
MARIEL ROBERTS

415N Milbank Hall, 3009 Broadway
New York, NY 10027

marobert@barnard.edu
585-489-8740

Education

- Ph.D., Experimental Psychology** 2020
New York University, New York, NY
Doctoral Advisor: Marisa Carrasco, Ph.D.
Dissertation: *Attention and perceptual learning in special populations*
- M. Phil., Experimental Psychology** 2019
New York University, New York, NY
- M.A., Experimental Psychology** 2017
New York University, New York, NY
- B.A., Biological Basis of Behavior, with Honors** 2012
University of Pennsylvania, Philadelphia, PA
Magna Cum Laude; Dean's List; Nu Rho Psi (national neuroscience honor society)

TEACHING EXPERIENCE

- Term Assistant Professor at Barnard College** Fall 2020-Summer 2021
Taught a full-time 5-credit course load
Fall semester: 3 sections of Introductory Laboratory in Experimental Psychology
Fall semester: 2 sections of Perception Laboratory
Summer Term A: 1 lecture section and 2 recitation sections of Statistics
- Adjunct Professor at New York University** Summer 2021
Intensive 6-week undergraduate elective of 24 students, equivalent to regular term course
Primary responsibilities: designed course syllabus, prepared active learning exercises, facilitated class discussions, created novel lecture and assessment material (daily quizzes, exam questions, weekly homeworks), held weekly office hours
- Perception, Guest lecturer** Fall 2019
Undergraduate course of ~120 students
Primary responsibility: presented lecture *Pitch perception*
Department of Psychology, College of Arts & Sciences
New York University, New York
- Perception, Class instructor** Summer 2019
Intensive 6-week undergraduate elective of 25 students, equivalent to regular term course
Primary responsibilities: designed course syllabus, prepared active learning exercises, facilitated class discussions, created novel lecture and assessment material (daily quizzes, exam questions, weekly homeworks), held weekly office hours
Department of Psychology, College of Arts & Sciences
New York University, New York

Topics in Perception and Attention, Guest lecturer	Spring 2019
Advanced graduate elective of 23 students	
Primary responsibility: presented lecture <i>Attention in special populations</i>	
Department of Psychology, College of Arts & Sciences	
New York University, New York	
Introduction to Cognitive Neuroscience, Teaching assistant	Fall 2018
Undergraduate course of ~80 students, led two weekly recitation sections of ~20 students each	
Primary responsibilities: created PowerPoint presentations to accompany discussions of empirical research papers, graded exams and students' research papers, held weekly office hours	
Department of Psychology, College of Arts & Sciences	
New York University, New York	
Perception, Teaching assistant	Fall 2017
Undergraduate course of ~120 students, led two weekly recitation sections of ~30 students each	
Primary responsibilities: created PowerPoint presentations to review weekly lecture content, graded weekly quizzes and three exams, held weekly office hours	
Department of Psychology, College of Arts & Sciences	
New York University, New York	
Perception, Tutor	Summer 2017
Tutored one student throughout summer semester	
Department of Psychology, College of Arts & Sciences	
New York University, New York	
How We See, Guest lecturer	Fall 2013, Fall 2014, Fall 2018, Fall 2019
Freshman seminar of ~15 students	
Primary responsibilities: lectured and led discussions about various topics in perception, provided verbal and written guidance and feedback on students' scientific research and reaction papers	
Department of Psychology, College of Arts & Sciences	
New York University, New York	

HIGHER EDUCATION TRAINING: COURSES COMPLETED

NYU Graduate School of Arts and Sciences Teaching Certificate Program

8-week non-credit courses that explore the theory and practice of university teaching

Preparing Future Faculty 1: The Art & Craft of Teaching	2019
Preparing Future Faculty 2: Achieving Success through Communication	2019

HIGHER EDUCATION TRAINING: WORKSHOPS ATTENDED

NYU Center for the Advancement of Teaching Workshops

Motivating Student Learning	2019
How We Learn	2019
How To Be a Researcher & Teacher	2019
Discussion-Based Teaching	2019
Making Learning Stick	2019

Mentoring College Students	2019
Is This Going to Be on The Test?	2019

FELLOWSHIPS & AWARDS

NYU Graduate School of Arts and Sciences Dean's Dissertation Fellowship	2019 – 2020
Psych. Dept. Nominee: GSAS Dean's Outstanding Graduate Student Teaching Award	2019
National Science Foundation Graduate Research Fellow	2015 – 2017; 2018 – 2019
NYU Student Government Assembly Conference Fund Travel Grant	2019
NYU-NIH Vision Training Grant	2017 – 2018
NYU Dean's Student Travel Grant	2015
NYU MacCracken Program Award	2014 – 2015

