

# Rachit Dubey

Email: [rdubey@princeton.edu](mailto:rdubey@princeton.edu) | WEBSITE: <https://rachit-dubey.github.io/> | GOOGLE SCHOLAR: [Link](#)

## Experience & Education

- July 2025– Incoming Assistant Professor, Department of Communication, UCLA
- 2024– Postdoctoral Research Fellow, Department of Computer Science, Princeton University
- 2023–24 Postdoctoral Research Fellow, MIT Sloan School of Management
- 2018–23 PhD, Computer Science, Princeton University
- 2015–18 MS, Education, University of California, Berkeley
- 2008– 12 BEng, Computer Science, Nanyang Technological University, Singapore

## Published Articles

19. Orchinik, R., **Dubey, R.**, Gershman, S., Powell, D., & Bhui, R. (conditionally accepted). Learning from and about climate scientists. *PNAS Nexus* [[preprint](#)]
18. Bhui R. & **Dubey, R.** (2024). Why context should matter. *Decision*
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*. [[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](#)] [**See press coverage below**]
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](#)]  
[Featured as a **spotlight article** in [Trends in Cognitive Science](#)]
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]  
[**See press coverage below**]
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](#)]

## Working Papers

5. Liu, G., Snell, J., Griffiths, T.L., & **Dubey, R.** (under review). Binary climate data heightens perceived impact of climate change
4. Kraft-Todd, G.\*, **Dubey, R.\***, Yoeli, E., Rand D., & Bhanot, S. (under revision). Public good messaging motivates the wealthy to reduce water consumption. *Nature Communications*. [[preprint](#)]
3. **Dubey, R.**, Ho, M., Mehta, H., & Griffiths, T.L. (under revision). Aha! moments correspond to metacognitive prediction errors. [[preprint](#)]
2. Sukhov, N.\*, **Dubey, R.\***, Duke, A., & Griffiths, T.L. (under revision). When to keep trying and when to let go: Benchmarking optimal quitting. *Journal of Experimental Psychology: General* [[preprint](#)]

## 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.

## Technical Reports

1. **Dubey, R.\***, Grant E.\*, Luo, M.\*, Narasimhan, K., & Griffiths, T. L. (2020). Connecting context-specific adaptation in humans to meta-learning. *arXiv: 2011.13782*. [[link](#)]

## 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

## Teaching Experience

- PRINCETON
- 2019 *Graduate Student Instructor*, COS 360: Computational Models of Cognition (Fall 2019)  
[**Department of Computer Science's nomination for the 2020 Teaching Award**]
- UC BERKELEY
- 2018 *Graduate Student Instructor*, CogSci 131: Computational Models of Cognition (Spring 2018)
- 2016 *Graduate Student Instructor*, CogSci 131: Computational Models of Cognition (Fall 2016)  
[**Outstanding Graduate Student Instructor Award**]
- 2016 *Graduate Student Instructor*, CogSci 1: Introduction to Cognitive Science (Summer 2016)

## Mentoring

- 2023–24 Grace Liu, masters student in Computer Science, Princeton University
- 2022–24 Lucas Irwin, undergraduate in Computer Science, Princeton University  
[**George A. Miller Thesis Award in Cognitive Science**]
- 2022–24 Nikolay Sukhov, PhD student in Physics, Princeton University
- 2021–24 Zachary Dulberg, PhD student in Neuroscience, Princeton University
- 2022–23 Dhara Kumari Yu, masters student in CS, Stanford → PhD student in Psychology, UC Berkeley
- 2021–22 Yosi Hatekar, undergraduate in Computer Science, University of Toronto
- 2021–22 Ayush Chakravarty, undergraduate in CS, UC Davis → M.S. student in Symbolic Systems, Stanford
- 2020–21 Michael Luo, undergraduate in Computer Science, UC Berkeley → PhD student, UC Berkeley
- 2020–21 Jean Luo, undergraduate in Psychology, Princeton University → PhD student, USC
- 2020–21 Nimra Nadeem, undergraduate in Computer Science, Princeton University
- 2017–19 Hermish Mehta, undergraduate in EECS, UC Berkeley
- 2017–18 Madeleine Lee, undergraduate in Psychology, UC Berkeley

## Invited Talks

- 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

## Media Coverage

### **Press related to work on using AI to improve support for sustainable policies.**

Bloomberg: [The images that boost support for sustainable transportation.](#)

Washington Post: [How to transform city streets](#)

MIT Sloan Ideas Made to Matter: [Sustainable policies get a boost from AI-generated visuals](#)

### **Press related to work on multiple selves.**

Media Coverage: [Psychology Today](#), [Tech Xplore](#), [Princeton News](#)

### **Press related to work on happiness and machine learning.**

Vox: [How to deal with feelings of not being “good enough”](#)

DailyMail (UK): [Our brains are programmed to keep wanting more](#)

Medical News Today: [Humans desire to want more may serve an important purpose](#)

Neurologica: [The Psychology of FOMO](#)

Phys Org: [RL-based simulations show human desire to always want more may speed up learning](#)

Radio interview: [Deutschlandfunk \(German\)](#)

This study was also featured as the top post on [reddit r/science](#)

#### **Press related to work on curiosity.**

BBC: [Curiosity: the neglected trait that drives success.](#)

The British Psychological Society: [To stimulate curiosity in a topic, explain how it benefits society](#)

#### **Press related to work on human priors and artificial intelligence.**

Media Coverage: [MIT Technology Review](#), [HiTech News](#), [Import AI](#)

Expository articles and videos: [Arxiv Insights](#), [Two Minute papers](#), [Severely Theoretical](#)

In other languages: [Polish](#), [German](#)

## Reviewing

*Journal:* Trends in Cognitive Science, Nature Human Behavior, Nature Communications, Psychological Review, Cognition, Cognitive Science, Memory and Cognition, Cognition and Emotion, Journal of Artificial Intelligence Research, Transactions in Image Processing

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

## Conference Service

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

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

## Diversity, Equity, & Inclusion

Editor, Application Statement Feedback Program (2022-)

Member of Divest MIT, Divest Princeton, Citizens Climate Lobby, and Food & Water watch

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)