

# Angela Radulescu

email: [angela.radulescu@mssm.edu](mailto:angela.radulescu@mssm.edu)

## Academic Positions

- 2022 – **Assistant Professor**  
Departments of Psychiatry and Neuroscience, Icahn School of Medicine at Mt. Sinai (ISMMS)  
Center for Computational Psychiatry
- 2020 – 2022 **Faculty Fellow/Assistant Professor**  
Center for Data Science, New York University

## Education

- 2014 – 2020 Ph.D. in Cognitive Psychology and Neuroscience  
**Princeton University**  
Advisers: Yael Niv, Nathaniel Daw
- 2007 – 2011 B.A. in Neuroscience and Behavior, Economics  
**Columbia University**

## Awards & Honors

- 2020 Schmidt Science Fellowship Finalist
- 2017 Travel Award, Reinforcement Learning and Decision Making (RLDM)
- 2017 Cognitive Science Graduate Fellowship, Princeton University
- 2017 Re-entry Fellowship, Prison Teaching Initiative at Princeton University
- 2015 Charlotte and Morris Tanenbaum \*52 Fellowship, Princeton University
- 2014 Travel Award, Computational and Systems Neuroscience (Cosyne)
- 2013 Travel Award, Mechanisms of Motivation, Cognition and Aging Interactions
- 2011 Dean's List, Columbia University
- 2010 Summer Undergraduate Research Fellowship, Columbia University
- 2007 John Jay Scholar, Columbia University

## Funding

- 2025 – BD<sup>2</sup> Foundation Discovery Research Grant - Intracranial Neurophenotyping of State Switches in Bipolar Disorder (Co-PI)
- 2020 – 2023 Facebook Reality Labs, Cognitive Science Consortium Grant - Toward Rich User-World Predictive Interaction Models to Enable Human-Machine Collaboration (MPI)

Peer-Reviewed Publications [\*: equal contribution, #: mentee]

- 2026 **Radulescu A\***, van Opheusden B\*, Callaway F, Griffiths TL, Hillis JM. A resource-rational account of human eye movements during immersive visual search. *Open Mind*, in press.
- 2025 Trach JE#, deBettencourt MT, **Radulescu A**, McDougle SD. Rewards transiently and automatically enhance sustained attention. *Journal of Experimental Psychology: General*.
- 2024 Zhu J, **Radulescu A**, Bennett D. Emotional overshadowing: pleasant and unpleasant cues overshadow neutral cues in human associative learning. *Affective Science*, 5(3), 222-231.
- Li J#, **Radulescu A**. Dynamic self-efficacy as a computational mechanism of mania emergence. *Proceedings of the 46th Annual Conference of the Cognitive Science Society*.
- 2023 Bennett D\*, **Radulescu A\***, Zorowitz S, Falso V, Niv Y. Affect-congruent attention modulates generalized reward expectations. *PLOS Computational Biology*, 19(12), e1011707.
- Wise T, Emery K#, & **Radulescu A**. Naturalistic reinforcement learning. *Trends in Cognitive Sciences*, 28(2), 144-158.
- 2022 **Radulescu A**, Vong WK, Gureckis TM. Name that state: How language affects human reinforcement learning. *Proceedings of the 44th Annual Conference of the Cognitive Science Society*.
- 2021 **Radulescu A**, Shin Y, Niv Y. Human Representation Learning. *Annual Review of Neuroscience*, 44.
- 2020 Daniel R, **Radulescu A**, Niv Y. Multidimensional probabilistic learning reveals impaired attentional control during reinforcement learning in older adults. *Journal of Neuroscience*, 40(5), 1084-1096.
- 2019 **Radulescu A**, Niv Y. State representation in mental illness. *Current opinion in neurobiology*, 55: 160-166.
- Radulescu A**, Niv Y, Ballard IC. Holistic reinforcement learning: the role of structure and attention. *Trends in Cognitive Sciences*, 23(4), 278-292.
- 2017 Leong YC\*, **Radulescu A\***, Daniel R, DeWoskin V, Niv Y. Dynamic interaction between reinforcement learning and attention in multidimensional environments. *Neuron*. 93(2), 451-463.
- 2016 **Radulescu A**, Daniel R, Niv Y. The effects of aging on the interaction between reinforcement learning and attention. *Psychology and Aging*, 31(7), 747.
- Arkadir D, **Radulescu A**, Lubarr N, Raymond D, Bressman SB, Mazzoni P, Niv Y. *DYT1* dystonia increases risk taking in human. *eLife*, 5, e14155.
- 2015 Niv Y, Daniel R, Geana A, Gershman SJ, Leong Y, **Radulescu A**, Wilson RC. Reinforcement learning in multidimensional environments relies on attention mechanisms. *Journal of Neuroscience*, 35, 8145-8157.
- 2014 Gershman SJ, **Radulescu A**, Norman KA, Niv Y. Statistical computations underlying the dynamics of memory updating. *PLoS Computational Biology*, 10, e1003939.

