

## Dobromir (Doby) Rahnev, Ph.D.

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### ACADEMIC POSITIONS

2024-present Associate Chair of Research, School of Psychology, Georgia Tech  
2021-present Associate Professor, School of Psychology, Georgia Tech  
2023-2024 Inaugural Director, Computational Cognition (CoCo) Center of Excellence, Georgia Tech  
2022-2024 Blanchard Early Career Professor, School of Psychology, Georgia Tech  
2015-2021 Assistant Professor, School of Psychology, Georgia Tech  
2012-2015 Postdoc in Cognitive Neuroscience, UC Berkeley (Advisor: Mark D'Esposito)

### EDUCATION

2007-2012 Ph.D. in Psychology, Columbia University (Advisor: Hakwan Lau)  
2003-2007 B.A. in Psychology, Harvard University (*Summa cum laude, Highest Honors*)

### HONORS AND AWARDS

2023 Federation of Associations in Behavioral & Brain Sciences (FABBS) Early Career Award  
*Nominated by the Psychonomic Society; one nomination made every 3 years*  
2023 Faculty Development Award, College of Science, Georgia Tech  
2022 Vision Sciences Society (VSS) Young Investigator Award  
*One award made per year*  
2022 Cullen-Peck Award, College of Sciences, Georgia Tech (includes \$10,000 in funds)  
2021 APA Distinguished Scientific Award for an Early Career Contribution to Psychology  
*Area: Behavioral and cognitive neuroscience; one award made every 2 years*  
2020-2023 Student Recognition of Excellence in Teaching: Class of 1934 Award (received 3 times)  
*Recognizes teachers with top-40 student evaluation scores*  
2021 Reflective Teaching Badge, Georgia Tech  
2020 Class of 1969 Teaching Fellow, Georgia Tech  
2019 NSF CAREER Award (funding declined in lieu of an overlapping R01 award)  
2019 Inaugural National Eye Institute Faculty Travel Award  
2018-present Thank-a-teacher certificate (received 7 times), Georgia Tech  
2012 Graduate Travel Award, Vision Sciences Society  
2008 Okinawa Computational Neuroscience Summer Course (full expenses covered)  
2007 Thomas T. Hoopes Prize for outstanding undergraduate thesis  
2007 Phi Beta Kappa honors society for outstanding academic achievement  
2004-2005 Harvard College Scholarship for academic excellence  
2003 National diploma from Bulgarian Ministry of Education for outstanding achievements  
2002-2003 Two Gold Medals from the International Mathematical Olympiad

### CURRENT FUNDING

NIH R01 MH119189, *Uncovering the architecture of metacognition*  
Period: 5/2020 – 2/2025      Role: PI      Total amount: \$1,855,530

CoS Center seed fund program, *Computational Cognition (CoCo) Center*

Period: 7/2024 – 6/2027      Role: PI      Total amount: \$60,000

NIH Multidisciplinary Training in Vision and Research

Period: 12/2024 – 12/2025      Role: Subaward PI      Total amount: \$88,314

CIFAR Catalyst Funds, *Subjective Perception and Metacognition: A New Model of Scientific Community*

Period: 1/2025 – 12/2026      Role: Co-PI      Total amount: CA\$50,000

NIH R03 AG083314, *Mechanisms underlying age-based stereotype threat effects*

Period: 7/2023 – 6/2025      Role: Consultant      Total amount: \$156,000

### COMPLETED FUNDING

ONR Young Investigator, *Assessing and improving military personnel's metacognitive ability*

Period: 8/2020 – 8/2024      Role: PI      Total amount: \$509,889

NIH R21 MH122825, *Improving behavior with TMS: A concurrent TMS-fMRI approach*

Period: 3/2020 – 2/2023      Role: PI      Total amount: \$433,950

Georgia Tech Equipment Fund, *Neurotechnology for cognitive enhancement*

Period: 1/2022 – 7/2022      Role: PI      Total amount: \$378,559

Georgia Tech Class of 1969 Teaching Funds, *Neuroscience teaching equipment*

Period: 1/2021 – 1/2022      Role: PI      Total amount: \$1,000

NIH R56 MH119189, *Uncovering the architecture of metacognition*

Period: 5/2019 – 4/2020      Role: PI      Total amount: \$333,881

Oak Foundation, *Identifying dyslexia interventions for treatment nonresponders*

Period: 7/2016 – 6/2019;      Role: subaward PI      Subaward amount: \$5,957

GSU/GT Center for Advance Brain Imaging Seed Grant

Period: 7/2017 – 7/2018      Role: co-PI      Total amount: \$8,500

NIH R03 MH103842, *Investigating brain network dynamics with simultaneous TMS-fMRI*

Period: 4/2014 – 3/2016      Role: Postdoc (wrote grant)      Total amount: \$156,876

Harvard College Research Program grant, received 4 times

Period: 2004-2006      Role: PI      Total amount: \$13,000

### PUBLICATIONS

69. **Rahnev, D.** (in press). A comprehensive assessment of current methods for measuring metacognition. *Nature Communications*. [Preprint](#). [Data and Code](#).
68. Nakuci, J., Yeon, J., Kim, J.-H., Kim, S.-P., & **Rahnev, D.** (in press). Multiple brain activation patterns for the same task. *Nature Communications*. [Preprint](#). [Data and Code](#).
67. Xue, K., Shekhar, M., & **Rahnev, D.** (2024). Challenging the Bayesian confidence hypothesis. *Proceedings of the National Academy of Sciences of the United States of America*, 121(48): e2410487121. [Data and Code](#). [Preregistration](#).

