Vikram Gadagkar, PhD
Assistant Professor
Department of Neuroscience
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EDUCATION AND TRAINING:

2013-2020	Postdoc (Neuroscience)	Cornell University, USA Topic: Neural Mechanisms of Performance Evaluation in Singing Birds Adviser: Prof. Jesse H. Goldberg
2017	Summer Course	Methods in Computational Neuroscience, Marine Biological Laboratory, Woods Hole, MA, USA Course directors: Prof. Michale Fee & Prof. Mark Goldman
2006-2013	Ph.D. (Physics)	Cornell University, USA Thesis: Origin of the Inertial Anomaly in Solid Helium-4: Dislocation Dynamics versus Supersolidity Adviser: Prof. J. C. Seamus Davis
2002-2005	MS (Physics)	Indian Institute of Science, Bangalore, India (Graduated with highest GPA) Thesis: Ab Initio Restricted Hartree-Fock, High Pressure Raman, and Molecular Dynamics Studies on Carbon Nanotubes Adviser: Prof. Ajay K. Sood, FRS
1999-2002	B.Sc. (Physics, Chemistry, Mathematics)	St. Joseph's College, Bangalore University, India (First Class, 2 gold medals)

POSITIONS:

2020-present	Assistant Professor, Department of Neuroscience and the Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia University, USA
2017-present	NIH K99/R00 Pathway to Independence Fellow
2018-2020	Research Associate, Department of Neurobiology and Behavior, Cornell University, USA
2016-2020	Simons Collaboration on the Global Brain (SCGB) Postdoctoral Fellow
2013-2020	Visiting Scientist, Department of Physics, Cornell University, USA
2013-2018	Postdoctoral Associate, Department of Neurobiology and Behavior, Cornell University, USA
2006-2013	Graduate Research/Teaching Assistant, Department of Physics, Cornell University, USA
2005-2006	Graduate Research Assistant, Department of Physics, Indian Institute of Science, Bangalore, India
1999-2004	Kishore Vaigyanik Protsahan Yojana (KVPY) Fellow, Bangalore, India

AWARDS, FELLOWSHIPS, AND HONORS:

36. Sloan Research Fellowship	2025
35. Grossman-Kavli Scholar Award	2025
34. Klingenstein-Simons Fellowship Award in Neuroscience	2023
33. McKnight Scholar Award	2023
32. Konishi Neuroethology Research Award - International Society for Neuroethology	2023
31. NIH Director’s New Innovator Award – DP2	2022
30. Searle Scholar Award	2021

29. American Association for the Advancement of Science AAAS/Science Program for Excellence in Science 2019
28. Peter and Patricia Gruber International Research Award (Society for Neuroscience) 2018
27. K99/R00 Pathway to Independence Award (NIH/NINDS) 2017
26. Organization of Computational Neuroscience (OCNS) Award to attend the *Methods in Computational Neuroscience* course at the Marine Biological Laboratory at Woods Hole 2017
25. William Morton Wheeler Family Founders' Scholarship to attend the *Methods in Computational Neuroscience* course at the Marine Biological Laboratory at Woods Hole 2017
24. Simons Collaboration on the Global Brain (SCGB) Postdoctoral Fellowship 2016
23. Computational and Systems Neuroscience (COSYNE) Presenters Travel Award 2015
22. Douglas Fitchen Memorial Travel Award, Department of Physics, Cornell University 2011
21. International Conference in Low Temperature Physics (LT26) Travel Award 2011
20. Cornell University Graduate School Conference Award 2011
19. Cornell Graduate Fellowship, Department of Physics, Cornell University 2006
18. Junior Research Fellowship (JRF) in the National Eligibility Test (NET), Government of India, declined. 2004
17. Kumari L. A. Meera Award for the highest CGPA in MS (Physical Sciences), Indian Institute of Science, Bangalore 2002-2003
16. Rhodes Scholarship Finalist 2002
15. Sri B. K. Srinivasa Iyengar Memorial Gold Medal in Mathematics and Chemistry, Bangalore University, India 2002
14. Shikshana Shilpi Shri P. Mallikarjunappa Memorial Gold Medal in Physical Chemistry, Bangalore University, India 2002
13. A. N. Sridhara Prize for the best all-around student in St. Joseph's College, Bangalore University, India 2002
12. Srinivasa Masty Memorial Prize for Mathematics, St. Joseph's College, Bangalore University, India 2002
11. Phys. Sci. Assoc. Old Students' award for the most outstanding student, St. Joseph's College, Bangalore Univ., India 2002
10. Jaya Krishnan Prize for highest marks in all B.Sc. exams, St. Joseph's College, Bangalore University, India 2002
9. M. V. Jaganath Prize for highest marks in final B.Sc. exams, St. Joseph's College, Bangalore University, India 2002
8. Rev. Fr. Elias D'Souza S. J. Prize for Mathematics, St. Joseph's College, Bangalore University, India 2002
7. Prof. H. S. Srinivasa Rao Prize for highest marks in B.Sc. (PCM), St. Joseph's College, Bangalore University, India 2002
6. Certificate of Excellence in Lecture Competitions, St. Joseph's College, Bangalore University, India 2000
5. Awards in 9 science presentation contests and 14 science quizzes at the intercollegiate level in Bangalore, India 1999-2002
4. Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship, Govt. of India 1999-2004
3. Principal's Prize for highest marks in 1st year B.Sc. University Exam, St. Joseph's College, Bangalore Univ., India 2000
2. Special Prize for Academic Excellence in the All India Sec. School Exam of Central Board of Secondary Education 1997
1. Awarded the best all-around student in high school (KVIISc) 1997