## Peer-Reviewed Extended Abstracts [\*: equal contribution, #: mentee]

- 2025 Maher C#, Saez I, **Radulescu A**. Decoding latent human attention across cognitive models. *Reinforcement Learning and Decision-Making (RLDM)*, Dublin, Ireland.
- Maher C#, Qasim S, Nunez L, Saez I\*, **Radulescu A\***. Intracranial recordings uncover neuronal dynamics of multidimensional reinforcement learning. *Computational and Systems Neuroscience (Cosyne)*, Montreal, Canada.
- Li J#, MK Ho\*, **Radulescu A\***. Act-Now vs. Look-Ahead: a dual  $\beta$  framework of self-efficacy in reinforcement learning. *Reinforcement Learning and Decision-Making (RLDM)*, Dublin, Ireland.
- 2024 Maher C#, Qasim S, Nunez Martinez L, Saez I\*, **Radulescu A\***. Intracranial recordings reveal neural encoding of attention-modulated reinforcement learning in humans. *Computational Cognitive Neuroscience (CCN)*, Boston, MA. [paper selected for a talk]
- Li J#, **Radulescu A**. A link between self-efficacy and optimistic overgeneralization. *Computational Cognitive Neuroscience (CCN)*, Boston, MA.
- Eckstein M, Miller KJ, **Radulescu A**. A Generative Grammar for Automatically Designing Experiments on Human Learning and Decision Making. *Computational Cognitive Neuroscience (CCN)*, Boston, MA.
- 2020 **Radulescu A\***, van Opheusden B\*, Callaway F, Griffiths TL, Hillis JM. From heuristic to optimal models in naturalistic visual search. *Bridging AI and Cognitive Science workshop (BAICS), International Conference for Learning Representations (ICLR)*, Addis Ababa, Ethiopia (online). [paper selected for a talk, 4/63 acceptance rate]
- 2019 **Radulescu A**, Niv Y, Daw ND. A particle filtering account of selective attention during learning. *Computational Cognitive Neuroscience (CCN)*, Berlin, Germany.
- Davidson G#, **Radulescu A**, Niv Y. Contrasting the effects of prospective attention and retrospective decay in representation learning. *Reinforcement Learning and Decision Making (RLDM)*, Montreal, Canada.
- 2018 Davidson G#, **Radulescu A**, Niv Y. Passive forgetting or selective attention? Comparing two models of learning in multidimensional environments. *Computational Cognitive Neuroscience (CCN)*, Philadelphia, PA.
- 2017 **Radulescu A**, Leong YC, Niv Y. Reward sensitive attention dynamics during human reinforcement learning. *Computational Cognitive Neuroscience (CCN)*, New York, NY.
- Radulescu A**, Leong YC, Niv Y. Reward sensitive attention dynamics during human reinforcement learning. *Reinforcement Learning and Decision Making (RLDM)*, Ann Arbor, MI. [paper selected for a talk]
- Radulescu A**, Leong YC, Niv Y. Reward sensitive attention dynamics during human reinforcement learning. *Vision Sciences Society (VSS)*, St. Pete Beach, FL. [paper selected for a talk]
- Hitchcock P, **Radulescu A**, Niv Y, Sims C. Building on solid ground: establishing the stability of computational modeling parameters. In Hitchcock, P. (Chair), *Introducing Computational Clinical Science: New Techniques to Improve Methods, Theory, Diagnosis, and Prediction*. Symposium to be

presented at 51<sup>st</sup> Annual Convention for the Association for Behavioral and Cognitive Therapies, San Diego, California.

## Preprints [\*: equal contribution]

- 2024 Chen Y, **Radulescu A**, Wu HZ. Unveiling the latent dynamics in social cognition with multi-agent inverse reinforcement learning. *bioRxiv*, 2024-10.  
<https://www.biorxiv.org/content/10.1101/2024.10.09.617461v1.abstract>
- 2020 **Radulescu A**, Holmes K, Niv Y. On the convergent validity of risk sensitivity measures.  
<https://doi.org/10.31234/osf.io/qdhx4>

## Commentaries

- 2021 **Radulescu A**. Can data include personal narrative? *NYU Center for Data Science blog*. [[link](#)]
- 2014 Niv Y, Langdon AJ, **Radulescu A**. A free-choice premium in the basal ganglia. *Trends in Cognitive Sciences*, 19(1), 4-5.

