

**RACHEL RENÉ ROMEO, PhD, CCC-SLP**  
rromeo@mit.edu | +1 (617) 775-6841 | <http://rachelromeo.com>

## **PROFESSIONAL POSITIONS**

---

**Postdoctoral Research Fellow** 2018-present  
Translational Postdoctoral Training Program in Neurodevelopment  
Boston Children's Hospital and Massachusetts Institute of Technology  
PIs: Charles A. Nelson, III; John D. E. Gabrieli

## **EDUCATION**

---

**Ph.D., Harvard University & Massachusetts Institute of Technology** May 2018  
Program in Speech and Hearing Bioscience and Technology  
Advisor: John D. E. Gabrieli, PhD; Grover Hermann Professor of Health Sciences and  
Technology and Cognitive Neuroscience  
Dissertation: Environmental influences on the neural basis of language and reading development

**CCC-SLP, MGH Institute of Health Professions** August 2015  
Department of Communication Sciences and Disorders  
Clinical Fellowship (2017-2018): Diagnostic Specialist in pediatric language and literacy  
disorders in the Brain, Education, and Mind (BEAM) Group, Boston, MA  
ASHA License: 14092953 MA License: 77082-SP-SL

**M.Sc. with Distinction, University College London** October 2012  
Language Sciences, with specialisation in Language Development  
Advisor: Valerie Hazan, PhD; Department Chair and Professor of Speech Sciences  
Dissertation: Demographic trends and perceptual effects of intra-speaker acoustic variability in  
consonant production in adolescence

**B.A. Summa Cum Laude, University of Pennsylvania** May 2011  
Majors: Psychology *with Honors*, and Linguistics  
Advisor: Daniel Swingley, PhD; Professor of Psychology  
Honors Thesis: Longitudinal examination of phonetic specificity development during word  
recognition, in children with and without chronic otitis media with effusion

## **SELECTED RECOGNITIONS**

---

Nominee for Forbes 30 under 30 in Science and Healthcare	2018
Cognitive Neuroscience Society Graduate Student Award	2018
Society for the Neurobiology of Language Graduate Student Award	2017
UCL MSc Language Sciences Highest Overall Achievement Award	2012
UCL MSc Language Sciences Best Dissertation Prize	2012
Morris Viteles Award for Excellence in Undergraduate Psychology Research	2011
Phi Beta Kappa Society	2011
R. Jean Brownlee Honor Award for Leadership	2011

## **FUNDING**

---

### Individual Fellowships

- F31 HD086957: Individual Pre-Doctoral National Research Service Award 2016-2018  
*Eunice Kennedy Shriver* National Institute of Child Health and Human Development  
“Effects of linguistic input on the neural capacity for language development”
- The Thouron US-UK Graduate Exchange Fellowship 2011-2012  
“Examining social, cognitive, and neural contributions to childhood language disorders”
- Fulbright Postgraduate Award to the United Kingdom 2011-2012  
“Assessing eyetracking as clinical tool for early diagnosis of atypical language development”

### Training Grants

- T32 MH112510: Translational Post-doctoral Training in Neurodevelopment 2018-2020  
National Institute of Mental Health
- T32 DC000038: Pre-doctoral Training for Speech and Hearing Sciences 2012-2015  
National Institute on Deafness and Other Communication Disorders

### Individual Research Grants

- Harvard University Mind Brain Behavior Graduate Student Research Grant 2016  
“Linking home audio recordings to neurocognitive performance”
- Benjamin Franklin Society Undergraduate Research Grant, 2011  
“Phonological development in children with demographic variability”
- Mary & Matthew Santirocco College Alumni Society Undergraduate Research Grant 2010  
“Phonological development in children with potential hearing impairments”

### Scholarships

- Friends of the McGovern Institute Student Fellowship 2016-2017
- University College London Language Sciences Departmental Merit Scholarship 2011-2012
- Penn President Amy Gutmann & Dr. Michael Doyle Scholarship 2007-2011
- The Lui Family Scholarship for Excellence in Psychology 2008-2011