PUBLICATIONS:

*Co-first authors
#Co-corresponding authors

21. Natural behavior is learned through dopamine-mediated reinforcement
    J. Kasdin*, A. Duffy*, N. Nadler, A. Raha, A. L. Fairhall, K. L. Stachenfeld and **Vikram Gadagkar**
    Nature (2025) https://doi.org/10.1038/s41586-025-08729-1
    This work has been featured in:
    Zuckerman Institute News
20. Dopamine for performance evaluation – Insights from songbirds
    Vikram Gadagkar
    The Handbook of Dopamine, In Press

19. Dopaminergic error signals retune to social feedback during courtship
    A. Roeser*, **Vikram Gadagkar***[#], A. Das, P. A. Puzerey, B. Kardon and J. H. Goldberg[#]
    Nature (Cover Article) 623, 375-380 (2023)
    This work has been featured in:
    Nature Neuroscience, *Zuckerman Institute News*, *Cornell Chronicle*, *Forbes*, *Science Daily*, *Neuroscience News*, *Earth.com*, *Nature World News*, *Phys.org*, *Mirage News*
18. Dopamine neurons evaluate natural fluctuations in performance quality
    A. Duffy, K. W. Latimer, J. H. Goldberg, A. L. Fairhall[#] and **Vikram Gadagkar**[#]
    Cell Reports 38, 110574 (2022)
    This work has been featured in:
    Simons Foundation News
17. Movement signaling in ventral pallidum and dopaminergic midbrain is gated by behavioral state in singing birds
    R. Chen, **Vikram Gadagkar**, A. C. Roeser, P. A. Puzerey and J. H. Goldberg
    Journal of Neurophysiology 125, 2219-2227 (2021)
16. How practice makes perfect: dopamine clues from a songbird
    Vikram Gadagkar
    Simons Foundation Newsletter (2017)
15. Dopamine Neurons Encode Performance Error in Singing Birds
    Vikram Gadagkar, P. A. Puzerey, R. Chen, E. Baird-Daniel, A. Farhang and J. H. Goldberg
    Science 354, 1278-1282 (2016)
    This work has been featured in:
    Science Magazine Perspective, Simons Foundation Newsletter, CornellCast Video, Cornell Chronicle, The Scientist Magazine, Voice of America, Vice Magazine, Science Daily, Cosmos Magazine, Real Clear Life, Science News, Medium, My Science, Cornell Research, Journal of Experimental Biology
14. A Variability-Generating Circuit Goes Awry in a Songbird Model of the FOXP2 Speech Disorder
    Vikram Gadagkar and J. H. Goldberg
    Neuron (Preview) 80, 1341-1344 (2013)
13. Generalized Rotational Susceptibility Studies of Solid ^{4}He
    Vikram Gadagkar, E. Pratt, B. Hunt, M. Yamashita, M. J. Graf, A. V. Balatsky, and J. C. Davis
    Journal of Low Temperature Physics 169, 180-196 (2012)
12. Interplay of Rotational, Relaxational, and Shear Dynamics of Solid ^{4}He
    E. Pratt*, B. Hunt*, **Vikram Gadagkar**, M. Yamashita, M. J. Graf, A. V. Balatsky, and J. C. Davis
    Science 332, 821-824 (2011)
    This work has been featured in:
    Nature News Blog, The Kavli Foundation, Los Alamos News, AAAS EurekAlert, Science Daily, Space Daily, Phys.org
11. Evidence for a Superglass State in Solid ^{4}He
    B. Hunt*, E. Pratt*, **Vikram Gadagkar**, M. Yamashita, A. V. Balatsky, and J. C. Davis
    Science 324, 632-636 (2009)
    This work has been featured in:
    Science Perspective, Cornell Chronicle, Journal Club for Condensed Matter Physics, Physics World, Physics Today, Questia, Nanowerk
10. Irreversible pressure-induced transformation of boron nitride nanotubes
    S. Saha, **Vikram Gadagkar**, P. K. Maiti, D. V. S. Muthu, D. Golberg, C. Tang, C. Zhi, Y. Bando, and A. K. Sood
    Journal of Nanoscience and Nanotechnology 7(6), 1810-1814 (2007)
9. Double-walled carbon nanotubes under hydrostatic pressure: Raman experiments and simulations
    Vikram Gadagkar, S. Saha, D. V. S. Muthu, P. K. Maiti, Y. Lansac, A. Jagota, A. Moravsky, R. O. Loutfy, and A. K. Sood
    Journal of Nanoscience and Nanotechnology 7(6), 1753-1759 (2007)

