

Adam Bjorndahl

Curriculum Vitae

Baker Hall 145K
Department of Philosophy
Carnegie Mellon University
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Academic Positions

2022–present **Associate Professor of Philosophy (with tenure)**, Carnegie Mellon University.
2019–2022 **Associate Professor of Philosophy (without tenure)**, Carnegie Mellon University.
2014–2019 **Assistant Professor of Philosophy**, Carnegie Mellon University.

Education

2014 **Ph.D. Mathematics**, Cornell University.
2014 **M.S. Computer Science**, Cornell University.
2008 **M.S. Mathematics**, University of Toronto.
2007 **B.S. Mathematics and Philosophy**, University of Toronto.

Books

2024 **An Introduction to Classical and Modal Logics: The Outlines of Knowledge**, Cambridge University Press.

Research Papers

Preprints

2025 **A Logic of Uncertain Interpretation**, <https://arxiv.org/abs/2503.15544>.
2025 **Belief in Simplicial Complexes**, <https://arxiv.org/abs/2512.14647>.
(with P. Sink)
2025 **A Note on Proper Relational Structures**, <https://arxiv.org/abs/2506.17142>.
(with P. Sink)

Published

2023 **Sequential Language-based Decisions**, *Proceedings of the 19th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, 131–141.
(with J. Y. Halpern)
2022 **The Epistemology of Nondeterminism**, *Journal of Logic, Language and Information*, 31(4), 619–644.
○ Subsumes and extends a previous version published in 2018 in the *Proceedings of the 25th Workshop on Logic, Language, Information and Computation (WoLLIC)*, pages 145–162.

2021 **Language-based Decisions**, *Proceedings of the 18th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, 55–68.
(with J. Y. Halpern)

2021 **Endogenizing Epistemic Actions**, *Studia Logica*, 109, 1049–1091.
(with W. Nalls)

- Subsumes and extends a previous version published in 2017 in the *Proceedings of the 16th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, pages 426–440.

2020 **Knowledge Second**, *Res Philosophica*, 97(4), 471–487.

- Awarded the 2020 *Res Philosophica* Essay Prize for best unsolicited paper in the special issue on modal epistemology.

2020 **Bayesian Games with Intentions**, *Games and Economic Behavior*, 123, 54–67.
(with J. Y. Halpern and R. Pass)

- Subsumes and extends a previous version published in 2015 in the *Proceedings of the 15th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, pages 75–82.

2019 **Logic and Topology for Knowledge, Knowability, and Belief**, *The Review of Symbolic Logic*, 13(4), 748–775.
(with A. Özgün)

- Subsumes and extends a previous version published in 2017 in the *Proceedings of the 16th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, pages 98–101.

2019 **Uncertainty about Evidence**, *Proceedings of the 17th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, 68–81.
(with A. Özgün)

2018 **Topological Subset Space Models for Public Announcements**, *Outstanding Contributions to Logic: Jaakko Hintikka on Knowledge and Game Theoretical Semantics*, vol. 12, 165–186.

2017 **Kantian Decision Making Under Uncertainty**, *Philosophers' Imprint*, 17(7), 1–22.
(with A. J. London and K. Zollman)

2017 **Reasoning about Rationality**, *Games and Economic Behavior*, 104(3), 146–164.
(with J. Y. Halpern and R. Pass)

- Subsumes and extends a previous version entitled “Axiomatizing Rationality”, published in 2014 in the *Proceedings of the 14th International Conference on Principles of Knowledge Representation and Reasoning (KR)*, pages 178–187.

2017 **From Type Spaces to Probability Frames and Back, via Language**, *Proceedings of the 16th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, 75–87.
(with J. Y. Halpern)

2015 **Informative Counterfactuals**, *Proceedings of the 25th Semantics and Linguistic Theory Conference (SALT)*, 1–17.
(with T. Snider)

2013 **Language-based Games**, *Proceedings of the 14th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, 39–48.
 (with J. Y. Halpern and R. Pass)

- A shorter version was published in 2013 by invitation in the *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI)*, pages 2967–2971, as part of the “Best Papers from Sister Conferences” series.

2011 **Reasoning about Justified Belief**, *Proceedings of the 13th Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, 221–227.
 (with J. Y. Halpern and R. Pass)

Presentations

Invited Talks

2023 **Robustness and Equilibria**, *HalpernFest*, Cornell University.

2021 **The Epistemology of Nondeterminism**, *The Berkeley Logic Colloquium*.

2021 **Almost-logic**, *Association for Symbolic Logic – North American Annual Meeting*.