## **PEER REVIEWED JOURNAL ARTICLES**

---

### Published or In Press

- Romeo, R. R.**, Segaran, J., Leonard, J. A., Robinson, S., West, M. R., Mackey, A. P., Yendiki, A., Rowe, M. L., Gabrieli, J. D. E. (2018). Language exposure relates to structural neural connectivity in childhood. *Journal of Neuroscience*, 38(36), 7870-7877.  
[doi:10.1523/JNEUROSCI.0484-18.2018](https://doi.org/10.1523/JNEUROSCI.0484-18.2018)  
†Selected as cover article/ illustration: [www.jneurosci.org/content/38/36.cover-expansion](http://www.jneurosci.org/content/38/36.cover-expansion)
- Romeo, R. R.**, Leonard, J. A., Robinson, S. T., West, M. R., Mackey, A. P., Rowe, M. L., Gabrieli, J. D. E. (2018). Beyond the “30 million word gap:” Children’s conversational

exposure is associated with language-related brain function. *Psychological Science*, 29(5), 700–710. [doi:10.1177/0956797617742725](https://doi.org/10.1177/0956797617742725)

**Romeo, R. R.**, Christodoulou, J. A., Halverson, K. K., Murtagh, J., Cyr, A. B., Schimmel, C., Chang, P., Hook, P. E., & Gabrieli J. D. E. (2017). Socioeconomic status and reading disability: Neuroanatomy and plasticity in response to intervention. *Cerebral Cortex*, 28(7), 2297-2312. [doi:10.1093/cercor/bhx131](https://doi.org/10.1093/cercor/bhx131)

Tuomainen, O., Hazan, V., & **Romeo, R.** (2016). Do talkers produce less dispersed phoneme categories in a clear speaking style? *Journal of the Acoustical Society of America*, 140(4), EL320. [doi:10.1121/1.4964815](https://doi.org/10.1121/1.4964815)

**Romeo R.**, Hazan V., & Pettinato M. (2013). Developmental and gender-related trends of intra-talker variability in consonant production. *Journal of the Acoustical Society of America*, 134(5), 3781 - 3792. [doi:10.1121/1.4824160](https://doi.org/10.1121/1.4824160)

Hazan, V., **Romeo, R.**, & Pettinato, M. (2013). The impact of variation in phoneme category structure on consonant intelligibility. *Proceedings of Meetings on Acoustics*, 19(1), 060103. [doi:10.1121/1.4800618](https://doi.org/10.1121/1.4800618)

#### Under Review

Leonard, J. A., **Romeo, R. R.**, Park, A. T., Takada, M., Robinson, S.T., Grotzinger, H., Finn, A. S., Gabrieli, J. D. E., & Mackey, A. P. (*Revision submitted*). Associations between cortical thickness and reasoning vary by socioeconomic status in early childhood and adolescence. Revision invited at *Developmental Cognitive Neuroscience*.

#### In Preparation

**Romeo, R. R.**, Leonard, J. A., Segaran, J., Grotzinger, H., Robinson, S., West, M. R., Mackey, A. P., Rowe, M. L., Gabrieli, J. D. E. Interactions between SES, language exposure, and brain structure in young children.

**Romeo, R. R.**, Olson, H., Christodoulou, J. A., Gabrieli, J. D. E. Core deficits contributing to developmental reading disability vary by socioeconomic context.

**Romeo, R. R.**, Leonard, J. A., Scherer, E., Mackey, A. P., Gabrieli, J. D. E., West, M. R. Family-based intervention improves reasoning and executive function in young children.

### **INVITED ARTICLES AND CHAPTERS**

---

#### In Press

**Romeo, R. R.**, Imhof, A., Bhatia, P., Christodoulou, J. A. (2019). Relationships between socioeconomic status and reading development: Cognitive outcomes and neural mechanisms. In Lipina, S., Segretin, M. S., and Pakulak, E. (Eds.) *Mind, brain and education: The neuroscience of poverty*. Buenos Aires: CLASCO.

