

ALIYA RUMANA

CONTACT	aliyarumana@arizona.edu aliyarumana.com (she/her)	Department of Philosophy University of Texas at El Paso Worrell Hall 203 500 W University El Paso, Texas 79968
SPECIALISATIONS	philosophy of machine learning (AI) philosophy of neuroscience & cognitive science general philosophy of science	
COMPETENCIES	AI and computer ethics normative and meta-ethics politics, philosophy, & economics (PPE)	
EMPLOYMENT	Assistant Professor (since 2025) Department of Philosophy University of Texas at El Paso Postdoctoral Associate (2024–2025) Center for Philosophy of Science University of Pittsburgh Postdoctoral Research Fellow (2023–2024) Centre for Philosophy & Artificial Intelligence Research University of Erlangen-Nuremberg	
EDUCATION	PhD	Philosophy, neuroscience (doctoral minor), & cognitive science (doctoral minor), University of Arizona (2017–2023) <i>Dissertation title:</i> “Robust normativity in complexity science” <i>Committee:</i> Sara Aronowitz (co-chair), Mark Timmons (co-chair), Jonathan Weinberg, Allen Buchanan. MA Philosophy, York University (2015–2016) BBA Schulich School of Business, York University (2010–2014)
JOURNAL ARTICLES	Worldly infrastructure for deep learning. Conditionally accepted for <i>Philosophy of Science</i> (PSA supp.) (2027).	
(all peer-reviewed)	Explaining mechanism-task fit in neuroscience. <i>British Journal for Philosophy of Science</i> (2025). [doi] Anatomy’s role in mechanistic explanations of organism behaviour. <i>Synthese</i> , 203.47 (2024). [doi] In praise of animals. (with Rhys Borchert) <i>Biology & Philosophy</i> , 38.24 (2023). [doi]	

	Metacognitive control in single- vs. dual-process theory. <i>Thinking & Reasoning</i>, 29.2: 177–212 (2023). [doi] Arbitrating norms for reasoning tasks. <i>Synthese</i>, 200: 502 (2022). [doi] Anthropomorphism and anthropectomy as friendly competitors. <i>Philosophical Psychology</i>, 30.7: 970–91 (2017). [doi] A dual systems theory of incontinent action. <i>Philosophical Psychology</i>, 30.7: 925–44 (2017). [doi]
BOOK CHAPTERS	Sufficient reasons: Forestalling norm arbitration in task design. Invited for L. Ball & B. Richardson (Eds.), <i>International Handbook for Metareasoning</i>, Routledge (contracted). Confirmation in NeuroAI, part II: Constraint vs. mechanism discovery. Invited for D. P. Rowbottom, A. Curtis-Trudel, & D. L. Barack (Eds.), <i>The Role of Artificial Intelligence in Science: Methodological and Epistemological Studies</i>. Routledge (contracted). Confirmation in NeuroAI, part I: A tacking problem. Accepted for D. P. Rowbottom, A. Curtis-Trudel, & D. L. Barack (Eds.), <i>The Role of Artificial Intelligence in Science: Methodological and Epistemological Studies</i>. Routledge (contracted). Cognitive conflict in decision science: From resolution to detection. (first author; coauthored with Corey Allen & Katherine Boere) In F. De Brigard & W. Sinnott-Armstrong (Eds.), <i>Neuroscience & Philosophy</i>, Vol. 2, MIT Press (2026).
BOOK REVIEWS	Review of <i>From human reasoning to belief: An empirical account</i> by J. Mugg. Invited for <i>Notre Dame Philosophical Reviews</i>. Are more details better for deep histories? Review of <i>It's only human: The evolution of distinctively human cognition</i> by A. W. Schulz. <i>Metascience</i>, 34: 291–4 (2025). [doi] Balancing the evidential scale for the mental unconscious. Review of <i>Open minded: Searching for the truth about the unconscious mind</i> by B. R. Newell & D. R. Shanks. <i>Philosophical Psychology</i>, 38(8), 3791–6 (2024). [doi]
COMMENTARIES	Pressing Christie et al.'s (2023) objection: Why single out selected effects? <i>Australasian Philosophical Review</i>, 6(4): 412–7 (2024). [doi] Categorizing judgments as likely to be selected by intuition or deliberation. <i>Behavioral & Brain Sciences</i>, 46.E118 (2023). [doi] Reframing single- and dual-process theories as cognitive models: Commentary on De Neys (2021). <i>Perspectives on Psychological Science</i>, 16.6 (2021): 1428–31. [doi]
(all peer-reviewed)	

