PERSONAL INFORMATION

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FORMAL EDUCATION

GRADUATE STUDIES

Neuroscience Master Degree PEDECIBA (Basic Science Development Program), Universidad de la República

> **Structure: 2 years.** 60 course credit (1 credit = 7.5 hs on-site + 7.5 hs at home) + Project/Thesis
> All credits finished, Working on thesis and manuscript:
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> > **Supervisors:**
> > Dr. Linda Smith, Indiana University
> > Dr. Leonel Gómez. Universidad de la República
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> > *Data collected at the Computational Lab, Indiana University, working in collaboration with Chen Yu*
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> > **Project:**
> > The project involves working with developmental analysis of holding, object size and gaze in active (free moving) context, using dual head-mounted eye-tracking and infant behavior. The aim of the project is to study how the control of visual attention, through thr body, reaches out into the world to alter the visual input in ways that optimize processing of task relevant information. Using mixed effects models for analyses.

UNDERGRADUATE STUDIES

Human Biology Bachelor degree
Human Biology Bachelor, Facultad de Ciencias, Universidad de la República, Uruguay. March 16th, 2015. Neuroscience orientation with emphasis in Maths (Lineal Algebra I and II, Calculus I and II). Final Project: "Functional activation study during the WCST in older adults and its potential use in longitudinal studies in Alzheimer Disease". Project supervisors: Dr. Rodolfo Ferrando and Dr. Alicia Silveira.

Psychology Bachelor Degree
Psychology Bachelor, Facultad de Psicología, Universidad de la República, Uruguay. Finished on April 4th, 2017. Thesis: "Contributions of embodied cognition to Word Learning"

The final project consisted of a review of the contributions of embodied cognition theories to the study of word learning. This involved both a review of theories of cognition and cognitive development in general, and a discussion of what new insights did embodied cognition provide to the study of language in general, and specifically to word learning.

OTHER RESEARCH POSITIONS AND EXPERIENCE

ACADEMIC POSITIONS

Scholar visitor. Indiana University. November 2017, February, 2018.
Three-month visit at the "Cognitive Development" Lab, Indiana University, Bloomington, USA. During these three months I assisted both Linda Smith's and Chen Yu's Lab, and also assisted academic meetings, team meetings and talks. My visit to Indiana was a powerful experience on how to do research in early infancy in general, on how data coding takes place, and on working with multi-sensory data to answer developmental questions. This required learning Matlab skills to create and manipulate variables for data analyses. My master project is a result of my visit to Indiana University.

Research assistant, September 2016 until today. CICEA, Universidad de la República
Selected by merit assessment as a research assistant for CICEA's Basic Research Line. The project consisted of testing and optimizing visual tracking technology as a tool to study learning in early infancy. In a first phase, this implied working with Kinect Technology (and a Kinect ToolBox for Matlab) and compare Kinects´s ability to track infant behavior against OpenPose's (computer vision algorithms available to us through a collaboration with the Engineering Department). On a second phase, and as a result of the first phase, the project consisted on designing a multi-camera acquisition setup/lab (with high-resolution cameras, 60 FPS) that could work with OpenPose algorithms to track infant behavior.

This second phase required coordinating the lab project as a whole (space design and maintenance, grant application, project coordination). This also involved hiring an engineering student that solved specific technical problems (software installation, hardware setup, C++ script modifications) and worked with me on the different problems related to camera setup, synchronization, acquisition, data saving to disk, visualization, among other technical challenges.

LAB Website:
https://www.cicea.ei.udelar.edu.uy/investigacion/laboratorio-de-aprendizaje-en-primera-infancia/

Research assistant, June 2013-March 2015. CIBPsi, Facultad de Psicología Psicología
Selected by merit assessment as a research assistant for the project "Temporal processing and impulsiveness: Screening tool design for ADHD in educational settings" under the supervision of Dr. Alejandro Maiche and Dr. Alejandro Vásquez. The job required working together with a team (on a weekly meeting) and field work both at a Children's Hospital and at schools. The field work implied working with a trained researcher on the first phase, and then training an early researcher on the second phase. The job required both administrative and experimental competence:
- Financial administration
- Report design for the Financial Agency.
- Participant invitation, interviews and consent request.
- Symposia organization
- Software design: in charge of communication and feedback with the videogame designers used in the first phase (PC videogame designers from CEDETi, Chile) and in the second phase (Android app designers from PlayPower Labs, India-US)
- Data acquisition, organization and analysis (under supervision).First phase of the project took place at a Hospital. This implied the coordination with the Neuropsychiatric and the Paediatric Department to send invitations to participate and coordinate an agenda. The second phase happened at Schools, which demanded the interaction with school directors and teachers.
- Scientific communication design for Conference and Article presentation.