#### In Preparation

**Romeo, R. R.**, & Mody, M. (2019). Neurobiology of language development and disorders. *Perspectives of the ASHA Special Interest Groups*.

## CONFERENCE PRESENTATIONS

---

### *Spoken Presentations*

- Leonard, J. A., **Romeo, R. R.**, Park, A. T., Takada, M. E., Robinson, S. T., Grotzinger, H., Last, B. S., Finn, A. S., Gabrieli, J. D. E., Mackey, A. P., (2019). The neural correlates of reasoning differ by socioeconomic status in development. Part of the paper symposium: "Socioeconomic status, brain, and cognitive development: Environmental mechanisms and individual differences." *Society for Research in Child Development*, Baltimore, MD.
- Romeo, R. R.**, Leonard, J. A., Robinson, S. T., Rowe, M. L., Mackey, A. P., Gabrieli, J. D. E. (2018). Neural plasticity associated with a parent-implemented language intervention. In **R. R. Romeo (symposium organizer)**, "Varying approaches to early language interventions for lower-SES families." *Boston University Conference on Child Language Development*, Boston, MA.
- Romeo, R. R.** (2018). Socioeconomic influences on language and literacy development. *American Speech-Language Hearing Association*, Boston, MA.
- D'Mello A., **Romeo, R. R.**, Leonard, J. A., Mackey, A. P., Gabrieli, J. D. E. (2018). Cerebellar contributions to children's language processing. In nanosymposium: Human cognition and behavior: neurocognitive development. *Society for Neuroscience*, San Diego, CA.
- Romeo, R. R.**, Leonard, J. A., Robinson, S. T., Rowe, M. L., Mackey, A. P., Gabrieli, J. D. E. (2017). Structural and functional neural mechanisms underlying the relationship between children's language exposure and their linguistic abilities. *Many Paths to Language Workshop*. Max Planck Institute, Nijmegen, The Netherlands.
- Christodoulou, J. A., **Romeo, R. R.**, Cyr, A., Halverson, K., Murtagh, J., Chang, P., Hook, P., Gabrieli, J.D.E. (2017). Neurocognitive correlates of treatment response in children with dyslexia across SES. *Society for the Scientific Study of Reading*, Nova Scotia, Canada.
- Romeo, R. R.**, Leonard, J. A., Robinson, S. T., Rowe, M. L., Mackey, A. P., Gabrieli, J. D. E. (2017). Children's language exposure predicts neural structure and function during language processing, independent of SES. Part of the paper symposium: "Advances in neuroimaging research paradigms and techniques in the study of development." *Society for Research in Child Development*, Austin, TX.
- Leonard, J. A., **Romeo, R. R.**, Robinson, S. T., Mackey, A. P., Gabrieli, J. D. E. (2017). Can we improve children's learning through interventions? Evidence from a parenting intervention, exploratory play, and social learning about effort. Part of the paper symposium: Interaction of executive function and knowledge in the preschool years. *Society for Research in Child Development*, Austin, TX.
- Romeo, R. R.**, Christodoulou, J. A, Cyr, A. B., Halverson, K. K., Murtagh, J., Chang, P., Hook, P.E., & Gabrieli J.D.E. (2015). Children's socioeconomic status influences their response to reading intervention. *American Speech-Language Hearing Association*, Denver, CO.
- Romeo, R. R.**, Christodoulou, J. A, Cyr, A. B., Halverson, K. K., Murtagh, J., Chang, P., Mackey, A.P., Hook, P.E., Gabrieli J.D.E. (2015). Impact of SES on brain and behavior in children with dyslexia receiving intervention. *Society for the Scientific Study of Reading*, Kona, HI.