MENTORSHIP

Master's students (NYU's Graduate School of Arts & Science Mentorship Program)

Carrie Lott (2019-present)
 Ayijiuli Abudukadeer (2019)
 Natalie Nagpal (2018)

Research Mentor to undergraduate students (Carrasco lab)

Julia Payne (2018-present): awarded New York University's DURF* grant 3 times
 Sanjana Manjunath (2018-2019): awarded New York University's DURF* grant 2 times
 Elizabeth Eberts (2017): participant in NYU's NSF-funded Summer Undergraduate Research Program
 Imaad Sidiqqi (2012-2013): co-supervision of honors research thesis

RESEARCH EXPERIENCE

New York University, Research affiliate Collaborator: Professor Marisa Carrasco Department of Psychology New York, NY	2020 – present
New York University, Doctoral candidate Principal Investigator: Professor Marisa Carrasco Department of Psychology New York, NY	2014 – 2020
New York University, Lab manager Principal Investigator: Professor Marisa Carrasco Department of Psychology New York, NY	2012 – 2014
University of Pennsylvania, Honors thesis student Principal Investigator: Abass Alavi, M.D. Department of Radiology, Hospital of the University of Pennsylvania Philadelphia, PA	2011 – 2012

* Dean's Undergraduate Research Fund, a competitive grant dedicated to undergraduate research

New York University, NSF-funded Summer Undergraduate Research Program (SURP) Principal Investigator: Professor Marisa Carrasco Department of Psychology New York, NY	2011
University of Rochester Medical Center, Research intern Principal Investigator: Professor Tania Pasternak Center for Visual Science Rochester, NY	2010
Smithsonian's National Zoo & Conservation Biology Institute, Research intern Principal Investigator: Jesús E. Maldonado, Ph.D. Center for Conservation Genomics Washington D.C.	2009

PEER-REVIEWED PUBLICATIONS

- Roberts, M.** & Carrasco, M. Attention affects visual perception in the absence of microsaccades. In Prep.
- Roberts, M.** & Carrasco, M. (2021). Exogenous attention generalizes perceptual learning in adults with amblyopia. Under Review. *iScience*.
- Purokayastha, S., **Roberts, M.**, & Carrasco, M. (2021). Voluntary attention improves performance similarly around the visual field. *Attention, Perception & Psychophysics*, (), 1-11. doi: 10.3758/s13414-021-02316-y
- Roberts, M.**, Ashinoff, B., Castellanos, F. X., & Carrasco, M. (2017). When attention is intact in ADHD. *Psychonomic Bulletin & Review*, 25(4), 1423-1434. doi: 10.3758/s13423-017-1407-4.
- Roberts, M.**, Cymerman, R., Smith, R. T., Kiorpes, L., & Carrasco, M. (2016). Covert spatial attention is functionally intact in amblyopic human adults. *Journal of Vision*, 16(15), 1-19. doi: 10.1167/16.15.30.
- Dugué, L., **Roberts, M.**, & Carrasco, M. (2016). Attention reorients periodically. *Current Biology*, 26(12), 1595-1601. doi: 10.1016/j.cub.2016.04.046.
- Cavanaugh, M. R., Zhang, R., Melnick, M. D., Das, A., **Roberts, M.**, Tadin, D., Carrasco, M., & Huxlin, K. R. (2015). Visual recovery in cortical blindness is limited by high internal noise. *Journal of Vision*, 15(10): 9, 1-18. doi: 10.1167/15.10.9.
- He, K., Woodman, N., Boaglio, S., **Roberts, M.**, Supekar, S., & Maldonado, J. (2015). Molecular phylogeny supports repeated adaptation to burrowing within small-eared shrews of the genus of *Cryptotis* (Eulipotyphla, Soricidae). *PloS ONE*, 10(10), e0140280. doi: 10.1371/journal.pone.014028

TALKS

Vision Sciences Society Annual Meeting, St. Pete Beach, FL <i>Exogenous attention generalizes perceptual learning in adults with amblyopia</i>	2020
Invited talk, University of Washington, host Dr. Yeatman <i>Visual attention in amblyopia</i>	2019
Cognition & Perception 4th year talk, New York University <i>Attention and perceptual learning in amblyopia</i>	2018
Cognition & Perception Mini-Convention, New York University <i>Attention reorients periodically</i>	2016
Cognition & Perception Mini-Convention, New York University <i>Covert spatial attention is functionally intact in amblyopic human adults</i>	2015
Honors Research Symposium, University of Pennsylvania <i>Use of 18F-FDG-PET for quantitative assessment of temporal lobe epilepsy on brain metabolism</i>	2012
Center for Neural Science SURP Research Symposium, New York University <i>The effect of attention on visual perceptual learning: defying location specificity?</i>	2011

