

Education

PhD | Psychology

University of East Anglia | 2019

- Thesis: *Neurobehavioral Precursors of Executive Function in Early Development*
- advisor: John P. Spencer, PhD

MA | Psychology

University of Iowa | 2015

- focus: Developmental Science
- advisor: John P. Spencer, PhD

NIH PREP | Psychology

University of Michigan | 2013

- advisor: Ioulia Kovelman, PhD

BA | Psychology

University of Puerto Rico | 2012

Research Interests

Developmental Cognitive Neuroscience

- neurodevelopment
- neuroimaging (MRI, DTI)

Early Childhood Development

- executive functions
- play
- learning
- early adversity

Skills

Languages

english • spanish

Software

MS Office • SR Research eye-tracking software • R • E-Prime • Datavyu • FSL • AFNI • HomER2 • Adobe Director • SPSS • some Matlab • learning python, FreeSurfer & \LaTeX

Professional

lab and project management • written and oral communication • time management • research • data analysis • teamwork • data visualization

Employment

University of Pennsylvania

Provost Postdoctoral Fellow

Postdoctoral Researcher

Advisor: Allyson Mackey, PhD

July 2020 - present

Feb 2020 - July 2020

Research Experience

Developmental Dynamics Lab | Postgraduate Research Student

2016 - Present | University of East Anglia

PIs: John P. Spencer, PhD and Larissa K. Samuelson, PhD

Developed, coordinated, and managed studies from onset of research looking at the early development of executive function using converging behavioral and neuroimaging methods.

- project design and development • running sessions (lab, home, and hospital settings) • processing, analyzing and coding data (neuroimaging, eye tracking and behavioral) • prepare testing materials in SR Research *Experiment Builder* (eye-tracking software) • leading a team of research assistants • train and oversee research assistants and staff in a variety of assessment methods used with infants and young children, including eye-tracking, fNIRS, and iPad-based assessments.

Spatial Perception, Action, and Memory Lab | Graduate Research Fellow

2013 - 2015 | University of Iowa | PI: John P. Spencer, PhD

Developed, coordinated, and managed studies from onset of research looking at the development of visual working memory using converging behavioral and neuroimaging methods.

- project design and development • running sessions (lab settings)
- processing, analyzing and coding data (neuroimaging and behavioral)
- lead and train undergraduate research assistants in the basics of fNIRS (practical and theoretical implications), coding behavioral data and general lab duties.

Language and Literacy Lab | Research Assistant

2012 - 2013 | University of Michigan | PI: Ioulia Kovelman, PhD

Helped develop and coordinate studies exploring child bilingualism, literacy and brain development using language and reading tasks as well as the use of child-friendly imaging techniques (fMRI, fNIRS)

- project design and development • running subjects and processing, analyzing and coding data (neuroimaging and behavioral) • prepare testing materials in E-Prime
- leading a team of research assistants • train undergraduates in E-Prime and the basics of fNIRS (practical and theoretical implications) • collaborate in running participants on fMRI protocols

Laboratory of Fear Learning - Human Psychophysiology | Research Assistant

2011 - 2012 | University of Puerto Rico School of Medicine

Directors: Dr. Karen Martinez MD, MSc and Dr. Gregory Quirk, PhD

Developmental Social Cognitive Laboratory | Research Assistant

Summer 2011 | Institute of Child Development, University of Minnesota

NSF - Summer Research Experiences for Undergraduates

PI: Philip D. Zelazo, Ph.D.

Academic Honors and Awards

- **Provost's Postdoctoral Fellowship** | University of Pennsylvania 2020
- **Postgraduate SU Conference/Research Fund** | University of East Anglia 2019
- **Faculty of Social Sciences Postgraduate Training Fund** | University of East Anglia 2019
- **Graduate Student travel award** | Society for Research in Child Development (SRCD) 2019
- **Simons Foundation travel award** | International Congress of Infant Studies (ICIS) 2016
- **Graduate Research Fellowship** | National Science Foundation 2014
- **Dean's Graduate Research Fellowship** | University of Iowa 2013
- **Maryland Neuroimaging Center Summer Institute Fellowship** | University of Maryland 2013

