# Esteban Sebastian Lelo de Larrea-Mancera

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#### RESEARCH STATEMENT

I am a Mexican Psychology Scholar with a Cognitive Neuroscience approach to the study of perception, cognition and action. In particular, I am interested in the ways these conceptual categories interact with one another in the service of behavior and the possibility of a systematic change over time (learning). My work includes behavioral, electro-physiological, and computational methodologies focused on gathering and analyzing empirical datasets, theoretical formation of discourse in interactive media and the cognitive sciences, assessment of perceptual function in underserved populations, training of perceptual and cognitive function, and teaching Psychology students about topics in the Cognitive Neurosciences.

## **EDUCATION**

Ph. D., Cognition and Cognitive Neuroscience, University of California, Riverside.

Sep. 2021

Thesis: "Perceptual Learning: Assessment & training across the mechanical senses".

https://escholarship.org/content/qt7kw89480/qt7kw89480\_noSplash\_4fd1e06c8cd6bc4995af1173771380a7.pdf Committee: Aaron R. Seitz, Frederick J. Gallun & Khaleel A. Razak.

M. A. Cognitive Psychology, University of California, Riverside.

Jun. 2018

Thesis: "Training on Broad Band Tactile Stimulation Promotes the Generalization of Learning".

Committee: Aaron R. Seitz, Weiwei Zhang & Megan Peters.

M. Sc. Cognitive Systems & Interactive Media, Universitat Pompeu Fabra, Barcelona, Spain. Jun. 2012

Thesis: "Sound and Music to Study Disorders of Consciousness".

Committee: Sylvain LeGroux, Paul Verschure & Narcis Parés.

Licenciatura in Psychology, National Autonomous University of Mexico, CDMX, México.

Apr. 2010

Thesis: "The effect of musical context on auditory automatic change detection".

Committee: Rodolfo Solís-Vivanco, Irma Yolanda del Río, Ma. Dolores Rodríguez & Maura Ramírez.

#### RESEARCH EXPERIENCE

#### **Post-Doctoral Research Scholar**

Jan. 2023 to date

Research fellow at Northeastern University for the projects titled: "Mediators and Moderators of Auditory Training" funded by the National Institute of Health (NIA 1R01AG077725); Also for Grant No. R01DC015051 from the National Institute on Deafness and Other Communication Disorders (NIDCD) on translational central auditory processes evaluation; Also for Grant R01AQ6DC018166 from the National Institute on Deafness and Other Communication Disorders on the development of ecologically valid assessment of hearing loss. This project was moved from UC Riverside to Northeastern University as supervisor Aaron Seitz changed assignment.

- Department of Psychology & the *Center for Cognitive and Brain Health* in Northeastern University, Boston, MA, USA. **Supervisor:** Dr. Aaron Seitz
- Oregon Health & Science University (OHSU) and the National Center for Rehabilitative Auditory Research (NCRAR) at the VA Hospital in Portland, OR, USA. **Supervisor:** Dr. Frederick Gallun.

<u>Duties:</u> Support in grant writing, experimental design, stimulus generation, task planning and development, data collection, data analysis, result reporting, manuscript writing, corresponding submissions, designing follow-ups, generating new venues of collaboration.

Research fellow at the University of California Riverside for the project titled: "Mediators and Moderators of Auditory Training" funded by the National Institute of Health (NIA 1R01AG077725).

- Oregon Health & Science University (OHSU) and the National Center for Rehabilitative Auditory Research (NCRAR) at the VA Hospital in Portland, OR, USA. **Supervisor:** Dr. Frederick Gallun.
- Perception and Learning Lab, Department of Psychology & the Brain Game Center in UC Riverside, CA, USA. Supervisor: Dr. Aaron Seitz
  - <u>Duties:</u> Support in grant writing, experimental design, stimulus generation, task planning and development, data collection, data analysis, result reporting, manuscript writing, corresponding submissions, designing follow-ups, generating new venues of collaboration.

