

Curriculum Vitae

Contact	Fernando Llanos, Ph.D. Department of Linguistics The University of Texas at Austin 305 E. 23rd Street STOP B5100 Robert L. Patton Hall (RLP) 4.730 Austin, TX 78712	Version: May 19th, 2021 email: fllanos@utexas.edu web: www.fernandollanos.net
Interests	Neurolinguistics - psycholinguistics Speech sciences - phonetics - phonology Computational linguistics - machine learning Bilingualism - language acquisition - Hispanic linguistics Brain stimulation, neurofeedback	
Academic appointments	2020 - present. Assistant professor The University of Texas at Austin, Department of Linguistics 2018-2020. Postdoctoral Associate University of Pittsburgh, Communication Sciences and Disorders 2016-2018. Postdoctoral Fellow The University of Texas at Austin, Communication Sciences and Disorders Summer 2013, 2014. Research Assistant Purdue University, Speech, Language and Hearing Sciences 2010-2015. Teaching Assistant (instructor of the record) Purdue University, School of Languages and Cultures	
Education	2016 Ph.D., Purdue University, Hispanic Linguistics (concentration: speech perception) 2009 M.A., Spanish National Research Council (CSIC; Madrid, Spain), Speech Sciences (concentration: phonetics, phonology, and speech technologies) 2008 B.A., Universidad Complutense de Madrid (UCM; Madrid, Spain), Spanish language and literature	
Publications	<i>Peer reviewed journals</i> Gnanateja, G. N., Rupp, K., Llanos, F., Pernia, M., Sadapogan, S., Abel, T., & Chandrasekaran, B. (submitted). Deconstructing the Cortical Sources of Frequency Following Responses to Speech: A Cross-species Approach. Llanos, F., German, J. S., Gnanateja, G. N., & Chandrasekaran, B. (2021). The neural processing of pitch accents in continuous speech. <i>Neuropsychologia</i> , 158, 107883. Feng, G., Gan, Z., Llanos, F., Meng, D., Wang, S., Wong, P. C., & Chandrasekaran, B. (2021). A distributed dynamic brain network mediates linguistic tone representation and categorization. <i>NeuroImage</i> , 224, 117410.	

Paulon, G., Llanos, F., Chandrasekaran, B., & Sarkar, A. (2020). Bayesian Semiparametric Longitudinal Drift-Diffusion Mixed Models for Tone Learning in Adults. *Journal of the American Statistical Association*, 1-14.

Llanos, F., McHaney, J. R., Schuerman, W. L., Yi, H. G., Leonard, M. K., & Chandrasekaran, B. (2020). Non-invasive peripheral nerve stimulation enhances speech category learning in adults *Nature Partner Journals - Science of Learning*, 5(1), 1-11.

Llanos, F., Xie, Z., & Chandrasekaran, B. (2019). Biometric identification of listener identity from frequency following responses to speech. *Journal of Neural Engineering*, 16(5).

Kluender, K. R., Stilp, C. E., & Lucas, F. Llanos. (2019). Long-standing problems in speech perception dissolve within an information-theoretic perspective. *Attention, Perception, & Psychophysics*, 1-23.

Reetzke, R., Xie, Z., Llanos, F., & Chandrasekaran, B. (2018). Tracing the trajectory of auditory plasticity from novice to native-like speech categorization in adulthood. *Current Biology*, 28, 1419-1427.

Llanos, F., Xie, Z., & Chandrasekaran, B. (2017). Hidden Markov modeling of frequency-following responses to Mandarin lexical tones. *Journal of Neuroscience Methods*, 291, 101-112.

Wang, Y., Llanos, F., & Seidl, A. (2017). Infants adapt to speaking rate differences in word segmentation. *The Journal of the Acoustical Society of America*, 141(4), 2569-2578.

Llanos, F., Alexander, J. M., Stilp, C. E., & Kluender, K. R. (2017). Power spectral entropy as an information-theoretic correlate of manner of articulation in American English. *The Journal of the Acoustical Society of America*, 141(2), EL127-EL133.

Llanos, F., & Francis, A. L. (2016) The effects of language experience and speech context on the phonetic accommodation of English-accented Spanish voicing. *Language and Speech*, 60(1), 3-26..

Dmitrieva, O., Llanos, F., Shultz, A. A., & Francis, A. L. (2015). Phonological status, not voice onset time, determines the acoustic realization of onset f0 as a secondary voicing cue in Spanish and English. *Journal of Phonetics*, 49, 77-95.