2020 **The Epistemology of Nondeterminism**, *The Melbourne Logic Seminar*.

2019 **The Epistemology of Nondeterminism**, *The Thirteenth International Tbilisi Symposium on Language, Logic and Computation*.

2019 **The Epistemology of Nondeterminism**, *Seminar in Logic, Probability, and Games*, Columbia University.

2019 **The Epistemology of Nondeterminism**, *20th Annual Pitt/CMU Graduate Philosophy Conference: Uncertainty and the Limits of Knowledge*, Carnegie Mellon University.

2018 **Endogenizing Epistemic Actions**, *Academy Colloquium: Reasoning in Social Context*, University of Amsterdam.

2018 **Logic and Topology for Knowledge, Knowability, and Belief**, *46th Annual Meeting of the Society for Exact Philosophy*.

2018 **Logic and Topology for Knowledge, Knowability, and Belief**, *Winter Meeting of the Association for Symbolic Logic / American Philosophical Association Eastern Division Meeting*.

2016 **Formal Epistemology & Topological Subset Space Models for Public Announcements**, *Epistemic Utility Theory Group at the University of Bristol*.

2016 **Language-based Games**, *Epistemic Utility Theory Group at the University of Bristol*.

2014 **Language-based Games**, *3rd Workshop on Logic, Rationality & Intelligent Interaction at the Center for the Study of Language and Information (CSLI)*, Stanford University.

2014 **Language-based Games**, *Pure and Applied Logic Colloquium at Carnegie Mellon University*.

Peer-reviewed Conferences

2025 **A Logic of Uncertain Interpretation**, *Formal Approaches to Rationality and Meaning (FARM)*.

2025 **A Logic of Uncertain Interpretation**, *50th Annual Meeting of the Society for Exact Philosophy (SEP)*.

2025 **A Logic of Uncertain Interpretation**, *12th Workshop on Combining Probability and Logic (PROGIC)*.

2023 **Sequential Language-based Decisions**, *19th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.
(presented by J. Y. Halpern)

2022 **Knowledge Second**, *17th Formal Epistemology Workshop (FEW)*.

2021 **Language-based Decisions**, *18th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.

2019 **Uncertainty about Evidence**, *17th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.
(presented by A. Özgün)

2018 **The Epistemology of Nondeterminism**, *25th Workshop on Logic, Language, Information and Computation (WoLLIC)*.

2017 **From Type Spaces to Probability Frames and Back, via Language**, *16th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.

2017 **Logic and Topology for Knowledge, Knowability, and Belief**, *16th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.
(presented by A. Özgün)

2017 **Endogenizing Epistemic Actions**, *16th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.
(presented by W. Nalls)

2017 **Logic and Topology for Knowledge, Knowability, and Belief**, *14th Formal Epistemology Workshop (FEW)*.

2015 **Language-based Games**, *8th Workshop in Decisions, Games, and Logic (DGL)*.

2015 **Bayesian Games with Intentions**, *15th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.

2013 **Subset Space Public Announcement Logic Revisited**, *4th New York Graduate Student Logic Conference*.

2013 **Language-based Games**, *14th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.

2011 **Reasoning about Justified Belief**, *13th Conference on Theoretic Aspects of Rationality and Knowledge (TARK)*.

2010 **Extending S4 Completeness to Superspaces**, *3rd New York Graduate Student Logic Conference*.

Workshops/Seminars

2025 **Language-based Decisions**, *Bristol Research Talk*.

2024 **An Introduction to Knowledge Representation and Reasoning**, *Carnegie Mellon Math Club Colloquium*.

2024 **Belief and Causation**, *Logic and Interactive Rationality (LIRa) Seminar at the Institute for Logic, Language, and Computation in Amsterdam*.

2023 **Knowing and Measuring**, *Peking University Logic Seminar*.

2023 **Knowledge Second**, *Pittsburgh Formal Epistemology Workshop*.

2022 **Knowing and Measuring**, *Connections between Epistemic Logic and Topology*.

2022 **Knowledge Second**, *Logic and Interactive Rationality (LIRa) Seminar at the Institute for Logic, Language, and Computation in Amsterdam*.

2022 **Knowing and Measuring**, *Quantum Epistemology Beyond Quantum Measurement*.

2022 **Knowledge Second**, *Tsinghua Logic Salon*.

2022 **Knowledge Second**, *Logic4Peace*.

2021 **An Introduction to Knowledge Representation and Reasoning**, *Carnegie Mellon Math Club Colloquium*.