<u>Visiting Scholar</u> Sep. 2021 – Dec. 2022

Research associate at the Instituto Nacional de Neurología y Neurocirugía Manuel Velasco Suárez in the Cognitive and Clinical Psychophysiology Lab in Mexico City under the supervision of Rodolfo Solís-Vivanco.

- <u>Projects:</u> Validation of auditory measures in Mexican population. Central auditory processes in healthy older adults. Central auditory processes in those with Parkinson's disease. Central auditory processing in those with schizophrenia. The electrophysiological and behavioral effects of perceptual and cognitive load on a speech-on-speech masking task. Auditory training in older adults and those with Parkinson's disease. The effects of bilingual experience in speech audiometry. Application of a battery of auditory processing tests both in the audiological clinic and in historically underserved regions in Mexico.
- <u>Duties:</u> Experimental design, data collection, data analysis, result reporting, manuscript writing, corresponding submissions, designing follow-ups, generating new venues of collaboration.

<u>Visiting Scholar</u> Sep. 2021 – Dec. 2022

Research associate at the Instituto Nacional de Psiquiatría Ramón de la Fuente in the Neuroplasticity Lab in Mexico City supervised by Ruth Alcalá-Lozano and Yvonne Flores-Medina.

- <u>Projects:</u> Non-pharmacological intervention of older adults and those with grave mental disorders. Cognitive and auditory screening in the general population of Mexico City.
- <u>Duties:</u> Experimental design, data collection, data analysis, result reporting, manuscript writing, corresponding submissions, designing follow-ups, generating new venues of collaboration.

## **Post-Doctoral Researcher**

Sep. 2021 – April 2022

Research associate in charge of conducting the supplement for Grant No. R01DC015051 from the National Institute on Deafness and Other Communication Disorders (NIDCD) on translational central auditory processes evaluation through a collaborative project between US and Mexican Institutions:

- Oregon Health & Science University (OHSU) and the National Center for Rehabilitative Auditory Research (NCRAR) at the VA Hospital in Portland, OR, USA. **Supervisor:** Dr. Frederick Gallun.
- Perception and Learning Lab, Department of Psychology & the Brain Game Center in UC Riverside, CA, USA. Supervisor: Dr. Aaron Seitz
- National Institute of Neurology and Neurosurgery, Clinical and Cognitive Neurophysiology Lab, Cdmx, México. **Supervisor:** Rodolfo Solís-Vivanco
  - <u>Projects:</u> Generation of speech tests including recording and validation in the Spanish language. Application of a battery of auditory processing tests both in the audiological clinic and in historically underserved regions in Mexico.
  - <u>Duties:</u> Experimental design, data collection, data analysis, result reporting, manuscript writing, corresponding submissions, designing follow-ups, generating new venues of collaboration.

Perception and Learning Lab, Department of Psychology, UC Riverside, CA, USA.

Brain Game Center, UC Riverside, CA, USA.

Supervisor: Dr. Aaron Seitz

• <u>Projects:</u> Tactile Perceptual Learning; Multi-sensory perception and learning; Central Auditory Processing Assessment; Auditory Training through Brain Games; Cognitive Training through Brain Games; Motricity in Perceptual Learning.

• <u>Duties:</u> Manage scientific projects from experimental design, to programming of tasks, data collection, data analysis, scientific presentation and report. Also supervised groups of 6-10 research assistants.

# **Visiting Scholar**

Summer (June – Sept.) 2018 & 2019

Oregon Health & Science University (OHSU) and the National Center for Rehabilitative Auditory Research (NCRAR) at the VA Hospital in Portland, OR, USA.

Supervisor: Dr. Frederick Gallun.

- <u>Projects:</u> Central Auditory Processing Assessment with older adults, patients with hearing loss and/or traumatic brain injury; Auditory Training through Brain Games.
- <u>Duties:</u> Calibration and measurement of psychophysical instruments in specialized installations (e.g. VA anechoic chamber. Presented our work among the researchers of the NCRAR.

