

Curriculum Vitae

Silvia Benavides-Varela

Date of birth: 12 February 1983 Nationality: Costa Rican- Italian

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- **EDUCATION**

2012 PhD in Neuroscience (Cognitive program), International School for Advanced Studies, Italy
Supervisor: Jacques Mehler

2005 Engineering degree in Biotechnology, Dept. Biology, Instituto Tecnológico de Costa Rica

- **CURRENT POSITION**

Assistant Professor at Università degli Studi di Padova, Department of Developmental Psychology and Socialisation

- **PREVIOUS POSITIONS**

Dic 2016- Collaborations with Fondazione HPNR, Polo Apprendimento Padova, IRCCS Fondazione
Nov 2017 Ospedale San Camillo, Venice

2015 –2016 *Two-year Post-doctoral fellow (assegno di ricerca):* Dept. Developmental Psychology & Socialization, University of Padua

2012 – 2015 *Three-year Post-doctoral fellow (borsa di studio):* IRCCS Fondazione Ospedale San Camillo (Lido-Venice) in collaboration with Neuroscience Department University of Padua (Padova), Italy

2013 – 2014 *One-year Visiting Post-doctoral fellow:* Laboratoire Psychologie de la Perception, UMR 8242 CNRS-Université Paris Descartes (Paris) France

2005 – 2007 *(3) One-year Research contracts:* Neuroscience Research Program, Faculty of Medicine, University of Costa Rica

- **MAIN RESEARCH EXPERIENCE**

2013 Hospital Robert Debré, Paris (France). Neonatal Brain Research.

2012 – 2014 IRCCS Fondazione San Camillo, Venice (Italy). Neuropsychological Research.

2007 – 2012 Azienda Ospedaliero Universitaria S. Maria della Misericordia, Udine (Italy). Neonatal Brain Research.

2004 – 2005 Institute of Health Research. University of Costa Rica. Research experience in Molecular Biology.

2000 – 2003 Biotechnology Research Centre. Instituto Tecnológico de Costa Rica. Research experience in Biotechnology.

2002 – 2003 Children's National Hospital of Costa Rica. Skin Culture experience.

- **PRIZES, AWARDS & DISTINCTIONS**

- Sept 2016, Vicenza. Recipient of the **Best article of the year** by the Italian Association of Psychology- Development and Education Section- Italy. [National competition]
- Nov 2014, Venice: Award to the **Best Oral** Presentation at the First San Camillo Science Day, Venice-Italy.
- Sept 2013, Milan. Recipient of **Honorable mention as best young researcher** by the Italian Association of Psychology- Development and Education Section- Italy. [National competition]
- Sept 2013, Milan. Recipient of the **Luigia Camaioni Award** designed to the **best thesis in the topic of**

language development by the Italian Association of Psychology- Development and Education Section- Italy. [National competition]

- June 2012, Minneapolis. Recipient of the **International Society for Infant Studies Dissertation Award** designed to honor the outstanding doctoral thesis of the year. [International competition]
- Feb 2005, San José. Engineering **degree with honors**. Instituto Tecnológico de Costa Rica.
- Jun 2004, Cartago-CR. **Winner of the National Entrepreneurship Competition** promoted by the business incubation center of Costa Rica. The prize sponsored the foundation of “Innovaciones Biotecnológicas S.A.” (today BioTech), a private company providing counseling in biotechnology engineering for protecting the environment. [National competition].
- Oct 2000, San José-CR. **Best National Scores** at the entrance exams from the University of Costa Rica (Faculty of Medicine) and Instituto Tecnológico de Costa Rica (Biotechnology Engineering) [National competition].
- Dic 2000, San José-CR. **High-School degree with honors and best student award by the First Lady of Costa Rica** [National competition].