Teaching

- **Invited Lecturer** | University of East Anglia December 2017 & 2018
 - fNIRS for Cognitive Neuroscience, MSc module | Lecturer: Dr. Fraser Smith
 - fNIRS for Decoding the Real-World, BSc module | Lecturer: Dr. George Malcolm
- **Graduate Instructor** | University of Iowa Summer 2015
 - Introduction to Developmental Science
- **Co-Instructor** | University of Michigan February & March 2013
 - fNIRS Training Workshop
 - fNIRS Demo

Mentorship

- **Undergraduate Thesis Project** 2016 - present
 - Unofficially supervised six 3rd year thesis project students
- **Undergraduate Research Assistants** 2013 - present
 - Supervised 30 students across 4 projects

Work Experience

- **Consultant** | fNIRS Training, Data Collection, and Data Analysis 2019
University of Iowa | PI: Ece Demir Lira, PhD
- **Group Facilitator** | Dragon's Den Year 2 Residential Event 2019
University of East Anglia
Work with a group of 2nd year students to help them apply the psychological skills they are learning in their course to a simulated business situation
- **Research Associate** | fNIRS Training, Data Collection, and Data Analysis 2018-2019
University of East Anglia | PI: Velia Cardin, PhD
- **Grader** | PSYCH 352: Development of Language and Thought 2013
University of Michigan | Instructor: Ioulia Kovelman, PhD
- **Spanish Language Tester** | seasonal volunteer 2012-2013
En Nuestra Lengua (ENL) Ann Arbor, Michigan
Conduct Spanish assessments of bilingual children's Spanish skills

Professional Service

- **Ad-Hoc Reviewing**
 - **Developmental Cognitive Neuroscience**
- **Volunteering**
 - **Pint of Science Festival** 2019
 - **SRCD Biennial Meeting** 2015
- **University Service**
 - **Panel member, Graduate Research Fellowship Workshop** 2015
 - **NSF funding for STEM Research, University of Iowa**

Professional Affiliations

- **Flux: The Society for Developmental Cognitive Neuroscience**
- **Society for Research in Child Development (SRCD)**
- **International Congress of infant Studies (ICIS)**
- **Society for functional near-infrared spectroscopy (sFNIRS)**
- **Jean Piaget Society (JPS)**

Papers / Posters

Published

- **Delgado Reyes, L.**, Wijekumar, S., Magnotta, V., Forbes, S.H., & Spencer, J.P., 2020. "The functional brain networks that underlie visual working memory in the first two years of life." *NeuroImage*:116971. 10.1016/j.neuroimage.2020.116971
- Wijekumar, S., Kumar, A., **Delgado Reyes, L.**, Tiwari, M., & Spencer, J.P., 2019: "Early adversity in rural India impacts the brain networks underlying visual working memory." *Developmental Science*, e12822. 10.1111/desc.12822
- **Delgado Reyes, L.**, Bohache, K., Wijekumar, S., & Spencer, J.P., 2018: "Evaluating motion processing algorithms for use with functional near-infrared spectroscopy data from young children." *Neurophotonics*, 5. 1. 10.1117/1.NPh.5.2.025008

Under Review / in Prep.

- **Delgado Reyes, L.**, Buss, A.T., & Spencer, J.P., (in revision). "Development of the neural mechanisms of same-different judgements in preschoolers"
- **Delgado Reyes, L.**, Forbes, S.F., Southgate, H.*, Ross-Sheehy, S., & Spencer, J.P., (in prep). *working title*: "The role of rudimentary forms of attention and working memory in the development of executive function."
- **Delgado Reyes, L.**, Forbes, S.F., Ross-Sheehy, S., Magnotta, V., & Spencer, J.P., (in prep). *working title*: "Probing the early emergence of executive function in toddlerhood using converging neural and behavioral measures."
- Forbes, S.H., **Delgado Reyes, L.**, Grewal, J.*, Cassidy, J.R., Deoni, S., & Spencer, J.P., (in prep). "The role of sleep in early infant myelin development"
- **Delgado Reyes, L.**, Forbes, S.H., Deoni, S., Magnotta, V., & Spencer, J.P., (in prep). "The role of toddler myelination in preschool executive function development."