PEER-REVIEWED PUBLICATIONS
Méndez A*, Martín A*, Pires AC*, Maiche A, Vásquez A, González F, Carboni A. 2015. Temporal Perception and Delay Aversion: a videogame screening tool for the early detection of ADHD. Revista Argentina de Ciencias del Comportamiento 7(3): 90-101.

*These authors contributed equally to this work.

OTHER PUBLICATIONS
Méndez, AH. Gómez-Sena L. Estudio del aprendizaje de palabras desde una perspectiva de la cognición corporizada. 2017. Revista del XX Foro de lenguas de ANEP.

Méndez AH, Gómez-Sena L. Hacia una aproximación ecológica al estudio de la adquisición del lenguaje desde las Ciencias Cognitivas. 2019. Blog de CICEA.
http://www.cicea.ei.udelar.edu.uy/adquisicion-del-lenguaje/

ORAL PRESENTATIONS
2020 - Cogreso de Ciencias Cognitivas. Montevideo, Uruguay.
Title: "Visual attention in a (not so) cluttered world". In *"An embodied cognition approach to the study of development" symposium*.

Accepted for presentation but Cancelled due to Sars-Cov-2 pandemia

2017 - Décimo Foro de Lenguas de ANEP. Montevideo, Uruguay.
Title: "Estudio del aprendizaje de palabras desde una perspectiva de la cognición corporizada"(*"An embodied cognition approach to the study of word learning")*.

2014 - IACEP European Regional Conference 2014. Budapest, Hungary.
Title: "Converting experimental tasks into game-like software: a potential screening tool for ADHD.

2014 – Sociedad Uruguaya de Biociencias. Piriápolis, Uruguay.

Title: "Perfusión cerebral durante la realización del WCST en adultos mayores." (*"Brain perfusion during WCST in elderly people"*)

CONGRESS POSTERS:
2019 - Society for Research in Child Development. Baltimore, Maryland, USA.
Title: The sensorimotor coordination of vocal production in late infancy
Authors: Jeremy I. Borjon, Drew H. Abney, Andres Méndez, Chen Yu, Linda B. Smith.

2018 - Embodied & Situated Language Processing Conference. Lancaster, UK.
Title: Sensoriomotor change as a relevant component of early word learning.
Autores: Méndez A.H., Gómez-Sena L., Yu C., Smith L.B.

2017 - Society for the Neurobiology of Language Meeting. Baltimore, Maryland. USA.
Title: Using Kinect technology to assess word learning
Authors: Méndez A., Cervantes F., Gómez A., Carbajal G., Gómez-Sena L.

2015 -   Primer encuentro de neurociencias cognitivas. Buenos Aires, Argentina.
Title: The use of videogames for the assessment of temporal processing and delay aversion in educational settings
Authors: Méndez A, Vásquez A, Varela R, Pires A, Martín A, González F, Maiche A, Carboni A.

2015- XXV Asociación Latinoamericana de Sociedades de Biología y Medicina Nuclear (ALASBIMN). Punta del Este, Uruguay.
Title: "SPECT cerebral bajo activación con el test de Wisconsin en adultos mayores y su posible uso en la evaluación de intervenciones terapéuticas compensatorias en la demencia."
Authors: Andrés Méndez, María Langhain, Alicia Silveira y Rodolfo Ferrando.

2015- International Brain Research Organization (IBRO) Congress. Río de Janeiro, Brasil.
Title: Time processing skills in young children: a transversal study in educational settings."
Authors: Andrés Méndez, Alejandro Vásquez, Rocío Varela, Ana Pires, Ana Martín, Fernando González, Alejandro Maiche, Alejandra Carboni.

2014 – Jornada de Biología Humana. Tacuarembó, Uruguay.
Title: "Análisis de la perfusión cerebral durante el WCST."
Authors: Andrés Méndez, María Langhain, Alicia Silveira y Rodolfo Ferrando

2014 - Simposio "Enseñanza de la psicología cognitiva: situación actual y perspectivas". Montevideo, Uruguay
Title: "Transformando tareas experimentales en software lúdico: una herramienta potencial de tamizaje para Trastorno por Déficit de Atención e Hiperactividad (TDAH)."
Authors: Rocío Varela, Andrés Méndez, Ana Martín, Ana Pires, Fernando González, Patricia Wels, Alejandra Carboni, Alejandro Maiche y Alejandro Vásquez

RESEARCH SCHOOLS AND INTERNATIONAL PROGRAMMES
- Latin American Training Program, Society for Neuroscience. Querétaro, México. August 2015. http://www.sfn.org/latp.
- Interneuron Summer School. Amsterdam, July 2014. http://interneurons.nin.knaw.nl/.