## **Graduate Research Assistant**

Oct. 2010 – June 2011 & Oct. 2012 to Dec 2015

*Energy and Environment* research group at the Institute of Engineering at the National Autonomous University of Mexico (UNAM). Mexico City, México.

Supervisor: Dr. Claudia Sheinbaum Pardo.

- Projects: Water and Energy Linkage in Mexico; Biodiesel from waste cooking oil.
- <u>Duties:</u> Translator of scientific manuscripts (Spanish to English). Statistical data analyst.

# **Undergraduate Research Assistant**

Mar. 2008 – Mar. 2010

Neuropsychology and Support Groups Lab, Brain Research Department, Instituto Nacional de Neurología y Neurocirugía "MVS" (National Institute of Neurology and Neurosurgery), Mexico City, México.

Supervisor: Dr. Yaneth Rodriguez-Agudelo

- <u>Projects:</u> Familial Alzheimer Disease; Support groups for patients of neurological disorders; Neuropsychological Evaluation of paper-based assessments.
- <u>Duties:</u> We organized different lectures and didactic materials such as informational flyers for patients and care-givers of several psychiatric and neurological ailments. Furthermore, I assisted in the planning and evaluation of different neuropsychological batteries applied for different studies as well as in support of the clinical work of the lab.

# **Undergraduate Research Assistant**

Mar. 2008 – Mar. 2010

Neuropsychology and Support Groups Lab, Brain Research Department, Instituto Nacional de Neurología y Neurocirugía "MVS" (National Institute of Neurology and Neurosurgery), Mexico City, México.

**Supervisor:** Dr. Rodolfo Solís-Vivanco

- <u>Projects:</u> Attention and re-orientation electrophysiological markers in patients with Parkinson's Disease; Auditory automatic change detection as a neurophysiological marker of central auditory function.
- <u>Duties:</u> We studied Parkinson disease patients in oddball paradigms to elicit electric potentials related to sensory (N1), perceptual working memory (mismatch negativity: MMN), attentional (P300), and cognitive control (re-orientation negativity: RON) processes. Also I studied auditory change detection in the context of musical stimuli for my undergraduate dissertation work (see Larrea-Mancera, 2017).

#### **TEACHING EXPERIENCE**

#### **Thesis Director**

- For the student Katia Padilla Bustos doing her thesis on the effects of bilingual experience on speech audiometry registered at the National Autonomous University of Mexico in collaboration with the Instituto Nacional de Neurología y Neurocirugía.
- For the student Marcelo Hinojosa Cavada doing his thesis on the relationship between auditory sensory decline and cognitive performance in a normative test for cognitive decline in older adults. Dissertation registered at the National Institute of Psychiatry Ramón de la Fuente in Mexico City.

### **Directed presentations/posters**

Cheng, A., Jacuinde, D., Attanti, V., Astafanous, A., Fernandez, A., Larrea-Mancera, E. (2023, April 28). Remote Auditory Assessment Using Portable Automated Rapid Testing (PART) and Participant-owned Devices [Conference presentation]. R'Psych Undergraduate Research Conference, Riverside, CA United States.

Nguyễn, L., Lee, K., Jacuinde, D., Espino, J., Larrea-Mancera, L., Seitz, A. R. (2023, May 21, 2021). Reliability of at home auditory assessment using loaned calibrated devices and participant-owned devices [Conference presentation]. R'Psych Undergraduate Research Conference, Riverside, CA, United States.

Teaching Assistant Sept. 2016 – June 2021

University of California Riverside, Psychology Department, Riverside, CA, USA.