- **SELECTED INVITED TALKS (*), SYMPOSIUM PARTICIPATION (§) AND ORAL POSTER PRESENTATIONS (§) AT CONFERENCES**

- Feb 2018. Uno sguardo in evoluzione: studi sul linguaggio nell’età dello sviluppo. Giornata di Psicolinguistica Sperimentale e Computazionale *
- Sept 2017. I bambini contano. Co-presenter of the project founded by Fondazione Vodafone. §
- Oct 2016. Functional Interactions among brain regions supporting word learning at birth. Conference of the functional Near Infrared Spectroscopy Society (fNIRS), Paris-France. *
- Sept 2016. Verbal positional memory in 7 months-old. Annual conference of the Italian Association of Psychology- Development and Education- Vicenza, Italy. *
- July 2016. Identifying spatial and non-spatial deficits in right hemisphere damaged patients. International Neuropsychological Society Mid-Year meeting, London, UK. §
- Apr 2016. The foundations of word order. Perception and acquisition of language workshop. Cognitive Neuroscience Sector. SISSA, Trieste, Italy. *
- Jan 2016. Right hemisphere acalculia and numerical activities of daily living. XXXIV European Workshop on Cognitive Neuropsychology, Bressanone, Italy. §
- Nov 2015. Dove Nascono le parole. X Regional Congress Associazione Ostetrici Ginecologi Ospedalieri Italiani, Palermo, Italy*
- Jan 2015. Number transcoding in right-hemisphere damaged patients. XXXIII European Workshop on Cognitive Neuropsychology, Bressanone, Italy. §
- Nov 2014. Brain structural substrates of numerical everyday life activities in mild cognitive impairment. San Camillo Science day. Ospedale San Camillo, Lido-Venice. Italy. *
- Jul 2014. Sensitivity to Word Order at Birth: an EEG-NIRS Study with Newborns. International Conference for Infant Studies. Berlin, Germany. §
- Jan 2014. Simple number and calculation processing impairment in right hemisphere damaged patients with and without clinical neglect. 32nd European Workshop on Cognitive Neuropsychology. Brixen, Italy§
- Sept 2013. La memoria delle parole alla nascita: studi NIRS sulle capacità mnemoniche nei neonati. Annual meeting of the Associazione Italiana di Psicologia sezione Sviluppo-Educazione. Milan-Italy. §
- July 2013. The role of biology and environment on shaping early linguistic and numerical abilities. Venice Summer School on Aphasia and Language Rehabilitation. Venice-Italy. *
- March 2013. Numerical Skills in Preschool Children and Their Relation with Daily Activities. 3rd LA-School for Education, Cognitive and Neural Sciences. Comandatuba, Bahia-Brazil. *
- Sept 2012. Numerical Skills in pre-school children and their relation with daily activities. Workshop on

Acalculia rehabilitation. Ospedale San Camillo, Lido-Venice, Italy*

- June 2012. Newborns' Brain Signals the Bases of Word Representations at Birth. International Conference for Infant Studies (ICIS), Minnesota, USA. §
- Nov 2011. Emergence of the functional specialization of consonants and vowels in language acquisition. 36th Boston University Conference on Language Development. Boston-USA. §
- Sept 2011. Why do newborns forget? NIRS studies on memory processes at birth. XI International Conference of Cognitive Neuroscience (ICON). Palma de Mallorca, Spain. §
- April 2011. Consonants and vowels, the development of a functional specialization. Biennial Meeting of the Society for Research in Child Development SRCD, Montreal, Canada. §
- Oct 2010. What do newborns remember from words? Trieste Symposium on Perception and Cognition. University of Trieste, Italy. *

