Theresa M. Desrochers, Ph.D.

Rosenberg Family Assistant Professor of Brain Science
Assistant Professor of Neuroscience and Psychiatry and Human Behavior
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EDUCATION AND RESEARCH EXPERIENCE

Assistant Professor	**Brown University** Department of Neuroscience	2016-present
Post-Doc Fellow	**Brown University** Department of Cognitive, Linguistic, and Psychological Sciences Advisor: Dr. David Badre	2012-2016
Post-Doc Fellow	**Massachusetts Institute of Technology** Department of Brain and Cognitive Sciences Advisor: Dr. Ann M. Graybiel	2011
Ph.D.	**Massachusetts Institute of Technology** Department of Brain and Cognitive Sciences Advisor: Dr. Ann M. Graybiel	2001-2010
B.Sc.	**New York University** Neural Science and Science Education Honors Research Advisor: Dr. Joseph E. LeDoux	1996-2000

SCIENTIFIC INTERESTS

The focus of my research is sequence processing. Sequences are a discrete series of items that occur in a specific order with a beginning and end. The neural representation of sequences ranges from the series of muscle activations used by a frog to catch a fly, to a chess master mapping her next moves. Therefore, understanding how the brain supports this fundamental and scalable function requires investigation that spans from the firing of neurons in circuits, or systems, to cognition.

My career goal is to systematically address questions of sequence processing by combining intensive analysis in humans—where complex task design and whole brain imaging are possible—with parallel studies in monkeys—where detailed neural correlates of task performance and highly specific causal control methods are available. Current research in my laboratory focuses on multi-electrode recording in monkeys, functional magnetic resonance imaging (fMRI) and noninvasive transcranial magnetic stimulation (TMS) in humans, and using fMRI in monkeys to directly bridge between the species. There are several levels of potential benefit to these studies, ranging from informing the way we teach and learn in classrooms to new diagnostic capabilities and therapies for those with brain dysfunction resulting in difficulties with executing sequences, such as frontal lobe patients, addiction, obsessive-compulsive disorder (OCD), or Parkinson's Disease.

HONORS

Carney Institute for Brain Science Innovation Award	2022
National Academies of Science, Engineering, and Medicine New Voices Finalist	2021
Named Rosenberg Family Assistant Professor of Brain Science and Neuroscience	2019
Brown Institute for Brain Science Innovation Award II	2016-2018
Brown Institute for Brain Science Innovation Award I	2015-2016
Ruth L. Kirschstein National Research Service Award	2013-2015
Friends of the McGovern Institute Graduate Student Fellow, MIT	2008-2009
Angus MacDonald Award for Excellence in Undergraduate Teaching, MIT	2006
Dean's Educational and Student Advising Award, School of Science, MIT	2004
National Defense Science and Engineering Graduate (NDSEG) Fellowship	2002-2005
National Science Foundation Graduate Research Fellowship Honorable Mention	2002
Phi Beta Kappa/Albert Borgman Prize, NYU: Best honors thesis in Natural Sciences	2000
Sherrington Prize, NYU: Best undergraduate senior thesis in Neural Science	2000
Wang Prize, NYU: Best undergraduate science presentation	2000

PUBLICATIONS

Conen KE, **Desrochers TM** (2022) The neural basis of behavioral sequences in cortical and subcortical circuits. In: Oxford Research Encyclopedia of Neuroscience. DOI:10.1093/acrefore/9780190264086.013.421

Desrochers TM, Ahuja A, Maechler M, Shires J, Yusif Rodriguez N, Berryhill ME (2022) Caught in the ACTS: Defining Abstract Cognitive Task Sequences as an Independent Process. J Cogn Neurosci:1–12.

McKim TH, **Desrochers TM** (2022) Reward Value Enhances Sequence Monitoring Ramping Dynamics as Ending Rewards Approach in the Rostrolateral Prefrontal Cortex. eNeuro 9:ENEURO.0003-22.2022.

