

Phillip Hintikka Kieval

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🌐 phkieval.com

Research

AOS 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

Professor of Philosophy of Science
Department of History and Philosophy of Science
University of Cambridge
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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