- Romeo, R. R.**, & Swingley, D. (2015). Word recognition, phonological specificity, and SES: a longitudinal word-recognition study of toddlers. Part of the paper symposium: SES and infant language development: Four longitudinal studies. *Society for Research in Child Development*, Philadelphia, PA.
- Hazan, V., **Romeo, R.**, Pettinato, M. (2013). The impact of variation in phoneme category structure on consonant intelligibility. Part of the invited session: “Variability in speech intelligibility: Behavioral and neural perspectives.” *International Congress on Acoustics and The Acoustical Society of America*, Montreal, Canada.

### Posters

\*Denotes student mentee.

- \*Valencia, V., **Romeo, R. R.**, Leonard, J. A., Rowe, M. L., Gabrieli, J. D. E. (2019). Hablamos ambos (We speak both): Relationship between primary language use and lexical diversity in bilingual families. *Society for Research in Child Development*, Baltimore, MD.
- Romeo, R. R.**, Leonard, J. A., Segaran, J., Mackey, A. P., Rowe, M. L., Gabrieli, J. D. E. (2019). Structural and functional neural correlates of language experience in children from diverse socioeconomic backgrounds. Invited poster presentation in “Taking on the challenge: Re-evaluating the word gap and examining promising interventions for promoting young children’s language.” *Society for Research in Child Development*, Baltimore, MD.
- Wilmot, D., D’Mello, A. M., **Romeo, R. R.**, Peek, C., Meegoda, O., Centanni, T., Halverson, K., Gabrieli, J. D. E., Christodoulou, J. A. (2018). Neural correlates of phonological processing in dyslexia and comorbid dyslexia-ADHD. *Society for Neuroscience*, San Diego, CA.
- Meegoda, O., DeNovi, N., Pennebaker, M., Halverson, K., **Romeo, R. R.**, Imhof, A., Wilmot, D., Centanni, T., Gabrieli, J. D. E., Christodoulou, J. A. (2018). Reading miscue analysis in children with dyslexia, comorbid dyslexia/ADHD, & typical reading skills. *American Speech-Language Hearing Association*, Boston, MA.
- Imhof, A., D’Mello, A., Halverson, K., Wilmot, D., **Romeo, R. R.**, Frosch, I., Sridhar, A., Gabrieli, J. D. E., Christodoulou, J. A. (2018). Examining rates of comorbidity in Dyslexia, Dyscalculia & ADHD. *American Speech-Language Hearing Association*, Boston, MA.
- Mesite, L., Bhatia, P., **Romeo, R. R.**, Gabrieli, J. D. E., Christodoulou, J. A. (2018). Exploring relationships between socioeconomic status & reading skills in children with & without reading difficulties. *American Speech-Language Hearing Association*, Boston, MA.
- Romeo, R. R.**, Segaran, J., Leonard, J. A., Robinson, S. T., Mackey, A. P., Yendiki, A., Rowe, M. L., Gabrieli, J. D. E. (2018). Neural correlates of the “30-million word gap”: Children’s language exposure is related to white matter structure. *Cognitive Neuroscience Society*, Boston, MA.
- †Highest rated submission in the “Developmental” category.

- Leonard, J. A., **Romeo, R. R.**, Park, A. T., Takada, M., Robinson, S.T., Gabrieli, J. D. E., & Mackey, A. P. Associations between cortical thickness and reasoning vary by socioeconomic status in early childhood. *Cognitive Neuroscience Society*, Boston, MA.
- Romeo, R. R.**, Leonard, J. A., Robinson, S. T., Rowe, M. L., Mackey, A. P., Gabrieli, J. D. E. (2017). Language exposure is associated with the cortical thickness of young, low-SES children. *Society for the Neurobiology of Language*, Baltimore, MD.
- Christodoulou, J. C., **Romeo, R. R.** Halverson, K., Cyr, A., Murtagh, J., Chang, P, Mackey, A. P., Hook, P. E., Gabrieli J. D. E. (2017). Individual differences in intervention response: Socioeconomic status and reading disability as predictors. *Association for Psychological Science*, Boston, MA.
- Takada, M. E., Leonard, J. A., **Romeo, R. R.**, Robinson, S. T., Mackey, A. P., Gabrieli, J. D. E. (2017). Cognitive and neural correlates of mathematical reasoning across math proficiency levels. *Society for Research in Child Development*, Austin, TX.
- Romeo, R. R.**, Leonard, J. A., Robinson, S.T., Segaran, J., Rowe, M. L. Mackey, A. P., Gabrieli, J. D. E. (2016). Children’s language exposure predicts neural activation during language processing. *Society for Neuroscience*, San Diego, CA.
- †Selected as a “hot topic” – top 5% of all abstracts deemed newsworthy by peer review.