Ahuja A, **Desrochers TM**, Sheinberg DL (2022) A role for visual areas in physics simulations. Cogn Neuropsychol:1–15.

Conen K, **Desrochers TM** (2022) Unpacking self-ordered sequences. Neuron 110:566-568.

Milham M et al. (2022) Toward next-generation primate neuroscience: A collaboration-based strategic plan for integrative neuroimaging. Neuron 110:16–20.

Trach JE, McKim TH, **Desrochers TM** (2021) Abstract sequential task control is facilitated by practice and embedded motor sequences. J Exp Psychol Learn Mem Cogn 47(10): 1638-1659.

Berryhill ME*, **Desrochers TM*** (2021) Addressing the Gender Gap in Research: Insights from a Women in Neuroscience Conference. Trends in Neurosci 44(6):419-421. *These authors contributed equally to this work.

Szymula KP, Pasqualetti F, Graybiel AM, **Desrochers TM***, Bassett DS* (2020) Habit learning supported by efficiently controlled network dynamics in naive macaque monkeys. arXiv 2006.14565 *These authors contributed equally to this work.

Desrochers TM*, McKim TH* (2019) What is a sequence? The neural mechanisms of perceptual, motor, and task sequences across species and their interaction with addiction. In: Oxford Research Encyclopedia of Neuroscience (Sherman M, ed). New York and Oxford: Oxford University Press. (peer reviewed) *These authors contributed equally to this work.

Badre D, **Desrochers TM** (2019) Hierarchical cognitive control and the frontal lobes. In: Handbook of Clinical Neurology: The Frontal Lobes, Volume 163, 1st ed. (D'Esposito M, Grafman J, eds). Elsevier.

Burnett CJ, Funderburk SC, Navarrete J, Sabol A, Liang-Guallpa J, **Desrochers TM**, Krashes MJ (2019) Need-based prioritization of behavior. eLife 8:1–26.

Desrochers TM, Collins AGE, Badre D (2019) Sequential control underlies robust ramping dynamics in the rostrolateral prefrontal frontal cortex. J Neurosci 39(8): 1471-1483.

Desrochers TM (2018) SRT is as easy as 12AKDB3. Nat Hum Behav 2(12): 889-90.

Desrochers TM, Burk DC, Badre D, Sheinberg DL (2016) The monitoring and control of task sequences in human and non-human primates. Front Syst Neurosci 9:185.

Desrochers TM, Chatham CH, Badre D (2015) The necessity of rostrolateral prefrontal cortex for higher-level sequential behavior. Neuron 87(6): 1357-1368.

Desrochers TM, Amemori K, Graybiel AM (2015) Habit learning by naive macaques is marked by response sharpening of striatal neurons representing the cost and outcome of acquired action sequences. Neuron 87(4): 853-868. Video Abstract.

Desrochers TM†, Badre D† (2012) Finding parallels in fronto-striatal organization. Trends Cogn Sci 16(8): 407-8. †T.M. Desrochers is co-corresponding author.

Feingold J*, **Desrochers TM***, Fujii N*, Harlan R, Tierney PL, Shimazu H, Amemori K, Graybiel AM (2012) A system for recording neural activity chronically and simultaneously from multiple cortical and subcortical regions in non-human primates. J Neurophysiol 107(7): 1979-95. *These authors contributed equally to this work.

Desrochers TM, Jin DZ, Goodman ND, Graybiel AM (2010) Optimal habits can develop spontaneously through sensitivity to local cost. Proc Natl Acad Sci USA 107(47): 20512-7.
Commentary on this work: Sejnowski TJ (2010) Learning optimal strategies in complex environments. Proc Natl Acad Sci USA, 107(47), 20151-2.

Repa JC, Muller J, Apergis J, **Desrochers TM**, Zhou Y, LeDoux JE (2001) Two different lateral amygdala cell populations contribute to the initiation and storage of memory. Nat Neurosci 4(7): 724-31.