66. Shekhar, M. & **Rahnev, D.** (2024). Human-like dissociations between confidence and accuracy in convolutional neural networks. *PLoS Computational Biology*, 20(11):e1012578. [Data and Code](#).
65. Xue, K., Zheng, Y., Papalexandrou, C., Hoogervorst, K., Allen, M., & **Rahnev, D.** (2024). No gender difference in confidence or metacognitive ability in perceptual decision making. *iScience*, 27(12):111375. [Data and Code](#).
64. Nakuci, J., Yeon, J., Kim, J.-H., Kim, S.-P., & **Rahnev, D.** (2024). Behavior can be decoded across the cortex when individual differences are considered. *Imaging Neuroscience*, 2:1-17. [Data and Code](#).
63. Michel, M., Gao, Y., Mazor, M., Kletenik, I. & **Rahnev, D.** (2024). When visual metacognition fails: Widespread anosognosia for visual deficits. *Trends in Cognitive Sciences*, 28(12):1066-1077.
62. Gao, Y., Wang, M., & **Rahnev, D.** (2024). Objectively quantifying subjective phenomena: Measuring the Flashed Face Distortion Effect. *Cognition*, 250:105861. [Data and Code](#).
61. Rafiei, F.\*, Shekhar, M.\*, & **Rahnev, D.** (2024). The neural network RTNet exhibits the signatures of human perceptual decision-making. *Nature Human Behaviour*, 8:1752-1770. [Data and Code](#). [Preregistration](#).
60. Gao, Y., Chen, S., & **Rahnev, D.** (in press). Dynamics of sensory and decisional biases in perceptual decision making: Insights from the face distortion illusion. *Psychonomic Bulletin & Review*. [Data and Code](#).
59. Yeon, J., Carlson, A., **Rahnev, D.\*** & D'Esposito, M.\* (2024). Task learning is subserved by a domain-general brain network. *Cerebral Cortex*, 34(2):bhae013. [Data and Code](#).
58. Haddara, N. & **Rahnev, D.** (2024). Threat expectation does not improve perceptual discrimination despite causing heightened priority processing in the frontoparietal network. *Journal of Neuroscience*, 44(15):e1219232023. [Data and Code](#).
57. Shekhar, M. & **Rahnev, D.** (2024). How do humans give confidence? A comprehensive comparison of process models of perceptual metacognition. *Journal of Experimental Psychology: General*, 153(3):656–688. [Data and Code](#).
56. Elosegi, P., **Rahnev, D.**, & Soto, D. (2024). Think twice: Re-assessing confidence improves visual metacognition. *Attention, Perception, and Psychophysics*, 86:373–380. [Data and Code](#).
55. Zheng, Y., Recht, S., & **Rahnev, D.** (2023). Common computations for metacognition and meta-metacognition. *Neuroscience of Consciousness*, 2023(1):niad023. [Data and Code](#).
54. Nakuci, J., Yeon, J., Xue, K., Kim, J.-H., Kim, S.-P., & **Rahnev, D.** (2023). Quantifying the contribution of subject and group factors in brain activation. *Cerebral Cortex*, 33(22): 11092–11101. [Data and Code](#).
53. Nakuci, J., Samaha, J., & **Rahnev, D.** (2023). Brain signatures indexing variation in internal processing during perceptual decision-making. *iScience*, 26(10):107750. [Data and Code](#).
52. Xue, K., Zheng, Y., Rafiei, F., & **Rahnev, D.** (2023). The timing of confidence computations in human prefrontal cortex. *Cortex*, 168:167-175. [Data and Code](#). [Preregistration](#).
51. Chen, S. & **Rahnev, D.** (2023). Confidence response times: Challenging postdecisional models of confidence *Journal of Vision*, 23(7):11. [Data and Code](#).
50. Bliss, D.P., **Rahnev, D.**, Mackey, W.E., Curtis, C.E., & D'Esposito, M. (2023). Stimulation along the anterior-posterior axis of lateral frontal cortex reduces visual serial dependence. *Journal of Vision*, 23(7):1.
49. Mei, N., **Rahnev, D.**, & Soto, D. (2023). Using serial dependence to predict confidence across observers and cognitive domains. *Psychonomic Bulletin & Review*, 30:1596-1608. [Data and Code](#).
48. Haddara, N. & **Rahnev, D.** (2022). The impact of feedback on perceptual decision making and metacognition: Reduction in bias but no change in sensitivity. *Psychological Science*, 33(2):259-275. [Data and Code](#). [Preregistration](#).
47. **Rahnev, D.**, Balsdon, T., Charles, L., de Gardelle, V., Denison, R.N., Desender, K., Faivre, N., Filevich, E., Fleming, S., Jehee, J., Lau, H., Lee, A.L.F., Locke, S.M., Mamassian, P., Odegaard, B.,