8. Collapse of double-walled carbon nanotube bundles under hydrostatic pressure
   Vikram Gadagkar, P. K. Maiti, Y. Lansac, A. Jagota, and A. K. Sood
   Physical Review B 73, 085402 (2006)
7. High pressure Raman spectroscopy of double-walled carbon nanotubes
   Vikram Gadagkar, S. Saha, D. V. S. Muthu, P. Ramesh, H. Shinohara, R. O. Loutfy, and A. K. Sood
   Proceedings of the 50th Department of Atomic Energy - Solid State Physics Symposium (2005)
6. Strains induced in carbon nanotubes due to the presence of ions: *ab-initio* restricted Hartree-Fock calculations
   S. Ghosh, **Vikram Gadagkar**, and A. K. Sood
   Chemical Physics Letters 406, 10-14 (2005)
5. Faster development does not lead to correlated evolution of greater pre-adult competitive ability in *Drosophila melanogaster*
   M. Shakarad, N. G. Prasad, K. Gokhale, **Vikram Gadagkar,** M. Rajamani, and A. Joshi.
   Biology Letters 1, 91-94 (2005)
4. Communal courtship (?) in the Yellow Wattled Lapwing
   Vikram Gadagkar, L. Shyamal, N. V. Arakeri, M. Ramakrishnan, A. Kumar, and G. A. Uday Raghavan
   Newsletter for Birdwatchers 39(4), 66-67 (1999)
3. Little Grebe or Dabchick - a new sighting in the Indian Institute of Science campus, Bangalore
   Vikram Gadagkar, L. Shyamal, N. V. Arakeri, M. Ramakrishnan, and A. Lahiri
   Newsletter for Birdwatchers 39(4), 67 (1999)
2. Blue-throated Flycatcher, Indian Great Reed Warbler, Common Rosefinch and Lesser Golden-backed Woodpecker - four new species in the Indian Institute of Science campus, Bangalore
   Vikram Gadagkar, L. Shyamal, M. Ramakrishnan, N. V. Arakeri, S. Venkatesh, A. Lahiri, and A. Hariharan
   Newsletter for Birdwatchers 35(4), 69-70 (1995)
1. White-Browed Bulbul - A new sighting in the Indian Institute of Science campus, Bangalore
   Vikram Gadagkar, N. V. Arakeri, and M. Ramakrishnan
   Newsletter for Birdwatchers 34(4), 96 (1994)

RESEARCH SUPPORT:

10.	Sloan Research Fellowship	2025-present
9.	Grossman-Kavli Scholar Award	2025-present
8.	Klingenstein-Simons Fellowship Award in Neuroscience	2023-present
7.	McKnight Scholar Award	2023-present
6.	Konishi Neuroethology Research Award – International Society for Neuroethology	2023-2024
5.	NIH Director's New Innovator Award – DP2	2022-present
4.	Searle Scholars Award	2021-2024
3.	Columbia University/Zuckerman Institute Startup Funds	2020-present
2.	K99/R00 (NIH/NINDS) Pathway to Independence Award	2017-2024
1.	Simons Collaboration on the Global Brain (SCGB) Postdoctoral Fellowship	2016-2017

INVITED TALKS:

70.	*Upcoming: Natural Behavior is Learned Through Dopamine-Mediated Reinforcement* City University of New York (CUNY), USA.	2025
69.	*Natural Behavior is Learned Through Dopamine-Mediated Reinforcement* Cold Spring Harbor Laboratory, USA.	2024
68.	*Natural Behavior is Learned Through Dopamine-Mediated Reinforcement* Swedish Basal Ganglia Society (SWEBAGS) Webinar	2024
67.	*Natural Behavior is Learned Through Dopamine-Mediated Reinforcement* Neurobiology Seminar Series, Duke University, Durham, USA.	2024

66. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2024
Ringberg Workshop on Birds and Wires, Max Planck Institute for Biological Intelligence, Germany.
65. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2024
The Rockefeller University, New York, USA.
64. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2024
Searle Scholars Program Annual Meeting, Chicago, USA
63. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2024
Labroots 12th Annual Neuroscience Event/NIH BRAIN Initiative
62. *Does Dopamine Guide Vocal Learning?* 2023
Faculty Talk, Zuckerman Institute, Columbia University, New York, USA.
61. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2023
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
60. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2023
Max Planck Institute of Animal Behavior and University of Konstanz, Konstanz, Germany.
59. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2023
New York State Psychiatric Institute, Columbia University Irving Medical Center, New York, USA.
58. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2023
University of Washington (supported by the HHMI Gilliam Fellowship), Seattle, USA.
57. *Dopamine neurons change their tuning according to courtship context in singing birds* 2023
University Seminar for the Integrative Study of Animal Behavior, Columbia University, New York, USA.
56. *Does Practice Make Perfect? How the Brain Learns Language in a Social World* 2022
Brain Insight Lecture, Stavros Niarchos Foundation & Zuckerman Institute, Columbia University, New York, USA.
55. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2022
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
54. *Dopaminergic Reward and Performance Error Signals are Gated During Courtship* 2022
Dopamine Meeting, Montreal, Canada.
53. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2022
University of California, San Francisco, San Francisco, USA.
52. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2022
Learning and Reasoning and Carbon and Silicon Seminar Series, Stanford University, Stanford, USA.
51. *Dopamine Neurons Evaluate Natural Fluctuations in Performance Quality* 2022
Gordon Research Conference – Basal Ganglia, Ventura, California, USA.
50. *Dopamine Neurons Evaluate Natural Fluctuations in Performance Quality* 2022
Virtual Songbird Satellite Meeting, USA.
49. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021
Princeton Neuroscience Institute, Princeton University, Princeton, USA.
48. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021
Simons-Emory International Consortium on Motor Control, Columbia University, New York, USA.
47. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
46. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021
Kleinfeld Group, University of California, San Diego, USA.
45. *Dopamine neurons evaluate natural fluctuations in performance quality* 2021
ViDA 2021: Virtual Dopamine Conference
44. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2020
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.

43. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
42. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Department of Physiology, Northwestern University, Chicago, USA.
41. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Department of Integrative Biology, University of Wisconsin-Madison, Madison, USA.
40. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Zuckerman Mind Brain Behavior Institute, Columbia University, New York, USA.
39. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Department of Psychology, University of Chicago, Chicago, USA.
38. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Department of Biological Sciences and the Neuroscience Institute, Carnegie Mellon University, Pittsburgh, USA.
37. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019
Department of Neuroscience, Yale University, New Haven, USA.
36. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2018
School of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign, USA.
35. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2018
Department of Psychology, Hunter College, The City University of New York, New York, USA.
34. *Dopamine Neurons Encode Performance Error in Singing Birds* 2017
Zuckerman Institute, Columbia University, New York, USA.
33. *Dopamine Neurons Encode Performance Quality Relative to Recent Practice in Singing Birds* 2017
Simons Collaboration on the Global Brain (SCGB) NY-Area Postdoc Meeting, New York, USA.
32. *Dopamine Neurons Encode Performance Error in Singing Birds* 2017
SPiNES: Seminars from Post-docs in Neuroscience: Extramural Series, New York University, New York, USA.
31. *Dopamine Neurons Encode Performance Error in Singing Birds* 2016
Birdsong 6 – Integrating neural, social, and evolutionary influences on communication, San Diego, USA.
30. *Dopamine Neurons Encode Performance Error in Singing Birds* 2016
University of Washington, Seattle, USA.
29. *Dopamine Neurons Encode Performance Error in Singing Birds* 2016
Simons Collaboration on the Global Brain (SCGB) Annual Meeting, New York, USA.
28. *How Does Practice Make You Perfect? Clues from a Songbird* 2016
Cornell Undergraduate Society for Neuroscience (CUSN), Cornell University, Ithaca, USA.
27. *Dopamine neurons encode performance quality relative to recent practice in singing* birds 2016
Neurobiology and Behavior Graduate Student Symposium, Cornell University, Ithaca, USA
26. *Dopamine Neurons Encode Performance Error in Singing Birds* 2015
Lewis-Sigler Institute for Integrative Genomics, Princeton University, Princeton, USA.
25. *How is Trial and Error Learning Implemented in the Brain?* 2015
J. C. Séamus Davis Group Meeting, Department of Physics, Cornell University, Ithaca, USA
24. *Dopamine neurons encode performance error in singing birds* 2015
Neurobiology and Behavior Graduate Student Symposium, Cornell University, Ithaca, USA
23. *Zebra finch ventral tegmental area neurons encode song prediction error* 2015
COSYNE 2015: Computational and Systems Neuroscience, Salt Lake City, USA
22. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014
Centre de Neurophysique, Physiologie et Pathologie, University of Paris Descartes, Paris, France
21. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014
Institute of Neuroinformatics, University of Zurich/ETH, Zurich, Switzerland
20. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014
Bernstein Center for Computational Neuroscience, Humboldt University, Berlin, Germany