GRANTS and FELLOWSHIPS

CURRENT FUNDING:

NSF CAREER — Desrochers (PI) — 2022-27
CAREER: Testing the neural representation of sequences in nonhuman primate frontal cortex sing fMRI-localized electrophysiology
The goal of this project is to determine the neural mechanisms of nonmotor and nonspatial sequence monitoring using auditory and visual sequences in non-human primates. We will use fMRI and multiple single electrode recordings to determine the coding of sequential information within and across regions of the frontal cortex. We will compare signals from both recording modalities to determine their relationship within and outside identified zones of activity.

Carney Institute for Brain Science Innovation Award — Desrochers (co-PI) — 2022-23
Beyond Steady State: Mapping frontal representations onto sequential choices through reinforcement learning

This collaborative project, with Dr. Matthew Nassar, aims to determine how the frontal cortical sub-regions thought to underlie flexible behaviors work together using novel computational methods and behavioral tasks in conjunction with electrophysiological recording in animals.

NIH, NIMH, R21MH125010 Desrochers (PI) 2021-23
Investigating the neural representation of structured sequence viewing in the lateral prefrontal cortex of nonhuman primates

The goal of this project is to determine the neural correlates of structured sequence viewing in nonhuman primates through electrophysiological recordings to fMRI-localized regions in the lateral prefrontal cortex.

Office of Vice President for Research Seed Grant Desrochers (PI) 2020-23
With Dr. Sarah Garnaat, Butler Hospital, Brown University
Investigating the neural basis of sequential control in Obsessive-Compulsive Disorder

This project is to begin a collaboration to study the sequential control mechanisms in patients with Obsessive-Compulsive Disorder with fMRI as part of a multi-faceted resting state, fMRI, and TMS study.

COMPLETED FUNDING:

NSF 1632738 EPSCoR RII Track-2 FEC Desrochers (Investigator) 2016-21
PI: P Tse, Dartmouth. Co-PIs: D Sheinberg, Brown; C Gray, MSU
The Neural Basis of Attention

This EPSCoR grant combines the expertise of 14 neuroscientists at Dartmouth, Montana State, Brown and Nevada at Reno to study the neural basis of attention at multiple levels spanning neurophysiology/ optogenetics to whole brain levels (fMRI, EEG, ECoG) and computational modeling.

COBRE Phase 2 Center for Nervous System Function Desrochers (Project Leader) 2018-21
PI: J Sanes P20 GM103645-06 (NIGMS)
The neural basis of sequence monitoring in human and nonhuman primates

The goal of this study is to investigate the cognitive computations involved in sequential task monitoring using human and non-human primate fMRI.

Center for Vision Research Seed Funding Desrochers (Co-PI) 2019-20
With Co-PI Dr. David Sheinberg, Brown University
Comparing the neural basis of visual simulation in humans and nonhuman primates

Funding for one year is provided for a co-mentored graduate student with Dr. Desrochers and Dr. Sheinberg to perform a human fMRI study using the same task as currently used in an ongoing nonhuman primate study.

Brown Institute for Brain Science Innovation Award II Desrochers (Co-PI) 2016-18
With Co-PIs Dr. David Badre and Dr. David Sheinberg, Brown University
Neural investigation guided by comparative functional neuroimaging for cognitive research at Brown

The goal of this study is to specifically target functionally homologous regions in human and nonhuman primates for direct cellular investigation using electrophysiology.

COBRE Phase 1 Center for Nervous System Function Desrochers (Project Leader) 2016-18
PI: J Sanes P20 GM103645-05 (NIGMS)
The neural basis of sequential control in human and non-human primates

The goal of this study is to investigate the cognitive computations involved in sequential task control using human and nonhuman primate fMRI.

Brown Institute for Brain Science Innovation Award I Desrochers (Co-PI) 2015-16
With Co-PIs Dr. David Badre and Dr. David Sheinberg, Brown University
Comparative functional neuroimaging for cognitive research at Brown

The goal of this study is to establish a working protocol to carry out monkey fMRI at Brown University and to compare brain circuits for remembering temporally ordered visual events in monkeys and humans using fMRI.