CLINICAL EXPERIENCE

JOB EXPERIENCE

Therapeutic companion. March 2015 – December 2015.
Therapeutic companion of a child with language impairment. The job implied attending classes, supervising performance and designing interventions with the teacher and the therapeutic team which would meet both scholar and therapeutic goals.

Therapist/Therapeutic companion. October 2011 - March 2013.
Worked under supervision in the city of Mercedes, with three children in the Autistic Spectrum once a week. The job implied the implementation and co-design of cognitive behavioral therapies, supervised by Ps. Valentina Sciarra and Ps. Carolina Liesegang. Moreover, the job required the assistance to school with one of the children, supervising and designing strategies for/with the school teacher with the goal of promoting better school and communicational performance.

CLINICAL TRAINING COURSES
"Observing early childhood" annual course. Both lectures and observation experience. Ps. Víctor Guerra. June2015-June2016. Espacio Psi Clinic (Private clinic), Montevideo. Course based on Daniel Stern, Bernard Golse and Daniel Winincott

"Therapeutic companion in ASD training" annual course. Child Neurology Clinic, Montevideo, Uruguay. 2013

TEACHING EXPERIENCE

TEACHING AND SYLLABUS DESIGN
<u>Neurobiology</u>. *F*reshmen year course march-July 2020. Psychology Department,Universidad Católica del Uruguay

<u>Perception and attention lab</u>. Freshmen year course. Universidad Católica del Uruguay. August-December 2019. Job implied both preparing syllabus and teaching three groups. The course covered relevant concepts in Perception and Attention, and a hands-on experience with a relevant research question

<u>Secondary Biology teacher</u>, **5th grade, Social and Humanistic Orientation (17 year old teenagers), 2016.**
The course gives students an evolutionary perspective of Homo Sapiens and the neuroendrocrine and genetic basis of behavior.

<u>In-company English professor.</u> **July 2006 - December 2007.**
Hired by GRB & Associates to design and carry out tailor-made courses designed for RICOH Company and NH Columbia Hotel.

ACADEMIC TEXT DESIGN
Editing Assistant. September - December 2013. Facultad de Psicología
Editing assistant of the "Introduction to Cognitive Psychology" text, written by University Professors and compiled by Dr. Alejandro Vásquez. The job implied administrative and editing tasks:
- Financial execution
- Coordination of editing steps and meetings
- Chapter compilation and figure and reference revision.
- Participation in the editing process through a final reading, with design and content suggestions.

INTERDISCIPLINARY COURSE ORGANIZATION
Title: "From blackbox to puzzle: Tools for studying the mind." 2020
Course organizer. The course is centered on four workshops covering different approaches used in Cognitive Science (Neural Networks, Robotics, Neurophisiology and Behavioral Analyses). International Experts will collaborate with worskhops and lectures: Michael Brecht (Germany), Josh Bongard (USA), Vasudevi Reddy (UK), Drew Abney (USA), Emilio Kropff (Argentina). http://www.succc.org.uy/es/node/71
Accepted for presentation but Cancelled due to Sars-Cov-2 pandemia

Title: Aportes de las Ciencias Cognitivas a la Educación (*Contributions from Cognitive Science to Education*). 2019.Co-organised a course on the Contributions of Cognitive Science to Education, aimed for school teachers and professors**.** The course was an Introduction to Cognition. Lectures were given by different professors on Attention, Perception, Language, Memory, Emotions, Numerical cognition, and Reading.

Title: Aportes de las Ciencias Cognitivas al Aprendizaje (*Contributions from Cognitive Science to learning*). International Interdisciplinary course. 2017.
Co-organised a satellite course to the first Uruguayan Symposium in Education and Cognitive Science. Espacio Interdisiplinario, Montevideo, Uruguay. The course was centered on several approaches to study learning (Neuroscience, Psychology, Education). International experts collaborated with lectures: Linda Smith (USA), Justin Halberda (USA), Mariano Sigman (Argentina), Sidarta Ribeiro (Brazil), Manuel Carreiras (Spain.).