2021 **Kantian Decision Making Under Uncertainty: Dignity, Price, and Consistency**, *Kantian Rationality Lab at the Immanuel Kant Baltic Federal University in Kaliningrad*. (presented by A. J. London)

2021 **Generic Logic**, *Pittsburgh Formal Epistemology Workshop*.

2021 **Generic Logic**, *Foundational Studies Bristol Seminar*.

2020 **Almost-logic**, *Logic and Interactive Rationality (LIRa) Seminar at the Institute for Logic, Language, and Computation in Amsterdam*.

2019 **Topological Subset Space Semantics for Public Announcements**, *Topology and Modal Logic Worshop at the Thirteenth International Tbilisi Symposium on Language, Logic and Computation*.

2019 **Measurement and Action**, *Logic and Interactive Rationality (LIRa) Seminar at the Institute for Logic, Language, and Computation in Amsterdam*.

2018 **The Epistemology of Nondeterminism**, *Workshop on Logic, Information, and Topology at Carnegie Mellon*.

2017 **The Epistemology of Nondeterminism**, *Logic and Interactive Rationality (LIRa) Seminar at the Institute for Logic, Language, and Computation in Amsterdam*.

2017 **Logic and Topology for Knowledge, Knowability, and Belief, Modality and Method Workshop** at Carnegie Mellon.

2015 **Language-based Games**, *Seminar in Logic and Games at CUNY*.

2015 **Topological Subset Space Models for Public Announcements**, *New York Logic and Metaphysics Workshop at CUNY*.

2014 **Types and Intention**, *Workshop on Epistemology, Logic, and Games at Carnegie Mellon*.

Grants/Fellowships/Awards

2020 **The Res Philosophica Essay Prize**.
A prize of \$3,000 for the best paper submitted to the special issue on modal epistemology.

2018–2019 **The Course Hero-WW Fellowship**.
Awarded for excellence in teaching; provides \$39,250 to support research and travel and for the engagement of a student assistant.

2017–2019 **The Falk Fellowship.**
Provides \$3,875 for travel and research expenses.

2016–2017 **The Wimmer Faculty Fellowship.**
Proposal title: “Game Theory Through Games”. Provides \$3,000 to enhance teaching through designing or re-designing a course, innovating new materials, or exploring a new pedagogical approach.

2016–2017 **The Berkman Faculty Development Fund.**
Proposal title: “Topological Methods in Knowledge Representation and Reasoning”. Provides \$5,000 to support a series of visiting scholars working in the proposal area.

2014–2016 **The Falk Fellowship.**
Provides \$3,900 for travel and research expenses.

2011 **The Hutchinson Fellowship.**
Provides one semester of relief from teaching.

2008 **The Cornell Graduate School Recruiting Fellowship.**
Provides full graduate student support for one year.

2008 **The Natural Sciences and Engineering Researching Council of Canada (NSERC) PGS M Award.**
Provides one year's graduate student stipend.

2007 **The Ontario Graduate Scholarship.**
Provides one year's graduate student stipend.

Teaching

S15 17 20 23 F23 25 Game Theory (80-305/80-605)
 F15 17 18 20 21 S25 Decision Theory (80-306/80-606)
 S25 Formal Methods: Classical Logic (80-609)
 F14 16 S18 20 22 F24 Modal Logic (80-315/80-615)
 F19 20 22 Formal Logic (80-310/80-610)
 F18 19 21 22 Formal Methods: Tools & Techniques in Math & Logic (80-603)
 S16 18 21 Seminar on Formal Epistemology (80-521/80-821)
 S16 21 Formal Methods: Epistemic Logic and Topology (80-619)
 F18 S19 Formal Epistemology Working Group (FEWG)
 F15 16 17 18 Formal Methods: Decisions and Games (80-616)
 S17 Philosophy of Logic and Language (80-387/80-687)
 S16 Games and Decisions Reading Group

F=Fall, S=Spring

Advising

Ph.D. Dissertation

2016–2021 **Will Nalls**, “*Endogenizing Epistemic Actions in Dynamic Epistemic Logic*”.
Committee Chair

2018–2021 **Ana Smaranda Sandu**, “*Knowledge of Counterfactuals*”.
External Committee Member (Cornell University)

2020–2021 **Farzaneh Derakhshan**, “*Session-Typed Recursive Processes and Circular Proofs*”.
Committee Member

2015–2016 **Liping Tang**, “*Less is More: Information, Signals and Communication*”.
Committee Member

Master's Thesis

2022–2023 **Philip Sink**, “*Modal Logic Without Possible Worlds: A New Semantics Using Simplicial Complexes*”.
Committee Chair

