan/nss035
26. Comesaña, M., Soares, A. P., Sánchez-Casas, R., **Pinheiro, A. P.**, Rauber, A., Frade, S., & Fraga, I. (2012). The interplay of phonology and orthography to visual cognate words recognition: An ERP study. *Neuroscience Letters*, 529(1), 75-79. doi: 10.1016/j.neulet.2012.09.010
27. **Pinheiro, A. P.**, McCarley, R. W., Thompson, E., Gonçalves, O. F., & Niznikiewicz, M. (2012). From semantics to feelings: how do individuals with schizophrenia rate the emotional valence of words?. *Schizophrenia Research and Treatment*, 2012, 431823 (Special issue: 'Schizophrenia as a Disorder of Communication'). doi: 10.1155/2012/431823
28. Liu, T., **Pinheiro, A. P.**, Zhao, Z., McCarley, R. W., & Niznikiewicz, M. (2012). Emotional cues during simultaneous face and voice processing: electrophysiological insights. *PLoS One*, 7(2), e31001. doi:10.1371/journal.pone.0031001
29. Liu, T., **Pinheiro, A. P.**, Deng, G., Nestor, P. G., McCarley, R. W., & Niznikiewicz, M. (2012). Electrophysiological insights into processing nonverbal emotional vocalizations. *NeuroReport*, 23, 108-112. doi:10.1097/WNR.0b013e32834ea757
30. Soares, A. P., Comesaña, M., **Pinheiro, A. P.**, & Simões, A. (2012). The adaptation of the Affective Norms for English Words (ANEW) for European Portuguese. *Behavior Research Methods*, 44(1), 256-269. doi: 10.3758/s13428-011-0131-7
31. **Pinheiro, A. P.**, Galdo, S., Rauber, A., Sampaio, A., Niznikiewicz, M., & Gonçalves, O. F. (2011). Abnormal processing of emotional prosody in Williams syndrome: An event-related potentials study. *Research in Developmental Disabilities*, 32(1), 133-147. doi: 10.1016/j.ridd.2010.09.011
32. Gonçalves, O. F., **Pinheiro, A. P.**, Sampaio, A., Sousa, N., Fernández, M., & Henriques, M. (2011). Autobiographical narratives in Williams syndrome: Structural, process and content dimensions. *Journal of Developmental and Physical Disabilities*, 23, 289-302. doi: 10.1007/s10882-011-9228-2
33. Capitão, L., Sampaio, A., Prieto, M., Sousa, N., **Pinheiro, A. P.**, & Gonçalves, O. F. (2011). Williams syndrome hypersociability: a neuropsychological study of the amygdala and prefrontal cortex hypotheses. *Research in Developmental Disabilities*, 32(3), 1169-1179. doi: 10.1016/j.ridd.2011.01.006
34. **Pinheiro, A. P.**, Galdo, S., Sampaio, A., Niznikiewicz, M., & Gonçalves, O. F. (2010). Electrophysiological correlates of semantic processing in Williams Syndrome. *Research in Developmental Disabilities*, 31(6), 1412-1425. doi: 10.1016/j.ridd.2010.06.017
35. **Pinheiro, A. P.**, Soares, A. P., Começaña, M., Niznikiewicz, M., & Gonçalves, O. F. (2010). Sentence final word completion norms for European Portuguese children and adolescents: effects of age and sentence context. *Behavior Research Methods*, 42, 1022-1029. doi: 10.3758/BRM.42.4.1022

36. Gonçalves, O. F., **Pinheiro, A. P.**, Sampaio, A., Fernández, M., Sousa, N., & Henriques, M. (2010). The Narrative Profile in Williams Syndrome: There is More to Storytelling than Just Telling a Story. *The British Journal of Developmental Disabilities*, 56(111), 89-109 (Editor's Choice Top-Ten Paper). doi: <http://dx.doi.org/10.1179/096979510799102943>

INVITED TALKS AND SYMPOSIUMS (A selection)

