Aliyar Ozercan

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Research Profile

My research lies at the intersection of philosophy, cognitive science, and developmental psychology, and focuses on the computational and representational foundations of early social cognition. I study infancy in particular, asking what kinds of representational resources underwrite early mindreading and what standards of evidence justify attributing mental states in preverbal children. My work combines philosophical analysis with formal modeling, developmental evidence, and neurocognitive methods to develop mechanistic accounts that generate discriminative predictions for experimental paradigms. Current projects include an optimal control model of reference alignment under uncertainty and an Emotion-First theory on which affective appraisal supports social prediction prior to explicit belief reasoning. My broader research background also includes work as a neuroimaging research assistant specializing in fMRI data analysis. I received UConn's *Provost's Teaching Excellence Award* and have taught 16 sections as instructor of record, in addition to 16 further sections as a teaching assistant, with an overall course evaluation average of 4.61 across appointments, 0.55 points above the relevant institutional averages.

Areas of Specialization and Competence

AOS: Philosophy of Cognitive Science; Philosophy of Mind; Developmental Cognitive Science.
AOC: Philosophy of Language; Neurobiology of Language; Cognitive Neuroscience.

Education

University of Connecticut (UConn) 2018 – 2025
Ph.D. in Philosophy *Storrs, CT*

- Dissertation: "The Sub-Theories of Mind"
- Chair: William G. Lycan; Committee: Jonathan Phillips, Mitchell Green, Richard Moore

University of Connecticut (UConn) 2019 – 2025
Graduate Certificates (Ph.D. Minors) *Storrs, CT*

- Neurobiology of Language
- Cognitive Science
- Logic

University of Connecticut (UConn) 2018 – 2020
M.A. in Philosophy *Storrs, CT*

Middle East Technical University (METU) 2013 – 2016
M.A. in Philosophy *Ankara, Turkey*

- Thesis: "The Maxims of Relevance Theory for Determining the Referent of a Proper Name"
- Chair: Teo Grünberg; Committee: David Grünberg, Sandy Berkovski

Middle East Technical University (METU) 2009 – 2013
B.A. in Philosophy *Ankara, Turkey*

Books & Edited Volumes

Symbolic Logic Manual. Aliyar Ozercan. METU Press, Ankara, 2014.

Language, Logic, and Empirical Knowledge: Collected Papers of Teo Grünberg (1965–2005). Editors: D. Grünberg and Aliyar Ozercan. METU Press, Ankara, 2017.

Peer-Reviewed Articles

Publications

1. Representation of the Unknown: A Theory of Indefinite Targeting (*Synthese*, 2026)

Epistemology, Philosophy of Mind, Philosophy of Science

- Explains how inquiry can target an unknown by introducing "indefinite targeting," a formal representational scheme that supports adaptive investigation despite faulty starts (e.g., the Vulcan case).

Revise and Resubmit

1. Emotion-First Mindreading in Infancy: A Theory of Emotion (R&R at *Mind & Language*)

Philosophy of Mind, Developmental Psychology, Cognitive Science

- Argues that a domain-specific "Theory of Emotion" is an early form of mindreading, outlining a developmental ladder from resonance to practical metarepresentation, and integrates evidence from comforting, social referencing, and early humor.

2. The Puzzle of Early Deception: Lying Before Belief Representation (R&R at *Cognition*)

Philosophy of Cognitive Science, Developmental Psychology, Philosophy of Mind

- Develops a staged account of early deception that distinguishes access-control from belief-manipulation aims. Argues that children can produce tactically selective denials via access-gated, factive epistemic tracking before stable belief-content reasoning and narrative control, offering a third alternative to belief-first and association-only accounts.

Papers under review

1. Proto-Social Cognition: A Relational Framework for Infant Sociality (Under review)

Cognitive Science, Developmental Psychology, Philosophy of Mind

- Argues that infants' earliest social system manages live interaction (not state inference) via a "who-does-what-to-what" controller; explains existing findings on contingency and integration while making new, falsifiable predictions about anticipatory looking and partner-scaled re-engagement bids.

2. Helping Without Beliefs: Teleological Alignment in Early Instrumental Helping (Under review)

Developmental Psychology, Philosophy of Mind, Cognitive Science

- Argues that the canonical toddler helping profile (selectivity, targeting, efficiency) can be generated by a belief-free predictive control architecture, *Teleological Alignment*, which tracks publicly available goal structure and objective constraints, treats disruption as mismatch, and treats intervention as completion-based repair, without presupposing moral concern or shared commitment.

3. Beyond Belief: A Criterion Reading of Dennett's Standard for Mindreading (Under review)

Philosophy of Mind, Epistemology, Cognitive Science

- Proposes a "criterion reading" of Dennett's (1978) standard on which the belief benchmark is sufficient but not necessary, and sketches a model-comparison program for testing early emotion-reading against that standard.

