

Clara Bradley

Department of Logic and Philosophy of Science
University of California, Irvine
3151 Social Science Plaza A, Irvine 92697
cbradle1@uci.edu • www.clara-bradley.com

Research Interests

- AOS Philosophy of Physics, Philosophy of Science
AOC Logic, Formal Epistemology, Social Epistemology

Employment

- Jan 2025 – **Lecturer, University College London**
Department of Philosophy

Education

- 2019 – 2024 **University of California, Irvine**
Department of Logic and Philosophy of Science
Ph.D. Philosophy (Expected Fall 2024)

Graduate Emphasis in Physics
Dissertation: “Symmetry and Equivalence in the Constrained Hamiltonian Formalism”
Advisor: James Owen Weatherall
- 2015 – 2019 **University of Bristol**
M.Sci. Physics and Philosophy
First-Class Honours

Publications

- 2023 **The Representational Role of Sophisticated Theories**
Philosophy of Science, pp. 1–10. <https://doi.org/10.1017/psa.2023.131>.

- 2022 **Mathematical Responses to the Hole Argument: Then and Now**
with James Owen Weatherall.
Philosophy of Science, 89 (5):1223-1232. <https://doi.org/10.1017/psa.2022.58>.
- 2021 **The Non-Equivalence of Einstein and Lorentz**
The British Journal for the Philosophy of Science, 72(4):1039-1059.
<https://doi.org/10.1093/bjps/axz014>.
Editors' Choice Article.
- 2020 **On Representational Redundancy, Surplus Structure, and the Hole Argument**
with James Owen Weatherall.
Foundations of Physics, 50:270–293. <https://doi.org/10.1007/s10701-020-00330-y>.

Works in Progress

Do First-Class Constraints Generate Gauge Transformations? A Geometric Resolution

In Preparation [draft available].

Winner of the Justine Lambert Paper Prize

The Relationship between Lagrangian and Hamiltonian Mechanics: The Irregular Case

In Preparation [draft available].

The Extended Hamiltonian is Not Trivial

In Preparation [draft available].

The Physical Significance of Partial Observables: Connecting Gauge and Surplus Structure

In Preparation [draft available].

The Many Independence Theses

In Preparation.

A Paper on Conservation of Momentum in AQUAL (with James Owen Weatherall)

In Preparation.

Invited Talks

- May 2024 The Relationship between Lagrangian and Hamiltonian Mechanics: The Irregular Case
New Directions in the Foundations of Physics Conference
- May 2023 Do First-Class Constraints Generate Gauge Transformations? A Geometric Perspective
Quantum Spacetime in the Cosmos Conference, Perimeter Institute
- November 2022 Do First-Class Constraints Generate Gauge Transformations? A Geometric Perspective
Foundations of Physics @ Harvard Series (Online)
- February 2022 Partial Observables and Representational Redundancy
University of Bristol Philosophy of Science Seminar (Online)
- June 2019 The Non-Equivalence of Einstein and Lorentz
Oxford Philosophy of Physics Group, Oxford
- September 2018 The Non-Equivalence of Einstein and Lorentz
UC Irvine Philosophy of Physics Research Group, Irvine

Refereed Talks

- November 2024 The Extended Hamiltonian is Not Trivial
PSA 29th Biennial Meeting, New Orleans
- July 2023 Do First-Class Constraints Generate Gauge Transformations? A Geometric Perspective
21st European Conference on Foundations of Physics, Bristol
- November 2022 The Representational Role of Sophisticated Theories
PSA 28th Biennial Meeting, Pittsburgh
- November 2021 Mathematical Responses to the Hole Argument: Then and Now
PSA 27th Biennial Meeting, Baltimore
- October 2021 The Significance of Isomorphic Models
20th European Conference on Foundations of Physics, Paris
- July 2017 The Non-Equivalence of Einstein and Lorentz
The British Society for the Philosophy of Science Annual Conference, Edinburgh

Teaching Experience

Instructor of Record, UC Irvine

Fall 2023 Introduction to Logic
Outstanding Teaching Award

Teaching Assistant, UC Irvine

Winter 2023 Philosophy of Sex (Cailin O'Connor)

Fall 2022 Computer-Based Research in the Social Sciences

Spring 2021, The Good Life (James Owen Weatherall and Cailin O'Connor)
Spring 2022

Winter 2021 Critical Reasoning (Daniel Herrmann)

Winter 2020 Scientific Inquiry (JB Manchak)

Guest Lecturer

Spring 2023 Structure and Equivalence, UC Santa Barbara (Thomas Barrett)

Awards, Grants and Recognition

2024 Outstanding Scholarship Award \$500 (University of California, Irvine)

2024 Justine Lambert Paper Prize \$1000 (University of California, Irvine)

2023 Outstanding Teaching Award for Introduction to Logic (University of California, Irvine)

2019–2025 Social Science Merit Scholarship (University of California, Irvine)

2019–2022 Provost Fellowship \$20,000 (University of California, Irvine)

2019 Graduate Dean's Recruitment Fellowship \$5000 (University of California, Irvine)

2019 Peter Fowler Memorial Prize for Continued Excellence (University of Bristol)

2019 Philosophy Finalist Prize (University of Bristol)

2018 Undergraduate Faculty of Science Award (University of Bristol)

Professional Service

August 2023 Panelist and Speaker at LPS Summer Diversity Program (UC Irvine)

2022–2023 LPS Graduate Representative (UC Irvine)

2018–2019 Administrator for the Center for Science and Philosophy (University of Bristol)

Journal Referee: *Philosophy of Science*, *The British Journal for the Philosophy of Science*, *Studies in History and Philosophy of Science*, *European Journal for the Philosophy of Science*, *Philosophy of Physics*.