# Ömer Dağlar Tanrıkulu, Ph.D.

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## Employment

**Assistant Professor**, Department of Psychology, University of New Hampshire 2022–present
**Visiting Assistant Professor**, Program in Cognitive Science, Williams College 2021–2022
**Postdoctoral Fellow**, Department of Psychology, University of Iceland 2018–2021

## Education

**Ph.D.**, Cognitive Psychology, Rutgers University
**M.S.**, Cognitive Psychology, Rutgers University
**M.A.**, Cognitive Science, Boğaziçi University
**B.S.**, Chemical and Biological Engineering, Koç University

## Peer-Reviewed Journal Articles

Fleming, S., Robertson, P., Turek, D. & **Tanrıkulu, Ö.D.** (2025). Testing the Relative Influence of Three Key Factors in Mind-Based Models of Religion: Template Categories, Utility, and Threat. *Journal of Cognition & Culture*, 25(1-2), 159-181.

**Tanrıkulu, Ö.D.**, Froyen, V., Feldman, J. & Singh, M. (2024). Interaction of contour geometry and optic flow in determining relative depth of surfaces. *Attention, Perception & Psychophysics* 10.3758/s13414-023-02807-0.

Houborg, C., Kristjansson, A., **Tanrıkulu, Ö.D.** & Pascucci, D. (2023). The effects of visual distractors on serial dependence. *Journal of Vision* 23(12):1.

**Tanrıkulu, Ö.D.** Pascucci, D. & Kristjansson, A. (2023) Stronger serial dependence in the depth plane than the fronto-parallel plane between. *Journal of Vision* 23(5):20

Houborg, C., Kristjansson, A., **Tanrıkulu, Ö.D.** & Pascucci, D. (2023). The role of secondary features in serial dependence. *Journal of Vision* 23(5):21.

Pascucci, D., **Tanrıkulu, Ö.D.**, Chetverikov, A., Ozkirli A., Houborg, C., Ceylan, G., Zerr, P., Rafiei, M. & Kristjansson, A. (2023). Serial dependence in visual perception: A review. *Journal of Vision*, 23(1):9.

**Tanrıkulu, Ö.D.**, Froyen, V., Feldman, J. & Singh, M. (2022). The interpretation of dynamic occlusion: Combining contour geometry and accretion/deletion of texture. *Vision Research, 199*, 108075

**Tanrıkulu, Ö.D.**, Chetverikov, A., Hansmann-Roth S. & Kristjansson, A. (2021). What kind of empirical evidence is needed for probabilistic mental representations? An example from visual perception. *Cognition, 217*, 104903,

**Tanrıkulu, Ö.D.**, Chetverikov, A. & Kristjansson, A. (2021). Testing temporal integration of feature probability distributions using role-reversal effects in visual search.*Vision Research*, 188; 211-226.

**Tanrıkulu, Ö.D.**, Chetverikov, A. & Kristjansson, A. (2020). Encoding perceptual ensembles during visual search in peripheral vision.*Journal of Vision, 20*(8):20.

Chetverikov, A., Hansmann-Roth S., **Tanrıkulu, Ö. D.** & Kristjansson, A. (2019) Feature Distribution Learning (FDL): A New Method for Studying Visual Ensembles Perception with Priming of Attention Shifts. In: *Neuromethods*. Humana Press.

**Tanrıkulu, Ö.D.**, Froyen, V., Feldman, J. & Singh, M. (2018). When Is Accreting/Deleting Texture Seen as In Front? Interpretation of Depth From Texture Motion. *Perception, 47*(7), 694 - 721.

**Tanrıkulu, Ö.D.**, Froyen, V., Feldman, J. & Singh, M. (2016). Geometric figure-ground cues override standard depth from accretion-deletion. *Journal of Vision, 16*(5), 15.

## Manuscripts Under Review

Kristjansson, A. & **Tanrıkulu, Ö.D.** (in revision) Priming of probabilistic attentional templates: Neurophysiological evidence.

Lee, A., Turek, D. & **Tanrıkulu, Ö. D**, (under review). Beyond Suboptimality: Resource-Rationality and Task Demands Shape the Complexity of Perceptual Representations

Semizer, Y., Persaud, K., He, X., Kleene, N. & **Tanrıkulu, Ö.D.**(under review). Foraging strategies for negotiating costs and rewards in active visual search.

## Conference Presentations (Selected Talks)

**Tanrıkulu, Ö. D**.(2024, March). *Everyone knows what probabilistic perception is, so let's ask them: A survey study.* Talk given at the 7th International Icelandic Vision Lab Conference, Reykir, Iceland

Lee, A., Turek, D. & **Tanrıkulu, Ö. D**, (2023, November). *Perceptual representations of uncertainty are complex but not fully probabilistic.* Talk given at the 31st Annual Object Perception, Attention, and Memory (OPAM) Conference, San Francisco, California, USA.

McGee, T.A. & **Tanrıkulu, Ö. D.** (2022, June). *Investigating auditory role reversal effects using spatialized pitch distributions.* Talk given at the 9th Iberian Conference on Perception, Barcelona, Spain

**Tanrıkulu, Ö. D.** (2022, May). *How can we provide stronger empirical evidence for probabilistic representations in visual processing?.* Talk given at the 22nd Annual Meeting of the Vision Science Society, St. Petersburg, FL., U.S.A.