• INVITED TALKS AT UNIVERSITIES AND RESEARCH INSTITUTES

- Oct 2017. "What do babies remember?" Ghent University. Department of Experimental Psychology.
- Aug 2017. "Shaping early language and numerical abilities in young children". University of Costa Rica.
- April 2016. "The foundations of word order". Cognitive Neuroscience Sector. SISSA, Trieste, Italy.
- Oct 2016. "Diff. numeriche nelle attività della vita quotidiana in pazienti con MCI: substratti anatomici e predittori neurocognitive". Giornata di Studi: Dalle Neuroscienze alla clinica e viceversa. Palermo, Italy.
- Mar 2013. "The information encoded at birth". Psychology Department. Plymouth University, UK.
- Jan 2012. "What does the representation of a word sound look like in the newborn brain?" Laboratoire Psychologie de la Perception, UMR 8242 CNRS-Université Paris Descartes, France.
- Mar 2011. "fNIRS para el estudio de la memoria en los recién nacidos". Laboratorio de Neurociencia Integrativa University of Buenos Aires-Argentina.
- Nov 2009. "Item-specific memory in neonates". McDonnell Foundation meeting. Nelson Laboratory, Harvard University. Boston-USA
- Mar 2009. "Studying memory traces for speech in neonates". McDonnell Foundation meeting. Laboratoire de Sciences Cognitives et Psycholinguistique, CNRS, Paris-France.

• FELLOWSHIPS

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|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2007-2012 | Full tuition student scholarship for pursuing PhD. in Neuroscience, International School for Advanced Studies (SISSA)/ Italy (~ 66 000 €). |
| 2007-2010 | Supplemental scholarship for outstanding Costa Rican students abroad by the Ministry of Science and Technology of Costa Rica (~ 5800 €). |
| 2011 & 2013 | Special tuition, travel and accommodation scholarship by McDonnell Foundation for attending the Latin-America School for Education, Cognitive and Neural Science; Atacama-Chile and Bahia-Brazil (~ 10 000 €). |
| 2009 & 2012 | Full tuition and travel scholarship by Central European Cognitive Science Association for attending the Dubrovnik Conference on Cognitive Science, Dubrovnik, Croatia (~ 600 €). |
| 2009 | Full tuition and travel scholarship for the CEU Summer School: Memory and the Mind, Central European University, Budapest-Hungary (~ 800 €). |
| 2007 | Full tuition and travel grant for pursuing patch clamp training. Max Planck Institute for Molecular Medicine. Gottingen, Germany (~ 2500 €). |
| 2005 & 2006 | Full tuition, accommodation and travel scholarship by International Brain Research Organization (IBRO), Neuroscience and Behaviour Course, University of Zulia, Venezuela and Universidad Nacional de Colombia (~ 3000 €). |
| 2003 | Travel grant by Spanish Institute for Agricultural Researching, Madrid, Spain |

- 2001 – 2005 Full Tuition Scholarship awarded to the best entrance scores and best yearly scores, Biotechnology Engineering, Instituto Tecnológico de Costa Rica/ Costa Rica (~ 4500 €).
- 1998-1999 Monthly scholarship awarded by the “Best students in Costa Rica” program. Ministry of Public Education. Costa Rica (~ 1000 €).

- **(CO)SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

- 2015 –2017 1 PhD. student Neuroscience Department, University of Padua, Italy
- 2007 – 2014 7 Master Students from Biotechnology Engineering, Psychology, Speech Therapy, Cognitive Rehabilitation and Neuroscience at Instituto Tecnológico de Costa Rica/University of Padua (Italy)/Istituto Universitario Salesiano Veneziano (Italy)/Università degli Studi di Roma

- **TEACHING ACTIVITIES**

- 2018 Guest lecturer – Research Methods and Design in Cognitive Development; Memory; Language Development. School of Psychology. University of Padua, Italy
- 2016 Guest lecturer – I problemi nei bambini piccoli. Psychology of mathematical learning. Nevegal, Belluno-Italy
- 2013/2015 Guest lecturer – Language Acquisition and Perception in Infancy, Neuroscience Department University of Padua, Italy
- 2015 Guest tutor – Neuroimaging and behavioural methods in Infancy, Cognitive Neuroscience, International School for Advanced Studies, Italy
- 2012-2016 Guest lecturer – Introduction to functional near infrared spectroscopy, Department of General Psychology, University of Padua, Italy
- 2013 Guest lecturer- Lo sviluppo del linguaggio nel bambino piccolo. Milan, Italy.
- 2012 Guest lecturer – Neuroscience II, Istituto Universitario Salesiano Veneziano, Italy.