4. Emotion Reading as Mindreading in Infancy: A Complexity-Cost Criterion (Under review)

Developmental Psychology, Experimental Philosophy, Developmental Cognitive Neuroscience

- Develops a belief-free evidential standard for infant mindreading and applies it to emotion-domain paradigms (emotion–goal conflict, convergent comforting, active probing) with explicit falsifiers and pre-registered style quality checks.

5. Reference Alignment and Repair as Optimal Control (Under review)

Philosophy of Language, Pragmatics, Philosophy of Cognitive Science

- Models reference alignment as cost-sensitive control under uncertainty: a listener maintains a distribution over candidate targets and selects among *Wait*, *Ground*, *Guess*, and *LetGo* via a POMDP, predicting clarification behavior across stakes, costs, cue informativeness, and cognitive load.

7. Domain-Specific Sub-Theories of Mind and Their Developmental Assembly (Under Review)

Developmental Psychology, Philosophy of Cognitive Science, Philosophy of Mind

- Develops a modular Sub-Theory of Mind architecture in which social cognition is assembled from partially distinct components for motion, emotion, intention/desire, knowledge, and belief. Argues that false-belief understanding is a stringent but relatively late form of decoupled mindreading, while earlier components support genuine but computationally more basic forms of social prediction, thereby dissolving the standard rich-versus-lean deadlock in early Theory of Mind.

Papers in preparation

1. Pointing as Adaptive Social Regulation (In preparation)

Philosophy of Mind, Cognitive Development, Minimal Cognition

- Argues that infant pointing is best explained as a minimal regulatory architecture for managing another agent's attention: richer than conditioned association, leaner than propositional mindreading, and capable of explaining partner-sensitivity, communicative repair, and the imperative/declarative profile.

2. Prepositional Attitudes: Fear, Anger, and Desire (In preparation)

Philosophy of Mind, Philosophy of Emotion, Philosophy of Psychology

- Argues that fear of, anger at, and some desires for are best understood neither as proposition-plus-attitude states nor as merely flat objectual relations. Develops a target-plus-mode account of 'prepositional attitudes' as a structured middle category, explaining their intentional, evaluative, and motivational profile without reducing them to hidden propositions.

Affiliations and Visiting Positions

Institute for the Brain and Cognitive Sciences (IBACS) 2021 – present
Fellow and Affiliated Researcher *Storrs, CT*

Expression, Communication, and Origins of Meaning (ECOM) Research Group 2018 – present
Manager and Affiliated Researcher *Storrs, CT*

Boğaziçi University 2016 – 2018
Ph.D. Coursework in Philosophy (transferred to UConn) *Istanbul, Turkey*

University of California, Davis 2015 – 2016
Visiting Scholar in Philosophy *Davis, CA*

Harvard University 2011
Graduate Coursework and Research *Cambridge, MA*

Research Experience

Research Group Manager 2018 – 2024
University of Connecticut, Expression, Communication, and Origins of Meaning (ECOM) *Storrs, CT*

- Co-organized ten international, interdisciplinary conferences connecting philosophy, linguistics, psychology, and neuroscience. Keynote speakers included:
  - *Expression, Language, Music 2* (2024): Ani Patel; Paul Boghossian; Philippe Schlenker
  - *Kinds of Consciousness* (2024): Jonathan Birch; Elizabeth Schechter
  - *Millikanfest* (2023): François Recanati; David Papineau; Robyn Carston; Josh Armstrong; Dan Dennett
  - *Kinds of Action* (2023): Lucy O'Brien; John Schwenkler
  - *Expression, Language, Music* (2022): Tecumseh Fitch; Kathleen Higgins; Ray Jackendoff; Jerrold Levinson; Isabelle Peretz
  - *Expression, Language, Music* (scheduled 2021; postponed to 2022)
  - *Kinds of Mindreading* (2021): Jonathan Phillips; Helen Tager-Flusberg
  - *Kinds of Knowledge* (2020): Alex Byrne; Kristin Andrews
  - *Communication, Context, Conversation* (2019): Robyn Carston; Danielle Matthews; Mandy Simons
- Hosted and facilitated 55 invited talks; coordinated speaker series, schedules, publicity, and post-talk research networking across departments.
  - Invited speakers included William Snyder; Letty Naigles; Robyn Carston; Disa Sauter; Ani Patel; Peter Gärdenfors; Richard Moore; Jonathan Prather; Crispin Wright; Emily Myers; Peter Langland-Hassan; Cameron Buckner; Jill de Villiers; and others.
- Secured internal and external funding through grant writing and resource coordination; managed budgets and reporting for ECOM events.