EVENT ORGANIZATION
2014 - Facultad de Psicología, Montevideo, Uruguay.
Title: Simposio regional "Enseñanza de la psicología cognitiva: situación actual y perspectivas. (*Cognitive Psychology teaching: current situation and future planning*)"
Hosted by: CIBPsi e Instituto de Fundamentos y Métodos, Facultad de Psicología, UdelaR.
Organisers: Andrés Méndez y Alejandro Vásquez.

2013 - Facultad de Psicología, Montevideo, Uruguay.
Title: Simposio regional "Pasando de nivel: estimulación y evaluación del desarrollo cognitivo a través de los juegos de video (*Next level: cognitive development assessment and stimulation through the use of videogames*)."
Hosted by: CIBPsi, Facultad de Psicología, UdelaR
Organisers: Andrés Méndez y Fernando González.

OTHER ACADEMIC EXPERIENCE

Cognitive Science Master Assistant, 2016. Espacio Interdisciplinario, Universidad de la República.
The job implied taking care of financial reports, assist in course organization, manage institutional internal and external communication and writing meeting reports and grant application.

SCHOLARSHIPS AND GRANTS OBTAINED

SCHOLARSHIPS
Master Degree Scholarship, ANII. March 2017.
Selected by the Agencia Nacional de Investigación e Innovación (ANII, National Research Agency) to receive a two-year scholarship for the master´s degree.

Latin American Training program, Society for Neuroscience. August-September 2015.
Selected with 14 Latinoamerican students for a three week course in "Imaging the Brain: Visualizing Structure and Function in the CNS", at the Neurobiology Institute, Universidad Autónoma de México (UNAM), Querétaro. The course covered all costs and put together top world-wide researchers and imaging methods

UGRAD Fulbright. February-June 2011.
Selected with 7 other Uruguayan undergrad students for an academic scholarship offered by the Cultural State Department of the USA in association with Fullbright and World Learning. The internship implied one semester abroad at Augustana College, Sioux Falls, South Dakota.

OBTAINED GRANT APPLICATION
Financed projects in which I had a main role in writing.

Event Grant.
Title: "International Scientists' Visits", ANII (Agencia Nacional de Investigación e Innovación).
Event: satellite course "From black box to puzzle: Tools for studying the mind." taking place in March 2020
Mentioned in course organization section

Young Research grant.
Title: "Young research grant", CSIC (Comisión Sectorial de Investigación, Universidad de la República)
Project: "Using visual technologies for the study of word learning in early infancy", under supervision of Leonel Gómez-Sena.
Mentioned in CICEA lab design (funds to cover technology costs)

Research grant on Socially Relevant areas.
Title: "Social Inclusion Grant", CSIC (Comisión Sectorial de Investigación, Universidad de la República)
Project: "Assessment of the neurobiological, psychological and social impact on Alzheimer patients", together with Prof. Rodolfo Ferrando and Prof. Róbert Pérez. 2016
Project related to Human Biology Bachelor project

Teaching grant
Title: "Graduate studies support grant", CSE (Comisión Sectorial de Enseñanza, Universidad de la República)
Graduate program: Cognitive Science Master degree. The grant provided the Cognitive Science Master´s Degree with financial aid for 2017.
Related to job as graduate program assistant

LANGUAGE

English: Excellent English skills promoted by experience as a Scholar visitor in Indiana, UGRAD
                Scholarship for a semester and by working as in-company English professor.

                - Certificate of Proficiency in English (C.P.E), Cambridge, 2003
                - Teaching Knowledge Test Certificate (T.K.T.), Cambridge, 2006
Portuguese   Basic course: Portugués I - Facultad de Humanidades.

Spanish: Native language

PROGRAMMING SKILLS

- Intermediate knowledge of Matlab. Experience gained working with different datasets as a Scholar Visitor in Indiana, with the multi-sensory dataset for my Master Degree (from Indiana), and working with Kinect Matlab ToolBox and OpenPose tracking variables at CICEA.
- Basic to intermediate knowledge of SPSS *worked with children behavioral data) and SPM8 (worked with SPECT data) on 2011
- Introductory courses to Python programming (basic level) offered by Michigan University through Coursera platform. www.coursera.org, 2015:
         o Programming for everybody
         o Python Data Structure
         Also some experience creating Python scripts to interact with cameras at the lab
- Basic experience with R to run mixed effects models on behavioral data.

My work at CICEA's lab - working with a an Engineer Student to solve the different problems related to data acquisition, synchronization, optimization, visualization and analyses - helped me build a good foundation of computer concepts and notions necessary to understand what problems arise when interacting and using computer program tools to ask scientific questions