- **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2011 Main organizer: Emergence of the Functional Specialization of Consonants and Vowels in Language Acquisition. Symposium at the SRCD 2011 Biennial Meeting/ Montreal, Canada
- 2002 Organization committee member: Molecular biology and biotechnology. Teaching methods for university scholars. Instituto Tecnológico de Costa Rica.

- **PEER-REVIEWED PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS.**

- Bion, R.A.; Benavides-Varela, S. Nespors, M. (2011) Acoustic markers of prominence influence infant’s and adults’ segmentation of speech sequences. *Language and Speech* 54(1): 123-140
- Benavides-Varela, S., Gómez, D.M., & Mehler, J. (2011). Studying neonates’ language and memory capacities with functional near-infrared spectroscopy. *Frontiers in Psychology*, 2:64
- Hochmann, J.R., Benavides-Varela, S., Nespors, M., & Mehler, J. (2011). Consonants and Vowels, Different Roles in Early Language Acquisition. *Developmental Science* 14(6): 1445-1448
- Benavides-Varela, S., Gómez, D.M., Macagno, F., Bion, R., Peretz, I., & Mehler, J. (2011). Memory in the neonate brain. *PlosOne* 6(11)
- Benavides-Varela, S., Hochmann, J.R., Macagno, F., Nespors, M., & Mehler, J. (2012). Newborns' Brain Activity Signals the Origin of Word Memories. *Proceedings of the National Academy of Science USA*.109 (44):17908-17913
- Pinchman, H., Matjeko, A., Obersteiner, A., Killikelly, C, Abrahao, K., Benavides-Varela, S., Gabriel, F., Rato, J. & Vuillier, L (2014). Forging a new path for Educational Neuroscience: An international young-researcher perspective on combining neuroscience and educational practices. *Trends in Neuroscience and Education* 3.1: 28-31.
- Agostini, M., Garzon, M., Benavides-Varela, S., De Pellegrin, S., Bencini, G., Rossi, G., Rosadoni, S., Mancuso, M., Turolla, A., Meneghello, F. & Tonin, P. (2014). Telerehabilitation in Poststroke Anomia. *BioMed research international*, 2014.