PEER-REVIEWED CONFERENCE ABSTRACTS & POSTER PRESENTATIONS

- Purokayastha, S., **Roberts, M.**, & Carrasco, M. (2020). Microsaccades around the visual field. *Vision Sciences Society Annual Meeting*, St. Pete Beach, FL.
- Roberts, M.** & Carrasco, M. (2019). Exogenous attention and anticipatory fixation stability. *Journal of Vision*, 19(1), 265-265.
- Purokayastha, S., **Roberts, M.**, & Carrasco, M. (2019). Does endogenous attention compensate for spatial performance fields? *Journal of Vision*, 19(10): 265b-265b.
- Roberts, M.**, Ashinoff, B. K., Castellanos, F. X., & Carrasco, M. (2017). Endogenous and exogenous attention are functionally intact in adults with ADHD. *Journal of Vision*, 17(10): 699-699.
- Dugué, L., **Roberts, M.**, & Carrasco, M. (2016). *Attention reorients periodically*. Center for Visual Science 30th Annual Symposium: The Future of Attention, University of Rochester, Rochester, NY.
- Ashinoff, B., **Roberts, M.**, Castellanos, F. X., & Carrasco, M. (2015). Exogenous spatial attention in adults with ADHD is intact. *Perception*, 44:110-111.
- Dugué, L., **Roberts, M.**, & Carrasco, M. (2015). Occipital TMS modulates the effect of attention on contrast sensitivity. *Perception*, 44:110-111.
- Roberts, M.** & Carrasco, M. (2015). Amblyopic adults demonstrate intact endogenous spatial attention. *Journal of Vision*, 15(12): 1339-1339.

Carrasco, M., **Roberts, M.**, & Kiorpes, L. (2014). Exogenous spatial attention in amblyopic adults is intact. *Perception*, 43, S8.

Carrasco, M., **Roberts, M.**, Cymerman, R., Smith, R. T., & Kiorpes, L. (2014). Intact functioning of exogenous spatial attention in amblyopic adults. *Journal of Vision*, 14(10): 539-539.

Cavanaugh, M., Melnick, M., Zhang, R., **Roberts, M.**, Das, A., Tadin, D., Carrasco, M., & Huxlin, K. (2014). Residual inefficiencies of recovered vision in cortically blind fields—insights from the equivalent noise analysis. *Journal of Vision*, 14(10): 659-659.

PROFESSIONAL MEMBERSHIPS & SERVICE

Vision Sciences Society

New York Academy of Sciences

braiNY: Greater New York City Chapter of Society for Neuroscience

NOGN: Neuroscience Outreach Group at NYU

Ad-hoc reviewer for Scientific Reports

Ad-hoc reviewer for Journal of Vision

OUTREACH & UNIVERSITY SERVICE

Volunteer with Neuroscience Outreach Group at NYU (NOGN)	2016 – 2020
World Science Festivals, Biobus, Family Night at New York Hall of Science	
NYU Women in Science, graduate student mentor & panelist	2016 – 2020
Volunteer co-organizer for annual prospective Ph.D. student weekends	2014 – 2020
Lead doctoral student organizer for NYU MA research conference	2017 & 2018
Led workshops for MA students on how to make effective poster presentations	
National Science Foundation Virtual Mentor	2016
Doctoral student judge for NYU MA research conference	2015

SKILLS

Experimental	Design, data collection, and analysis of perceptual psychophysical studies Eye movement recording (Eyelink 1000, ISCAN) and analysis Figure editing using Inkscape
Programming	Matlab: experimental programming (MGL toolbox), data analysis, figure creation SPSS Statistics R: data processing, statistical analysis and visualization GitHub: uploading, revising, and sharing code Command-line operation in UNIX terminal Basics of HTML for personal website maintenance
Neuroimaging	Certified user of the magnetic resonance image (MRI) facility Experimental design of fMRI studies Data analysis (FSL, Freesurfer, SPM Toolbox) Anatomical segmentation of 18F-FDG-PET scans (ROVER software)
TMS	Certified transcranial magnetic stimulation (TMS) operator Magstim Rapid2 Plus1 stimulator (3.5T), 70mm figure-of-eight coil Brainsight Neuronavigation system (Rogue Research)

FASTSCAN digital laser scanner

Experimental design of TMS studies, phosphene thresholding, data collection

Administrative Successful initial submission and maintenance of institutional review board protocols
Assistance with successful grant submissions (NIH R01, NSF)
Maintenance of Endnote reference library
Creation and maintenance of lab website and internal wiki