2019–2021 **Paula Neeley**, “*A Formalization of Dynamic Epistemic Logic*”.
Committee Member

2019–2020 **Jacob Neumann**, “*Semantics of Nondeterministic Construction*”.
Committee Chair

2016–2017 **Masayuki Tashiro**, “*Decision Paradox and Rationality*”.
Committee Co-chair

Undergraduate Senior Thesis

2022–2023 **Samuel Thompson**, “*Argumentation Frameworks and Voting Theory*”.
Advisor

2020–2021 **Liangze “Josh” Li**, “*Fuzzy Logic and Paradoxes*”.
Advisor

2018–2019 **Jacob Neumann**, “*Hidden Variable Semantics for Nondeterministic Program Construction*”.
Advisor

2018–2019 **Garrison McMullen**, “*Vagueness using Topological Semantics*”.
Advisor

2017–2018 **Kenneth Wells**, “*Resolving Ethical Dilemmas using a Kantian Decision Making Framework*”.
Advisor

2015–2016 **Ariel Rao**, “*A Finite Memory Automaton for Two-Armed Bernoulli Bandit Problems*”.
Advisor

Professional Service

2024–2026 Chair of the National Steering Committee for NASSLLI

2023–2026 Director of Graduate Studies (Department of Philosophy)

2021–2026 Director of the CMU Summer School in Logic and Formal Epistemology

2022–2026 Co-organizer of the Pittsburgh Formal Epistemology Workshop (PFEW)

2025–2026 Member of the Department Head Search committee

2026 Program Committee member for AiML

2024–2025 Program Committee Chair of TARK

2017–2025 Program Committee member for TARK

2018, 2025 Program Committee Chair for NASSLLI

2016/18/22/25 Instructor for NASSLLI

2024–2025 Fulbright committee member

2024 Program committee member for LOFT

2024 Member of “Lowering the Barriers to Early Course Feedback” working group

2019–2023 Organizer of the CMU Philosophy Department Colloquium Series

2023 Chair of the Graduate Curriculum Committee

2021–2023 Member of the departmental Diversity, Equity, & Inclusion Committee

2023 Created the “Rationality, Uncertainty, and Choice: Formal Methods” minor

2015/17–19/21–23 Instructor for the CMU Summer School in Logic and Formal Epistemology

2022 Co-organizer of CELT (“Connections between Epistemic Logic and Topology”)

2021 Member of the Dietrich Space Committee

2016, 2020 CMU Philosophy Graduate Admissions Committee

2019 Program committee member for NASSLLI

2019 Organizer of the “Topology and Modal Logic” workshop at TbiLLC

2018 Co-organizer of the “Logic, Information, and Topology” workshop at CMU

2017 Co-organizer of the “Modality and Method” workshop at CMU

2015 Co-organizer of the “Differentiating Contents” workshop at CMU

2014 Co-organizer of the “Epistemology, Logic, and Games” workshop at CMU

2010–2013 TA trainer for Cornell math and statistics graduate students

Journal/Book Reviewing

Analysis (2025, 2022, 2022, 2019, 2017, 2016); *Logic and Logical Philosophy* (2025, 2019); *Cambridge University Press* (2024); *Synthese* (2024, 2021); *International Journal of Game Theory* (2024); *Advances in Modal Logic* (2024, 2018); *Journal of Logic and Computation* (2023); *Journal of Philosophical Logic* (2023, 2022, 2021, 2021); *Journal of Symbolic Logic* (2022); *Economics and Philosophy* (2021); *Mind* (2021); *Australasian Journal of Logic* (2021); *Review of Symbolic Logic* (2021, 2020); *Ergo* (2021); *Foundations of Software Science and Computation Structures* (2021); *Society for Philosophy and Psychology* (2021); *Information and Computation* (2020); *Philosophy of Science* (2020, 2017, 2016); *Information Sciences* (2019); *Workshop on Logic, Language, Information and Computation* (2019); *Tbilisi Symposium on Language, Logic and Computation* (2019); *Journal of Logical and Algebraic Methods in Programming* (2018); *Journal of Economic Behavior & Organization* (2018); *Philosophers' Imprint* (2017); *Journal of Applied Non-Classical Logics* (2017); *Studia Logica* (2017, 2016); *Games and Economic Behavior* (2017, 2016); *Erkenntnis* (2017, 2016); *Reports on Mathematical Logic* (2016); *Philosophical Studies* (2015); *Journal of Logic, Language and Information* (2015, 2013).