

# Rachit Dubey

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## Academic Appointments

July 2025–	Assistant Professor, Department of Communication, UCLA
2024–25	Postdoctoral Research Fellow, Department of Computer Science, Princeton University
2023–24	Postdoctoral Research Fellow, MIT Sloan School of Management

## Education

2018–23	Ph.D. in Computer Science, Princeton University Dissertation title: <i>The successes and failures of human drives</i>
2015–18	M.S. in Education, University of California, Berkeley
2008– 12	B.Eng. in Computer Science, Nanyang Technological University, Singapore

## Awards

2024	The 2024 Society for the Neuroscience of Creativity Dissertation Award
2021	Princeton Energy and Climate Scholars fellowship
2020	Best reviewer award for the 37 <sup>th</sup> International Conference on Machine Learning, ICML, 2020 [ranked top 10%]
2020	Best reviewer award for the 34 <sup>th</sup> conference on Neural Information Processing Systems, 2020 [ranked top 8.5%]
2017	Graduate School of Education Fellowship Award, Block Grant Award
2016	Outstanding Graduate Student Instructor Award, University of California, Berkeley
2016	Marascuilo Fellowship Award
2016	Graduate School of Education Fellowship Award, Block Grant Award

## Research Interests

**General Areas:** Computational Communication, Cognitive Psychology, Machine Learning

**Application Areas:** Climate Change, Public Policy

## Representative Publications

4. Liu, G., Snell, J., Griffiths, T.L., & **Dubey, R.** (2025). Binary climate data visuals amplify perceived impact of climate change. *Nature Human Behavior*, 1-10. [\[paper\]](#)
  - Featured in *Grist*: [Scientists just found a way to break through climate apathy](#)
  - Featured in *Gizmodo*: [Study uncovers one thing that cuts through climate apathy: loss](#)
  - Featured in *UCLA Newsroom*: [How to break through climate apathy](#)
  - Featured in *Phys.Org*: [Seeing lost winters shakes climate indifference](#)
  - Op-ed in *New Scientist*: [Why climate change fades into the background](#)
  - International coverage: [France](#), [Germany](#), [Greece](#), [Portugal](#)

3. **Dubey, R.,** Hardy, M., Griffiths, T.L., & Bhui R. (2024). AI-generated visuals of car-free US cities help improve support for sustainable policies. *Nature Sustainability*, 7(4), 399 – 403. [[paper](#)]
  - Featured in *Bloomberg*: [The images that boost support for sustainable transportation](#)
  - Featured in *Washington Post*: [How to transform city streets](#)
  - Featured in *Sloan Ideas Made to Matter*: [Sustainable policies get a boost from gen-AI visuals](#)
2. Dulberg, Z., **Dubey, R.,** Berwian, I., & Cohen, J. (2023). Having “multiple selves” helps learning agents explore and adapt in complex changing worlds. *Proceedings of the National Academy of Sciences*, 120(28), e2221180120. [[paper](#)]
1. **Dubey, R.,** Griffiths, T.L., & Dayan, P. (2022). The pursuit of happiness: A reinforcement learning perspective on habituation and comparisons. *PLOS Computational Biology*, 18(8), e1010316. [[paper](#)]
  - Featured in *Vox*: [How to deal with feelings of not being “good enough”](#)
  - Featured in *Neurologica*: [The Psychology of FOMO](#)
  - Featured in *DailyMail (UK)*: [Our brains are programmed to keep wanting more](#)
  - Featured in *Phys.Org*: [RL simulations show desire to want more may speed up learning](#)
  - Radio interview: [Deutschlandfunk \(German\)](#)