19. *Neural Mechanisms of Trial and Error Learning* 2014
Biomedical Engineering Society Retreat, Cornell University, Ithaca, USA

18. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014
Research Design in the Study of Animal Social Behavior, Department of Neurobiology and Behavior, Cornell University, Ithaca, USA

17. *How Practice Makes You Perfect: Reverse Engineering the Zebra Finch Brain* 2013
Cornell Electron Devices Society, Cornell University, Ithaca, USA

16. *In Search of 'Actor' and 'Critic' Neurons in the Zebra Finch Song Circuit* 2013
National Centre for Biological Sciences, Bangalore, India

15. *How does Practice Make you Perfect? Insights from the Songbird Brain* 2013
St. Joseph's College, Bangalore, India

14. *Supersolid or a Network of Defects? The Tortuous Story of Solid Helium* 2013
Department of Physics, Indian Institute of Science, Bangalore, India

13. *In Search of 'Actor' and 'Critic' Neurons in the Zebra Finch Song Circuit* 2013
Centre for Neuroscience, Indian Institute of Science, Bangalore, India

12. *In Search of 'Actor' and 'Critic' Neurons in the Zebra Finch Song Circuit* 2013
Research Design in the Study of Animal Social Behavior, Department of Neurobiology and Behavior, Cornell University, Ithaca, USA

11. *Supersolid or a Network of Defects? The Tortuous Story of Solid Helium* 2013
Cornell Electron Devices Society, Cornell University, Ithaca, USA

10. *'Supersolid' He-4: A New State of Matter?* 2009
Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India

9. *'Supersolid' He-4: A New State of Matter?* 2009
Department of Physics, Indian Institute of Science, Bangalore, India

8. *Evidence for a superglass state in solid He-4* 2009
Pizza Talk Summer Series, Department of Physics, Cornell University, Ithaca, USA

7. *'Supersolid' He-4: A New State of Matter?* 2008
Cornell Electron Devices Society, Cornell University, Ithaca, USA

6. *Collapse of double-walled carbon nanotube bundles under hydrostatic pressure* 2008
Pizza Talk Summer Series, Department of Physics, Cornell University, Ithaca, USA

5. *Collapse of double-walled carbon nanotube bundles under hydrostatic pressure* 2007
McEuen Group, Department of Physics, Cornell University, Ithaca, USA

4. *Fractals - Truth and Beauty* 2004
Part of the "Special aspects of Classical Mechanics" series, Department of Physics, Bangalore University, India

3. *Natural Selection* 2001
Kendriya Vidyalaya, Indian Institute of Science, Bangalore, India

2. *Evolution by Natural Selection - Darwin and Beyond* 1998
Bharathi Junior College, Mandya, India

1. *Evolution by Natural Selection - Darwin and Beyond* 1997
Kendriya Vidyalaya, Indian Institute of Science, Bangalore, India

POSTER PRESENTATIONS:

16. *Dopamine Guides Vocal Learning Through Reinforcement* 2024
15th International Congress of Neuroethology, Berlin, Germany.

15. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2024
Klingenstein-Simons Fellowship Award in Neuroscience Annual Meeting, New York, USA.

14. *Evaluating the Actions of Others: Neural Mechanisms of Mate Choice in Female Songbirds* 2023
Searle Scholars Program Annual Meeting, Chicago, USA.