NINDS F32 NS080593 Desrochers (PI) 2013-15

Investigation of the control and monitoring of task sequences

The goal of this study is to investigate the human neural systems that support the hierarchical control of task sequences using fMRI.

MENTEE FUNDING AND AWARDS:

Interactionist Cognitive Neuroscience T32 to Hannah Doyle 2022-23
Carney Institute for Brain Science Reproducible Paper Prize to Janet Chang, and 2022
University Library Prize for Innovation in Research Rigor, Transparency & Reproducibility
NIMH Ruth L. Kirschstein National Research Service Award (NRSA) to Dr. Katherine Conen 2022-24
NSF GRFP Honorable Mention to Hannah Doyle 2022
Undergraduate Teaching and Research Fellowship to Kyoko Leaman 2022
Aarit Ahuja's Society for Neuroscience abstract selected for press release (<30 out of 9,000+) 2021
Undergraduate Teaching and Research Fellowship to Matthew Salomon 2021
Undergraduate Teaching and Research Fellowship to Janet Chang 2021
Undergraduate Teaching and Research Fellowship to Jay Vankawala 2020
NSF GRFP to Juliana Trach (pre-doctoral program enrollment) 2020-23
Interactionist Cognitive Neuroscience Training Grant to Aarit Ahuja 2019-20
Hyundai Idea Incubation Grant to Aarit Ahuja 2019
SACNAS The National Diversity in STEM Conference Travel Award to Nadira Yusif Rodriguez 2019
BioMed Postdoctoral Travel Award, Brown University to Dr. Theresa McKim 2019
Undergraduate Teaching and Research Fellowship to Kristina Lowndes 2019
Undergraduate Teaching and Research Fellowship to Vivian Lu 2019
NIDA Ruth L. Kirschstein National Research Service Award (NRSA) to Dr. Theresa McKim 2018-21
Connors Postdoctoral Fellowship to Dr. Debaleena Basu 2018-19
Center for Vision Research Fellowship to Dr. Debaleena Basu 2018
Carolina Neurostimulation Conference Travel Award to Dr. Theresa McKim 2018
Undergraduate Teaching and Research Fellowship to Gabriela Batista 2018
Undergraduate Teaching and Research Fellowship to Meghan Hershkowitz 2018
Summer Program in Neuroscience Excellence and Success (SPINES) Fellowship 2017, 19
Connors Postdoctoral Fellowship to Dr. Theresa McKim 2017
UNM Clinical Neurostimulation Conference Travel Award to Dr. Theresa McKim 2017
Undergraduate Teaching and Research Fellowship to Juliana Trach 2017
Undergraduate Teaching and Research Fellowship to Sarah Master 2016

EARLY CAREER AWARDS:

Eye Movement Gordon Conference Young Investigator Travel Fellowship 2011
Friends of the McGovern Institute Graduate Student Fellow 2008-09
National Defense Science and Engineering Graduate (NDSEG) Fellowship 2002-2005
National Science Foundation Graduate Research Fellowship Honorable Mention 2002
University Honors Scholar, New York University 1996-2000
National Merit Scholar 1996

SERVICE AND OUTREACH

UNIVERSITY SERVICE:

Brown University Service and Outreach Involvement

NIH Postbaccalaureate Research Education Program	Mentor	2021-present
Neuroscience Graduate Program Student Retreat	Mentor and Speaker	2019
Undergraduate Lab Tours/Open House	Host Lab	2019
Young Scholar's Conference	Faculty Participant	2016, 17, 18
CareerLAB Job Market Panel	Panelist	2018
Workshop for Style and Self-Editing in the Sciences	Workshop Leader	2018
CareerLAB Panel	Panelist	2017
Women in Science and Engineering (WiSE) Panel	Panelist	2017
Biology Undergraduate Open House	Host Lab	2017
Postdocs in Brain Science Interactive Grant Workshop	Panelist	2016
Graduate WiSE "Women in STEM" Panel	Panelist	2016

