

John Dougherty

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AOS	Philosophy of Physics, History of Philosophy of Science	
AOC	Logic, Philosophy of Mathematics, Philosophy of Science	
ACADEMIC APPOINTMENTS	Munich Center for Mathematical Philosophy, LMU Munich Assistant Professor Postdoctoral Fellow	2021–present 2018–2021
EDUCATION	University of California, San Diego Ph.D., Philosophy University of Chicago A.B., Honors, Physics A.B., Honors, History, Philosophy, and Social Studies of Science and Medicine	2018 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	2026 2025 2024 2024 2021 2021 2021 2020 2020 2018 2017
PREPRINTS	Black hole thermodynamics: More than an analogy? J. Dougherty and C. Callender https://philsci-archive.pitt.edu/13195/	2016

GRANTS, AWARDS, AND FELLOWSHIPS	LMU PostDoc Support Fund grant	2026	
	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 GSA Travel Grant	2015	
	UC San Diego Philosophy Dept. Graduate Essay Prize	2014	
	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	
INVITED TALKS	On pragmatist readings of the Born Rule 100 years of Born Rule, IQOQI, Vienna	October 2026	
	Two varieties of scientific antirealism University of Technology Nuremberg	December 2025	
	Effective and selective realisms Realism & Antirealism workshop, TU Dortmund Lichtenberg Group, University of Bonn	December 2025 May 2022	
	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 Stockholm University	November 2024 October 2024	
	Gauge theories and the homotopy paradigm Beyond Cosmology Group, University of Geneva	December 2023	
	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 Philosophy of Physics Reading Group, Caltech Philosophy of Physics Research Seminar, Oxford	March 2021 October 2020 February 2020	
	PAPERS PRESENTED	Geometric objects and the puzzle of spinors Biennial Meeting of the Philosophy of Science Association British Society for the Philosophy of Science Conference	November 2026 July 2026
		Restriction and rigor Mathematical Rigour and Physics, University of Bristol	June 2026

The Background of Batalin–Vilkovisky Quantization Postwar physics across scales, LMU Munich	April 2026
Against “Against <i>Pointillisme</i> ” 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 Munich–Wuppertal–Hannover Workshop	July 2024 July 2023
Multi-model and multi-framework idealizations Interdisciplinary Workshop on Modelling Complex Systems	March 2024
Against modelism European Philosophy of Science Association Meeting UK and European Conference on Foundations of Physics	September 2023 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, MCOMP	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 Virtual entities in science: a virtual workshop Munich Center for Mathematical Philosophy	July 2021 March 2021 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

- LMU Munich** 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 2015–2018
- Introduction to Logic
 - Scientific Reasoning
 - Science, Society, and Values
- Teaching Assistant — Philosophy 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 2017
- Problems of Philosophy
 - Philosophy of Science
 - Directed Readings on the Philosophy of Mathematics
- University of Chicago**
- Teaching Assistant — Mathematics 2007–2010
- Elementary Functions and Calculus I-II-III
 - Fundamental Mathematics

SUPERVISION	Munich Center for Mathematical Philosophy		
	Master's theses		
	E. Maierhofer, Adaptability of linguistic and scientific paradigms	2026	
	A. Melnik, Fibrational categories of models	2026	
	C. J. Bland, Is constructive mathematics sufficient for physics?	2025	
	J. Grujic, Quantization anomalies: interpretive and epistemic implications	2025	
	N. Ü. Coşkuner, 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	
ILMPS Conference		2026	
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	
REFEREEING	External reviewer		
	PhD thesis, University of Western Ontario	2025	
	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

ILMPS 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