## Conference Poster Presentations (*selected*) [\*: equal contribution, #: mentee]

- 2025 Beltrán JM#, Mehta MM, Butler G, **Radulescu A**, Morris LS. Investigating the neural encoding of reward prediction errors and anhedonia using 7-Tesla MRI. *Society for Biological Psychiatry*, Toronto, Canada.
- 2025 Li J#, **Radulescu A**. Dynamic self-efficacy as a computational mechanism for positive overgeneralization. *Society for Biological Psychiatry*, Toronto, Canada.
- 2024 Xie M#, Gu X, **Radulescu A**. Effects of attention and learning on mood dynamics. *Computational Psychiatry Conference*, Minneapolis, MN.
- 2023 Beltrán JM#, Mehta MM, Butler G, **Radulescu A**, Morris LS. Exploring the neural correlates of reward and punishment learning in depression using 7-Tesla MRI. *Computational Psychiatry Conference*, Dublin, Ireland.
- Li J#, **Radulescu A**. Dynamic self-efficacy updating as a computational mechanism of mania emergence. *Computational Psychiatry Conference*, Dublin, Ireland.
- 2022 Maher C#, Gu X, **Radulescu A**, Saez I. The neural basis of representation learning in the human prefrontal cortex. *Society for Neuroscience Annual Meeting*, San Diego, CA.
- 2018 **Radulescu A**, Niv Y. Separable attention processes constrain multidimensional reinforcement learning. *Society for Neuroscience Annual Meeting*, San Diego, CA.
- 2017 Bu J#, **Radulescu A**, Turk-Browne NB, Niv Y. Feature-based reward learning biases dimensional attention. *Vision Sciences Society (VSS)*, St. Pete Beach, FL.
- Radulescu A**, Leong YC, Niv Y. Reward-sensitive attention dynamics during human reinforcement learning. *Computational Cognitive Neuroscience*, New York, NY.

- 2016 **Radulescu A**, Allefeld C, Schuck N, Haynes JD, Niv Y. Studying value-guided decision making through model-based multivariate fMRI analysis. *Society for Neuroeconomics*, Berlin, Germany.
- 2015 **Radulescu A**, Niv Y. Learning state representations from experience. (2015). *Machine Learning Summer School*, Tübingen, Germany.
- 2014 Arkadir D, **Radulescu A**, Lubarr N, Raymond D, Bressman SB, Mazzoni P, Niv Y. A link between corticostriatal plasticity and risk taking in humans. *Computational and Systems Neuroscience (Cosyne)*, Salt Lake City, UT. [presenting author]
- 2012 **Radulescu A**, Niv Y. Age-related differences in learning to selectively attend. *Society for Neuroscience Annual Meeting*, New Orleans, LA.

### Invited Talks

- 2025 **Reinforcement Learning and Decision-Making (RLDM) Conference**
- 2024 **Columbia University Seminar on Cognitive and Behavioral Neuroscience**  
**SUNY Downstate Behavioral and Neural Science Seminar**
- 2023 **Max Planck UCL Center for Computational Psychiatry**  
**SfN Minisymposium: Generalization for Learning and Decision-Making**  
**NIA Workshop on Computational Approaches to Advance Aging and AD/ADRD Research**  
**Algorithms for Building and Structuring Internal Models, Park City Winter Conference**
- 2022 **NSF/Simons NeuroDataScience Workshop, University of California, Irvine**  
**Maps in Reinforcement Learning RLDM Conference Workshop**  
**NYU Center for Data Science, Women in Data Science Panel**  
**Dartmouth College Cognitive Brown Bag**  
**University of Chicago Department of Psychology Cognition Workshop**
- 2021 **RLDM Meeting, Max Planck Institute, Tübingen, Germany**  
**University of California, Berkeley Department of Psychology**  
**Department of Psychiatry, Icahn School of Medicine at Mt. Sinai**  
**Shenhav Lab, Cognitive, Linguistic & Psychological Sciences, Brown University**
- 2020 **Max Planck UCL Center for Computational Psychiatry**  
**Microsoft Research Seminar**  
**MILA, Neural-AI Reading Group**
- 2019 **New York University, Department of Psychology, ConCats Seminar**  
**Princeton Neuroscience Institute Retreat**  
**Rutgers University, Cognitive Science Graduate Seminar**  
**Tel Aviv University, Department of Psychology**
- 2018 **Manhattan Area Memory Meeting**

## Invited Workshops and Tutorials

2025	<b>School on Analytical Connectionism.</b> Bias in human reinforcement learning lecture
2024	<b>SRDNA Computational Modeling Workshop.</b> Reinforcement learning tutorial
2024	<b>Computational Psychiatry Conference.</b> Reinforcement learning tutorial
2021	<b>FLUX Computational Modelling Workshop.</b> Computational models of human gaze data tutorial
2021	<b>Mental Effort Workshop.</b> Computational models of human gaze data tutorial