13. *Dopaminergic Reward and Performance Error Signals are Gated During Courtship* 2022
Gordon Research Conference – Neural Mechanisms of Acoustic Communication, Mount Holyoke, USA
12. *Dopaminergic Reward and Performance Error Signals are Gated During Courtship* 2022
Dopamine Meeting, Montreal, Canada.
11. *Evaluating the Actions of Others: Neural Mechanisms of Mate Choice in Female Songbirds* 2022
Searle Scholars Program Annual Meeting, Chicago, USA.
10. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2022
Simons Collaboration on the Global Brain (SCGB) Annual Meeting, New York, USA.
9. *Dopamine neurons evaluate natural fluctuations in performance quality* 2021
SfN 2021: Society for Neuroscience Meeting, Chicago, USA
8. *Social context-dependent modulation of dopaminergic performance error* 2018
SfN 2018: Society for Neuroscience Meeting, San Diego, USA
7. *Social context-dependent modulation of dopaminergic performance error* 2018
Birdsong 8: Out on a Limb, San Diego, USA
6. *Social context-dependent modulation of dopaminergic performance error* 2018
Bird Song and Animal Communication Annual Meeting, Millbrook, New York, USA
5. *Social context-dependent modulation of dopaminergic performance error* 2018
Simons Collaboration on the Global Brain (SCGB) Annual Meeting, New York, USA.
4. *Dopamine neurons encode performance error in singing birds* 2016
SfN 2016: Society for Neuroscience Meeting, San Diego, USA.
3. *Interplay of Rotational, Relaxational, and Shear Dynamics of Solid ^4He* 2011
LT26: International Conference on Low-Temperature Physics, Beijing, China
2. *Unifying the Rotational, Relaxational, and Shear Dynamics of Solid ^4He* 2010
QFS2010: International Symposium on Quantum Fluids and Solids, Grenoble, France
1. *High pressure Raman spectroscopy of double-walled carbon nanotubes* 2005
50th Department of Atomic Energy Solid State Physics Symposium, Mumbai, India

WORKSHOPS AND SCHOOLS:

13. Faculty Mentor Training – Columbia Center for Teaching and Learning, Zuckerman Institute, Columbia University, USA. 2025
12. Faculty Mentor Bystander Intervention Training, Columbia University, USA 2024
11. BRAINYAC Mentor Training, Zuckerman Institute, Columbia University, USA 2023
10. *Crawford Bias Reduction Theory & Training (CRBT) – Targeted Lab/Team Intervention*, Zuckerman Institute, Columbia University, USA 2022-2023
9. *Center for the Improvement of Mentored Experiences in Research (CIMER) Mentor Training for PIs*, Zuckerman Institute, Columbia University, USA 2022
8. *Crawford Bias Reduction Theory & Training (CRBT)*, Zuckerman Institute, Columbia University, USA 2021-2022
7. *The PI Crash Course: Skills for Future or New Lab Leaders*, Columbia University, USA 2020
6. *Methods in Computational Neuroscience*, Marine Biological Laboratory, Woods Hole, MA, USA 2017
5. *Kodai Summer School in Quantum Mechanics, Statistical Mechanics and Non-Linear Dynamics*, Indian Institute of Astrophysics (IIA), Bangalore, India 2003
4. 100-hour workshop in *Space Sciences* conducted by St. Joseph's College, Bangalore University, India 2002
3. 100-hour workshop in *Reaction Mechanisms*, St. Joseph's College, Bangalore University, India 2001
2. 100-hour workshop in *Spectroscopy*, St. Joseph's College, Bangalore University, India 2000
1. 100-hour workshop on *Human Resource Development*, St. Joseph's College, Bangalore University, India 2000

LEADERSHIP AND SERVICE:

Conferences and Meetings:

6. *Upcoming:* Co-Chair (elected), Gordon Research Conference – Neural Mechanisms of Acoustic Communication 2026

5.	Discussion Leader, Gordon Research Conference – Neural Mechanisms of Acoustic Communication	2024
4.	Co-Vice Chair (elected), Gordon Research Conference – Neural Mechanisms of Acoustic Communication	2024
3.	Organizing Member, Zuckerman Institute Gender Inclusion Group (ZIGI)	2021-present
2.	Conference session moderator, Virtual Dopamine (ViDA) Conference: The Future of Dopamine	2020
1.	Co-organized a NeuroDinner event for the Program in Neuroscience, Cornell University	2014

Selection Committees:

6.	Neurobiology and Behavior Graduate Program, Columbia University	2023-2024
5.	Zuckerman Institute Postdoc Fellows Program, Zuckerman Institute, Columbia University	2023
4.	Faculty Search Committee, Zuckerman Institute, Columbia University	2021
3.	Artist Selection Committee, Art in the Education Lab, Zuckerman Institute, Columbia University	2021 & 2022
2.	Interviewer for Doctoral Program in Neurobiology and Behavior, Columbia University	2021-present
1.	Colloquium committee: Department of Physics, Cornell University	2008

Peer Review:

8.	Reviewer, NIH Director's New Innovator Award – DP2	2025
7.	Member, NIH Neurobiology of Motivated Behavior Study Section	2023
6.	Member, NIH/NINDS Special Emphasis Panel on Music and Health	2022
5.	Reviewer, Columbia University's Research Initiatives in Science and Engineering (RISE) Competition	2020-2021
4.	Abstract Reviewer, Computational and Systems Neuroscience (Cosyne)	2017
3.	Review Panelist, National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP)	2016
2.	Reviewed honors thesis for Biological Sciences Honors Program, Cornell University	2015 & 2016
1.	Reviewed grant proposals for Sigma Xi Cornell University Chapter	2015 & 2016

Journal Review:

Current Biology

Proceedings of the National Academy of Sciences (PNAS)

Progress in Neurobiology

Panelist:

5.	Career panel moderator, Columbia University Neurobiology and Behavior Graduate Student Retreat, Glen Cove, USA.	2024
4.	STEMPeers panel on Early Career Research in Academia: Know What to Expect, Philadelphia, USA	2022
3.	Postdoc-Faculty Coffee Chat, Zuckerman Institute, Columbia University, USA	2021
2.	Panelist for Columbia Access Neuroscience (CAN) – a program for students from underrepresented backgrounds in neuroscience, Columbia University, USA	2021 & 2022
1.	Panelist for the Yale Neuroscience Career Panel, Department of Neuroscience, Yale University, USA	2021

PhD Thesis Committee:

5.	Ishani Ganguly (Behnia and Abbott Labs), Zuckerman Institute, Columbia University	2024-present
4.	Ryan Schwark (Abdus-Saboor lab), Zuckerman Institute, Columbia University	2024
3.	Ching Fang (Abbott & Aronov labs), Zuckerman Institute, Columbia University	2023-present
2.	John Lindsey (Litwin-Kumar lab), Zuckerman Institute, Columbia University	2022-2024
1.	Yow-Tyng Yeh (Woolley lab), Zuckerman Institute, Columbia University	2021-present

PhD Qualifying Exam Committee:

3.	Ishani Ganguly (Behnia and Abbott Labs), Zuckerman Institute, Columbia University	2022
2.	John Lindsey (Litwin-Kumar lab), Zuckerman Institute, Columbia University	2021
1.	Ching Fang (Abbott & Aronov labs), Zuckerman Institute, Columbia University	2021

External PhD Thesis Committee:

1.	Xueqian Ma (Hahnloser lab), ETH Zurich	2024-present

MEMBERSHIPS:

7.	International Society for Neuroethology	2023 - present
6.	Society for Social Neuroscience	2023 - present
5.	Dopamine Society, Founding Member	2022 - present
4.	American Association for the Advancement of Science (AAAS)	2019 - present
3.	Sigma Xi, The Scientific Research Society	2018 - present
2.	Organization for Computational Neurosciences (OCNS)	2018 - present
1.	Society for Neuroscience (SfN)	2015 - present

TEACHING AND MENTORING:

Courses:

13.	UN3005 Neurobio II: Devpt & Systems, Columbia University (Guest Lecture on Reinforcement Learning in Songbirds)	2023-2024
12.	BMSC-GA-4463: Readings in Neuroscience, New York University (Guest Faculty)	2022
11.	MUSI AV4000 – *Music, Math, and Mind*, Columbia University (Guest Lecture on How Practice Makes Perfect – Dopamine Clues from a Songbird)	2022-2024
10.	E3B GR6450 – *Ethology and the Evolution of Behavior*, Columbia University (Guest Lecture on Song Learning and Dopamine)	2021-2022
9.	PS 521/NE 521 – *Animal Models in Behavioral Neuroscience*, Boston University (Guest Faculty)	2020
8.	Academic Application Boot Camp, Columbia University (Lecture on How to Write an Effective Research Statement and Session on Research Statement Live Q&A)	2020
7.	NB&B GR6055 – *Survey Neuroscience II*, Columbia University (Lecture on Motor Performance in Songbirds)	2020-2024
6.	BIONB 2220 – *Introduction to Neuroscience*, Department of Neurobiology and Behavior, Cornell University (Guest Lecture on Basal Ganglia and Reinforcement Learning)	2016
5.	PHYS 1101 – *General Physics I*, Department of Physics, Cornell University (Teaching Assistant)	2012
4.	PHYS 1117 – *Concepts of Modern Physics*, Department of Physics, Cornell University (Grader)	2008
3.	PHYS 208 – *Fundamentals of Physics II*, Department of Physics, Cornell University (Teaching Assistant)	2008
2.	PHYS 101/102 – *General Physics I/II*, Department of Physics, Cornell University (Teaching Assistant)	2007
1.	PHYS 208 – *Fundamentals of Physics II*, Department of Physics, Cornell University (Teaching Assistant)	2007

