

# Michael Nielsen

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## Academic Appointments

Senior Lecturer in Mathematical Philosophy, The University of Sydney, Discipline of Philosophy, January 2023-

Lecturer in Mathematical Philosophy, The University of Sydney, Discipline of Philosophy, July 2020-January 2023

Research Fellow, Australian National University, School of Philosophy, July 2019-July 2020

## Research

AREAS OF SPECIALIZATION    Epistemology, decision theory, logic, philosophy of science, probability  
AREAS OF COMPETENCE        Metaphysics, philosophy of artificial intelligence, philosophy of mind

## Education

Ph.D. Philosophy, Columbia University, 2019

M.A. Philosophy, Georgia State University, 2014

B.A. Comparative literature, UC Santa Barbara, 2008

B.A. Slavic languages and literature, UC Santa Barbara, 2008

## Publications

### BOOK

1. *The Bayesian Approach to Consensus and Polarization* (with Rush Stewart), under contract with Cambridge University Press.

### JOURNAL ARTICLES

24. New possibilities for fair algorithms (with Rush Stewart). Accepted for publication and forthcoming in *Philosophy & Technology*, 2024.
23. The implicit decision theory of non-philosophers (with Preston Greene, Andrew Latham, and Kristie Miller). *Synthese* 203(2), 2024.
22. Only CDT values knowledge. *Analysis* 84(1), 2024.
21. Accuracy and probabilism in infinite domains. *Mind* 132(536), 2023.
20. Preference change and utility conditionalization. *Thought* 11(2), 2022.
19. A harder dilemma for partial subjunctive supposition. *Analysis* 82(4), 2022.
18. Distention for sets of probabilities (with Rush Stewart). *Philosophy of Science* 89(3), 2022.
17. On the best accuracy arguments for probabilism. *Philosophy of Science* 89(3), 2022.
16. Regular conditional probabilities and strictly proper loss functions. *Statistics and Probability Letters* 185, 2022.

15. Speed-optimal induction and dynamic coherence (with Eric Wofsey). *The British Journal for the Philosophy of Science* 73(2), 2022.
14. Conglomerability, disintegrability, and the comparative principle (with Rush Stewart). *Analysis* 81(3), 2021.
13. Accuracy-dominance and conditionalization. *Philosophical Studies* 178(10), 2021.
12. The strength of de Finetti's coherence theorem. *Synthese* 198(12), 2021.
11. A new argument for Kolmogorov conditionalization. *Review of Symbolic Logic* 14(4), 2021.
10. Convergence to the truth without countable additivity. *Journal of Philosophical Logic* 50(2), 2021.
9. Counterexamples to some characterizations of dilation (with Rush Stewart). *Erkenntnis* 86(5), 2021.
8. Persistent disagreement and polarization in a Bayesian setting (with Rush Stewart). *The British Journal for the Philosophy of Science* 72(1), 2021.
7. Deterministic convergence and strong regularity. *The British Journal for the Philosophy of Science* 71(4), 2020. (Honourable mention for 2020 Popper Prize)
6. On the possibility of testimonial justice (with Rush Stewart). *Australasian Journal of Philosophy* 98(4), 2020.
5. Generalized learning and conditional expectation (with Simon Huttegger). *Philosophy of Science* 87(5), 2020.
4. On linear aggregation of infinitely many finitely additive probability measures. *Theory and Decision* 86(3), 2019.
3. Obligation, permission, and Bayesian orgulity (with Rush Stewart). *Ergo* 6(3), 2019.
2. Another approach to consensus and maximally informed opinions with increasing evidence (with Rush Stewart). *Philosophy of Science* 86(2), 2019.
1. Voodoo dolls and angry lions: How emotions explain arational actions (with Andrea Scarantino). *Philosophical Studies* 172(11), 2015.

#### OTHER

2. A new justification of induction (book note on *Hume's Problem Solved: The Optimality of Meta-Induction* by Gerhard Schurz). *Metascience* 29, 2020.
1. What's hot in mathematical philosophy (with Rush Stewart). *The Reasoner* 12(10), 2018.

## Teaching

LECTURER (\* indicates primary instructor/unit coordinator)

Higher-order Logic and Metaphysics, The University of Sydney, 2024\*  
 Core Issues in Theoretical Philosophy, The University of Sydney, 2023, 2024  
 Inductive Logic, The University of Sydney, 2023\*  
 Society, Knowledge, and Self, The University of Sydney, 2021\*, 2023\*, 2024\*  
 Introductory Logic, The University of Sydney, 2021, 2022, 2023, 2024  
 FASS1000: Studying Arts and Social Sciences, The University of Sydney, 2022, 2023  
 Philosophy of Science, The University of Sydney, 2022\*  
 Philosophy of Artificial Intelligence, The University of Sydney, 2022\*  
 Introduction to Formal Philosophy, The University of Sydney, 2021\*  
 Symbolic Logic, Columbia University, 2018\*

TUTORIAL INSTRUCTOR

Introductory Logic, The University of Sydney, 2020, 2022

#### TEACHING ASSISTANT

Contemporary Moral Problems, Columbia University, 2018

Symbolic Logic, Columbia University, 2015, 2016, 2017

Philosophy of Science, Columbia University, 2017

Metaphysics, Columbia University, 2016

#### POSTGRADUATE SUPERVISION

Christian Alafaci (Sydney), PhD secondary supervisor

Jordan Lee-Tory (Sydney), PhD secondary supervisor

Aaron Wu (Sydney), MPhil secondary supervisor, completed 2023, currently applying to PhDs