- Peters, M.A.K., Reyes, G., Rouault, M., Sackur, J., Samaha, J., Sergent, C., Sherman, M., Siedlecka, M., Soto, D., Vlassova, A., & Zylberberg, A (2022). Consensus goals for the field of visual metacognition. *Perspectives on Psychological Science*, 17(6):1746-1765. [Data and Code](#).
46. Jin, S., Verhaeghen, P., & **Rahnev, D.** (2022). Across-subject correlation between confidence and accuracy: A meta-analysis of the Confidence Database. *Psychonomic Bulletin & Review*, 29(4):1405-1413. [Data and Code](#).
45. Rafiei, F. & **Rahnev, D.** (2022). TMS does not increase BOLD activity at the site of stimulation: A review of all concurrent TMS-fMRI studies. *eNeuro*, 9(4):1-14.
44. Goldstein, S., Rafiei, F. & **Rahnev, D.** (2022). 3D-printed stand, timing interface, and coil localization tools for concurrent TMS-fMRI experiments. *Brain Stimulation*, 15(5):1290-1291. [Code and tool descriptions](#).
43. **Rahnev, D.** (2021). Visual metacognition: Measures, models and neural correlates. *American Psychologist*, 76(9):1445–1453.
42. Shekhar, M. & **Rahnev, D.** (2021). The nature of metacognitive imperfection in perceptual decision making. *Psychological Review*, 128:45-70. [Data and Code](#).
41. Shekhar, M. & **Rahnev, D.** (2021). Sources of metacognitive inefficiency. *Trends in Cognitive Science*, 25(1):12-23.
40. **Rahnev, D.** (2021). Response bias reflects individual differences in sensory encoding. *Psychological Science*, 32(7):1157-1168. [Data and Code](#).
39. Rafiei, F., Safrin, M., Wokke, M.E., Lau, H., & **Rahnev, D.** (2021). Transcranial magnetic stimulation alters multivoxel patterns in the absence of overall activity changes. *Human Brain Mapping*, 42(12):3804-3820. [Data and Code](#).  
[Received a certificate for a top downloaded article.]
38. Bang, J.W. & **Rahnev, D.** (2021). Awake suppression after brief exposure to a familiar stimulus. *Communications Biology*, 4:348. [Data and Code](#).
37. **Rahnev, D.** (2021). A robust confidence–accuracy dissociation via criterion attraction. *Neuroscience of Consciousness*, 2021(1): niab039. [Data and Code](#).
36. Rafiei, F. & **Rahnev, D.** (2021). Qualitative speed-accuracy tradeoff effects that cannot be explained by the diffusion model under the selective influence assumption. *Scientific Reports*, 11:45. [Data and Code](#).
35. Xue, K., Shekhar, M., & **Rahnev, D.** (2021). Examining the robustness of the relationship between metacognitive efficiency and metacognitive bias. *Consciousness and Cognition*, 95:103196. [Data and Code](#).
34. **Rahnev, D.**, Desender, K., Lee, A., ... Zylberberg, A. [83 authors] (2020). The Confidence Database. *Nature Human Behaviour*, 4:317-325. [Data and Code](#).
33. Yeon, J. & **Rahnev, D.** (2020). The suboptimality of perceptual decision making with multiple alternatives. *Nature Communications*, 11:3857. [Data and Code](#).
32. Yeon, J., Shekhar, M., & **Rahnev, D.** (2020). Overlapping and unique neural circuits support perceptual decision making and confidence. *Scientific Reports*, 10:20761. [Data and Code](#).
31. **Rahnev, D.** (2020). Confidence in the real world. *Trends in Cognitive Science*, 24(8):590-591.
30. **Rahnev, D.** (2020). Resource-rational analysis versus resource-rational humans. [Commentary to Lieder & Griffiths] *Behavioral and Brain Sciences*, 43:e19.
29. Hu, M. & **Rahnev, D.** (2019). Predictive cues reduce but do not eliminate intrinsic response bias. *Cognition*, 192:104004. [Data and Code](#).
28. Bang, J.W., Milton, D., Sasaki, Y., Watanabe, T., & **Rahnev, D.** (2019). Post-training TMS abolishes performance improvement and releases future learning from interference. *Communications Biology*, 2(1):320. [Data and Code](#).
27. Bang, J.W., Shekhar, M., & **Rahnev, D.** (2019). Sensory noise increases metacognitive efficiency. *Journal of Experimental Psychology: General*, 148(3):437-452. [Data and Code](#).