GRANTS,
HONOURS, &
AWARDS

University of Texas at El Paso

2025–2028 Startup Award (\$35,000 USD)

Summer Seminar in Neuroscience and Philosophy (SSNAP), Duke University

2023 Co-principal investigator on “*A multilevel neural framework of self-processing*” project, an fMRI experiment at Marco Iacoboni’s lab at the University of California, Los Angeles, USA (\$30,000 USD)

2023 Co-principal investigator on “*Temporal dynamics of conflict detection in moral decision-making*” project, an EEG experiment at Olav Krigolson’s lab at the University of Victoria, Canada (\$20,000 USD)

2023 Fellowship (\$1,000 USD)

Institute for Humane Studies, George Mason University

2023 Junior Fellowship (\$6,000 USD)

2022 George W. Gibbs Grant (\$6,000 USD)

2018–2022 Graduate Fellowships (\$11,500 USD)

2018 Hayek Travel Grant (\$400 USD)

Philosophy of Animal Minds & Behaviour Association (PAMBA)

2023 Best Essay Prize for “*In praise of animals*” with Rhys Borchert (\$3,000 CAD)

Moral Narratives Workshop, Princeton University

2022 Fellowship (\$500 USD)

Herbert Carter Travel Award, University of Arizona

2022 award for interdisciplinary presentation (\$400 USD)

Centre for the Philosophy of Freedom, University of Arizona

2017 Doctoral Fellowship (\$8,500 USD)

Government of Ontario, Canada

2017 Graduate Scholarship (\$15,000 CAD, declined)

Kitty & Lou Newman Memorial, York University

2016 Graduate Scholarship (\$12,000 CAD)

Graduate Scholarship, York University

2015–2016 Graduate Scholarship (\$9,000 CAD)

Department of Mathematics, York University

2013–2014 Chair’s Honour Roll

SELECTED TALKS

(*) invited

Worldly infrastructure for deep learning.

Central Meeting for American Philosophical Association, Denver, Co, Feb 2027.

Philosophy of Science Association, San Diego, CA, Nov 2026.

Deep South Philosophy & Neuroscience Workgroup, Pensacola, FL, Sep 2025.

**Center for Philosophy of Science*, University of Pittsburgh, PA, Mar 2025.

Southern Society for Philosophy & Psychology, Cincinnati, OH, Mar 2024.

Title TBD

**Eastern Meeting for American Philosophical Association*, Boston, MA, Jan 2027.

Problem analysis in memory psychology.

Southern Society for Philosophy & Psychology, Atlanta, GA, Feb 2026.

Task norms as experimental conventions.

**Philosophy of Science of Decision-making seminar*, online, Feb 2026.

**Department of Philosophy at University of Victoria colloquium*, online, Nov 2025.

Confirmation in cognitive modelling.

Society for Philosophy & Psychology, Cornell University, Ithaca, NY, Jun 2025.

**3rd Luxembourg Workshop on AI & Epistemology*, University of Luxembourg, Luxembourg, Jun 2024.

Issues in Philosophy of Memory 3.5, Philosophy of Memory Organization, online, Oct 2023.

Are human strategies exceptional?

**Decentering the Human in the Human Sciences*, Center for Philosophy and History of Science, Boston University, MA, May 2025.

Rationality's role in rational analysis.

Southern Society for Philosophy & Psychology, Mobile, AB, Apr 2025.

Central Division of the American Philosophical Association, New Orleans, LA, Feb 2024.

Explaining mechanism-task fit in neuroscience.