1. Pinheiro, A.P. (2017). Prediction in auditory emotional processing. Presented at "The Predictive Mind and Emotion: Predictive Coding Approaches in Affective Neuroscience", Faculty of Psychology and Education Sciences, University of Porto, Porto, Portugal.
2. Pinheiro, A.P. (2016). A Cognitive Neuroscience view of voice processing abnormalities in schizophrenia: A window into auditory verbal hallucinations? Presented at XII National Psychiatry Congress, Vilamoura, Portugal.
3. Pinheiro, A. P. (2015). The social brain in the act of communication: ERP insights. Presented at "In the Lab speaking with...", Speech Lab, Faculty of Psychology and Education Sciences, University of Porto, Porto, Portugal.
4. Pinheiro, A. P. (2013). The social brain in the act of communication: electrophysiological changes in schizophrenia. Presented at IX National Congress of Psychiatry, Estoril, Portugal.
5. Pinheiro, A. P. (2011). Language processing in Williams syndrome: insights from event-related potentials. Presented at Global COE International Symposium, Future Trends in the Biology of Language, Keio University, Tokyo, Japan.
6. Pinheiro, A. P. (2009). Williams Syndrome: assembling a jigsaw puzzle. Presented at LEND (Leadership Education Excellence in Neurodevelopmental Disabilities) program research seminar, Nisonger Center, Newark, USA.
7. Pinheiro, A. P., Sampaio, A., Prieto, M., Henriques, M., & Gonçalves, O. F. (2006). Narrative profile in Williams Syndrome. Presented at Conference on Developmental Disorders, University of Santiago de Compostela, Spain.

AWARDS AND HONORS

- 2018: Fulbright Research Scholarship.
- 2016: Helmsley Scholarship, Cold Spring Harbor Laboratory.
- 2016: ERP Boot Camp Fellowship, UC Davis.
- 2016: FCT Investigator Consolidating Grant.
- 2015 Summer Institute in Cognitive Neuroscience Fellowship, UC Davis & UC Santa Barbara.
- 2013 Young Investigator Award, Portuguese Association of Psychology.
- 2013 International Travel Fellowship Award, Society of Biological Psychiatry.
- 2012 FCT Investigator Starting Grant.
- 2012 Top-Ten Fellow Poster of the Harvard Psychiatry Research Day Poster Session (Mysell Committee, Department of Psychiatry, Harvard Medical School).
- 2012 Poster Award Finalist: 3rd Biennial Schizophrenia International Research Society Meeting.

- 2010 MGH/HST Athinoula A. Martinos Center for Biomedical Imaging Fellowship, Two-Week Multimodality Short Course.
- 2006 University of Minho Award to the graduating student with the highest average grade in Psychology, University of Minho, Portugal.

MEMBERSHIP IN PROFESSIONAL, SCIENTIFIC ORGANIZATIONS AND INTERNATIONAL NETWORKS

- Psychonomic Society
- Association for Psychological Science
- European Society for Cognitive and Affective Neuroscience
- Society for the Neurobiology of Language
- Society for Psychophysiological Research
- Women in Cognitive Science;
- Society of Biological Psychiatry
- Portuguese Association of Experimental Psychology

SERVICE

Scientific Management positions

- Marie Sklodowska-Curie Individual Fellowships (Reviewer);
- Leading Fellows Programme, The Netherlands (Reviewer);
- Swiss National Science Foundation (Reviewer);
- APSSC Students Grant Competition and APSSC Student Research Award, Association for Psychological Science (Reviewer).

Editorial positions

Ad Hoc Reviewer (2010-Present):

Journal of Neurolinguistics; Language and Cognitive Processes; Child Neuropsychology; Acta Psychiatrica Scandinavica; Research in Developmental Disabilities; Schizophrenia Research; International Journal of Psychophysiology; Psychological Medicine; Research in Autism Spectrum Disorders; Psychiatry Research; Psychophysiology; Social Neuroscience; Cortex; Brain & Language; Neuropsychologia; Social Cognitive & Affective Neuroscience; Frontiers in Psychology; Behavior Research Methods; Scientific Reports; Biological Psychology; Psychophysiology; Cognition and Emotion, Human Brain Mapping.

Other research related functions

Coordinator of the Research Group “Voice, Affect & Speech (VAS) Lab”, Faculty of Psychology, University of Lisbon.

TEACHING

Perception, Attention & Memory (BA level)
Psychology of Emotions (BA level)

Affective Neuroscience (BA level)
Neuroscience of Learning (BA level)
Seminars in Cognitive Science (Graduate Level)

STUDENT SUPERVISION

Advisor for PhD Students

Maria Amorim (2017-2021)
Carla Barros (2015-2019)
Diana Pereira (2014-2018)
Paula Castiajo (2014-2018)
Margarida Vasconcelos (2014-2018)
Lisa Goller (2016-2019)
Joseph Johnson (2016-2019)
Tatiana Conde (concluded in 2016)

Adviser for Master Students (12 concluded and 2 in progress)