- 14 Courses taught (quarter system) including: Introductory Psychology, Health Psychology, Research Methods in Psychology, Sensation and Perception, Cognitive Processes, Psychology and Technology, Skepticism and Pseudoscience.
- <u>Duties:</u> Discussion Sections were planned in coordination with a main lecturer and lead independently by Teacher Assistents. This included the design of teaching materials, lecturing, grading exams and writing submissions, and leading and managing laboratory practices. Typically one course included three groups of around 30 students each one meeting once per week for one hour.

Associate Lecturer

Jan. 2013 – June 2016

Universidad Iberoamericana (UIA), Psychology Department, Mexico City, México.

- 16 Courses taught (semester system) including: Biological basis of behavior; Neurophysiology; Cognitive processes I; Language and thought; Neurobiology of emotive behavior; Cognitive processes II; Neurochemistry and Psychopharmacology.
- <u>Duties:</u> Courses typically required from 2 to 4 hours of weekly lectures and additional laboratory practice in some cases. Groups typically consisted of about 20 students on average. Professors were expected to design course contents along general learning target outcomes. Generate teaching materials. Lecture classes. Design and conduct laboratory practice with students. Grade all materials.

#### **PUBLICATIONS**

- Lelo de Larrea-Mancera, E. S., Stavropoulos, T., Carrillo, A. A., Menon, K. N., Hoover, E. C., Eddins, D. A., Gallun, F. J., & Seitz, A. R. (2023). Validation of the adaptive scan method in the quest for time-efficient methods of testing auditory processes. *Attention, Perception, & Psychophysics*, 0123456789. <a href="https://doi.org/10.3758/s13414-023-02743-z">https://doi.org/10.3758/s13414-023-02743-z</a>
- Lelo de Larrea-Mancera, E. S., Solís-Vivanco, R., Sánchez-Jiménez, Y., Coco, L., Gallun, F. J., & Seitz, A. R. (2023). **Development and validation of a Spanish-language spatial release from masking task in a Mexican population.** *The Journal of the Acoustical Society of America, 153(1).* <a href="https://doi.org/10.1121/10.0016850">https://doi.org/10.1121/10.0016850</a>

- Bologna, W., Carrillo, A., Clamage, D., Coco, L., He, Y.J., Lelo de Larrea-Mancera, E. S., Stecker, C., Gallun, F. J. & Seitz, A. R. (2023). **Effects of Gamification on Assessment of Spatial Release From Masking.** *American Journal of Audiology*. 1-10. https://doi.org/10.1044/2022 AJA-22-00133
- Martínez-Serrato, Y., Rodríguez-Violante, M., Lelo de Larrea-Mancera, E. S., Ruiz-Contreras, A., Rodríguez-Agudelo, Y., Ricardo-Garcell, J., & Solís-Vivanco, R. (2023). **Attentional impairment in Parkinson's disease is modulated by side of onset: neurophysiological evidence**. *Clinical Neurophysiology*, *145*, 45–53. <a href="https://doi.org/10.1016/j.clinph.2022.10.014">https://doi.org/10.1016/j.clinph.2022.10.014</a>
- Larrea-Mancera, E. S. L., Seitz, A. R., Maniglia, M. (Sep 2022, accepted first stage of a Registered Report or Replication). Sensory-motor perceptual learning and motor response specificity. *Attention, Perception, and Psychophysics*.
- Larrea-Mancera, E. S. L., Stavropoulos, T., Carrillo, A. A., Cheung, S., He, Y. J., Eddins, D. A., Molis, M. R., Gallun, F. J., & Seitz, A. R. (2022). **Remote auditory assessment using Portable Automated Rapid Testing (PART) and participant-owned devices.** *The Journal of the Acoustical Society of America*, 152(2), 807–819. <a href="https://doi.org/10.1121/10.0013221">https://doi.org/10.1121/10.0013221</a>
- Gallun, F. J., Coco, L., Koerner, T. K., Larrea-Mancera, E. S. L. D., Molis, M. R., Eddins, D. A., & Seitz, A. R. (2022). Relating Suprathreshold Auditory Processing Abilities to Speech Understanding in Competition. *Brain Sciences*, 12(6), 695. https://doi.org/10.3390/brainsci12060695
- Larrea-Mancera, E. S. L. De, Philipp, M. A., Stavropoulos, T., Anna, A., Cheung, S., Koerner, T., Molis, M. R., Gallun, F. J., & Aaron, R. (2021). **Training with an auditory perceptual learning game transfers to speech in competition**. *Journal of Cognitive Enhancement*. https://doi.org/10.1007/s41465-021-00224-5
- Larrea-Mancera, S. L. De, Stavropoulos, T., Hoover, E., Eddins, D., Gallun, F., & Seitz, A. (2020). Portable Automated Rapid Testing (PART) for auditory research: Validation in a normal hearing population. Journal of the Acoustical Society of America, 148 (4), 1831–1851. <a href="https://doi.org/10.1101/2020.01.08.899088">https://doi.org/10.1101/2020.01.08.899088</a>
- Murray, C. A., Larrea-Mancera, E. S. L. De, & Glicksohn, A. (2020). **Revealing multisensory benefit with diffusion modeling.** *Journal of Mathematical Psychology*, 99, <a href="https://doi.org/102449.10.1016/j.jmp.2020.102449">https://doi.org/102449.10.1016/j.jmp.2020.102449</a>
- Justo-guillén, E., Ricardo-garcell, J., Rodríguez-camacho, M., Rodríguez-agudelo, Y., Larrea-Mancera, L. De, Sebastian, E., Solís-Vivanco, R. (2019). Auditory mismatch detection, distraction, and attentional reorientation (MMN-P3a-RON) in neurological and psychiatric disorders: A review.