IBACS Fellowship on NIH and NSF Grants 2022

IBACS (Institute for the Brain and Cognitive Sciences) *Storrs, CT*

- Awarded a $5,000 competitive fellowship for graduate research in Brain and Cognitive Sciences.
- Completed an intensive multi-week grant-writing workshop focused on NIH F31 and F32 proposals; drafted Specific Aims and core research sections with faculty feedback.
- Served on a mock NIH review panel to score and discuss proposals; gained practical insight into NSF GRFP and NRSA processes.

Research Assistant in Neuroimaging 2019 – 2021

IBACS (Institute for the Brain and Cognitive Sciences) and BIRC (Brain Imaging Research Center) *Storrs, CT*

- Managed and preprocessed multimodal neuroimaging data, including fMRI and EEG, using BIDS apps and preprocessing pipelines (fMRIPrep, XCP Engine).
- Performed quality control and motion correction; slice timing correction; coregistration; normalization; spatial smoothing.
- Analyzed task-based and resting-state fMRI data using FSL (FEAT) and AFNI; conducted ROI and whole-brain analyses; integrated FreeSurfer-based anatomy.
- Computed connectivity metrics (seed-based correlation, ICA, ALFF) and network-level interactions across subjects; contributed to multivariate analyses for cognitive and clinical projects.
- Programmed cognitive tasks for fMRI and EEG using PsychoPy and Python for adult and clinical populations.
- Developed reusable documentation and Python scripts for automated analysis pipelines and lab-wide task deployment.
- Trained in MRI and EEG hardware operation, safety protocols, and participant preparation; supported scanner bookings, stimulus setup, and troubleshooting.

Research Assistant 2014 – 2016

METU, Laboratory for Computational Ontology *Ankara, Turkey*

- Contributed to the project "In Pursuit of the Missing Premise," investigating foundational gaps in theoretical models of reasoning.
- Translated philosophical accounts of agency into formal, computable models of agent-based reasoning: specified an ontology for agents, actions, goals, and epistemic constraints; defined class hierarchies and relational schemas; created test queries to probe inferences, defeaters, and exception handling.
- Bridged theory to implementation by developing rule- and belief-update procedures; wrote formal specifications that informed prototype computational agent design.

Invited Talks

"Prepositional Minds," Department of Philosophy Colloquium, University of Connecticut, Storrs, CT, February 2024

"Sub-Theories of Mind," Cognitive Science Research Club, Middle East Technical University, Ankara, Turkey, December 2023

"Sub-Theories of Mind," Department of Psychology Seminar, Bilkent University, Ankara, Turkey, December 2023

"How to Beat Dr. Frankenstein?," Institute for the Brain and Cognitive Sciences (IBACS), University of Connecticut, Storrs, CT, October 2020

"Evidentiality and Its Challenge to Propositional Theories," Boğaziçi Linguistics Circle, Boğaziçi University, Istanbul, Turkey, December 2019

"Indexicality of Proper Names," Altmann Lab Talk, University of Connecticut, Storrs, CT, September 2019

Presentations

"Representations, Descriptions, and Prepositional Attitudes in Animals" at International Society for the Philosophy of the Sciences of the Mind (ISPSM), December 2023

"XII Edition Workshop of Philosophy of Biology & Cognitive Sciences," November 2023, University of Málaga, Spain

"Sub-Theories of Mind," November 2023, University of Connecticut, Storrs, CT

"Representations, Descriptions, and Prepositional Attitudes in Animals" at 14th Annual Northwestern/Notre Dame Graduate Epistemology Conference, May 2023, Northwestern University, Illinois

"Third-Person to First-Person: Understanding Others' Mental States" at First-Person Science of Consciousness Conference, May 2023, Witten/Herdecke University, Germany

"Descriptions, Representations, and Prepositional Attitudes in Animals," 73rd New Mexico-Texas Philosophical Society Meeting, University of Texas at El Paso, El Paso, Texas, April 2023

"Why would you say that?" October 2022, University of Connecticut, Storrs, CT

"How to satisfy your curiosity?" May 2022, IHPST Graduate Conference, University of Toronto, Toronto, Canada

"How to satisfy your curiosity?" April 2022, University of Connecticut, Storrs, CT

"Evidentiality and Its Challenge to Propositional Theories," December 2020, University of Connecticut, Storrs, CT

"Animal Curiosity," October 2019, Bleen Conference, University of Connecticut, Storrs, CT

"Bir Hatanın Peşinde" (In Pursuit of a Mistake) December 2017, 2nd METU Philosophy Graduate Students Conference, METU, Ankara, Turkey

"Dinleyici İçin Kurallar" (The Maxims of the Audience) May 2016, 1st METU Philosophy Graduate Students Conference, METU, Ankara, Turkey

"In Pursuit of the Missing Premise," co-authored with O. Akçelik, September 2015, British Logic Colloquium, Cambridge University, Cambridge, UK