Llanos, F., Dmitrieva, O., Shultz, A. A., & Francis, A. L. (2013). Auditory enhancement and second language experience in Spanish and English weighting of secondary voicing cues. *Journal of the Acoustical Society of America*, 134(3), 2213-2224.

Shultz, A. A., Francis, A. L., & Llanos, F. (2012). Differential cue weighting in perception and production of consonant voicing. *JASA Express Letters*, 132(2), EL95-EL101.

Llanos, F. (2008). Asimetrías en la formación de numerales complejos en español. *Diálogo de la lengua*, 1, 70-88.

*Peer-reviewed
chapters*

Llanos, F., Dmitrieva, O., Francis, A. L., & Shultz, A. A. (2015). Temporal and spectral dependencies in the processing of Spanish and English stop consonant voicing. In R. Klassen, J. M. Liceras and E. Valenzuela (eds). *Hispanic Linguistics at the crossroads: Theoretical linguistics, language acquisition and language contact* (13-25). John

Benjamins.

*Peer-reviewed
proceedings*

Llanos, F., & Gutiérrez, C. (2009). Expansión y crecimiento exponencial en sistemas de numerales. *Interlingüística XIX, actas del congreso de jóvenes lingüistas*, 19, 583-593.

**Refereed
presentations**

Zhao, T., Llanos, F., Kuhl, P.K., & Chandrasekaran, B. (2020). Neural pitch tracking of nonnative lexical tones in 7 and 11-month-old infants. Poster presented at *the 179th Meeting of The Acoustical Society of America*, Virtual. December 7-11.

Pettet, M., Llanos, F., Kuhl, P.K., Chandrasekaran, B., & Zhao, T., (2020). Identification of listener identity from frequency following responses in 7 and 11-month-old infants. Poster presented at *The 179th Meeting of the Acoustical Society of America*, Virtual. December 7-11.

Gnanateja, G. N., Rupp, K., Llanos, F., Remick, M., Teichert, T., Sadagopan, V., Abel, T., & Chandrasekaran, B. (2020). Frequency-Following Response Generation and Modulation: Response Properties of Cortical FFR to Speech Signals. Poster presented at the *Advances and Perspectives in Auditory Neuroscience Meeting*, Virtual. October 22-23.

Chandrasekaran, B., Gnanateja, G. N., Llanos, F., Remick, M., Teichert, T., Sadagopan, V., Abel, T. (2020). Frequency-Following Response Generation and Modulation: Representational Similarity Analysis for Cross-species and Cross-level Characterization. Poster presented at the *Advances and Perspectives in Auditory Neuroscience Meeting*, Virtual. October 22-23.

Llanos, F., German, J. S., Gnanateja, G. N., & Chandrasekaran, B. (2020) Dynamic encoding of English pitch accents in EEG responses to continuous speech: effects of native language experience and attention. Poster presented at *The Society for the Neurobiology of Language Annual Meeting*, Virtual. October 21-24.

Rupp, K., Llanos, F., Abel, T., & Chandrasekaran, B. (2020). Heschl's gyrus encoding of abstract context-invariant speech cues in natural speech perception. Poster presented at the *Cognitive Neuroscience Society Annual Meeting*, Boston, MA. May 2-5.

Llanos, F., McHaney, J. R., Leonard, M. K., Schuerman, W. L., Yi, H. G., & Chandrasekaran, B. (2018). Transcutaneous vagus nerve stimulation enhances nonnative speech categorization. Poster presented at *The Tenth Annual Meeting of the Society for the Neurobiology of Language*, Quebec, Canada. August, 16-18.

Llanos, F., Reetzke, R., Xie, Z., Hamilton, L., & Chandrasekaran, B. (2018). Using machine learning to model effects of attention and language-experience on neural phonemic constancy. Poster presented at *The Tenth Annual Meeting of the Society for the Neurobiology of Language*, Quebec, Canada. August, 16-18.

Llanos, F., & Chandrasekaran, B. (2018). Machine learning decoding of listener identity from frequency following responses. Poster presented at *The 41st Annual Midwinter Meeting of the Association for Research in Otolaryngology*, San Diego, CA. February, 9-14.

Llanos, F., Reetzke, Madhumitha, S., & Chandrasekaran, B. (2017). Neurofeedback mediated modulation of the frequency following response. Poster presented at *The 41st Annual Midwinter Meeting of the Association for Research in Otolaryngology*, San

Diego, CA. February, 9-14.

Llanos, F., Xie, Z., & Chandrasekaran, B. (2017). Decoding linguistically-relevant pitch patterns from frequency-following responses using hidden Markov models. Poster presented at *The 173th Meeting of the Acoustical Society of America*, Boston, Massachusetts. May, 25-29.