Joshua Thong (ANU), PhD external supervisor, completed 2022, postdoc at the National University of Singapore, currently lecturer at Singapore Management University

#### UNDERGRADUATE HONOURS SUPERVISION

Rebel Bailey (Sydney), completed 2023

Zesi Feng (Sydney), completed 2022, awarded University Medal, currently PhD student at Notre Dame

#### OTHER TEACHING EXPERIENCE

Teacher of English as a Second Language, Language Link in Moscow (2009)

Director of Studies and Lead Teacher of English as a Second Language, English First in Jakarta (2010-2011)

## Service

#### UNIVERSITY ADMINISTRATION

Placement Director (for Philosophy postgraduate students), The University of Sydney (2024-)

Postgraduate Coordinator for Philosophy, The University of Sydney (2023-)

Academic Advisor for the Faculty of Arts and Social Sciences, The University of Sydney (2021-2023)

Department of Philosophy seminar organizer, The University of Sydney (2020-2022)

Convener for the ANU School of Philosophy weekly seminar (2020)

Rapporteur for the Columbia University Seminar on Logic, Probability, and Games (2018-2019)

#### ORGANIZER

Columbia Workshop on Probability and Learning (2017)

Columbia Workshop on Group Agency and Social Epistemology (2016)

#### REFEREE

*Analysis, Annals of Pure and Applied Logic, Australasian Journal of Philosophy, The British Journal for the Philosophy of Science, Cambridge University Press, Ergo, Economic Theory, Erkenntnis, European Journal for Philosophy of Science, Information Sciences, Journal of Philosophical Logic, Mind, Philosophers' Imprint, Philosophia Mathematica, Philosophical Studies, Philosophy of Science, Review of Symbolic Logic, Statistical Science, Symmetry, Synthese*

#### OTHER

Fellowship in Academic Administration, Office of Postdoctoral Affairs, Columbia University (2016)

## Awards and Honors

School Research Support Scheme Grant, *Decision Making With the Computational Theory of Mind*, The University of Sydney, 2024

BJPS Popper Prize Honourable Mention (for “Deterministic convergence and strong regularity”), 2020

Columbia Teaching Scholar for the course Philosophy, Science, and Politics of Learning, 2019 (declined)

Visiting Scholar, UC Irvine, Department of Logic and Philosophy of Science, October 2018

Participant, International Rationality Summer Institute, 2018

Visiting Fellow, Munich Center for Mathematical Philosophy, LMU Munich, August–September 2018

Lina Kahn Prize (best graduate student paper in metaphysics), Columbia University, 2018–2019

David H. Siff Philosophy of Science Award, Columbia University, 2017–2018, 2018–2019

Conference organization funding, Columbia University Department of Philosophy, 2017 (\$2,800)

Conference organization funding, Columbia University Department of Philosophy, 2016 (\$2,200)

Sidney Morgenbesser Fellowship, Columbia University, 2016–2017

Dean’s Fellowship, Columbia University, 2014–2019

Outstanding Graduate Student Research Award, GSU Department of Philosophy, 2014

Brains and Behavior Fellowship, GSU, 2012–2014

Randell Magee Memorial Award (given to an outstanding senior in Slavic Studies), UCSB, 2008

Dean’s Honors, UCSB, 2006–2008

Full scholarship for Intensive Elementary Russian, UCLA, Summer 2006

## Selected Presentations

INFINITE FAIR LOTTERIES, GENERALISED LIMITS, AND THE INEFFABLE

Sydney University Mathematics Society (April 2024)

SIMPLE PROBABILITY

The University of Sydney Philosophy Seminar (October 2023)

ONLY CDT VALUES KNOWLEDGE

Australian National University Decision Theory Workshop (November 2022)

FROM REFLECTION TO MERE FINITE ADDITIVITY

Munich Center for Mathematical Philosophy (2019)

A GENERAL MERGING OF OPINIONS RESULT FOR DYNAMICALLY COHERENT LEARNING

The International Conference for Philosophy of Science and Formal Methods in Philosophy of the Polish Association for Logic and Philosophy of Science (2019)

ON THE POSSIBILITY OF TESTIMONIAL JUSTICE

Formal Epistemology Workshop (2019), presented by coauthor

COMMENTS ON “KOLMOGOROV COMPLEXITY AND OCCAM’S RAZOR ASSUMPTIONS IN INDUCTIVE CAUSAL INFERENCE” BY DAVID KINNEY

The International Conference for Philosophy of Science and Formal Methods in Philosophy of the Polish Association for Logic and Philosophy of Science (2019)

COMMENTS ON “RAMSEFYING PROBABILISTIC COMPARATIVISM” BY EDWARD ELLIOT

APA Eastern Division Meeting (2019)

SPEED-OPTIMAL INDUCTION AND DYNAMIC COHERENCE

Columbia University Seminar on Logic, Probability, and Games (2018)

UC Irvine Seminar on Social Dynamics (2018)

Munich Center for Mathematical Philosophy, Workshop on Induction and Probability (2018)

OBLIGATION, PERMISSION, AND BAYESIAN ORGULITY

26<sup>th</sup> Biennial Meeting of the Philosophy of Science Association (2018)

## Miscellaneous

RESEARCH

Research assistant, *Agent-Centered Restrictions in Causal Decision Theory*, PI: Melissa Fusco (2017-2018)

Research assistant, Max Planck Institute for Evolutionary Anthropology in Jakarta (2010-2011)

LANGUAGES

Russian, Spanish, Indonesian, Latin, L<sup>A</sup>T<sub>E</sub>X, Python