## Teaching

2024 –	<b>New York Computational Psychiatry Workshop</b> – founding co-director
2023 –	<b>Modern Statistics for Modern Biology</b> , ISMMS – co-director
2022 –	<b>Fundamentals of Computational Psychiatry</b> , ISMMS – founding co-director
2022 –	<b>Selected Topics in Neuroscience</b> , ISMMS – co-director
2021	<b>Advanced Topics in Data Science</b> , New York University – co-lead instructor
2018	<b>Introduction to Cognitive Neuroscience</b> , Princeton University – assistant instructor
2015 – 2019	<b>Introduction to Psychology</b> , Princeton Prison Teaching Initiative – instructor, team lead
2017	<b>Introduction to Neuroscience</b> , Columbia University High School Programs – instructor
2015	<b>Developmental Psychology</b> , Princeton University – assistant instructor
2010	<b>Thinking and Decision Making</b> , Columbia University – teaching assistant

## Mentoring

2023 – 2025	Marjorie Xie (postdoctoral fellow, ISMMS)
2023 –	Jing Li (graduate student, neuroscience, ISMMS)
2022 –	Catherine Kim (research coordinator, ISMMS)
2022 –	Jackie Beltran (graduate student, neuroscience, ISMMS)
2022 – 2023	Itzel Martinez (MA student, neuroscience, ISMMS)
2021 –	Christina Maher (graduate student, neuroscience, ISMMS)
2021 – 2023	Kara Emery (postdoctoral fellow, NYU Center for Data Science)
2021	Sally Leung (NYU undergraduate independent research; MA student at Columbia)
2021	Praxal Patel (NYU Center for Data Science MA independent research)
2018	Guy Davidson (Princeton summer internship; graduate student at NYU Center for Data Science)
2017 – 2018	Julie Newman (Princeton undergraduate senior thesis; analyst at ClearView Healthcare)
2015 – 2017	Jennifer Bu (Princeton undergraduate senior thesis; medical student at UCSD)
2015	David Wang (Princeton summer internship; medical student at Stanford)

## Thesis committees

2025 –	Ross Kempner (ISMMS)
2023 –	Jackie Beltran (ISMMS)
2023 –	Alessandra Yu (ISMMS)
2023 –	Matthew Schafer (ISMMS)
2023 –	Qixiu Fu (ISMMS)
2023 –	Nathan Tyler-Hall (UNC Chapel Hill)
2023 –	Alexandra Fink (ISMMS)

2023 – Pushkala Jayaraman (ISMMS)

## Ad-hoc Reviewer

*ACM Symposium on Eye-tracking Research and Applications (ETRA)* | *Aging, Neuropsychology and Cognition* | *Biological Psychiatry* | *Cerebral Cortex* | *Cognition* | *Cognitive, Affective and Behavioral Neuroscience (CABN)* | *Collabra* | *Computational Cognitive Neuroscience (CCN)* | *Computational Systems Neuroscience (Cosyne)* | *Computational Psychiatry Conference (CPC)* | *Cognitive Science Society (CogSci)* | *Current Biology* | *Current Opinion in Behavioral Sciences* | *eLife* | *eNeuro* | *Journal of Mathematical Psychology* | *Journal of Neuroscience* | *Nature Communications* | *Nature Human Behavior* | *Neural Networks* | *Neurons, Behavior, Data Analysis, and Theory* | *NSF Division of Information and Intelligent Systems* | *PLoS Computational Biology* | *Psychonomic Bulletin & Review* | *Science* | *Scientific Reports*

## Service

2024 – **Icahn School of Medicine at Mt. Sinai (ISMMS)**, Curriculum Committee  
 2023 – **Computational Cognitive Neuroscience (CCN)**, Program Committee  
 2024 – 2025 **Computational Cognitive Neuroscience (CCN)**, DEI chair

## Summer Courses

2025 **Neuro4Pros**, Queen's University, Kingston, ON, Canada  
 2018 **Methods in Neuroscience at Dartmouth (MIND)**, Dartmouth University, Hanover, NH  
 2015 **Machine Learning Summer School (MLSS)**, MPI Tübingen, Germany

## Research Positions

2019 – 2020 Ph.D. intern, Facebook Reality Labs; manager: James Hillis  
 2011 – 2014 Lab manager, Princeton Neuroscience Institute; adviser: Yael Niv  
 2010 – 2011 Undergraduate research assistant, Columbia University; adviser: Jacqueline Gottlieb  
 2009 Undergraduate research assistant, Columbia University; adviser: Elke Weber