

John Dougherty

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AOS	Philosophy of Physics, History of Philosophy of Science, Philosophy of Mathematics	
AOC	Logic, Philosophy of Science	
ACADEMIC	Munich Center for Mathematical Philosophy, LMU Munich	
APPOINTMENTS	Assistant Professor (non-tenure-track) Postdoctoral Fellow	2021 – present 2018 – 2021
EDUCATION	University of California, San Diego Ph.D., Philosophy Dissertation: Identity in gauge theories Committee: Craig Callender (Chair), Nancy Cartwright, David Meyer, Charles Sebens, James Owen Weatherall	2018
	University of Chicago A.B., Honors, Physics A.B., Honors, History, Philosophy, and Social Studies of Science and Medicine	2010 2010
ARTICLES & CHAPTERS	Effective and selective realisms <i>The British Journal for the Philosophy of Science</i> Gauge theories in physics <i>Stanford Encyclopedia of Philosophy</i> Wilfrid Sellars and constructive empiricism <i>HOPOS</i> , 14(2):435–478 Cluster decomposition and two senses of isolability P. D. Williams, J. Dougherty , and M. E. Miller <i>Philosophy of Physics</i> , 2(1):12 The substantial role of Weyl symmetry in deriving general relativity from string theory <i>Philosophy of Science</i> , 88(5):1149–1160 The non-ideal theory of the Aharonov–Bohm effect <i>Synthese</i> , 198(12):12195–12221 I ain’t afraid of no ghost <i>Studies in History and Philosophy of Science</i> , 88:70–84 The hole argument, take n <i>Foundations of Physics</i> , 50(4):330–347 Large gauge transformations and the strong CP problem <i>Studies in History and Philosophy of Modern Physics</i> , 69:50–66 What inductive explanations could not be <i>Synthese</i> , 195(12):5473–5483 Sameness and separability in gauge theories <i>Philosophy of Science</i> , 84(5):1189–1201	forthcoming 2025 2024 2024 2021 2021 2020 2020 2018 2017

REVIEWS	E. K. Chen, <i>Laws of Physics</i> <i>Metascience</i> , 34:163–166	2025
	E. Landry, ed., <i>Categories for the Working Philosopher</i> <i>Philosophy of Science</i> , 88(4)	2021
	T. Vistarini, <i>The Emergence of Spacetime in String Theory</i> <i>Notre Dame Philosophical Reviews</i>	2020
GRANTS, AWARDS, AND FELLOWSHIPS	Cambridge/LMU Strategic Partnership grant, co-PI Neil Dewar	2024
	QISS Philosopher Fellow, Rotman Institute	2024
	Cambridge/LMU Strategic Partnership grant, co-PI Aron Wall	2024
	<i>The British Journal of Philosophy of Science</i> Referee of the Year	2023
	LMU Philosophy Student Council Prize for Good Teaching	2023
	James T. Cushing Memorial Prize in History and Philosophy of Physics	2020
	Beyond Spacetime Predoctoral Research Fellow	2017
	Mary B. Hesse Graduate Student Essay Award	2016
	UC San Diego Frontiers of Innovation Scholars Program Fellow	2016
	UC San Diego Philosophy Dept. Graduate Essay Prize	2014
INVITED TALKS	Category theory in the philosophy of science	
	Um Convite à Filosofia da Matemática, IME University of São Paulo	April 2025
	What is the Renormalon Problem? (with M. Miller and J. D. Fraser)	
	Asymptotic Expansions in Physics Workshop, CNRS	December 2024
	Empiricism and gauge theories	
	Physics meets Philosophy in Vienna	November 2024
	Stockholm University	October 2024
	Gauge theories and the homotopy paradigm	
	Beyond Cosmology Group, University of Geneva	December 2023
	Effective and selective realisms	
	Lichtenberg Group, University of Bonn	May 2022
	On a Limitation of Mapping Accounts of Applicability	
	Mathematical Explanation: Ideas, Models, and Perspectives, IHPST	May 2022
	Some philosophical aspects of the renormalization of gauge theories	
	Higher Structures Emerging from Renormalisation, ESI Vienna	November 2021
	I ain't afraid of no ghost	
	Sigma Club, London School of Economics	March 2021
	Philosophy of Physics Reading Group, Caltech	October 2020
	Philosophy of Physics Research Seminar, Oxford	February 2020
PAPERS PRESENTED	Against <i>pointillisme</i> about fields	
	The Ontology of Fields, LMU Munich	January 2026
	A comparison of categorial methods in philosophy of science	
	Pragmatism and the Applicability of Mathematics, Cambridge	September 2025
	Symmetry from entropy in quantum field theory	
	It from Bit, LMU Munich	July 2025
	What is the philosophical problem with gauge theories?	
	Workshop on History and Philosophy of QFT, LMU Munich	June 2025
	Empiricism and gauge theories	
	German Society for Philosophy of Science	March 2025
	Two varieties of scientific anti-realism	
	Workshop on Pragmatism in the Formal Sciences	April 2025