  \*International Journal of Psychophysiology\*, 146 (February), 85–100.

  https://doi.org/10.1016/j.ijpsycho.2019.09.010
- Lelo de Larrea-Mancera E. S., Dempsey-Jones, H., Makin, T. and Seitz, A. R. (2019) **Does Training on Broad Band Tactile Stimulation Promote the Generalization of Learning?** Archival paper in *Joint IEEE 9th International Conference on Development and Learning and Epigenetic Robotics* (ICDL-EpiRob), Oslo, Norway, 2019, pp. 1-6. <a href="https://ieeexplore.ieee.org/document/8850704/">https://ieeexplore.ieee.org/document/8850704/</a>
- Lelo-de-Larrea-Mancera, E, S., Rodríguez-Agudelo, Y., & Solís-Vivanco, R. (2017). Musical rhythm and pitch: a differential effect on auditory dynamics as revealed by the N1/MMN/P3a complex. *Neuropsychologia*, 100 (January), 44–50. <a href="https://doi.org/10.1016/j.neuropsychologia.2017.04.001">https://doi.org/10.1016/j.neuropsychologia.2017.04.001</a>

- Sheinbaum C., Balam M., Robles G., Lelo De Larrea S. (2015). **Potential of biodiesel from waste cooking oil** in Mexico and associated emissions. Archival paper in 9th Conference on Sustainable Development of Energy, Water and Environment Systems. September 20th-2th, 2014.
- Sheinbaum C., Chavez C., Lelo Delarrea S. (2012). **Energy and water linkage in Mexico**. *International Journal of Sustainable Water and Environmental Systems*, 4 (2012) pp. 15-22