26. **Rahnev, D.** & Fleming, S.M. (2019). How experimental procedures influence estimates of metacognitive ability. *Neuroscience of Consciousness*, 2019(1):niz009. [Data and Code](#).
25. Verhaeghen, P., Geigerman, S., Yang, H., Montoya, A., & **Rahnev, D.** (2019). Resolving age differences in working memory: Removing differences in perceptual ability eliminates age-related working memory deficits. *Experimental Aging Research*, 45(2):120-134.
24. **Rahnev, D.** (2019). The Bayesian brain: What is it and do humans have it? [Commentary to Brette] *Behavioral and Brain Sciences*, 42:e238.
23. Michel, M., ... **Rahnev, D.**, ... (2019). Opportunities and Challenges for a Maturing Science of Consciousness. *Nature Human Behaviour*, 3:104-107.
22. **Rahnev, D.\*** & Denison, R.\* (2018). Suboptimality in perception decision making. [Target Article.] *Behavioral and Brain Sciences* 41(e223):1-66.
21. **Rahnev, D.** & Denison, R. (2018). Behavior is sensible but not globally optimal: Seeking common ground in the optimality debate. [Authors' Response to Commentaries.] *Behavioral and Brain Sciences*, 41, e251.
20. Shekhar, M. & **Rahnev, D.** (2018). Distinguishing the roles of dorsolateral and anterior PFC in visual metacognition. *Journal of Neuroscience* 38(22):5078-5087. [Data and Code](#).
19. Bang, J.W., Sasaki, Y., Watanabe, T., & **Rahnev, D.** (2018). Feature-specific awake reactivation in human V1 after visual training. *Journal of Neuroscience* 38(45):9648-9657. [Data and Code](#).
18. Michel, M., Fleming, S.M., Lau, H., Lee, A.L.F., Martinez-Conde, S., Passingham, R.E., Peters, M.A.K., **Rahnev, D.**, Sergent, C., & Liu, K. (2018). An informal internet survey on the current state of consciousness science. *Frontiers in Psychology* 9:2134.
17. Bang, J.W. & **Rahnev, D.** (2017). Stimulus expectation alters decision criterion but not sensory signal in perceptual decision making. *Scientific Reports* 7:17072. [Data and Code](#).
16. **Rahnev, D.** (2017). Top-down control of perceptual decision making by the prefrontal cortex. *Current Directions in Psychological Science* 26(5):464-469.
15. **Rahnev, D.** (2017). The case against full probability distributions in perceptual decision making. *bioRxiv* 108944.
14. **Rahnev, D.**, Nee, D.E., Riddle, J., Larson, A., & D'Esposito, M. (2016). Causal evidence for frontal cortex organization for perceptual decision making. *Proceedings of the National Academy of Sciences of the United States of America* 113(21):6059-6064. [Data and Code](#).
13. **Rahnev, D.**, Koizumi, A., McCurdy, L.Y., D'Esposito, M., & Lau, H. (2015). Confidence leak in perceptual decision making. *Psychological Science* 26(11):1664-1680. [Data and Code](#).
12. Morales, J., Solovey, G., Maniscalco, B., **Rahnev, D.**, de Lange, F.P., & Lau, H. (2015). Low attention impairs optimal incorporation of prior knowledge in perceptual decisions. *Attention, Perception, and Psychophysics* 77(6):2021-2036.
11. **Rahnev, D.**, Kok, P., Munneke, M., Bahdo, L., de Lange, F.P., & Lau, H. (2013). Continuous theta burst transcranial magnetic stimulation reduces resting state connectivity between visual areas. *Journal of Neurophysiology* 110(8):1811-1821.
10. **Rahnev, D.** (2013). Entrainment of neural activity using transcranial magnetic stimulation. *Journal of Neuroscience* 33(28):11325-11326.
9. de Lange, F., **Rahnev, D.**, Donner, T., & Lau, H. (2013). Pre-stimulus oscillatory activity over motor cortex reflects perceptual expectations. *Journal of Neuroscience* 33(4):1400-1410.
8. **Rahnev, D.**, Bahdo, L., de Lange, F.P., & Lau, H. (2012). Pre-stimulus hemodynamic activity in dorsal attention network is negatively associated with decision confidence in visual perception. *Journal of Neurophysiology* 108(5):1529-1536.
7. Kok, P., **Rahnev, D.**, Jehee, J., Lau, H., & de Lange, F. (2012). Attention reverses the effect of prediction in silencing sensory signals. *Cerebral Cortex* 22(9):2197-2206.

6. **Rahnev, D.**, Maniscalco, B., Luber, B., Lau, H., & Lisanby, S.H. (2012). Direct injection of noise to the visual cortex decreases accuracy but increases decision confidence. *Journal of Neurophysiology* 107(6):1556-1563.
5. **Rahnev, D.**, Huang, E., & Lau, H. (2012). Subliminal stimuli in the near absence of attention influence top-down cognitive control. *Attention, Perception, and Psychophysics* 74(3):521–532.
4. **Rahnev, D.**, Maniscalco, B., Graves, T., Huang, E., de Lange, F.P., & Lau, H. (2011). Attention induces conservative subjective biases in visual perception. *Nature Neuroscience* 14(12):1513-1515.
3. **Rahnev, D.**, Lau, H., & de Lange, F.P. (2011). Prior expectation modulates the interaction between sensory and prefrontal regions in the human brain. *Journal of Neuroscience* 31(29):10741-10748.
2. Nikolov, S.\*, **Rahnev, D.\***, & Lau, H. (2010). Probabilistic model of onset detection explains previous puzzling findings in human time perception. *Frontiers in Psychology* 1:37.
1. Caruso, E., **Rahnev, D.**, & Banaji, M. (2009). Using conjoint analysis to detect discrimination: Revealing covert preferences from overt choices. *Social Cognition* 27(1):128-137.

\* authors contributed equally to the work

### BOOK CHAPTERS

1. **Rahnev, D.** & Kayser, A. (in press). The continuum between working memory and perceptual decision making. *The Neural Architecture of Working Memory* (Editor: Mark D'Esposito).
2. Miyoshi, K., Webb, T., **Rahnev, D.**, & Lau, H. (in press). Confidence and metacognition. *Encyclopedia of the Human Brain*.

### PEER-REVIEWED CONFERENCE PROCEEDINGS

2. Wei, S., Xie, Y., & **Rahnev, D.** (2021). Inferring serial correlation with dynamic backgrounds. *Proceedings of the 38<sup>th</sup> International Conference on Machine Learning (PMLR)* 139:11047-11057. [among 3% of papers selected for a long presentation after peer review]
1. Vergara, V.M., Rafiei, F., Wokke, M.E., Lau, H., **Rahnev, D.**, Calhoun, V.D. (2021). Evidence for Transcranial Magnetic Stimulation Induced Functional Connectivity Oscillations in the Brain. *43<sup>rd</sup> Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)* 1407-1411.

### SUBMITTED MANUSCRIPTS

1. Gao, Y., Xue, K., Odegaard, B., & **Rahnev, D.** (in revision at *Communications Psychology*). Automatic multisensory integration follows subjective confidence rather than objective performance. [Preprint](#). [Data and Code](#). [Preregistration](#).
2. **Rahnev, D.**, Block, N., Denison, R.N., & Jehee, J. (in revision at *NBDT*). Is perception probabilistic? Clarifying the definitions. [Preprint](#).
3. Hoogervorst, K., Banellis, L., Fardo, F., Xue, K., **Rahnev, D.**, & Allen, M. (submitted). Gender differences in metacognition: Global and local contrasts in bias and efficiency. [Preprint](#). [Data and Code](#). [Preregistration](#).
4. Chen, S. & **Rahnev, D.** (submitted). Signatures proposed to index perceptual effects emerge in a purely cognitive task. [Preprint](#). [Data and Code](#).
5. Zheng, Y., Xue, K., Shekhar, M., & **Rahnev, D.** (submitted). Similar computational noise for perceptual decision making with confidence, expectation, and reward. [Preprint](#). [Data and Code](#). [Preregistration](#).
6. Green, M., Hu, M., Denison, R., & **Rahnev, D.** (submitted). Using artificial neural networks to relate external sensory features to internal decisional evidence. [Preprint](#). [Data and Code](#).