- Gómez, D. M., Berent, I., Benavides-Varela, S., Bion, R. A., Cattarossi, L., Nespors, M., & Mehler, J. (2014). Language universals at birth. ***Proceedings of the National Academy of Sciences***, 111(16), 5837-5841.
- Semenza, C., Meneghello, F., Arcara, G., Burgio, F., Gnoato, F., Facchini, S., Benavides-Varela, S., Clementi, M. & Butterworth, B. (2014). A new clinical tool for assessing numerical abilities in neurological diseases: Numerical Activities of Daily Living. ***Frontiers in Aging Neuroscience***, 6, 112.
- Benavides-Varela, S., Pitteri, M., Priftis, K., Passarini, L., Meneghello, F., Semenza, C. (2014). Right-Hemisphere (Spatial?) Acalculia and the Influence of Neglect. *Frontiers in Human Neuroscience*, 8, 644.
- Benavides-Varela, S. & Mehler, J. (2015). Verbal Positional Memory in 7-month-olds. ***Child Development***. 86(1), 209-223.
- Benavides-Varela S., Burgio F., Meneghello F, De Marco M., Arcara G., Rigon J., Pilosio C., Butterworth B., Venneri A., Semenza C. (2015). Anatomical substrates and neurocognitive predictors of daily numerical abilities in Mild Cognitive Impairment. ***Cortex***, 71, 58-67
- Benavides-Varela, S., Butterworth, B., Burgio, F., Arcara, G., Lucangeli, D., Semenza, C. (2016). Numerical activities and information learned at home link to the exact numeracy skills in 5 to 6 years-old children. ***Front. Psychol.*** 7:94. doi: 10.3389/fpsyg.2016.00094
- Benavides-Varela, S., Passarini, L., Butterworth, B., Rolma, G., Burgio, F., Pitteri, M., Meneghello, F., Shallice, T., Semenza, C. (2016) Zero in the brain: a voxel-based lesion–symptom mapping study in right hemisphere damaged patients. ***Cortex***, 77, 38-53.
- Lorusso, R., Sciarra, D., Pegorer, S., Benavides-Varela, S., Lucangeli, D. (2016). Crescere i problem solvers di domani. ***Difficoltà in matematica***. 13(1), 37-53.
- Benavides-Varela, S., Butterworth, B., Burgio, F., Arcara, G., Lucangeli, D., Semenza, C. (2016). Le attività con l'uso dei numeri e le informazioni apprese in casa si correlano alle abilità di calcolo esatto nei bambini di 5/6 anni. ***Difficoltà in matematica***. 13(1), 9-34.
- Zanini, C., Benavides-Varela, S., Lorusso, R., & Franzon, F. (2016). Mass is more: The conceiving of (un) countability and its encoding into language in 5-year-old-children. ***Psychonomic Bulletin & Review***, 1-11.
- Galderisi, A., Brigadoi, S., Cutini, S., Moro, S. B., Lolli, E., Meconi, F., Benavides-Varela, S., Baraldi, E., Amodio, P., Cobelli, C., Trevisanuto, D. & Dell'Acqua, R. (2016). Long-term continuous monitoring of the preterm brain with diffuse optical tomography and electroencephalography: a technical note on cap manufacturing. ***Neurophotonics***, 3(4), 045009-045009.
- Benavides-Varela, S., Piva, D., Burgio, F., Passarini, L., Rolma, G., Meneghello, F., & Semenza, C. (2017). Re-assessing acalculia: Distinguishing Spatial and purely Arithmetical deficits in right-hemisphere damaged patients. ***Cortex***, 88, 151-164.
- Benavides-Varela, S., & Gervain, J. (2017). Learning word order at birth: A NIRS study. ***Developmental Cognitive Neuroscience***. <http://dx.doi.org/10.1016/j.dcn.2017.03.003>
- Burgio, F., Benavides-Varela, S., Arcara, G., Trevisson, E., Frizziero, D., Clementi, M., & Semenza, C. (2017). Numerical activities of daily living in adults with neurofibromatosis type 1. ***Journal of Intellectual Disability Research***.
- Arcara, G., Burgio, F., Benavides-Varela, S., Toffano, R., Gindri, P., Tonini, E., ... & Semenza, C. (2017). Numerical Activities of Daily Living–Financial (NADL-F): A tool for the assessment of financial capacities. ***Neuropsychological Rehabilitation***, 1-23.
- Benavides-Varela, S., Siugzdaite, R., Gómez, D. M., Macagno, F., Cattarossi, L., & Mehler, J. (2017). Brain regions and functional interactions supporting early word recognition in the face of input variability. ***PNAS: Proceedings of the National Academy of Sciences USA***, 114(29), 7588-7593.
- Hochmann, J. R., Benavides-Varela, S., Fló, A., Nespors, M., & Mehler, J. (2018). Bias for Vocalic Over Consonantal Information in 6-Month-Olds. ***Infancy***, 23(1), 136-151. doi:10.1111/inf.12203
- Semenza, C., Benavides-Varela, S. (2018). Reassessing Lateralisation in Calculation. ***Philosophical Transactions of the Royal Society B***. DOI:10.1098/rstb.2017.0044

