

Phillip Hintikka Kieval

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🌐 phkieval.com

Research

AOS History & Philosophy of AI · Philosophy of Science · Cognitive Science
AOC AI Ethics · Politics of Science & Technology · American Pragmatism

Employment

2025– **Postdoctoral Associate**, *University of Florida*

Education

2021–2025 **PhD in History and Philosophy of Science**, *University of Cambridge*
Advisors: Marta Halina, Hasok Chang
Examiners: Rune Nytrup, Mauricio Suárez
2019–2021 **MA in Philosophy**, *University of Houston*
2015–2019 **BA in Philosophy**, *University of Houston*
Magna Cum Laude with University Honors and Honors in Major.

Publications

forthcoming **Kieval, P. H.** “Representation Learning without Representationalism: A Non-Representational Account of Deep Learning Models in Scientific Practice,” in *Philosophy of Science for Machine Learning: Core Issues and New Perspectives*, eds., Durán, J. M. & Pozzi, G. Synthese Library.

2025 **Kieval, P. H.**, Buckner, C. “‘Captured’ by Centaur: Opaque Predictions or Process Insights?” *Journal of Experimental Psychology: Animal Learning and Cognition*.

2024 **Kieval, P. H.** “Artificial Achievements,” *Analysis*, 84(1): 32–41.

2022 **Kieval, P. H.** “Permission to believe is not permission to believe at will,” *Synthese*, 200(347): 1–12.

2022 **Kieval, P. H.** “Mapping representational mechanisms with deep neural networks,” *Synthese*, 200(196): 1–25.

Awards & Fellowships

2025 **AI Fellow**, London AI and Humanity Project (LAIHP), *University of London*. (Declined)

2024–2025 **Visiting Graduate Student**, Department of Philosophy, *University of Michigan*.

- 2022-2025 **Student Fellow**, Leverhulme Centre for the Future of Intelligence, *University of Cambridge*.
- 2022 **Best Student Paper Award**, Issues in XAI4, *TU Delft*, Delft, Netherlands.
- 2021-2025 **Gates Cambridge Scholarship**, *University of Cambridge*, Full-cost scholarship awarded to outstanding applicants from countries outside the UK to pursue a postgraduate degree in any subject available at the University of Cambridge.
- 2019-2021 **Graduate Teaching Assistantship**, Department of Philosophy, *University of Houston*.
- 2018-2019 **Mellon Research Scholars Fellowship**, Andrew W. Mellon Foundation.

Presentations

Refereed

- 15 November 2024 **"Deep Learning as Method-Learning,"** Philosophy of Science Association 2024, New Orleans, LA.
- 21 March 2024 **"Data modelling and exploratory concept formation in neuroscience,"** 2024 Annual Meeting of the Southern Society for Philosophy and Psychology.
- 24 Nov 2023 **Getting Real About Neural Data Science: Neural Manifolds and Exploratory Concept Formation in Cognitive Neuroscience,"** 1st Annual Web Conference of the International Society for the Philosophy of the Sciences of the Mind.
- 20 Oct 2023 **"Getting Real About Neural Data Science: Neural Manifolds and Exploratory Concept Formation in Cognitive Neuroscience,"** 7th International Conference on the History and Philosophy of Computing, *Warsaw University of Technology*.
- 6 May 2023 **"Varieties of Representational Risk in Medical AI,"** PhilInBioMed 4, *University of Cambridge*.
- 13 Nov 2022 **"Automated Exploration, Understanding, and Semantic Opacity,"** Philosophy of Science Association 2022, Pittsburgh, PA.
- 19 Oct 2022 **"Biased-by-design: why algorithms are necessarily value-laden"** Graduate Student Workshop on Philosophy of Machine Learning Max Planck Institute for Intelligent Systems, *University of Tübingen*.
- 11 Sept 2022 **"Getting Real about Neural Data Science"** Philosophy of Cognitive Neuroscience: Content, Self, and Cognitive Ontology 37th Annual Boulder Conference on the History and Philosophy of Science, *University of Colorado Boulder*.
- 3 June 2022 **"Biased-by-design: why algorithms are necessarily value-laden"** Ethical Issues in AI and Computing Conference Embedded EthiCS @ Harvard in partnership with Social & Ethical Responsibilities of Computing at MIT, *Harvard University*.
- 25 May 2022 **"Unsupervised Discoveries, Understanding, and Semantic Opacity,"** Issues in XAI #4 - Explanatory AI: Between ethics and epistemology, *TU Delft*.