**Center for Philosophy of Science*, University of Pittsburgh, PA, Nov 2024.

International Society for the Philosophy of the Sciences of the Mind, online, Nov 2024.

Deep South Philosophy & Neuroscience Workgroup, Pensacola, FL, Oct 2024.

**Concepts for Understanding Brain Organization*, City University Paris, Paris, Jun 2024.

Conflict as an entry point to decision-making. (presented with Corey Allen)

**Summer Seminars in Neuroscience & Philosophy*, Duke University, Durham, NC, Aug 2024.

Ideological propositions and ideology critique. (presented with Anna-Bella Sicilia)

Social Ontology, Duke University, Durham, NC, Jul 2024.

Anatomy's role in mechanistic explanations of organism behaviour.

International Society for the Philosophy of the Sciences of the Mind, online, Nov 2023.

Philosophy of Science Association, Pittsburgh, PA, Nov 2022.

Society for Philosophy & Psychology, online, Jun 2021.

Can animals be moral agents? (presented with Rhys Borchert)

**Philosophy of Animal Minds & Behaviour Association*, Central Division of the American Philosophical Association, New Orleans, LA, Feb 2024.

(Basal) memory as sensitivity to backward-facing concerns. (presenter, co-authored with Urtè Laukaitytė)

Unconventional Memory Workshop, *Munich Center for Mathematical Philosophy*, LMU Munich, Munich, Sep 2023.

Prediction and planning in complex political systems. (presenter, co-authored with Travis Quigley)

*Political Theory Seminar, *University of Bamberg*, Bamberg, DE, Oct 2023.

*Junior Fellowship Workshop, *Institute for Humane Studies*, Raleigh, North Carolina, May & Aug 2023 [two sessions].

*Graduate Workshop, *Institute for Humane Studies*, online, Apr 2022.

*Graduate Workshop, *Institute for Humane Studies*, George Mason University, Fairfax, VA, Oct 2019.

In praise of animals (presented with Rhys Borchert).

Philosophy of Animal Minds & Behaviour Association, Madrid, Apr 2023.

Irreducible normativity in biological functions.

Society for Metaphysics of Science, Eastern Division of the American Philosophical Association, Montréal, QC, Jan 2023.

Reasoning improvements after cognitive control: Frontoparietal network under phasic inhibition through the hyperdirect pathway.

Society for Neuroscience, San Diego, CA, Nov 2022 [poster].

Normativism in moral psychology.

Southern Society for Philosophy & Psychology, Mobile, AL, Mar 2022.

Eastern Division of the American Philosophical Association, online, Jan 2022.

Graduate Workshop, *Institute for Humane Studies*, online, Mar 2021.

Astrobiological reasons for climate change.

Rocky Mountain Ethics Congress, Boulder, CO, Aug 2022.

Metacognitive control in single- vs. dual-process theory.

Society for Judgment & Decision-Making, online, Feb 2022 [poster].

Southern Society for Philosophy & Psychology, online, Dec 2020.

A realist answer to the relevance question.

USC/UCLA Annual Graduate Conference, UCLA, Los Angeles, CA, Mar 2019.

Canadian Philosophical Association, Université du Québec à Montréal, Montréal, QC, Jun 2018.

Autonomy without a self.

Uebiro Graduate Philosophy Conference, University of Hawaii at Manoa, Honolulu, HI, Mar 2018.

Canadian Philosophical Association, University of Calgary, Calgary, AB, May 2016.

Metacognitivism.

*Graduate Workshop, *Institute for Humane Studies*, George Mason University, Fairfax, VA, Nov 2017.

Morality, Moral Philosophy, & the Humanities in the Age of Neuroscience, Kent State University, Kent, OH, Nov 2016.

Anthropomorphism and anthropectomy as friendly competitors.

**Philosophy Graduate Conference*, York University, Toronto, ON, Apr 2016.

An integrated theory of knowledge how.