Book Chapters

- Benavides, S. (2005) Estudio anatómico de sanguinaria, in “Estudio anatómico de 10 especies medicinales y espontáneas”. Chacón, R. (Edi). Editorial Tecnológica. Cartago, Costa Rica.
- Mento, G & Benavides-Varela, S. (2017). La prospettiva delle neuroscienze cognitive dello sviluppo, pp 139-154 in “Il cervello al lavoro: Nuove prospettive in neuropsicologia cognitive”. Bisiacchi, P & Vallesi, A (Curatori). 2017. Editor: Il Mulino. Bologna, Italia.

- **SCIENTIFIC CONTRIBUTIONS TO CONGRESSES SELECTED (only first or senior-author contributions)**

- 2018 Pocoloto e la Gara dei Numeri: strumenti digitali per potenziare la letto-scrittura e la matematica per la classe prima della scuola elementare. XXXV CONGRESSO C.N.I.S. NAZIONALE (Coordinamento Nazionale degli Insegnanti Specializzati). Assisi, Italia.
- 2018 Compito di denominazione: trend evolutivo dell'accuratezza e dei tempi di risposta. XV giornata di aggiornamento sull'uso degli strumenti in Psicologia clinica dello sviluppo. Bologna, Italy.
- 2018 Emerging mathematical skills and the role of the cerebellum in pilocytic astrocytoma survivors. XXXVI European Workshop on Cognitive Neuropsychology, Bressanone, Italy.
- 2017 Assessing mathematical abilities in children in Pilocytic Astrocytoma. European Association of Neurosurgical Societies (EANS). Eposter: 189296. Venice, Italy 2017;
- 2017 Abilità numeriche in bambini con astrocitoma pilocitico. Giornata scientifica in onore di Annette Karmiloff-Smith: L'approccio neurocostruttivista: riflessioni teoriche, metodologie di ricerca e implicazioni cliniche ed educative. Bologna, Italy.
- 2016 Learning word order at birth. Conference of the functional Near Infrared Spectroscopy Society (fNIRS), Paris-France.
- 2016 You use the right hemisphere for transcoding the "nothingness". European Society for Cognitive and Affective Neuroscience. Porto, Portugal.
- 2016 Functional Interactions among brain regions supporting word learning at birth. International Congress of Infant Studies. New Orleans, USA.
- 2016 Zero in the brain. Annual Conference of the Cognitive Neuroscience Society. New York, USA.
- 2015 Audio-visual dynamics in multiple object processing: Is Attending to Both Modalities a Prerequisite for the Flexibility of Individuation? An N2pc study. RAW Workshop, Rovereto, Italy.
- 2015 When zero counts: Number transcoding in right-hemisphere damaged patients. 19th Conference of the European Society for Cognitive Psychology (ESCP). Paphos, Cyprus
- 2014 The Link Between Numerical Exposure at Home and Children's Exact Numerical Skills. International Conference on Cognitive Neuroscience. Brisbane, Australia.
- 2014 Brain hemodynamic response and functional connectivity during encoding and retrieval in newborns. 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM), Hamburg- Germany.
- 2013 How do Daily Activities Influence Children's Numerical Performance? 41st Conference of the International Neuropsychological Society. Hawaii- USA.
- 2012 How do 7-month-olds encode new multisyllabic words? Workshop "Cognitive Modules and Interfaces" in honor of Noam Chomsky. Trieste, Italy
- 2012 Sensitivity to Linguistic Universals at Birth: A fNIRS Study with Newborn Infants. Organization for Human Brain Mapping. Beijing, China.
- 2012 Serial Position Effects Influence 7-month-olds word learning. 4th Dubrovnik Conference on Cognitive Science: memory control and retrieval, Dubrovnik, Croatia.
- 2011 Sonority hierarchy in one-month-old infants' brains. 36th Boston University Conference on Language Development. Boston-USA
- 2011 Newborn's brain signals memory for vowels. Conference of the Society for Research in Child Development SRCD, Montreal, Canada
- 2010 Interference prevents recognition memory in the newborns' brain. Theoretical Perspectives on Autobiographical Memory. Aarhus-Denmark.
- 2010 Processing consonants and vowels at 12 months. CDC Opening Conference in Cognitive Development Center CEU. Budapest-Hungary
- 2009 Optical Topography Study: Is Memory for Speech already present at birth? Dubrovnik Conference on Cognitive Science, Croatia
- 2009. The first word: memory for speech in the neonate's brain. Annual Conference of the Society for Cognitive Sciences, Amsterdam, Netherlands.
- 2009. Memory for Speech Stimuli in the Newborn's Brain. Conference of the Society for Research in Child Development SRCD Denver, U.S.A.