- 13 May 2022 **"Unsupervised Discoveries, Understanding, and Semantic Opacity,"** Rotman Graduate Student Conference 2022: Models and Idealization Rotman Institute of Philosophy, *Western University*.
- 23 April 2022 **"Unsupervised Discoveries, Understanding, and Semantic Opacity,"** 4th Annual Scientific Understanding and Representation (SURE) Workshop, *Fordham University*.
- 16 Dec 2021 **"Unsupervised Discoveries, Understanding, and Semantic Opacity,"** Philosophy in Informatics VI, Department of History and Philosophy of Science, Faculty of Philosophy, *Pontifical University of John Paul II in Krakow*.
- 2 Oct 2021 **"Artificial Achievements,"** Rice-UH Graduate Conference, *Rice University*.
Invited
- 13 May 2023 **"Towards Trustworthy Machine Learning: Reliability and the Value of Uncertainty,"** Gates Day of Research 2023, *University of Cambridge*.
- 22 June 2022 **"Getting Real about Neural Data Science,"** LCFI Kinds of Intelligence Work in Progress Retreat, Leverhulme Centre for the Future of Intelligence, *University of Cambridge*.
- 7 May 2022 **"Biased-by-design: why algorithms are necessarily value-laden,"** Gates Day of Research 2022, *University of Cambridge*.
- 2 Feb 2022 **"Unsupervised Discoveries and Semantic Opacity in Data-driven Neuroscience,"** Poldrack Lab, Department of Psychology, *Stanford University*.

Teaching

University of Michigan

- Winter 2025 **Course Assistant**, Generative AI and Cognitive Science with *Chandra Sripada and Richard Lewis*

University of Cambridge

- Spring 2023 **Supervisor**, Introduction to History and Philosophy of Science
 Winter 2023 **Supervisor**, Introduction to History and Philosophy of Science
 Fall 2022 **Supervisor**, Introduction to History and Philosophy of Science
 Winter 2022 **Supervisor**, Ethics and Politics of Technology

University of Houston

- Spring 2021 **Teaching Assistant**, Logic I
 Fall 2020 **Teaching Assistant**, Introduction to Philosophy
 Summer 2020 **Grading Assistant**, Introduction to Philosophy
 Summer 2020 **Grading Assistant**, Philosophy and the Arts
 Spring 2020 **Teaching Assistant**, Logic I
 Fall 2019 **Teaching Assistant**, Logic I

Professional Activities

Diversity and Inclusion

- 2022 **Committee Member**, Wellness, Inclusion, Diversity, and Equity (WIDE) Committee, Leverhulme Centre for the Future of Intelligence, University of Cambridge
- 2021-2022 **Organizing Committee**, Minorities and Philosophy (MAP), Department of History and Philosophy of Science, *University of Cambridge*.
- April 2021 **Co-Organizer**, BIPOC Philosophical Film Series with UH Minorities and Philosophy (MAP) (Funding secured from the Media and the Moving Image Initiative (MMI)), *University of Houston*.
- 2020 **Co-Founder**, University of Houston Chapter of Minorities and Philosophy (MAP)
- March 2018 **Participant**, COMPASS: Undergraduate Philosophy Workshop, University of Texas at Austin Chapter of Minorities and Philosophy (MAP)

Service and Mentorship

- 2023-2024 **Co-Organizer**, 6th Annual Scientific Understanding and Representation (SURE) Workshop, *LSE & University of Cambridge*.
- 2023 **Co-Organizer**, Lingnan-Cambridge Workshop on AI in Science, *University of Cambridge*.
- 2023-2024 **PhD Student Representative**, Department of History and Philosophy of Science, *University of Cambridge*
- 2022-2024 **Co-Organizer**, Jobseekers' Coffee, Department of History and Philosophy of Science, *University of Cambridge*
- 2022-2024 **Organizer**, HPS Workshop, Department of History and Philosophy of Science, *University of Cambridge*.
- 2021-2022 **Co-Director**, Learning for Purpose Programme, Gates Cambridge Scholars Council, *University of Cambridge*

Refereeing

AI & SOCIETY

Analysis

Cognitive Systems Research

Erkenntnis

Ethics and Information Technology

Philosophy of Science

Synthese

WIREs Cognitive Science

Languages

English Native Speaker

Spanish B2 (Upper Intermediate)
Python

References

Marta Halina

- University Associate Professor in the Philosophy of Cognitive Science
- Department of History and Philosophy of Science
- University of Cambridge
- mh801@cam.ac.uk

Hasok Chang

- Hans Rausing Professor of History and Philosophy of Science
- Department of History and Philosophy of Science
- University of Cambridge
- hc372@cam.ac.uk

Cameron Buckner

- Professor and Donald F. Cronin Endowed Chair in the Humanities
- Department of Philosophy
- University of Florida
- cameron.buckner@ufl.edu