#### **CONFERENCE AND SYMPOSIUM PRESENTATIONS**

- **Discussion Panel and Arcade Presentation:** Ai Xia, Ayanna Seals, E. Sebastian Lelo de Larrea-Mancera, Min Kwak, Pedro Sodre, Sid Chou, Mariette Papic & Chella Quint. (July, 2023) Space Party Rescue: an auditory training VR experience. <a href="https://ai-xia.itch.io/spacepartyrescue">https://ai-xia.itch.io/spacepartyrescue</a>. Developed at the XR Brain Jam and presented at the Games for Change Festival. New York City, NY, USA.
- **Poster:** Lelo de Larrea-Mancera, Solís-Vivanco, Sánchez-Jiménez, Padilla Bustos, Chimal-Gómez, Padilla-Canales, Correa-Medina, Bologna, Clamage, Gallun & Seitz. (May, 2023). Complementary measures for clinical audiological practice to better explain self-reported hearing difficulties: A study using an automated measurement tool in Mexico. Presented at the 184th Meeting of the Acoustical Society of America. Chicago, IL, USA.
- **Poster:** Mendiola, Lelo de Larrea-Mancera, Gallun, Seitz & Diedesch. (May, 2023). Evaluating compliance on a gamified auditory training task in Veterans. Presented at the 184th Meeting of the Acoustical Society of America. Chicago, IL, USA.
- **Short talk:** Remote auditory assessment and training. Presented at the symposium titled: Cognitive training in the real world: a feasibility perspective. LearnMem conference, April 2023, Huntington Beach, CA, USA.
- **Short talk:** Auditory Processing Alterations in Parkinson's Diesease. Accepted for podium talk at the Association for Research in Otolaryngology 46th annual mid-winter meeting (Feb) 2023, at Orlando, FL, USA.
- **Discussion Panel:** *Ecological concerns for cognitive and perceptual training.* Presented at the BrainPlay Conference held November 2022 in Carnegie Mellon University, Pittsburgh, PA, USA.
- **Short talk:** Gamified training on spectro-temporal and spatial auditory discrimination improves intelligibility of speech in competition. Presented at the 7<sup>th</sup> Biennial Perceptual Learning Workshop. Alyeska, Alaska, USA.
- **Poster:** Lelo de Larrea-Mancera, Solís-Vivanco, Coco, Sánchez-Jiménez, Carrillo, Gallun & Seitz. (2022). *Portable Automated Rapid Testing in Spanish: Validation and norms of central hearing processes on a Mexican population.* Presented in the 182th Meeting of the Acoustical Society of America. Denver, CO. <a href="https://doi.org/10.13140/RG.2.2.35899.08482">https://doi.org/10.13140/RG.2.2.35899.08482</a>
- **Short talk**: Gamification effect (or rather, using gaming technology to train auditory function). Presented at the Virtual Conference for Computational Audiology (2022). <a href="https://computationalaudiology.com/wp-content/uploads/2022/06/VCCA2022">https://computationalaudiology.com/wp-content/uploads/2022/06/VCCA2022</a> <a href="program\_abstracts\_v4.pdf">program\_abstracts\_v4.pdf</a>
- Short talk: La neurociencia cognitiva de la audición y la salud mental (The cognitive neuroscience of audition and mental health). Presented at the International Week of the Brain organized by the Psychology Department of the National Autonomous University of Mexico (UNAM). Transmitted live online (<a href="https://fb.watch/bY8h7WLdrx/">https://fb.watch/bY8h7WLdrx/</a>). Mexico City. Mexico.
- **Poster:** Lelo de Larrea-Mancera, Stavropoulos, Carrillo, Cheung, Palandrani, Hoover, Eddins, Molis, Gallun & Seitz. (2022, Feb. 5-9). *Validation of the Adaptive Scan Method in the Quest for More Efficient Methods for Testing Auditory Processes*. Presented at the Midwinter Meeting of the Association for Research in Otolaryngology, February 2022. Event hosted online.