7. Bocheva, M. & **Rahnev, D.** (submitted). Switching the motor response weakens confidence serial dependence. [Preprint](#). [Data and Code](#).
8. Xue, K., Fung, H., & **Rahnev, D.** (submitted). Dissociable effects of stimulus reliability and boundary distance on confidence and accuracy. [Preprint](#). [Data and Code](#).
9. Shekhar, M. & **Rahnev, D.** (submitted). Using artificial neural networks to reveal the human confidence computation. [Preprint](#). [Data and Code](#).
10. Xue, K., Shekhar, M., & **Rahnev, D.** (submitted). A novel behavioral paradigm reveals the nature of confidence computation in multi-alternative perceptual decision making. [Data and Code](#).

#### INVITED TALKS AND SYMPOSIA

- 2024 Computational Cognition conference, Georgia Tech
- 2024 Sense and Salience Workshop, Emory University
- 2024 Symposium talk, Annual Interdisciplinary Conference
- 2023 CoCo Big Ideas chalk talk series, Georgia Tech
- 2023 Brain Space Initiative Talk Series, Georgia State University
- 2023 Colloquium, Florida State University
- 2023 Neuroeconomics Seminar, University of Zurich
- 2022 RIKEN Center for Brain Science, Japan
- 2022 Neuromodulation and Neuroimaging Speaker Series, University of Pennsylvania
- 2022 ONR Cognitive Science of Learning Program Meeting
- 2022 Vision Science Society Young Investigator Award lecture
- 2022 Vision Science Society symposium speaker
- 2021 Consciousness Club, University College London
- 2021 Cognition group, University of Stirling
- 2021 Cognitive lunch, University of Virginia
- 2021 ONR Cognitive Science of Learning Program Meeting
- 2021 Center for Cognitive and Brain Sciences, Indian Institute of Technology, Gandhinagar, India
- 2021 Perceptual Confidence and Uncertainty workshop, Paris, France
- 2021 What's new in Atlanta Neuroscience
- 2020 Cognitive Science Speaker Series, City University of New York (CUNY)
- 2020 Sensation and Perception series, UC San Diego
- 2020 Adversarial Collaboration on "Is Perception Probabilistic", CCN workshop
- 2020 École polytechnique fédérale de Lausanne (EPFL)
- 2020 Whitney lab, UC Berkeley
- 2020 Cognition and Brain Science brown bag, Georgia Tech
- 2019 New York University colloquium
- 2019 McGovern Institute, MIT
- 2019 Ling lab, Boston University
- 2019 Center for Translational Research in Neuroimaging and Data Science, Georgia State
- 2019 Smokies Cognition and Neuroscience Symposium (SCANS) Invited Talk
- 2018 Neuroscience Club, Georgia Tech
- 2018 Baylor College of Medicine
- 2017 Neuro Seminar Series, Georgia Tech/Emory
- 2016 GSU/GT Center for Advanced Brain Imaging
- 2016 Cognition and Brain Science brown bag, Georgia Tech
- 2016 College of Science Advisory Board, Georgia Tech
- 2015 Center for Visual and Neurocognitive Rehabilitation Seminar Series, Atlanta VA
- 2015 Engineering psychology brown bag, Georgia Tech
- 2015 Cognition and Brain Science brown bag, Georgia Tech

- 2014 Berkeley Neuroscience Conference
- 2014 Department of Cognitive Sciences colloquium, UC Irvine
- 2014 Psychology Department colloquium, University of Chicago
- 2014 School of Psychology colloquium, Georgia Tech
- 2013 Brain Lunch, UC Berkeley
- 2012 ASSC Invited Symposium Talk
- 2012 Adolphs lab, Caltech
- 2012 Cognitive Lunch, Columbia University
- 2012 Heatherton lab, Dartmouth College
- 2012 Kanwisher lab, MIT
- 2011 Carrasco lab, NYU
- 2010 Division Seminar, New York State Psychiatric Institute
- 2009 Donders Center for Cognitive Neuroscience, the Netherlands
- 2008 Cognitive Lunch, Columbia University
- 2008 Division Seminar, New York State Psychiatric Institute

## **PROFESSIONAL AND PUBLIC INVOLVEMENT**

### **Editorial positions**

2021-2023 Journal of Vision Associate Editor

### **Journal Reviews (73 different journals)**

Acta Psychologica	Journal of Neuroscience
Attention, Perception and Psychophysics	Journal of Neuroscience Research
Behavior Research Methods	Journal of Vision
Behavioral and Brain Sciences	Memory & Cognition
Biological Psychiatry	Metacognition and Learning
BMC Biology	Mind & Language
Brain and Behavior	Nature
Brain Connectivity	Nature Communications
Brain Research	Nature Human Behaviour
Brain Sciences	Nature Reviews Psychology
Brain Stimulation	NeuroImage
Brain Structure & Function	Neuron
Cell Reports	Neuropsychologia
Cerebral Cortex	Neuropsychology Review
Cognition	Neuroscience & Biobehavioral Reviews
Cognitive Neuroscience	Neuroscience of Consciousness
Cognitive Psychology	Open Mind
Cognitive Science	Oxford Research Encyclopedia of Neuroscience
Communications Biology	PLoS Computational Biology
Consciousness and Cognition	PLoS ONE
Cortex	PNAS
Current Biology	Personality and Individual Differences
eLife	Perspectives on Psychological Science
Experimental Brain Research	Philosophical Transactions B
European Journal of Neuroscience	Psychological Methods
Frontiers in Human Neuroscience	Psychological Review
Frontiers in Psychology	Psychological Science
Human Brain Mapping	Psychonomic Bulletin & Review



iScience	Psychophysiology
Journal of Experimental Psych: Applied	Royal Society Open Science
Journal of Experimental Psych: General	SCAN
Journal of Experimental Psych: HPP	Science Advances
Journal of Experimental Psych: LMC	Scientific Reports
Journal of Cognitive Neuroscience	Translational Psychiatry
Journal of Consciousness Studies	Trends in Cognitive Science
Journal of Intelligence	Vision Research
Journal of Neurophysiology	