## All Published Articles

23. Sukhov, N\*, **Dubey, R.\***, Duke, A., & Griffiths, T.L (in press). When to keep trying and when to let go: Benchmarking optimal quitting. *Journal of Experimental Psychology: General* [[link](#)]
22. Dulberg, Z., **Dubey, R.,** & Cohen, J. (in press). Adapting to loss: A computational model of grief. *Psychological Review*. [[link](#)]
21. Yu, D., Thompson, B. D., & **Dubey, R.** (2025). Leveraging AI to advance psychological research for climate policy. *Current Opinion in Behavioral Sciences*, 65,101547. [[link](#)]
20. Liu, G., Snell, J., Griffiths, T.L., & **Dubey, R.** (2025). Binary climate data visuals amplify perceived impact of climate change. *Nature Human Behavior*, 1-10. [[link](#)]
19. Orchinik, R., **Dubey, R.,** Gershman, S., Powell, D., & Bhui, R. (2024). Learning from and about scientists: Consensus messaging shapes perceptions of climate change and climate scientists. *PNAS Nexus*, 3(11), page485 [[link](#)]
18. Bhui R. & **Dubey, R.** (2024). Why context should matter. *Decision*, 11(4), 557–567. [[link](#)]
17. **Dubey, R.,** Hardy, M., Griffiths, T.L., & Bhui R. (2024). AI-generated visuals of car-free US cities help improve support for sustainable policies. *Nature Sustainability*, 7(4), 399-403. [[link](#)]
16. Dulberg, Z., **Dubey, R.,** Berwian, I., & Cohen, J. (2023). Having “multiple selves” helps learning agents explore and adapt in complex changing worlds. *Proceedings of the National Academy of Sciences*, 120(28), e2221180120. [[link](#)]

15. Orchinik, R., **Dubey, R.**, Powell, D., Gershman, S., & Bhui, R. (2023). Learning About Scientists from Climate Consensus Messaging. In *Proceedings of the 45th Annual Conference of the Cognitive Science Society*. [\[link\]](#)
14. **Dubey, R.**, Griffiths, T.L., & Dayan, P. (2022). The pursuit of happiness: A reinforcement learning perspective on habituation and comparisons. *PLOS Computational Biology*, 18(8), e1010316. [\[link\]](#)
13. Dulberg, Z., **Dubey, R.**, Berwian, I.M., & Cohen, J.D. (2022). Modularity benefits reinforcement learning agents with competing homeostatic drives. In *Proceedings of the 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making*. [\[link\]](#)
12. **Dubey, R.**, Griffiths, T.L., & Lombrozo, T. (2022). If it's important, then I'm curious: Increasing perceived usefulness stimulates curiosity. *Cognition*, 226, 105193. [\[link\]](#)
11. **Dubey, R.\***, Mehta, H\*, & Lombrozo, T. (2021). Curiosity is contagious: A social influence intervention to induce curiosity. *Cognitive Science*, 45(2), e12937. [\[link\]](#)
10. **Dubey, R.** & Griffiths, T.L. (2020). Understanding exploration in humans and machines by formalizing the function of curiosity. *Current Opinion in Behavioral Sciences*, 35, 118-124. [\[link\]](#)
9. **Dubey, R.** & Griffiths, T.L. (2020). Reconciling novelty and complexity via a rational analysis of curiosity. *Psychological Review*, 127(3), 455. [\[link\]](#)
8. **Dubey, R.**, Griffiths, T.L., & Lombrozo, T. (2019). If it's important, then I am curious: A value-based intervention method to induce curiosity. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. [\[link\]](#)
7. **Dubey, R.**, Agrawal, P., Pathak, D., Griffiths, T. L., & Efros, A. A. (2018). Investigating human priors for playing video games. In *35th International Conference on Machine Learning (ICML)*. [\[link\]](#)  
[Long oral presentation: 8% acceptance rate]
6. Mehta, H\*, **Dubey, R.\***, & Lombrozo, T. (2018). Your liking is my curiosity: a social popularity intervention to induce curiosity. In *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. [\[link\]](#)
5. **Dubey, R.**, & Griffiths, T. L. (2017). A rational analysis of curiosity. In *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. [\[link\]](#)
4. **Dubey, R.\***, Peterson, J\*, Khosla, A., Yang, M. H., & Ghanem, B. (2015). What makes an object memorable?. In *Proceedings of the IEEE International Conference on Computer Vision (ICCV)*. [\[link\]](#)
3. **Dubey, R.**, Dave, A., & Ghanem, B. (2014). Improving saliency models by predicting human fixation patches. In *Asian Conference on Computer Vision*. [\[link\]](#)
2. Dave, A\*, **Dubey, R.\***, & Ghanem, B. (2012). Do humans fixate on interest points?. In *21st IEEE International Conference on Pattern Recognition*. [\[link\]](#)
1. **Dubey, R.**, Ni, B., & Moulin, P. (2012). A depth camera based fall recognition system for the elderly. In *International Conference on Image Analysis and Recognition*. [\[link\]](#)