- **Poster:** Gallun, Diedesch, Srinivasan, Lelo de Larrea-Mancera, Koerner, Molis, Hoover, Eddins & Seitz. (2021, Feb. 16-25). *Auditory processing abilities across the adult lifespan tested with a Portable Automated Rapid Testing (PART) battery*. Presented at the Midwinter Meeting of the Association for Research in Otolaryngology, February 2021. Event hosted online.
- **Poster:** Larrea-Mancera et al. (2020, May 11-15). *Rapid Testing (PART) for auditory research in an older population* [Poster in session 2aPPa]. 179th Meeting of the Acoustical Society of America in Chicago, Illinois, USA. (Conference cancelled due to COVID-19).
- Short talk & poster: Lelo de Larrea-Mancera E. S., Dempsey-Jones, H., Makin, T. and Seitz, A. R. *Does Training on Broad Band Tactile Stimulation Promote the Generalization of Learning?* Joint IEEE 9th International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRob) (2019) Oslo, Norway.
- **Short talk**: Evaluating central auditory psychophysical performance for training applications. Presented at the Games for Engaging Learning (GEL) Network meeting, Carnegie Mellon, (2019). Pittsburgh, PA.
- **Poster:** Lelo de Larrea-Mancera, Stavropoulos, Gallun, Eddins & Seitz. (2019). *Portable psychoacoustics with passive and active noise-attenuating headphones*. Presented at the Meeting for the Acoustical Society of America. Louisville, KY.
- **Poster:** Koerner, Lelo de Larrea-Mancera, Billings, Seitz & Gallun (2019). Evaluation of a Binaural Detection Task in PART for Assessing TFS Processing in Hearing Impaired Listeners. Presented at the International Hearing Loss Conference. Ontario, Canada.
- **Short talk**: Musical rhythm and pitch: a differential effect on auditory dynamics as revealed by the N1/MMN/P3a complex. Presented at the Marquam Hill Audiology Grand Rounds at the NCRAR in the VA Hospital (2018). Portland, Oregon, USA.
- **Poster**: Murray, Glicksohn, Lelo de Larrea-Mancera, Seitz & Shams (2018). *Revealing Multi-sensory enhancement with the drift diffusion model*. Presented at the International Multi-Sensory Research Forum. Toronto, Canada.
- **Poster**: Lelo de Larrea-Mancera, Dempsey-Jones, Makin & Seitz (2017). *Dissociable outcomes of tactile perceptual learning for simple vs complex stimuli*. Presented at the Psychonomics Society 58th Annual Meeting. Vancouver, Canada.
- **Short talk**: *Narrow and broad-band tactile stimulation yield to different learning outcomes*. Presented at the Tactile Research Group Annual Meeting (2017). Vancouver, Canada.

## **HONORS & AWARDS**

Laureate for VR research application: Space Party Rescue: an auditory training VR experience (July, 2023). <a href="https://ai-xia.itch.io/spacepartyrescue">https://ai-xia.itch.io/spacepartyrescue</a>. Developed at the XR Brain Jam and presented at the Games for Change Festival. New York City, NY, USA.

**Travel grant** for presenting *Gamified training on spectro-temporal and spatial auditory discrimination improves intelligibility of speech in competition* at the 7<sup>th</sup> Biennial Perceptual Learning Workshop (August, 2022). Alyeska, Alaska, USA.

**Acoustical Society of America travel awardee** for presenting *Portable Automated Rapid Testing in Spanish: Validation and norms of central hearing processes on a Mexican population.* Presented in the 182th Meeting of the Acoustical Society of America (May, 2022). Denver, CO.

**P&P Technical Area Selection of the Journal of the Acoustical Society of America** (March, 2021): Lelo de Larrea-Mancera et al. (2020). *Portable Automated Rapid Testing (PART) for auditory research: Validation in a normal hearing population.* 

UC MEXUS 5th year PhD fellowship (Riverside, California, USA, 2020-2021).

**IEEE travel grant** for presenting Larrea-Mancera et al. (2019) *Does Training on Broad Band Tactile Stimulation Promote the Generalization of Learning?* In the Epigenetics and Robotics Conference (2019, Oslo, Norway).

**CONACYT/ UC MEXUS PhD 5 year fellowship** for the elaboration of the phd program in Psychology (Riverside, California, USA, 2016-2020).