### Grant Reviews

2024	Israel Science Foundation (ISF), Israel
2024	Dorothy Hodgkin Fellowship, Royal Society, United Kingdom
2022	NIH, Human Complex Mental Function (HCMF) Study Section
2022	French National Research Agency (ANR), France
2022	Fund Consciousness Science fund
2022	Templeton World Charity Foundation
2022	The British Academy, United Kingdom
2020	NIH, Cognition and Perception (CP) Study Section
2020	Belgian Fund for Scientific Research (F.R.S.-FNRS)
2019	NIH, Sensory, Perceptual and Cognitive Processes (SPC) Study Section
2019	NSF, Program in Cognitive Neuroscience (CogNeuro)
2019,2020	NSF, Program in Perception, Action, and Cognition (PAC)
2019	Wellcome Trust Foundation, Sir Henry Dale Fellowship, United Kingdom
2019	National Science Center of Poland
2019	Icelandic Research Fund
2018,2020	Georgia State/GT Center for Advanced Brain Imaging seed grant program
2018	Austrian Science Fund

### Conference Reviews

2021-present	Vision Science Society, Abstract Review Committee member
2018	Cognitive Computational Neuroscience conference, Abstract reviewer

### Conference/Workshop organization

2022-2024	Co-organizer (with Steve Fleming, Lucie Charles, and Megan Peters) of ASSC satellite on Perceptual Metacognition
2022	Program committee member, Collaborative Research in Computational Neuroscience (CRCNS) PI meeting, Atlanta, GA
2020	Organizer of virtual workshop on “Is Perception Probabilistic?” sponsored by the Cognitive Computational Neuroscience (CCN) conference, >250 attendees
2020	Organizer of workshop on “The goals for the field of visual metacognition” that brought together 26 scientists to determine a joint list of long- and medium-term goals

### Media

- *Interviewed by InnerDrive about human metacognition (2023)*
- *Shekhar & Rahnev (2018) Journal of Neuroscience*
  - Covered by: The Data Organization, MedWorm, Technology Networks, Pinterest Neuropsychology Research

- *Rahnev et al. (2016) PNAS*
  - SfN Hot Topics media release
  - Covered by: Daily Mail, Yahoo! News, Science 2.0, Technology.org, Medical News Today, The Times of India, Scicasts, Big News Network, Newswise, and 10 others
- *Rahnev et al (2015) Psychological Science*
  - Covered by: Association for Psychological Science official website
- *Rahnev et al (2011) Nature Neuroscience*
  - Covered by: Nature NeuroPod podcast
- *Harvard senior thesis & Caruso, Rahnev, & Banaji (2009) Social Cognition*
  - Covered by: The Economist

## MENTORING

### Postdocs

- Medha Shekhar (2023-present)
- Marshall Green (2022-present)
  - Best Poster award, Georgia Tech Psychology welcome back event, 2022
- Yi Gao (2021-present)
- Johan Nakuci (2020-2023)
  - Cognitive Neuroscience Society (CNS) Postdoctoral Fellow Award winner, 2021
  - Best Theoretical Contribution prize, Georgia Tech Psychology welcome back event, 2022
  - Next position: Postdoctoral Fellow at Army Research Laboratory (ARL)
- Bryan Conklin (2021-2022)
  - Next position: Senior DeFi Researcher at Celsius X
- Ji Won Bang (2016-2018)
  - Next position: Postdoctoral Fellow at NYU medical school

### Ph.D. Students

- Bogeng Song (2024-present)
- Alish Dipani (2024-present; co-advised with Ratan Murty & Audrey Sederberg)
- Herrick Fung (2023-present)
- Kai Xue (2022-present)
  - Larry S. O'Hara Graduate Fellowship awarded to the top 4 students in the College of Sciences at Georgia Tech, 2024
- Yunxuan Zheng (2022-present)
- Nadia Haddara (2018-2024)
  - Georgia Tech Psychology Best Paper Award, 2023
- Samuel Goldstein (2020-2022)
  - Presidential scholarship
  - Next position: Data Scientist at World Wide Technology
- Farshad Rafiei (2016-2022)
  - Georgia Tech Psychology Best Student Award, 2022
  - Next position: Machine Learning Scientist at IQVIA
- Medha Shekhar (2016-2021)
  - Georgia Tech Psychology Best Student Award, 2021
  - Next position: Postdoctoral Fellow at University College London (PI: Ray Dolan)
- Jiwon Yeon (2016-2021)
  - Georgia Tech Psychology Best Paper Award, 2021
  - Association of Korean Neuroscientists Outstanding Research Award, 2021

- Next position: Postdoctoral Fellow at Stanford (PI: Justin Gardner)
- Valeria Tretyak (2015)
  - Next position: Doctoral student at UT Austin

### Masters Students

- Sneha Venkatachalam (2017-2018; next position: Software engineer at Paypal)
- Nidhi Menon (2017-2018; next position: Data scientist at Autodesk)