Wang, Y., Llanos, F., & Seidl, A. (2016). Infants use context to normalize speaking rate. Poster presented at *The International Conference on Infant Studies*. New Orleans, Louisiana. May, 26-29.

Llanos, F., Alexander, J. M., Stilp, C. E., & Kluender, K. R. (2015). Shannon entropy predicts the sonority status of natural classes in English. Poster presented at *The 169th Meeting of the Acoustical Society of America*, Pittsburgh, Pennsylvania. May, 18-22.

Wang, Y., Llanos, F., & Seidl, A. (2015). Speech rate normalization in 14-month-olds. Poster presented at *The Biennial Meeting of The Society for Research in Child Development*. Philadelphia, Pennsylvania. March, 19-21.

Llanos, F., & Francis, A. L. (2014). Processing of English-accented Spanish VOT by Spanish speakers with low English experience. Poster presented at *The 168th Meeting of the Acoustical Society of America*, Indianapolis, Indiana. October, 27-31.

Llanos, F., Jiang, Y., & Kluender, K. R. (2014). Exploiting second-order statistics improves statistical learning of vowels. Poster presented at *The 168th Meeting of the Acoustical Society of America*, Indianapolis, Indiana. October, 27-31.

Llanos, F., & Francis, A. L. (2014). Language switching and sub-phonemic processing in English-accented Spanish. Podium presentation at *The Hispanic Linguistic Symposium*, West Lafayette, Indiana. November, 13-16.

Sundquist, J., Llanos, F., & Suarez-Garcia, P. (2014). Tracking the Dynamics of Change in Jespersen's Cycle in Middle English. Podium presentation at *The 20th Germanic Linguistics Annual Conference*. West Lafayette, Indiana. May, 2-3.

Llanos, F., & Francis, A. L. (2014). Effects of experience on the processing of phonetic contrasts in foreign-accented Spanish. Poster presented at *The 167th Meeting of the Acoustical Society of America*, Providence, Rhode Island. May, 5-9.

Llanos, F., Dmitrieva, O., & Francis, A. L. (2013). The role of experience, saliency and auditory enhancement in Spanish and English voicing. Podium presentation at *The Hispanic Linguistics Symposium 2013*, University of Ottawa, Ottawa, Canada. October, 17-20.

Dmitrieva, O., Shultz, A., Llanos, F., & Francis, A. L. (2012). Acoustics correlates of stop consonant voicing in English and Spanish. Poster presented at *The 164th Meeting of the Acoustical Society of America*, Kansas City, Missouri. October, 22-26.

Lin, M., Francis, A. L., Llanos, F., Dmitrieva, O., & Chapman, R. (2012). Processing interactions between segmental and suprasegmental information in English and Mandarin Chinese. Poster presented at *The 164th Meeting of the Acoustical Society of America*, Kansas City, Missouri. October, 22-26.

Llanos, F., Francis, A. L., Dmitrieva, O., Shultz, A. A., & Chapman, R. (2012). Mod-

eling learning of the English voicing contrast by Spanish listeners living in the United States. Poster presented at *The 164th Meeting of the Acoustical Society of America*, Kansas City, Missouri. October, 22-26.

Llanos, F., Francis, A. L., Dmitrieva, O., Shultz, A. A., & Chapman, R. (2012). Factors affecting relative weighting of acoustic cues to voicing in Spanish and English. Podium presentation at *The Purdue Linguistics Association Symposium*, West Lafayette, Indiana. March, 23-24.

Gutiérrez, C., & Llanos, F. (2012). Del origen de lacio en español. Podium presentation at *The 66th annual Kentucky Foreign Language Conference*. Lexington, Kentucky. April, 14-16.

Llanos, F., & Gutiérrez, C. (2012). "Mispelens" in the early Romance scripta. Podium presentation at *The 12th Annual Graduate Symposium* sponsored by the Department of Foreign Languages and Literatures of Purdue University, West Lafayette, Indiana. March 3-4.

Llanos, F., Schultz, A. A., Dmitrieva, O., Chapman, R., & Francis, A. L. (2011). Do language specific differences in primary acoustic cues affect relative weighting of secondary cues to phonological contrasts? Poster presented at *The 161st Meeting of the Acoustical Society of America*, Seattle, Washington. May, 23-27.

Schultz, A. A., Llanos, F., & Francis, A. L. (2011). Are individual differences in the relative weighting of perceptual cues to stop consonant voicing reflected in production? Podium presentation at *The Purdue Linguistics Association Symposium*, West Lafayette, Indiana. March, 9-10.