Talks

- **Delgado Reyes, L.**, Forbes, S.H., Magnotta, V., & Spencer, J.P., 2019: "Neurobehavioral precursors of executive function in early development." Invited Talk presented at Washington University in St. Louis, Missouri, USA.
- **Delgado Reyes, L.**, Forbes, S.H., Deoni, S., & Spencer, J.P., 2019: "The role of toddler myelination in preschool executive function development." Flash Talk & Poster presented at 2019 *Flux Congress*, New York, USA.
- **Delgado Reyes, L.**, & Spencer, J.P., 2018: "Attentional precursors of executive function in early development." Talk presented at *BPS EOE Conference 2018: From research to theory and practise: changing lives*, Norwich, United Kingdom

- **Delgado Reyes, L.,** & Spencer, J.P., 2018: "Attentional precursors of executive function in early development." Talk presented in A. Buss (chair), *Current research on executive function development: brain, behavior, and theory*. 48th Annual Meeting of the *Jean Piaget Society*, Amsterdam, Netherlands
- **Delgado Reyes, L.,** Wijekumar, S., Magnotta, V., & Spencer, J.P., 2016: "Connecting the dots: brain-behavior relationships between looking tasks and explicit decision tasks." Talk presented at the Biennial Meeting of the *fNIRS Society*, Paris, France

Posters

- **Delgado Reyes, L.,** Forbes, S.H., Magnotta, V., & Spencer, J.P., 2020: "Early emergence of EF using neural and behavioral measures." Poster to be presented at *2020 Flux Congress*, virtual
- **Delgado Reyes, L.,** Forbes, S.H., Magnotta, V.A., & Spencer, J.P., 2020: "Early emergence of EF using neural and behavioral measures." Poster accepted at *International Congress of Infant Studies*. (withdrew because of COVID-19)
- **Delgado Reyes, L.,** & Spencer, J.P., 2019: "Neurobehavioral precursors of executive function in early development." Poster presented at 2019 *Society for Research in Child Development* Biennial Meeting, Baltimore, Maryland.
- Forbes, S.H., **Delgado Reyes, L.,** & Spencer, J.P., 2019: "A neurodevelopmental approach to understanding the role of sleep in visual working memory." Poster presented at 2019 *Society for Research in Child Development* Biennial Meeting, Baltimore, Maryland. [presenting author]
- **Delgado Reyes, L.,** & Spencer, J.P., 2018: "Neurobehavioral precursors of executive function in early development." Poster presented at *fNIRS 2018*, Tokyo, Japan.
- **Delgado Reyes, L.,** & Spencer, J.P., 2018: "Attentional precursors of executive function in early development." Poster presented at *Expanding the field (ETF): Multi-disciplinary Developmental Dynamics conference*, Norwich, United Kingdom
- **Delgado Reyes, L.,** Wijekumar, S., Magnotta, V., & Spencer, J.P., 2016: "Early development of visual working memory: an fNIRS study." Poster presented at the 22nd Annual Meeting of the *Organization for Human Brain Mapping*, Geneva, Switzerland.
- **Delgado Reyes, L.,** Wijekumar, S., Magnotta, V., & Spencer, J.P., 2016: "Shining light into the early development of visual working memory: an fNIRS study." Poster presented at the Biennial Meeting of the *International Conference on Infant Studies*, New Orleans, LA.
- **Delgado Reyes, L.,** Wijekumar, S., Magnotta, V., Huppert, T., & Spencer, J.P., 2015: "Using fNIRS and preferential looking to examine the early development of visual working memory." Poster presented at the *Society for Research in Child Development* Biennial Conference, Philadelphia, PA.
- **Delgado Reyes, L.,** Wijekumar, S., Magnotta, V., Huppert, t., & Spencer, J.P., 2014: "Using fNIRS and preferential looking to examine the early development of visual working memory." Poster presented at the Biennial Meeting of the *fNIRS Society*, Montreal, Canada.
- **Delgado Reyes, L.,** Doebel, S., & Zelazo, P.D., 2011: "Developmental change in executive function: subtle task variation affects 3-year-olds' performance on the dccc." Poster presented at the *University of Minnesota All-programs Poster Symposium*, Minneapolis, MN.

* Only including talks and posters as presenting author.

References

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