**CONACYT MSc. 1 year fellowship** for the elaboration of master studies (Barcelona, Spain, 2011-2012).

**PRONABES scholarship for thesis projects** awarded by the Mexican government (2010, México, Cdmx).

**Armstrong scholarship for excellence in research**. Through the National Institute of Neurology and Neurosurgery (2009, México, Cdmx).

**FOGARTY scholarship for familiar Alzheimer research.** Awarded by the National Institute of Neurology and Neurosurgery and the University of Texas (2009, México, Cdmx).

#### **RELEVANT SKILLS**

**Spoken Languages:** English (proficient; TOEFLibt 114/120), Spanish (native), Catalan (beginner).

Programming Languages: MATLAB, Python, R.

Statistical Analysis: SPSS, JASP, Microsoft Excel, R, MATLAB.

Electrophysiological Analysis: EEGLAB, ERPLAB, Brain Vision Analyzer, FieldTrip, MATLAB Signal

Processing Toolbox EEGLab, ERPLab, FieldTrip.

Psychophysical Measurement tools: PART for auditory research; Audacity.

**Experiment Design:** Psychophysics Toolbox, Inquisit.

#### **SELECTED COURSES**

Special Topics in Behavioral Neuroscience: Psychedelics with a focus on mechanism and clinical application. Taught by professor Khaleel Abdul-Razak at University of California, Riverside, CA, U.S.A.

Special Topics in Social Psychology: The science of happiness and well-being. Taught by professor <u>Sonja Lyubomirsky</u> at University of California, Riverside, CA, U.S.A.

Special Topics in BioComputation: Computational Modeling of Behavior. Taught by professor Megan Peters at University of California, Riverside, CA, U.S.A.

**Multiple Regression & Correlation Analysis**. Taught by professor <u>Dan Ozer</u> at University of California, Riverside, CA, U.S.A.

**Research Methods in Cognitive Science**. Taught by professor <u>Aaron Seitz</u> at University of California, Riverside, CA, U.S.A.

**Experimental Design & Analysis of Variance**. Taught by professor <u>Bob Rosenthal</u> at University of California, Riverside, CA, U.S.A.

**Construction of Discourse in Interactive Media**. Taught by professor <u>Simon Penny</u> at University Pompeu Fabra, Barcelona, Spain.

Interaction Models. Taught by professor Narcís Pares at University Pompeu Fabra, Barcelona, Spain.

**Psychology and Cognitive Science: Thought, Brain, and Behavior.** Taught by professor <u>Paul Verschure</u> at Universitat Pompeu Fabra, Barcelona, Spain.

Neurophysiology of language and thought processes. Imparted by professor <u>César Casasola</u> at the National and Autonomous University of Mexico (UNAM). México City, México.

**Introduction to Ethology**. Imparted by professor <u>Jairo Muñoz</u> at the National and Autonomous University of Mexico (UNAM) and the Psychiatry Institute Ramón de la Fuente. México City, México.

**Philosophy of Science**. Imparted by professor <u>Patricia Corrés-Ayala</u> at the National and Autonomous University of Mexico (UNAM). México City, México.

#### OTHER WORK EXPERIENCE

- **Maintenance laborer** in a kiwifruit orchard under the supervision of Clint Wall en Kiwifruit Supplies Ltd. 74 Maketu Rd. Maketu, New Zealand. (July Sept. 2010).
- **Front-liner and fund-raiser for Greenpeace** New Zealand, under the supervision of Christopher Burman. 11 Akiraho Street, Mt Eden, Auckland, New Zealand. (May June. 2010).
- **Office boy** under the supervision of Ana Sara Ferrer of at the Centro Avanzado de Comunicación Eulalio Ferrer. Miguel Angel de Quevedo 16, Coyoacán, Mexico City, México. (June 2007 Feb. 2008).
- **Laborer and Water-pump Operator** for "Rain for Rent". 110 East 3rd Street Rifle, 81650, Rifle, CO, USA. (Dec. 2006 Mar. 2007).