Postdocs:

1.	Keshav Suresh, Zuckerman Institute, Columbia University	2024-present

Graduate Students:

5.	Arnav Raha, Zuckerman Institute, Columbia University	2024-present
4.	Nathan Nadler, Zuckerman Institute, Columbia University	2023-present
3.	Jessica Burke, Zuckerman Institute, Columbia University	2022-present
2.	Hannah Chen, Zuckerman Institute, Columbia University	2021-present
1.	Jonathan Kasdin, Zuckerman Institute, Columbia University	2020-present

Postbacs:

4.	Malavika Eswaran, Zuckerman Institute, Columbia University	2023-present
3.	Amanuel Sahilu, Zuckerman Institute, Columbia University	2022-present
2.	Arnav Raha, Zuckerman Institute, Columbia University	2021-2023
1.	Jessica Burke, Zuckerman Institute, Columbia University	2020-2021

Undergraduate Students:

10.	Kayla Davis, Zuckerman Institute, Columbia University (Leadership Alliance Program)	2023
9.	D'Juan Moreland, Zuckerman Institute, Columbia University (NIH U-RISE Program)	2023
8.	Aditi Borde, Zuckerman Institute, Columbia University	2023-present
7.	Malavika Ramarao, Department of Neurobiology and Behavior, Cornell University	2019-2020
6.	Archana Podury, Department of Neurobiology and Behavior, Cornell University	2016-2018
5.	Alexander Farhang, Department of Neurobiology and Behavior, Cornell University	2014-2015
4.	Eliza Baird-Daniel, Department of Neurobiology and Behavior, Cornell University	2013-2015
3.	Praveen Narayanan, Department of Physics, Cornell University	2011
2.	Neal Harrington, Department of Physics, Cornell University	2011
1.	James McArdle, Department of Physics, Cornell University	2011

High School Students:

1.	Aminata Diallo, Zuckerman Institute, Columbia University (BRAINYAC Program)	2023-2024

Visiting Students:

1.	Xueqian Ma, ETH Zurich (Hahnloser Lab)	2023

OUTREACH/PODCASTS/INTERVIEWS:

17.	Lab tour for Columbia Access Neuroscience (CAN) – a program for students from underrepresented backgrounds in neuroscience, Columbia University, USA	2024
16.	Jazz Meets Neuroscience with Terri Lyne Carrington, Zuckerman Institute, Columbia University, New York, USA	2024
15.	The Song and Dance of Neurons – Science Talk and Interpretive Dance with neuroscientist and dancer Sloka Iyengar for STEMPeers, Philadelphia, USA	2022
14.	Jazz Listening Party with Miguel Zenon – Instrumental Mastery and Neuroscience, Zuckerman Institute, Columbia University, New York, USA	2021
13.	Sound Waves and Brain Waves: Birdbrains and Love Songs – episode with Jazz Artist in Residence Miguel Zenon, Zuckerman Institute, Columbia University and Northern Manhattan Arts Alliance (NoMAA), New York, USA	2021
12.	Scientific Sense Podcast with Gill Eapen	2021
11.	Featured in *Journey of the Early Career Scientist* – hosted by the Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia University, New York, USA	2020
10.	Selected to speak at the inaugural SPARK talks - Scholars Present About Research and Knowledge, on *How does practice make you perfect? Clues from a songbird*, Cornell University Library, Cornell University, Ithaca, USA	2015
9.	Co-organized a workshop *Play or get played: game theoretic ideas in animal behavior* for Expanding Your Horizons: Motivating Young Women in Science+Mathematics, Cornell University, Ithaca, USA	2015
8.	Co-organized a series of popular science lectures for students and the public through Looking Around: Students' Group for Interdisciplinary Interactions, Indian Institude of Science, Bangalore, India	2005
7.	Conducted a city-wide science quiz for undergraduates at St. Joseph's College, Bangalore University, Bangalore, India	2004
6.	Conducted a science quiz for students awarded the National Science Fellowship (KVPY) at the Indian Institute of Science, Bangalore, India	2004

5.	Conducted a science quiz for students awarded the National Science Fellowship (KVPY) at the Indian Institute of Science, Bangalore, India	2003
4.	Conducted the 13th annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India	2002
3.	Conducted the 12th annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India	2001
2.	Conducted the 11th annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India	2000
1.	Conducted the 10th annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India	1999