## **INVITED TALKS AND GUEST LECTURES**

- 12/5/2018, Neuroscience approaches to alleviating the academic achievement gap. University of Delaware School of Education Colloquium, Newark, DE.
- 12/03/2018, Socioeconomic contributions to typical and atypical language development. Center for Autism Research Excellence, Boston, MA.
- 11/15/2018, Environmental influences on phenotypes of developmental disorders and implications for precision treatment. Boston Children’s Hospital Department of Pediatrics Division Chiefs Research Meeting, Boston, MA.
- 11/12/2018, Socioeconomic influences on early neurocognitive development: Implications for education. Stanford University Graduate School of Education Colloquium, Stanford, CA.
- 10/25/2018, The importance of interactive talk for linguistic, cognitive, and neural development. LENA Foundation (webinar), Denver, CO.
- 9/27/2018, Relationships between children’s conversational exposure and brain development. The Hanen Centre (webinar), Toronto, ON.
- 7/25/2018, Science matters panel: Early language interaction and brain development. Campaign for Grade Level Reading, Philadelphia, PA.
- 6/26/2018, The importance of an engaging environment for children’s language and literacy development. AARP Foundation Experience Corps Network (Keynote Address), Orange County, CA.
- 3/29/2018, Beyond the “30-million-word gap:” Children’s conversational exposure is associated with language-related brain function. LENA Foundation (webinar), Denver, CO.

3/28/2018, The importance of conversation for children's language development. Pediatric Hearing Loss Professionals study group, Boston MA.

1/10/2018, Environmental influences on the neural basis of language and reading development. Boston Children's Hospital Laboratories of Cognitive Neuroscience Colloquium, Boston MA.

9/29/2017, Environmental influences on the neural basis of language and reading development. Landmark College Symposium, Cambridge MA.

7/19/2017, 6/27/2018 Socioeconomic effects on language and reading development. Neuroscience of Reading Summer Institute, Cambridge MA.

## **TEACHING EXPERIENCE**

Boston University, Sargent College Department of Speech, Language & Hearing Sciences Adjunct Professor SH524: Normal Language Acquisition (undergraduate level)	Spring 2019
Harvard University Graduate School of Education Teaching Fellow and Independent Section Instructor H-126: Typical and Atypical Neurodevelopment (masters level)	Fall 2016 and 2017
MGH Institute of Health Professions Department of Communication Sciences and Disorders Course Co-designer and Teaching Assistant CD723: Language, Culture and Cognition (masters level)	Summer 2015
MGH Institute of Health Professions Department of Communication Sciences and Disorders Adjunct Lecturer and Teaching Assistant CD833: Neuromotor Speech Disorders (masters level)	Summer 2015
Massachusetts Institute of Technology Departments of Health Science and Technology; Electrical Engineering and Computer Science; and Linguistics and Philosophy Teaching Assistant and Section Instructor 6.541/24.968/HST.710: Speech Communication (doctoral level)	Spring 2014

## **STUDENT MENTORING**

### *Masters Students:*

2017-2018	Melissa Giebler	Harvard Graduate School of Education (independent study)
2016	Christina Stavrakas	MGH Institute of Health Professions (research assistant)
2016	Natalie Albrittain-Ross	MGH Institute of Health Professions (research assistant)