Van Fraassen and McDowell on empiricism and objectivity	
Workshop on Invariance and Objectivity	October 2024
Pragmatism and the interpretation of physical theories	
Pragmatism and The Philosophy of Science, Rotman Institute	September 2024
Wilfrid Sellars and constructive empiricism	
Congress of the International Society for HOPOS	July 2024
Munich–Wuppertal–Hannover Workshop	July 2023
Multi-model and multi-framework idealizations	
Interdisciplinary Workshop on Modelling Complex Systems	March 2024
Against modelism	
European Philosophy of Science Association Meeting	September 2023
UK and European Conference on Foundations of Physics	July 2023
The substantial role of Weyl symmetry in deriving general relativity from string theory	
Foundations of Observational, Classical and Semi-Classical Gravitational Physics and The Problem of Agency and Laws of Nature, MCMP	March 2023
Perturbing the hole argument	
German Physical Society Spring Meeting, Heidelberg	March 2022
The substantial role of Weyl symmetry in deriving general relativity from string theory	
Philosophy of Science Association Meeting	November 2021
Effective and selective realisms	
European Philosophy of Science Association Meeting	September 2021
The unreasonable(?) effectiveness of mathematics in science	
Summer School on Mathematical Philosophy for Female Students	July 2021
I ain't afraid of no ghost	
British Society for the Philosophy of Science Conference	July 2021
Virtual entities in science: a virtual workshop	March 2021
Munich Center for Mathematical Philosophy	November 2019
The geometry of black hole entropy	
Cambridge/LMU workshop on Black Hole Thermodynamics	October 2019
Beyond Spacetime II: Time in Quantum Gravity	March 2015
Black holes as black boxes	
European Philosophy of Science Association Meeting	September 2019
Sizing up gauge	
Second ILMPS Conference	September 2019
Philosophy of Logic, Math and Physics Graduate Conference	June 2017
Fields, loops, and the strong CP problem	
British Society for the Philosophy of Science Conference	July 2019
Pittsburgh Early Career Workshop	April 2019
Problems, puzzles, and paradoxes in particle physics	
Second Joint MCMP–Hannover Workshop	June 2019
Subsystem independence in gauge theories	
Workshop on Relativistic Locality, MCMP	May 2019

Equivalence within and between theories	
Foundations of Categorical Philosophy of Science	April 2019
How to do things with isomorphisms	
Munich Center for Mathematical Philosophy	October 2018
The inertial structure of a Newtonian cosmos	
UK and European Conference on Foundations of Physics	July 2018
Sameness and separability in gauge theories	
Philosophy of Science Association Meeting	November 2016
UK and European Conference on Foundations of Physics	July 2016
British Society for the Philosophy of Science Conference	July 2016
Third International Summer School in Philosophy of Physics	July 2015
What mathematical explanations could not be	
Philosophy of Logic, Math and Physics Graduate Conference	June 2015
The hole argument, take n	
IPP Conference on the Foundations of Physics	March 2015
A few points on gunky space	
Philosophy of Science Association Meeting	November 2014
Black hole thermodynamics: More than an analogy? (with C. Callender)	
Philosophy of Science Association Meeting	November 2014
Symmetries, laws, and quantum fields	
UC San Diego Philosophy Graduate Student Conference	May 2014
Problems with justifying typicality measures	
IPP Conference on the Foundations of Physics	March 2014
COMMENTARIES	
V. Chasova, “Observable Diffeomorphisms (or, How to Limit the Hole Argument and Extend Direct Empirical Status)”	
Online symmetry workshop	June 2023
R. Chaplin, “Being Ashamed of Others: Rethinking the Self-Appraisal Account of Shame”	
East Coast Tritons Workshop	March 2023
L. E. Szabó, “Physicalism and the Quine–Putnam indispensability argument”	
Workshop on Physicalism, MCMP	May 2022
J. Norton, “No time for the Hamiltonian constraint”	
American Philosophical Association Pacific Division Meeting	April 2018
T. Menon, “Rebuilding Neurath’s boat Planck by Planck”	
Conference on the Philosophical Foundations of Quantum Gravity	June 2017
T. Barrett, “What do symmetries tell us about structure?”	
American Philosophical Association Pacific Division Meeting	April 2017
C. Chall, “Doubt for Dawid’s non-empirical theory assessment”	
American Philosophical Association Pacific Division Meeting	April 2016
R. Wald, “The ‘geodesic principle’ . . . in general relativity”	
Michigan Foundations of Physics Workshop	January 2014