Awards, Fellowships, and Grants

UConn Doctoral Fellowships (3 awards; total $4,750)	2019, 2023
ELM Fellowships (3 awards; total $4,600)	2020, 2022, 2023
ECOM Research Fellowships (4 awards; total $4,500)	2019 – 2023
UConn Conference Award ($2,000)	2023
UConn Doctoral Dissertation Fellowship ($2,500)	2022
IBACS and BIRC Fellowships (3 awards; total $15,000)	2020 – 2022
Provost's Teaching Excellence Award	2019
Visiting Research Grant to UC Davis ($5,000)	2015
Laboratory for Computational Ontology Research Grant ($1,000)	2015
Akbank Research Project Contest Winner ($100,000)	2012

Teaching Experience

Principal Instructor (16 sections)

Neuropsychology | *4 sections* — Summer 2022, 2023, 2024
Phillips Academy Andover

Social Psychology | *2 sections* — Summer 2022 and 2024
Phillips Academy Andover

Philosophy and Logic | *1 section* — Spring 2024
UConn Stamford

Philosophy and Social Ethics | *5 sections* — 2020 – 2023
UConn Storrs; UConn Hartford; UConn Waterbury

- Sections taught: Waterbury (Fall 2023), Hartford (Spring 2023), Storrs (Summer 2021, Summer 2020).

Problems of Philosophy | *4 sections* — 2021 – 2022
UConn Storrs; UConn Hartford; UConn Waterbury

- Sections taught: Waterbury (Fall 2022, Fall 2021), Storrs (Summer 2022), Hartford (Spring 2022).

History of Science | *1 section* — 2017
Bartin University (Turkey)

Teaching Assistant (16 sections)

Philosophy and Logic | *2 sections* — Spring 2019
UConn Storrs

Problems of Philosophy | *4 sections* — Fall 2018
UConn Storrs

Introduction to Logic | *2 sections* — Fall 2017
Bartin University (Turkey)

Logic I | *2 sections* — Fall 2017
Bartin University (Turkey)

Logic II | *2 sections* — Spring 2018
Bartin University (Turkey)

Modern Logic II | *2 sections* — Fall 2014 and 2015
METU (Turkey)

Modern Logic I | *2 sections* — Spring 2013 and 2014
METU (Turkey)

Introduction to Logic | *2 sections* — Fall 2012 and 2013
METU (Turkey)

Graduate Courses

Philosophy of Mind

- Mind and Consciousness – William Lycan (UConn)
- Philosophy of Curiosity – İlhan İnan (Boğaziçi University)
- Expressing and Saying – Dorit Bar-On (UConn)
- From Concepts to Event Representation – Gerry Altmann (UConn)

Cognitive Neuroscience and Research Methods

- Foundations in Neuropsychology – John Salamone and Deborah Fein (UConn)
- Foundations in Neurobiology of Language – Jim Magnuson (UConn)
- Structure, Acquisition, and Processing of Language – William Snyder (UConn)
- Cognitive Neuroscience of Language – Emily Myers and Nicole Landi (UConn)
- Neurobiology of Typical and Atypical Cognitive and Lang. Development – Letty Naigles and Inge-Marie Eigsti (UConn)
- Research Methods and Statistics for Cognitive Science – Murat Perit Cakir (audit) (METU)
- Neuroimaging Methods – Roeland Hancock (UConn)

Semantics and Philosophy of Language

- Semantics I – Magdalena Kaufmann (UConn)
- Semantics II – Magdalena Kaufmann (UConn)
- Advanced Semantics (Perspective) – Magdalena Kaufmann (UConn)
- Propositional Theories of Meaning in Philosophy of Language – Teo Grünberg (METU)
- Force and Content – Lionel Shapiro (UConn)
- Heretic Approaches to Natural Language Semantics – Hanti Lin (audit) (UC Davis)
- Vagueness – Adam Sennet (audit) (UC Davis)
- Non-Ideal Philosophy of Language – Lynne Tirrell (UConn)
- Events and Their Names – Sun Demirli (Boğaziçi University)

Technical Skills

Programming: Python

Developer Tools: Git; Docker; Visual Studio Code

Neuroimaging & Experimental: PsychoPy; BIDS Apps (fMRIPrep, MRIQC, XCP Engine); FSL; AFNI; FreeSurfer

Analysis & Modeling: GLM; functional connectivity (seed-based correlation, ICA, ALFF); mixed-effects group analysis; task design for fMRI and EEG

Grant Writing: NIH/NSF-style proposals; internal funding applications; LaTeX

Learning Management Systems (LMS): Canvas; Blackboard

References

Prof. Dr. William (Bill) Lycan
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Prof. Dr. Mitch Green
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Prof. Dr. Dorit Bar-On
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