Llanos, F. (2010). La edición crítica digital de textos medievales españoles: nuevas tecnologías y perspectivas de trabajo. Podium presentation at *The 45th International Congress on Medieval Studies*, Kalamazoo, Michigan. May, 13-16.

Invited talks

Llanos, F. (2021). Reopening the sensitive period in adult learners of lexical tones. UCLA Phonetics Seminar. Department of Linguistics. University of California Los Angeles (UCLA). April 19th.

Llanos, F. (2021). The effects of laboratory training and peripheral nerve stimulation on perceptual learning of lexical tones. UF Language & Brain Interest Group. University of Florida. February 9th.

Llanos, F., Reetzke, R., & Chandrasekaran, B. (2019). Proactive neural processing of native and non-native speech. *The 177th Meeting of the Acoustical Society of America*, Louisville, KY. May, 15.

Llanos, F. (2018). The effects of language experience and selective attention in the neural coding of phonetic cues and phonological contrasts. Department of Linguistics, University of Florida. January, 31.

Llanos, F. (2016). Relative importance of experience with 1st-order versus 2nd-order statistics in perceptual and statistical learning of vowel categories. The Michael S. Goodman '74 Memorial Lectures. Department of Cognitive, Linguistic and Psychological Sciences. Brown University. February, 2.

Funding

Sarkar, A & Llanos, F. (not funded) *Novel Statistical Methods for High-dimensional Imaging and Behavioral Neuroscience Data*. CNS Catalyst Grant. The University of Texas at Austin: \$50,000. 2021-2022

Llanos, F., Law, D., & Cruz, E. (funded) *Documenting Neuroplasticity in Native Speakers of Endangered Languages in Latin America*. Texas Global Seed Grant. The University of Texas at Austin: \$10,000. 2021-2022.

Urbin, Mike & Llanos, F. (funded) *Mechanisms of Non-invasive Vagus Nerve Stimulation Underlying Enhanced Motor Control in Humans*. University of Pittsburgh: \$30,000. 2019-2020.

LLanos, F. (funded) *NVIDIA Corporation Titan XP GPU grant*: \$3,600. 2018.

Honors and awards

Purdue Research Foundation One-Year-Long Grant. Purdue University. 2015-2016.

Purdue Research Foundation Summer Grant. Purdue University. Summer 2014.

Purdue Graduate Student Government Travel Grant. Purdue University. 2015, 2012, 2011, 2010.

Acoustical Society of America Travel subsidy. 2015, 2012.

Editorial service

Editorial board member of the *Journal of Speech, Language, and Hearing Research*. 2020 - present.

External peer reviewer: *Language and Speech*; *The Journal of Speech, Language, and Hearing Research*; *Attention, Perception, and Psychophysics*; *Phonetica*; *Journal of Neural Engineering*; *Brain and Language*; *PLOS one*; *Nature - Scientific Reports*; *Languages*; *Applied psycholinguistics*.

Academic service

Member of the Student Admissions Committee. Department of Linguistics. The University of Texas at Austin. 2020-2021.

Member of the Linguistics Colloquium Committee. Department of Linguistics. The University of Texas at Austin. 2020-2021.

Treasurer of the Purdue Linguistics Association, Purdue University. 2012-2013.

Member of the organizational committee of *The 1st Interdisciplinary Conference of AHLiST. (Purdue University-University of Houston-Universidad Complutense de Madrid)*. 2011.

Community service

Volunteer in "Aprendiendo a Leer" Program (learning how to read). This was a community service program directed by Alejandro Cuza at Purdue University. 2012.

Teaching experience

UT Austin LIN 393: Neurolinguistics Seminar
 LIN 350: Introduction to Psycholinguistics

Purdue University SPAN 102: Second semester of Spanish
 SPAN 201: Third semester of Spanish
 SPAN 202: Fourth semester of Spanish
 SPAN 301: Fifth semester of Spanish
 SPAN 401: Seventh semester of Spanish
 SPAN 305: Spanish for Heritage Speakers
 SPAN 361: Structure of Spanish I: phonetics, phonology and dialectology
 SPAN 362: Structure of Spanish II: morphology, lexicology, and syntax

**Mentoring
experience**

Plan II Honors thesis co-supervisor Andrew Park (2021 - present)

Undergraduate research assistant supervisor Niyenth Iyengar (2020 - present)

PhD dissertation committee member Won So (SLHS). PhD supervisor: Craig Champlin
 Fan-Yin Cheng (SLHS). PhD supervisor: Craig Champlin

Languages Spanish (native), English (near native)

Programming Matlab, Phyton, Praat, Latex, R, Gephi