Undergraduate Students:

2016-present	Veronica Valencia	Wellesley College (mentored honors thesis, conference submission, McNair Scholar recipient)
2016-2018	Joshua Segaran	Massachusetts Institute of Technology (mentored independent study, co-author on publication)
2017-2018	Jessica Chang	Emory University (research assistant)
2017	Donna Gan	Wellesley College (Undergraduate Research Opportunity, "UROP")
2017	Melissa Meloche	Massachusetts Institute of Technology (Undergraduate Research Opportunity, "UROP")
2016-2017	Lucy Cronin-Golomb	Tufts University (research assistant)
2016-2017	Nina Manning	Massachusetts Institute of Technology (Undergraduate Research Opportunity, "UROP")
2016-2017	Laura McGearry	Wellesley College (Undergraduate Research Opportunity, "UROP")
2009-2011	Research Peer Advisor,	Penn Center for Undergraduate Research & Fellowships

High School Students:

2017	Samantha Chin	The Winsor School (summer research internship)
2017	Charlotte Fries	The Winsor School (summer research internship)
2017	Rebecca Lasser	Dana Hall School (summer research internship)
2017	August Kane	Commonwealth School (summer research internship)
2017	Andrew Ark	Winchester High School (summer research internship)

**MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS**

---

Society for Research in Child Development (SRCD)  
Society for the Neurobiology of Language (SNL)  
Cognitive Neuroscience Society (CNS)  
Society for Neuroscience (SfN)  
The Society for Developmental Cognitive Neuroscience (Flux)  
American Speech Language Hearing Association (ASHA)  
Society for the Scientific Study of Reading (SSSR)  
International Dyslexia Association (IDA)

**SELECTED PRESS**

---

Full list available at <http://rachelromeo.com/press/>

ABC News, 8/13/18, <http://abcnews.go.com/Health/young-children-talking-back-adults-strengthens-language-regions/story?id=57150490>



Reuters, 8/13/18, <http://www.reuters.com/article/us-health-childhood-language/back-and-forth-conversations-with-young-kids-may-aid-brain-development-idUSKBN1KY28O>

BBC World News, 8/13/18, <http://www.bbc.co.uk/programmes/w172w4hs8vxxgvn>

US News & World Report, 3/13/2018, <http://www.usnews.com/news/national-news/articles/2018-03-13/talking-and-listening-to-your-children-could-be-key-to-brain-development>

World Economic Forum, 2/28/2018, <http://www.weforum.org/agenda/2018/02/how-you-talk-to-your-child-changes-their-brain/>

Scientific American, 2/22/2018, <http://www.scientificamerican.com/article/talking-with-mdash-not-just-to-mdash-kids-powers-how-they-learn-language/>

National Public Radio, 2/14/2018, <http://www.wbur.org/commonhealth/2018/02/14/mit-brain-study>

Boston Globe, 6/29/2017, <http://www.bostonglobe.com/metro/2017/06/26/mit-study-finds-poorer-kids-benefit-more-from-summer-reading-programs/UQwO4xh3caCbJYZUDpWGPI/story.html>

## **SERVICE**

---

**Ad Hoc Manuscript Review** (<http://publons.com/a/1353200/>)

*Developmental Science*

*Child Development*

*Journal of Child Language*

*Pediatrics*

*Journal of the Acoustical Society of America*

## **Departmental Committees**

2015-2018 Graduate admissions committee member, Harvard Division of Medical Sciences

2017 “Science of Learning” Faculty Search Committee, Harvard Graduate School of Education

## **SELECTED COMMUNITY SERVICE**

---

Developed and delivered hands-on “Introduction to Brain Science” seminars for elementary-aged students within local Boston-area schools. 2017-present

Playspace Activity Leader, providing play-based early learning to homeless infants and young children, Horizons for Homeless Children 2014-2016

Volunteer remedial reading tutor in high-need elementary schools (grades K-6), Penn Reading Initiative 2008-2011