TEACHING

(*) online

Assistant professor (University of Texas at El Paso)

Co-convened seminar on philosophy of neuroscience (spring 2027)
Co-convened seminar on philosophy of cognitive science (fall 2026)
Co-convened seminar on philosophy of machine learning (AI) (spring 2026)
Introduction to philosophy (fall 2025, spring 2026*)

Lead graduate instructor (University of Arizona)

Law & morality (*1 session*: winter 2022*)
Neuroethics (*4 sessions*: fall 2019*–2022*, winter 2021*)
Consciousness & cognition (*3 sessions*: summer 2018*, 2022*, spring 2020*)
Moral thought (*2 sessions*: winter 2019*, spring 2021*)
Ethics & economics (*10 sessions*: winter 2018*; summer 2019*–2022*)

Teaching assistant (University of Arizona & York University)

Ethics & economics of wealth creation; Mario Villareal-Diaz (fall 2018)
Mind, matter, & God; Christopher Maloney (fall 2017, spring 2019)
Logic & critical thinking; Jonathan Weinberg (fall 2017)
Introduction to ethics; Julie Allen (summer 2017)
Introduction to philosophy; Alexandru Manafu (2016–2017)

Junior supervisor

Ibifuro Jaja, PhD philosophy, University of Erlangen-Nuremberg (Jan 2024–July 2024) (with Vincent C. Müller)

SERVICE

Teaching initiatives

Designing and administering ethics of AI modules in undergraduate computer science courses as part of an NSF grant awarded to UTEP (spring 2026–2027)
Teaching course at Pittsburgh Summer School, Center for Philosophy of Science, University of Pittsburgh (Jul 2025, 2026)

Committee

Member of College of Liberal Arts Curriculum Committee, University of Texas at El Paso (fall 2025–present)
Member for Philosophy of Neuroscience/Psychology/Cognitive Science/AI Program Committee, Philosophy of Science Association, San Diego (2026)

Editing

Müller, V. C., Dung, L., Löhr, G., & Rumana, A., (Eds.) (2025). *Philosophy of artificial intelligence: The state of the art*. Synthese Library (Ed. Otávio Bueno). Berlin: Springer Nature.

Conference organising

5th Biennial Conference on “*Philosophy of Artificial Intelligence*”, PAIR Centre, University of Erlangen-Nuremberg, Erlangen, Bavaria, Germany (Dec 2023) (with Vincent C. Müller, Leonard Dung, Guido Löhr)

Mentoring

Ibifuro Jaja, philosophy, PhD, University of Erlangen-Nuremberg (2024–present)

Surraiya Baloch, philosophy, MA, University of Karachi (2022–2023)
Shramana Pramanik, philosophy, MA, Jadavpur University (2022–2023)

Editorial assistant (with Mark Timmons), *Oxford Studies in Normative Ethics* (spring 2022, 2023)

Research assistant (with Muhammad Ali Khalidi), philosophy of memory research project (2015–2016)

REVIEWING

Journals

Philosophy of Science, Philosophical Studies, Synthese, Philosophical Psychology, Perspectives in Psychological Science, Minds & Machines, Phenomenology & the Cognitive Sciences, Philosophy & the Mind Sciences

Conferences

Philosophy of Science Association (PSA), Society for the Philosophy of Artificial Intelligence (SPAI), Southern Society for Philosophy & Psychology (SSPP), International Society for the Philosophy of Minds & Brain (ISPSM), Arizona Feminist Philosophy Graduate Conference

REFERENCES

Sara Aronowitz

(PhD supervisor)
Associate Professor
Department of Philosophy
University of Toronto
s.aronowitz@utoronto.ca

Edouard Machery

(Postdoc supervisor)
Distinguished Professor
Director of the Center for Philosophy of Science
Department of History & Philosophy of Science
University of Pittsburgh
machery@pitt.edu

Robert Batterman

Distinguished Professor
Department of Philosophy
University of Pittsburgh
mtimmons@arizona.edu

Kristin Andrews

Professor
Department of Philosophy
CUNY Graduate Center
andrewsk@yorku.ca

Mark Timmons

(PhD co-supervisor)
Professor
Department of Philosophy
University of Arizona
mtimmons@arizona.edu