- **CERTIFIED SCIENTIFIC TRAINING/ SUMMER SCHOOLS ATTENDED**

2013- 3rd Latin American School for Education, Cognitive and Neural Sciences. Comandatuba, Bahia-Brazil
 2013- Genetics and Genomics for Neuropsychology at the International Neuropsychological Society. Hawaii. USA.
 2012- Neuroscience of Mathematical Cognition and Learning. Beijing Normal University, China.
 2011- LA_School for Education, Cognitive and Neural Sciences. San Pedro de Atacama-Chile
 2011- The Neuroscience of Language Development: Structure and Function. Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
 2010- EGI International School on Electroencephalography. German Institute for International Educational Research. Frankfurt-Germany
 2009- Memory and the Mind: Learning and representing structures in the brain. The CEU Budapest-Hungary
 2007- Patch clamp training. Max Planck Institute for Molecular Medicine. Gottingen, Germany
 2006- Neurobiology and behaviour. IBRO Visiting Lecture Program. Universidad Nacional. Bogotá, Colombia
 2005- Brain-Environment Interactions. International Brain Research Organization. Maracaibo, Venezuela.
 2004- PCR real-time and its applications. Institute of Health Research. University of Costa Rica.
 2004- Radiation and Safety in the laboratory. Ciudad de la Investigación, University of Costa Rica.
 2004- Genetics and Oncology. Faculty of Medicine, University of Costa Rica.
 2003- Detection and identification of virus, viroides and phytoplasm. National Institute for Agricultural Researching. Madrid, Spain
 2003- Molecular medicine and Neurosciences. Faculty of Medicine, University of Costa Rica.
 2003- Cellular and molecular biology. Faculty of Biology. University of Costa Rica.

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

From 2016 – Associazione Italiana di Psicologia, Sezione Sviluppo Educazione. From 2016 – Società Italiana di Neuropsicologia (SINP), Italy; 2015-2016 – European Society for Cognitive Psychology (ESCoP); 2015-2016 – Cognitive Neuroscience Society (CNS), USA; 2014-2017 Organization for Human Brain Mapping (OHBM); 2014-2015 – Association for Psychological Science (APS), USA; 2012-2016 – International Society Infant Studies.

Member of the Education Committee fNIRS Society 2017-to date

Scientific Committee Board: Rivista Difficoltà in matematica

Project Reviewer: Research Foundation Flanders

Ad-hoc Reviewer for: Plos One; Brain and Language; Neurobiology of Language; Developmental Cognitive Neuroscience; L'Anée Psychologique; International Journal of Psychophysiology; Language Learning and Development; Wiley Interdisciplinary Review: Cognitive Science; Early Child Research Quarterly; Current Direct Psychological Science; Neuroimage; Human Brain Mapping; Scientific Reports, Front Human Neuroscience; Front Psychology; Front in Language Science; Cerebellum & Ataxias; Actualidades en Psicología; Difficoltà in matematica; Developmental Psychology.