TEACHING	Munich Center for Mathematical Philosophy	
	Lecturer	2018 – present
	Early Analytic Philosophy (BA)	
	Formal Philosophy of Science (MA)	
	History of Philosophy of Science (MA)	
	Philosophy of Mathematics (BA, MA)	
	Philosophy of Physics (BA, MA)	
	Philosophy of Science (BA, MA)	
	University of California, San Diego	
	Instructor of Record — Philosophy Dept.	2015 – 2018
	Introduction to Logic	
	Scientific Reasoning	
	Science, Society, and Values	
	Teaching Assistant — Philosophy Dept.	2011 – 2016
	Introduction to Philosophy	
	Introduction to Logic	
	Introduction to Philosophy: Metaphysics	
	Introduction to Philosophy: Epistemology	
	Ethics & Society	
	Aristotle	
	Existentialism	
	Graduate Writing Consultant — UC San Diego Writing Center	2016
	Teaching Assistant — Revelle Humanities Program	2014
	Foundations of Western Civilization: Israel and Greece	
	Rome, Christianity, and the Middle Ages	
	Pomona College	
	Lecturer in Philosophy — Philosophy Dept.	2017
	Problems of Philosophy	
	Philosophy of Science	
	Directed Readings on the Philosophy of Mathematics	
	University of Chicago, Chicago, Illinois	
	Teaching Assistant — Mathematics Dept.	2007 – 2010
	Elementary Functions and Calculus I-II-III	
	Fundamental Mathematics	
SUPERVISION	Munich Center for Mathematical Philosophy	
	Master's theses	
	V. Vivek, Is there a special problem about narrativist representation?	in progress
	C. J. Bland, Is constructive mathematics sufficient for physics?	2025
	J. Grujic, Quantization anomalies: interpretive and epistemic implications	2025
	N. Ü. Coşkun, The concept of probability in physics	2024
	J. Verschoyle, The later Wittgenstein today: The non-extensionalist view	2023
	M. S. Binkle, On the (in-)compatibility of models of time's passage in chronology exhibiting and violating universes	2023
	B. Zayton, Brandom's argument for the existence of singular terms and inferentialist quantification	2022
	A. Deng, Rethinking quantum non-individuality	2022
	Bachelor's theses	
	M. Tabak, Scientific understanding and paradox in special relativity	2025
	J. Trapp, Quantum mechanics in Schlick's philosophy of science	2025

A. Arzt, On the meaning of gauge symmetries	2025
A. Sittoni, On ultrastructures and decategorification	2024
S. Testino, A formal approach to syntactic structures	2024

PROFESSIONAL
ACTIVITIES

Organizer

MCMP Colloquium in Logic and Philosophy of Science	2022 – present
MCMP Work in Progress Seminar	2022 – present
MCMP Philosophy of Physics Reading Group	2019 – 2022, 2025
UC San Diego Graduate Philosophy Colloquium Series	2013 – 2015

Co-Organizer

MCMP Summer School for Widening Participation	2022 – present
Workshop on Pragmatism and the Applicability of Mathematics	2025
Workshop on Pragmatism in the Formal Sciences	2025
Global Structure in Semi-Classical Gravity	2022
Category Theory in Philosophy of Science	2021
Second Joint MCMP–Hannover Workshop	2019

Discussion group leader

Midwest Summer School in Philosophy of Physics	2020
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REFEREEING

External reviewer

PhD thesis, University of Western Ontario	2025
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Publishers

The MIT Press

Funding agencies

Deutsche Forschungsgemeinschaft (DFG)

Journals

Analysis, Bulletin of Symbolic Logic,
British Journal for the Philosophy of Science, Erkenntnis,
European Journal for Philosophy of Science, Foundations of Physics,
Foundations of Science, HOPOS, International Studies
in the Philosophy of Science, Journal for General Philosophy of Science,
Kriterion, Res Philosophica, Philosophical Studies, Philosophy of Physics,
Philosophy of Science, Studies in History and Philosophy of Modern Physics,
Studies in History and Philosophy of Science, Synthese

Conference and workshop programs

Irvine–London–Munich–PoliMi–Salzburg Network Conference	2024
European Conference on Foundations of Physics	2023
Alternative Approaches to Scientific Realism	2021
UC San Diego Summer Program for Women in Philosophy	2015