Brown University Commitments

Neuroscience Graduate Program Seminar Committee	Committee Member	2022-present
Brown's Task Force on Doctoral Education	Committee Member	2021-present
Neuroscience Graduate Program Steering Committee	Committee Member	2020-present
Carney Human Testing Space (HuTS) Committee	Committee Member	2019-present
Dept. of Neuroscience Departmental Vision Committee	Committee Member	2019
Dept. of Neuroscience Teaching Evaluation Committee	Committee Member	2019
Institutional Review Board (IRB)	Board Member	2018-present
Brown Inst. for Brain Sci. Subcommittee on Jr. Fac. Dev.	Committee Member	2017
MRI Research Facility Safety, Education, and Training	Committee Member	2017-present
Scientific Advisory for Brain Stimulation Facility (BSF)	Committee Member	2016-present

ACADEMIC SERVICE:

Editorial Board Member

Journal of Neuroscience	Associate Editor	2021-present
Journal of Cognitive Neuroscience	Consulting Editor	2020-present

Conference Program Committees

Collaborative Research in Computational Neuroscience (CRCNS)	Program Committee Member	2017
Cognitive Computational Neuroscience Conference	*Ad hoc* Reviewer	2017

Grant Review

NIH NIMH K99/R00 Special Emphasis Review Panel	Reviewer	2022
NSF Grant Review	Panelist	2018-21
NIH Cognition and Perception (CP)	*Ad hoc* Reviewer	2020
NIH Early Career Reviewer Program	*accepted*	2019
NSF Division of Perception, Action & Cognition (BCS)	*Ad hoc* Reviewer	2018, 19
University of Leuven, Belgium, Research Grant	*Ad hoc* Reviewer	2019
Flanders Research Foundation Grant, Belgium	*Ad hoc* Reviewer	2018
National Defense Science and Engineering Graduate Fellowships	Panelist	2015

External PhD thesis examiner

Jorja Shires, Berryhill Lab, University of Nevada, Reno	present
Matthew Boehm, NIDA, NIH	present
Kirsten Zimen, Manning Lab, Dartmouth	2022
Kevin Harstein, Tse Lab, Dartmouth	2019

Michael Romano, Han Lab, Boston University 2019

Ad hoc scientific journal review: *Behavioral Neuroscience, Cerebral Cortex, Cognitive Computational Neuroscience Conference, Cortex, Developmental Psychology, eLife, Human Brain Mapping, J Cognitive Neuroscience, J Exp Psychol: Learning, Memory, and Cognition, J Neurophysiology, J Neuroscience, Nature, Nature Human Behavior, Nature Neuroscience, Neurobiology of Learning and Memory, Neuron, NeuroImage, Neuropsychologia, Neuroscience, PLOS Biology, Science, Scientific Reports,* and *Topics in Cognitive Science*

SYMPOSIA and CONFERENCES ORGANIZED / CHAIRED:

Neurobiology of Cognition Gordon Conference — Conference Vice-Chair — 2022-24
Neurobiology of Cognition Gordon Conference — Session Chair — 2022

Attention EPSCoR Women in Neuroscience Conference — Co-Organizer — 2018-20
Yearly workshop focusing on skills. Chair of multiple sessions.
Brown, Montana State, and Nevada at Reno (2020 cancelled due to COVID-19)

Conference on Cognitive Computational Neuroscience — Session Co-Chair — 2018
Session on Cross-Species Collaboration, Philadelphia, PA

COMMUNITY OUTREACH:

School Grade 7 outreach — Human brain activity leader — 2022

School Grade 4 outreach — Human brain activity leader — 2022

Brown Brain Fair, Education & Demonstration for Public — Demonstration Leader — 2017-19
(cancelled due to COVID-19 2020-21)