- **TECHNICAL SKILLS & COMPETENCES**

- Languages: Spanish (native), Italian (native-like), English (native-like), French (basic knowledge).
- Programming skills: Matlab, E-basic (Eprime), Psyscope, Praat, Mbrola.
- Neuroscientific Techniques: Electrophysiology (EEG, ERPs), fNIRS, TDCS, eye-tracking, MRI (VBM, VLSM).
- Biotechnology Techniques: ELISA, Liquid chromatography, PCR, Rat brain surgery, Patch clamp, in-vitro culture

- **SELECTED MEDIA COVERAGE**

- **Publication: Focus, Sezione Scienza**

Title: I bambini ricordano già a 5 giorni di vita (date: 15/10/2012)

<http://www.focus.it/scienza/scienze/i-bambini-ricordano-gia-a-5-giorni-di-vita-151012-37261>

- **Publication: La stampa**

Title1: Cervello “al lavoro” fin dalla nascita per ricordare le parole. (date: 15/10/2012)

Title 2: Gli “estremi” delle parole sono fondamentali per apprendere il linguaggio (date: 09/09/2014)

- **Publication: Corriere della Sera**

Title1: I neonati ricordano le parole già a pochi giorni di vita. (date: 16/10/2012)

http://www.corriere.it/salute/neuroscienze/12_ottobre_16/neonati-cervello-ricordo-parole_da7fa162-176f-11e2-834a-587475fb3e23.shtml

Title 2. Ai 7 mesi I bambini imparano le parole

http://www.corriere.it/salute/pediatria/14_settembre_09/a-7-mesi-bimbi-imparano-parole-ricordando-prima-ultima-sillaba-0e87606e-382d-11e4-876b-2f897d4bd66b.shtml

- **Publication: Il sole 24 ore**

Title: Ricerca sui neonati: all'origine del linguaggio una base biologica, uguale per tutti. Tra i preferiti il suono «Bl»

<http://www.ilsole24ore.com/art/notizie/2014-04-01/ricerca-neonati-origine-linguaggio-base-biologica-uguale-tutti-i-preferiti-suono-bl-200633.shtml?uuid=ABTYiY7>

- **Publication: La Repubblica, Le Scienze**

Title: Il cervello si attiva alla nascita per ricordare le parole (date: 16/10/2012)

http://www.lescienze.it/news/2012/10/16/news/memoria_neonati_linguaggio_parole_vocali-1313337/

- **Publication: L'Unità, Scienza e Tecnologia**

Title: A pochi giorni di vita, i neonati già ricordano le parole

- **Publication: Zanichelli, Aula di Scienze**

Title: Come funziona il cervello dei neonati (date: 07/01/2013).

<http://archivoscienze.scuola.zanichelli.it/in-evidenza/2013/01/07/vedere-come-pensano-i-neonati/>

- **Publication: Ansa.**

Title: I neonati ricordano subito le parole (date: 15/10/2012)

http://www.ansa.it/web/notizie/rubriche/cronaca/2012/10/15/neonati-ricordano-subito-parole_7636205.html

- **Publication: Open Science World**

Title: The first and the last – Word “edges” are important for language acquisition (date: 11/09/2014)

- **Publication: Science Daily**

Title1: Word edges are important for language acquisition.

<https://www.sciencedaily.com/releases/2014/09/140908083348.htm>

Title 2: Universal syllables: Some innate preferences shape the sound of words from birth

<https://www.sciencedaily.com/releases/2014/04/140401102126.htm>

- **Publication: PsyPost**

Title: Word ‘edges’ are important for language acquisition, study finds (date: 14/09/2014)

<http://www.psypost.org/2014/09/word-edges-important-language-acquisition-study-finds-28164>

- **Publication: Informe 21.**

Title: Recién nacidos pueden recordar palabras con pocos días de vida (date: 16/10/2012)

<http://informe21.com/memoria/recien-nacidos-pueden-recordar-palabras-con-pocos-dias-de-vida>