### Lab Managers

- Kai Xue (2020-2022; next position: PhD student at Georgia Tech)

### Undergraduate, High-School, and Postbac Students

*\* indicates undergraduate co-authors on journal articles*

*<sup>ST</sup> indicates the completion of a Senior Thesis in Dr. Rahnev's lab*

*<sup>PURA</sup> indicates winners of Georgia Tech's Presidential Undergraduate Research Award (PURA)*

*<sup>Leddy</sup> indicates winners of Georgia Tech's Leddy Family scholarship*

### Georgia Tech

Sunny Jin<sup>\*, ST, PURA</sup>, Minzhi Wang<sup>\*, PURA</sup>, Sarayu Ayyalasomayajula<sup>PURA</sup>, Mingjia Hu<sup>\*</sup>, Diana Milton<sup>\*</sup>, Brooklyn Crabtree<sup>ST</sup>, Alexis Webber<sup>ST</sup>, Tristan Hackman<sup>ST</sup>, Samuel Weiss-Cowie<sup>Leddy</sup>, Girish Jayakumar, Krishna Saxena, Krishna Kocherla, Satyapragnya Kar, Ananya Jain, Sruthi Medepalli, Khushi Sharma, Rahul Iyer, Ria Nayar, Anushka Ramisetty, Quinlan Tran, Catherine Jiao, Anna Mills, Morgan Duvall, Leah Wu, Sophie Michelson, Sneha Jayanthi, Divya Tadanki, Pranav Viswanav, Gianna Capozzi, Sohum Gaitonde, Snehanjali Jayanthi, Divya Tadanki, Nikko Beady, Ashley Hong, Daniel Kim, Sahithi Pandi, Ana Shin, Rory Brown, Corey Breeland, Amber Fischer, Alwin Khoja, Himanaga Pandi, Lokranjan Lakshmikanthan, Anika Halder, Huy Trinh, Varunil Shah, Joshua Gaul, Mia Huff, Taylor Helfrich, Farooq Sheikh, Ashna Bhardwaj, Emine Zeynep Ulutas, Milan Patel, Nathan Hartley, Caterina Rossie, Austin Karesh, Amulya Noone, Aditya Prakash, Tralucia Powell, Alan Hoang, Riley Brooksher, Megan Kelly, Khue Tran, Siena Tetali, Elisabeth Clonts, Sora Bang, Lindley Hudson, Juliana Trach, Laura-Anne Thompson, You Zheng, Ranjani Sundaresan

### UC Berkeley

Alina Larson<sup>\*</sup>, Xin Zhao

### Columbia

Elliott Huang<sup>\*</sup>, Linda Bahdo<sup>\*</sup>, Stanislav Nikolov<sup>\*</sup>, David Zhou, Guy Graney, Evan Griffith, Jenessa Holder, Jan-Michael Rives, James Cunningham, Joshua Erb, Samantha Schipani, Mia Schachter, Ian Kwok, Rachel Kasha

## **SERVICE**

### **Professional service**

2024-present Member, Search committee for Executive Director of GT's Institute for Neuroscience, Neurotechnology and Society (INNS)

2024-present Member, Working group for establishing a new major in Computation and Cognition

2023 Moderator, Vision Science Society annual meeting

2023-present Member, Digital Lab scientific advisory committee

2023-present Member, Neuroengineering Center Student Awards Committee

2023 Member, Neuroscience cluster hire working group

2022-present Member, Center for Advanced Brain Imaging (CABI) Advisory Committee

2021-present Area Coordinator, Cognition and Brain Sciences, Georgia Tech

2020-present Organizer, Growing Up in Science talk series, Georgia Tech

2019-present IRB Consultant, Georgia Tech

2019-present	Member, Multiple Faculty Search Committees, Georgia Tech (elected DEI advocate)
2020-2023	Member, School of Psychology Diversity Committee, Georgia Tech
2018-2023	Member, Atlanta Chapter of the Society for Neuroscience (ACSFN) Council
2021-2023	Brown bag faculty sponsor, Cognition and Brain Sciences, Georgia Tech
2021-2022	Organizer, Neuroscience Seminar Series, Georgia Tech
2021-2022	Member, Holistic Admission Committee, Georgia Tech
2021-2022	Member, Critical Review Committee, Georgia Tech
2021	Presenter, New Faculty Welcome Event, Georgia Tech
2019-2021	Member, College of Sciences Faculty Diversity Council, Georgia Tech
2018-2021	Member, Center for Advanced Brain Imaging (CABI) Operations Committee
2020-2021	Organizer, School of Psychology Colloquium Series, Georgia Tech
2020-2021	Member, College of Sciences Task Force on Racial Equity, Georgia Tech
2019-2021	Member, Graduate Student Committee, Georgia Tech
2017-2018	Neuroscience Liaison, School of Psychology, Georgia Tech
2016-2017	Organizer, School of Psychology Colloquium Series, Georgia Tech
2015-2016	DOTE (Teaching observation and evaluation), Georgia Tech
2013	Student mentor, Association for the Scientific Studies of Consciousness
2008-2010	IT Assistant, Department of Psychology, Columbia University

### **Community Outreach**

2022-present	Faculty Mentor, Neuromatch Academy
2021-present	Faculty Mentor, Research Experience for Undergraduates (REU) program
2020	FOCUS program participant providing graduate admission guidance to URM undergrads
2017	Atlanta Brain Awareness Month Program for disadvantages high school students
2016	Georgia Tech School of Psychology summer camp for high school students

### **Professional Memberships**

Vision Science Society (VSS)  
Cognitive Computational Neuroscience (CCN)  
Cognitive Neuroscience Society (CNS)  
Psychonomics Society  
Society for Neuroscience (SfN)  
Association for the Scientific Study of Consciousness (ASSC)  
Phi Beta Kappa Society