Gordon School Grade 1 outreach — Human brain activity leader — 2017, 19

MEDIA-RELATED SCIENCE COMMUNICATION:

Video Interview as an expert on Transcranial Magnetic Stimulation (TMS) 2021
Leadership Alliance “Skills and Techniques” with the Carney Institute, and
Open Education sponsored by US-Canada Regional Committee at IBRO,
In collaboration with Brown Digital Learning and Design

Interviewed and Lab featured in Brown University Biomedical videos 2020
“Empowered to Heal” and “Dean’s Report”

Quoted as an expert Scientist in Gizmodo 2020
“What's the Best Human Brain Alternative for Hungry Zombies?”

Quoted as an expert Scientist in Arkansas Democrat Gazette 2019
“Practically Active: Forming a healthier habit is a matter of training your brain”

Quoted and Lab featured in Brown Alumni Magazine 2018
“On the Neural Frontier”

Podcast Interview: “Voices of Neuroscience” 2017

Radio guest expert Scientist, NPR, Regina Brett Show, WKSU, Ohio 2012

TEACHING EXPERIENCE

University Course Teaching

Brown University Course Instructor

NEUR 2050: *Advanced Systems Neuroscience* 2017-present

Core curriculum class for first year Neuroscience Graduate Program students
Student feedback: (scale: 5=high, 1=low)
2022: sabbatical
2021: course effectiveness=4.50, instructor mean=4.79
2020: course effectiveness=4.46, instructor mean=4.73
2019: course effectiveness=4.20, instructor mean=4.42
2018, 2017: course evaluations reframed and rescaled across the university

Brown University Guest Lectures

CLPS 2001 Graduate Core Class, "Sequence Learning" 2021
CLPS 0950 Introduction to Programming, "Coding in Context" 2021
Nature of Interpretation: Information or Abstraction, VISA Winter Session Course 2020
NEUR 2060: *Cognitive Neuroscience* 2017

High School Teaching

Merrimack High School, Merrimack, NH 2000-01

9th grade Physical Science, 10th grade Biology, 12th grade Anatomy and Physiology

Manhattan Comprehensive Night and Day High School, New York, NY 2000

Student teacher, Biology for mostly non-native English speakers
Coordinated textbook donation (students previously working without a book)

MENTORING EXPERIENCE

Brown University: Desrochers Lab Mentees

* Under-represented minority in STEM (Native American, Hispanic or African American)
BLUE represents current position

Post-doctoral Associates:

Nadira Yusif Rodriguez* 2023-present
Andrew Westbrook, K99 Co-Sponsor with Dr. Michael Frank 2021-present
Katherine Conen 2020-present
Theresa McKim, Researcher TU Dresden, Volition & Cognitive Control 2017-2021
Debaleena Basu 2018-20

Graduate students:

Hannah Doyle (Neuroscience) 2021-present
Aarit Ahuja (Neuroscience), Co-supervised with Dr. David Sheinberg 2018-2022
Nadira Yusif Rodriguez* (Neuroscience) 2016-2022

Research Assistants:

Xavier Lee (undergraduate) 2023-present
Sebastian Nunez* (Brown-NIH PREP program) 2021-present
Nicholas Cardin 2020-21
Matthew Maestri (lab manager) 2016-present

Undergraduate students:

Samantha Buyungo* (Neuroscience)	2023-present
Rolake Feyisetan* (Neuroscience)	2022-present
Claire Kim (Neuroscience)	2022-present
Joceline Rodriguez Monteiro* (RI-INBRE SURF program), URI Special Fellow	2022
Kyoko Leaman (Neuroscience)	2021-present
Michael Lahiff (Neuroscience)	2021-2022
Janet Chang (Cognitive, Linguistic, and Psychological Sciences), Honors Thesis Awarded *two* Senior Thesis Prizes for Innovation in Research Rigor, Transparency & Reproducibility, post-bac, Mt. Sinai	2021-2022
Matthew Salomon (Neuroscience)	2020-2021
Christine Schremp (Neuroscience)	2020
Jay Vankawala (Neuroscience), Honors Thesis, medical student, UCLA	2019-21
Kristina Lowndes (Neuroscience), Honors Thesis	2019-20
Keran Yang (Wheaton College), PhD Candidate, Wash U St. Louis	2019
Vivian Lu (Neuroscience), Honors Thesis, PhD Candidate, UC Berkeley	2018-20
Gabriela Batista* (Neuroscience)	2018
Meghan Hershkowitz (Neuroscience), medical student, U of Washington	2018
Jessica Perreault (NSF EPSCoR summer MSU exchange)	2018
Rebecca Boylan (NSF EPSCoR summer MSU exchange)	2018
Eojin Choi (Neuroscience), medical student, Johns Hopkins	2017-18
Victoria Flagg (Neuroscience)	2017-18
Juliana Trach (Cognitive, Linguistic, and Psychological Sciences), Awarded Whalen Award Senior Thesis Prize, PhD Candidate, Yale	2015-18
Aja Evans* (Leadership Alliance Student), Interactive documentary producer	2015
Sara Palasits* (Leadership Alliance Student)	2015
Sarah Master (Cognitive, Linguistic, and Psychological Sciences), Honors Thesis, PhD Candidate, NYU	2014-17
Kathryn Graves* (Cognitive, Linguistic, and Psychological Sciences), Honors Thesis, PhD Candidate, Yale	2013-15

Brown University: Thesis Committee Mentees

Isabella Penido (Neuroscience)	2022-present
Danielle Silva (Neuroscience)	2017-present
Diana Burk (Neuroscience)	2019-20
Eunkyu Hwang (Cognitive, Linguistic, and Psychological Sciences)	2018-20

Brown University: Concentration (Major) Undergraduate Mentees

16 *Current Advisees:* Beckerle, John; Belay, Ruth; Buyungo, Samantha; Erdemir, Guzide Ayse; Kemball-Cook, William; Khan, Shazain; Kim, Claire; Park, Hannah; Raju, Srikrishnan; Regalia, Camilla; Vulakh, Gabriella

14 *Previous Advisees* (graduated)

PROFESSIONAL MEMBERSHIPS

Cognitive Neuroscience Society	2012-present
Society for Neuroscience	2006-present
Women in Control, Women in Cognitive Science, 500 Women in Science, ALBA Network	2016-present
Founding executive member Postdocs in Brain Sciences (PIBS) at Brown	2014-16
Sigma Xi	2011
Phi Beta Kappa	1999

NYU Alumnae Scholar's Circle, 1997; Baird Scholar's Group, 1996

PROFESSIONAL DEVELOPMENT

Teaching Advancement Courses and Workshops

Developing an Inclusive Learning Environment Workshop, Brown University 2021
Anchor Program for resilient course design (4 days), Brown University 2020

Mentoring Workshops

NRMN Unconscious Bias and Identity Course 2021
Culturally Aware Mentoring (NRMN/CIMER) Workshop, Brown University 2021
Understanding and Addressing the Impact of Anti-Blackness, Brown University 2021
Inclusive Mentoring Workshop, University of Rhode Island 2020
Diversity and Inclusion in STEM Workshop, Brown University 2020
National Research Mentoring Network (NRMN) Faculty Mentor Training, Brown University 2018
How to Have Difficult Mentoring Conversations Workshop, Brown University 2016

Grant Writing Workshops

Planning and Writing Successful Grant Proposals, Brown University 2020
Convey Your Vision: Crafting Education & Assessment Plans for NSF CAREER, Brown University 2020
NSF CAREER Award Workshop, Brown University 2017
Write Winning Grant Proposals Workshop, Brown University 2017

RESEARCH COMMUNICATIONS

Invited seminars: International

EPFL, Swiss School on Neurophysiology for Neural and Biomedical Engineering, 2015
Zermatt, Switzerland (Plenary Speaker)