## Book Chapters

1. Soon, C. S., **Dubey, R.**, Ananyev, E., & Hsieh, P. J. (2017). Approaches to understanding visual illusions. In *Computational and cognitive neuroscience of vision*, (pp. 221-233). Springer, Singapore.

## Invited Talks

- 2025 Climate politics working group, UCLA  
Guest Lecturer, Data Science for Social Good, UCLA
- 2024 Department of Psychology Colloquium, University of Michigan  
Department of Communication Colloquium, University of California, Los Angeles  
Summerfield Lab, University of Oxford  
School of Informatics Colloquium, University of Edinburgh  
School of Sustainability Colloquium, Arizona State University  
Department of Psychology Colloquium, Purdue University
- 2023 Department of Psychology Colloquium, NYU  
Climate & Sustainability Consortium, MIT  
Department of Psychology Colloquium, University of California, San Diego  
Department of Psychology Colloquium, Georgia Institute of Technology  
Departments of Computer Science and Psychology Colloquium, University of British Columbia  
Department of Psychology Colloquium, University of California, Berkeley  
Computational Psychiatry Journal Club, Max Planck Institute for Biological Cybernetics  
Symposium on Insight, Society for the Neuroscience of Creativity  
Causality in Cognition Lab, Stanford University
- 2022 Consciousness and AI seminar, Future of Humanity Institute, University of Oxford  
Symposium on Intrinsic Rewards, Society for Neuroeconomics  
Concepts and Categories (ConCats) Seminar, NYU
- 2021 Climate Psychology and Action Lab, University of California, San Diego  
PDP seminar, Princeton University  
Schulz lab, Max Planck Institute for Biological Cybernetics, Tübingen, Germany  
Active Child workshop, University of Göttingen, Germany
- 2020 Affective Brain Lab seminar, UCL  
PDP seminar, Princeton University
- 2019 Princeton Alumni Association Club  
Kidd Lab, University of California, Berkeley  
Graduate Cognitive Science Seminar, University of Rutgers, New Brunswick  
Curiosity, Explanation, & Exploration Workshop, Princeton University
- 2018 Cognition Colloquium, University of California, Berkeley

## Reviewing

*Journal:* Trends in Cognitive Science (x1), Nature Human Behavior (x2), Nature Communications (x1), Psychological Review (x3), Cognition (x5), Cognitive Science (x3), Open Mind (x3), Memory and Cognition (x1), Cognition and Emotion (x1), Journal of Artificial Intelligence Research (x1), Educational Psychology Review (x1)

*Conference proceedings:* Neural Information Processing Systems (x3), International Conference on Machine Learning (x3), International Conference on Learning Representations (x3), Cognitive Science Society (x4)

## Conference Service

Organizer “Combating the climate crisis with cognitive science” workshop, CogSci 2021.

Panelist “Object Representations for Learning and Control” workshop, NeurIPS 2021.

## Service

Editor, Application Statement Feedback Program (2022-)

Volunteer scientist, Skype A Scientist (2021-)

Volunteer software developer, CareGiver Saathi (2021)

[Developed an app with the NGO to locate oxygen, medicines, and beds during India’s worst COVID wave.]

[My app was used by over 10,000 people to find critical life-saving resources during this period.]

Founder and Team lead, Zero Waste Princeton (2019-21)

[Led a group of 30+ students to research and develop strategies to reduce Princeton’s food & plastic waste.]

Research Consultant, Yellowstone Ecological Research Center (2019-21)