### **Dissertation committees**

2024	Nadia Haddara (Georgia Tech, Psychology; primary advisor)
2023	Haleh Falakshahi (Georgia Tech, Electrical and Computer Engineering)
2022	Leonel Tapia (Universidad del Desarrollo, Chile)
2022	Jason Tsukahara (Georgia Tech, Psychology)
2022	Farshad Rafiei (Georgia Tech, Psychology; primary advisor)
2022	Ashkan Faghiri (Georgia Tech, Electrical and Computer Engineering)
2021	Hongting Zhao (Georgia Tech, Biomedical Engineering)
2021	Farshad Rafiei (Georgia Tech, Psychology; primary advisor)
2021	Charles Ferris (Emory)
2021	Jiwon Yeon (Georgia Tech, Psychology; primary advisor)
2021	Medha Shekhar (Georgia Tech, Psychology; primary advisor)
2021	Taylor Curley (Georgia Tech, Psychology)
2020	Joshua Calder-Travis (Oxford, UK)

- 2020 Elyse Norton (NYU)
- 2019 Euisun Kim (Georgia Tech, Biomedical Engineering)
- 2019 Derek Smith (Georgia Tech, Psychology)
- 2019 David Illingworth (Georgia Tech, Psychology)
- 2016 Savannah Cookson (Georgia Tech, Psychology)

#### **Preliminary examination committees**

- 2024 Dolly Seeburger
- 2023 Reba Koenen
- 2022 Sakshi Dhawan
- 2021 Justin Sukernek
- 2021 Jason Tsukahara
- 2021 Yunji Lee
- 2020 Farshad Rafiei (primary advisor)
- 2020 Jiwon Yeon (primary advisor)
- 2020 Medha Shekhar (primary advisor)
- 2019 Keenan May
- 2018 Taylor Curley
- 2017 Derek Smith

#### **Master's committees**

- 2022 Samuel Goldsein (primary advisor)
- 2021 Mangan Lloyd
- 2020 Soroush Mirjalili
- 2017 Medha Shekhar (primary advisor)

#### **First Year Ph.D. committees**

- 2017 Farshad Rafiei (primary advisor)
- 2017 Jiwon Yeon (primary advisor)
- 2017 Rachel Boyd

#### **Undergraduate thesis committees**

- 2022 Mary Kate Gale (Biology)
- 2021 Sunny Jin (Neuroscience; primary advisor)
- 2021 Sophia Martin (Psychology)
- 2021 Patricia Suzanne Eastwood (Psychology)
- 2020 Brooklyn Crabtree (Neuroscience; primary advisor)
- 2020 Alexis Webber (Biomedical engineering; primary advisor)
- 2020 Qing Zou (Psychology)
- 2019 Juliana Alfonso (Psychology)
- 2017 Tristan Hackman (Psychology; primary advisor)
- 2015 Christine Lee (Psychology)

#### **TEACHING**

##### **Course Instructor, Georgia Tech (last 7 years)**

*\* Awarded the Student Recognition of Excellence in Teaching: Class of 1934 CIOS Honor Roll (award established in Fall, 2019)*

- Fall, 2024      Sensation and Perception (Psyc 3040)      Class size: 167      Score: (class in progress)
- Fall, 2023      Sensation and Perception (Psyc 3040)      Class size: 180      Score: 4.7\*

Spring, 2023	Cognitive Neuroscience (Psyc 4090)	Class size: 42	Score: 4.9*
Fall, 2022	Sensation and Perception (Psyc 3040)	Class size: 147	Score: 4.8*
Fall, 2021	Sensation and Perception (Psyc 3040)	Class size: 100	Score: 4.9*
Spring, 2021	Cognitive Neuroscience (Psyc 4090)	Class size: 42	Score: 4.8*
Fall, 2020	Sensation and Perception (Psyc 3040)	Class size: 69	Score: 4.9*
Spring, 2020	Cognitive Neuroscience (Psyc 4090)	Class size: 31	Score: not collected
Spring, 2020	Graduate Cog Neuro (Psych 6090)	Class size: 10	Score: not collected
Fall, 2019	Sensation and Perception (Psyc 3040)	Class size: 70	Score: 4.7
Spring, 2019	Cognitive Neuroscience (Psyc 4090)	Class size: 21	Score: 4.8
Fall, 2018	Sensation and Perception (Psyc 3040)	Class size: 74	Score: 4.7
Spring, 2018	Graduate Cog Neuro (Psych 6090)	Class size: 10	Score: 5
Spring, 2018	Cognitive Neuroscience (Psyc 4090)	Class size: 12	Score: 4.8
Fall, 2017	Sensation and Perception (Psyc 3040)	Class size: 72	Score: 4.8
Spring, 2017	Cognitive Neuroscience (Psyc 4090)	Class size: 12	Score: 4.8

**Course Instructor, Columbia**

Summer, 2010 A New Look at Mathematics, Columbia Summer Program for High School Students

Summer, 2009 College Prep: Mathematics, Columbia Summer Program for High School Students

Summer, 2008 College Prep: Mathematics, Columbia Summer Program for High School Students

**Graduate Teaching Fellow, Columbia**

Spring, 2012 Attention and Perception (delivered guest lecture)

Fall, 2011 Judgment and Decision Making (delivered guest lecture)

Fall, 2010 Introduction to Statistics for Behavioral Scientists (led lab section)

Spring, 2010 The Science of Psychology (delivered guest lecture)

Spring, 2009 Attention and Perception (delivered guest lecture)

Fall, 2007 Personality Psychology