Invited seminars: National

University of Pennsylvania, Mind Center for Outreach, Research and Education (MindCORE) 2022
Nathan S. Kline Institute for Psychiatric Research (NKI), Center for Biomedical Imaging and Neuromodulation (C-BIN) Works in Progress Seminar 2022
Washington University, St. Louis, Cognitive, Computational, and Systems Neuroscience (CCSN) Pathway Annual Student Invited Speaker 2022
University of Rochester, Department of Brain and Cognitive Sciences Seminar Series 2021
Roger Williams University, Psychology Colloquium 2021
University of Minnesota, Center for Magnetic Resonance Research 2019
University of Connecticut, Brain Imaging Research Center Seminar Series 2019
University of Texas, Dallas, Dept. Behavioral and Brain Sciences 2018
Dartmouth College, Department of Psychological Brain Sciences 2018
McLean Hospital, Center for Depression, Anxiety and Stress Research 2017
Princeton University, Neuroscience Institute lunch Seminar Series 2017
Duke University, Neurobiology Seminar Series 2016
U.C. Berkeley, Department of Psychology Colloquium 2015
Harvard Visual Attention Lab Seminar Series 2010
MIT McGovern Institute for Brain Research Retreat 2008

Invited seminars: Internal (Brown University)

Neuroscience Department Retreat 2016
Neuroscience Graduate Program Seminar Series 2015
Neuroscience Department Retreat 2016
Alpert Medical School, Neurology Research Night 2015

International Conferences

Brain and Cognition Workshop, Indian Institute of Science, Bangalore, India (Invited speaker) 2018
Control Processes Conference, Amsterdam, Netherlands (Invited short talk) 2017

National Conferences

Gordon Research Conference, Neurobiology of Cognition, Newry, ME (Discussion Leader)	2022
Control Processes Conference, Providence, RI (Invited Data Blitz)	2019
Gordon Research Conference, Neurobiology of Cognition, Newry, ME (Invited Short Talk)	2018
Society for Neuroscience, San Diego, CA (Poster)	2016
Gordon Research Conference, Neurobiology of Cognition, Newry, ME (Poster)	2016
Society for Neuroscience, Chicago, IL (Poster)	2015
Cognitive Neuroscience Society, San Francisco, CA	2015
Society for Neuroscience, Washington, DC (Poster)	2014
Cognitive Neuroscience Society, Boston, MA (Poster)	2014
Computational and Systems Neuroscience (Cosyne), Salt Lake City, UT (Poster)	2014
Society for Neuroscience, San Diego, CA (Poster)	2013
Cognitive Neuroscience Society, San Francisco, CA (Poster)	2013
Gordon Research Conference, Eye Movements, ME (Invited Young Investigator Talk)	2011

Conferences Attended Without Presenting

Cognitive Neuroscience Society, Virtual	2020
Society for Neuroscience, Chicago, IL	2019
Society for Neuroscience, San Diego, CA	2018
Cognitive Neuroscience Society, Boston, MA	2018
Society for Neuroscience, Washington, DC	2017
Cognitive Computational Neuroscience, New York, NY	2017
Control Processes Conference, San Diego, CA	2016
Federation of European Neuroscience Societies, Milan, Italy	2014

PERSONAL INTERESTS

My motivation to study sequences and the neural bases of behaviors in general comes from a lifetime love of the natural world and studying complex movement. I have fond memories of playing in the forest and observing the creatures there as a child growing up in Massachusetts and New Hampshire along with watching every nature show I could. I studied dance for many years as a child until high school, when I began studying *American Shaolin Kempo Karate*, which I still continue, having attained the master rank of *go-dan* (5^{th} degree black belt). I enjoy rock climbing and have basic conversational skills in Spanish and Italian. I am an educator and mentor at heart who is passionately devoted to increasing diversity in science and overcoming the systemic bias that can exist.