**Tanrıkulu, Ö.D.**, Chetverikov, A., Hansmann-Roth S. & Kristjansson, A. (2021, June). *Is there empirical support for probabilistic mental representations? A case within visual perception.* Talk presented at the Annual Meeting of the Society for Philosophy and Psychology, Princeton, NJ, U.S.A.

**Tanrıkulu, Ö. D.**, Pascucci, D. & Kristjansson, A. (2021, June). *Adding another dimension to history effects in vision: Positive serial dependence effects in Virtual Reality.* Talk given at the 20th Biomedical and Health Sciences Conference at the University of Iceland, Reykjavik, Iceland.

**Tanrıkulu, Ö. D.** (2020, February) *Is there empirical support for probabilistic mental representations in visual perception?.* Talk given at the Workshop on Representation in Cognitive Science, Ruhr-Universitat Bochum, Germany.

**Tanrıkulu, Ö. D.**, Chetverikov, A. & Kristjansson, A. (2019, August). *Testing the temporal integration of information from visual ensembles: How variance modulates recency effects.* Talk given at the 42nd European Conference on Visual Perception, Leuven, Belgium.

## Invited Talks (Selected)

Psikolojide bilissel devrim (EN: Cognitive revolution in psychology) *CogIST Bilissel Bilimin Temelleri Cevrimici Yaz Okulu.* (*EN: CogIST Fundamentals of Cognitive Science Virtual Summer School*) Istanbul, Turkey (2022, July)

A computational approach to vision: Using visual ensembles to study probabilistic representations in perception *Science Workshop Series.* Bennington College, Bennington, VT, USA (2022, April)

Temporal dynamics of Feature Distribution Learning: A new method for studying visual ensembles. *Attention, perception, and temporal context.* Webinar series organized by David Pascucci, (2021, January)

Visual ensembles as a tool to study probabilistic representations *Cognitive Science Colloquium Series,* Bogazici University, Istanbul, Turkey (2019, December)

## Grants & Proposals

***Pending***:

- National Science Foundation, Perception, Action, and Cognition Program (Collaborative Research Grant)
  Submitted January 2025; under review
  Title: *Investigating Complex Interactions between Expectations, Perception, and Episodic Memory in Naturalistic Contexts*
  Role: Lead PI ($633,819)
  Co-PI: Kimele Persaud, Rutgers University

***Not funded***:

- UNH COLA gift fund to support faculty transdisciplinary activity
  Submitted February 2025; not funded
  Title: *Exploring the Intersection of Cognition and Culture*
  Role: Co-PI ($5,000)
  Lead PI: Paul Robertson, University of New Hampshire

- John Templeton Foundation, Online Funding Inquiry
  Submitted August 2024; not funded & in-revision
  Title: *Explaining Religion's Cultural and Cognitive Success through the Positive Effects of Counterintuitive Visual Paradigms*
  Role: Lead PI ($175,700)
  Co-PI: Paul Robertson, University of New Hampshire
- Icelandic Research Fund, Postdoctoral Fellowship Grant
  Submitted December 2020; not funded
  Title: *Investigating the probabilistic nature of perceptual representations*
  Role: Lead-PI ($200,000)

## Teaching Experience (Condensed Summary)

Instructor for more than fifteen undergraduate and graduate courses across cognitive psychology, vision science, computational modeling, philosophy of mind, and scientific writing at the University of New Hampshire, Williams College, Rutgers University, and the University of Iceland.

## Mentoring (Condensed Summary)

Supervise graduate and undergraduate researchers in visual perception, VR-based experimentation, computational modeling, and interdisciplinary projects. Mentees have produced first-author publications, competitive theses, conference presentations, and research awards; graduate trainees also mentor junior students, contributing to a layered mentoring culture in the lab.

## Professional Service (Condensed)

**Guest Editor**, *New Ideas in Psychology* (Special Issue: Probabilistic Nature of Perception & Cognition)
**Review Editor**, *Frontiers in Psychology*
**Grant Reviewer**, National Science Foundation (NSF), Division of Behavioral and Cognitive Sciences; Collaborative Research Excellence (CORE); University of New Hampshire
**Organizer**, Psychology Colloquium Series, University of New Hampshire (2023 - present)
**Ad-hoc reviewer:** Cognition; Vision Research; Attention, Perception & Psychophysics; Cognitive Processing; Journal of Vision
**Abstract reviewer:**Society for Philosophy and Psychology, 2025 Conference **Member:** Vision Science Society; Society for Philosophy and Psychology; International Society for the Study of Existential Psychology (ISSEP)

## Honors & Awards (Selected)

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| 2021 | Elsevier/Vision Research Travel Award, 21st Vision Sciences Society Conference |
| 2016 | Graduate School Fellowship, Rutgers University |
| 2016 | Professional Development Fund, Rutgers University AAUP-AFT |
| 2007-2009 | Graduate Scholarship, Technical and Scientific Research Council of Turkey (TUBITAK) |