

Simon Allzén

Researcher in Philosophy of Science and Physics

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Research

Research profile

Focus on evidence, confirmation, and scientific realism in contemporary physics, with particular focus on dark matter, astrophysics, cosmology, and the historical organisation of frontier research. I combine philosophical analysis and historical case studies with computational methods, including bibliometrics, natural language processing, and data visualisation.

Areas of Specialization

Philosophy of science and physics; history of science and physics; confirmation theory; philosophy of astrophysics; philosophy of cosmology.

Academic Appointments and Career Breaks

2026–present	Parental Leave Following completion of the Swedish Research Council International Postdoc.
2023–2025	Postdoctoral Researcher in Theoretical Philosophy <i>Department of Philosophy, Stockholm University</i> <i>Institute of Physics, University of Amsterdam</i> <i>Vossius Center for the History of Humanities and Sciences, University of Amsterdam</i> Three-year international research project funded by the Swedish Research Council; appointment concluded 31 December 2025.

Education

2022	Ph.D. in Theoretical Philosophy <i>Stockholm University, Stockholm, Sweden</i> Thesis: <i>Reassessing Realism: On the Ontology of the Unobservable</i> . Degree awarded 20 December 2022. Opponent: Michaela Massimi. Committee: James Ladyman, Karen Crowther, Åsa Wikforss, and Edvard Mörtzell
2017	M.A. in Theoretical Philosophy, with distinction <i>University of Gothenburg, Gothenburg, Sweden</i>
2016	M.A. in Practical Philosophy <i>University of Gothenburg, Gothenburg, Sweden</i>
2014	B.A. in Theoretical Philosophy, with distinction <i>University of Gothenburg, Gothenburg, Sweden</i>
2014	B.A. in Practical Philosophy, with distinction <i>University of Gothenburg, Gothenburg, Sweden</i>

Publications

Peer-reviewed journal articles

- Allzén, Simon (2026). “Dark Matter Realism: How Referential Semantics Restricts Realism in Contemporary Fundamental Physics.” *Synthese*. doi:10.1007/s11229-026-05589-8.
- Allzén, Simon (2023). “Against Methodological Continuity and Metaphysical Knowledge.” *European Journal for Philosophy of Science* 13, 5. doi:10.1007/s13194-022-00505-6.
- Allzén, Simon (2022). “From Unobservable to Observable: Scientific Realism and the Discovery of Radium.” *Journal for General Philosophy of Science* 53, 307–321. doi:10.1007/s10838-022-09614-5.

4. Allzén, Simon (2021). “Scientific Realism and Empirical Confirmation: A Puzzle.” *Studies in History and Philosophy of Science* 90, 153–159. doi:10.1016/j.shpsa.2021.10.008.

Book chapter

5. Allzén, Simon (2023). “Extragalactic Reality Revisited: Astrophysics and Entity Realism.” In N. Mills Boyd, S. De Baeremaeker, V. Matarese, and K. Heng (eds.), *Philosophy of Astrophysics: Stars, Simulations, and the Struggle to Determine What Is Out There*, 277–293. Synthese Library 472. doi:10.1007/978-3-031-26618-8_15.

Manuscripts and preprints

6. Allzén, Simon (2026). “Diverging Paths to Dark-Matter Discovery.” Manuscript.
7. Allzén, Simon (2026). “Evidential Reconfiguration as Bayesian Confirmation for Dark Matter: How Known Data Becomes New Evidence.” Manuscript.
8. Allzén, Simon (2026). “Historical Continuity as Justification for Dark Matter: How History Becomes an Epistemic Strategy.” Manuscript.
9. Allzén, Simon. “Modest Scientific Realism and Belief in Astronomical Entities.” Manuscript.

Research Funding and Awards

2023–2025	Dark Matter Diagnostics <i>Swedish Research Council, International Postdoc Grant</i> Approximately EUR 360,000; three-year international research project.
2020–2022	Establishing the Philosophy of Supersymmetry <i>Stockholm–Cambridge Collaborative Research Grant</i> Project grant of approximately EUR 6,500.
2021	New Directions in Philosophy of Cosmology <i>Templeton Foundation Seed Grant</i> USD 4,000.
2021	Junior Fellowship Award <i>Vossius Center for the History of Humanities and Sciences, University of Amsterdam</i> EUR 3,000.
2020	Research Visit Scholarship <i>Bergströms Stiftelse</i> SEK 20,000.

Visiting and Interdisciplinary Appointments

2023–2025	Postdoctoral Resident <i>Institute of Physics and Vossius Center for the History of Humanities and Sciences, University of Amsterdam</i> Member of Amsterdam Philosophy and History in Gravity (AMPHIG), Gravitation and Astroparticle Physics Amsterdam (GRAPPA), the Dutch Black Hole Consortium, and the History and Philosophy of Physics group.
2022	Short-term Research Visitor <i>Final Theory Research Group, Max Planck Institute for the History of Science, Berlin</i>
2021	Junior Fellow <i>Institute of Physics and Vossius Center, University of Amsterdam</i> Two-month fellowship.
2020	Research Visitor <i>Department of Philosophy, University of Bristol</i> Two-month research visit.

Teaching Experience

2026	Philosophy of Science and Scientific Method Ph.D Karolinska Institutet; Swedish University of Agricultural Sciences.
2025	Philosophy of Science and Scientific Method Ph.D. + Master's course Karolinska Institutet.
2022, 2025	Philosophy of Science and Scientific Method Ph.D. Swedish University of Agricultural Sciences.
2022	Epistemology; Philosophy of Science Introductory course + summer course Stockholm University.
2018–2020	Epistemology and Philosophy of Science Introductory course Stockholm University.
2018	Scientific Method and Research Ethics Advanced-level Stockholm University.
2018	Knowledge and Science Upper-secondary teacher education programme Stockholm University.

Selected Invited Talks

2025	Dark Matter Realism: How Referential Semantics Restricts Realism in Contemporary Fundamental Physics Higher Seminar in Theoretical Philosophy, Stockholm University.
2025	From Particles to Pluralism: The Changing Ontology and Epistemology of Dark Matter The Epistemology of Dark Matter and Modified Gravity, National and Kapodistrian University of Athens.
2024	When, How, and Why Dark Matter Became a Particle Philosophy of Physics Seminar, University of Bristol.
2024	Is There a Coherent History of Dark Matter? <i>On the Interface Between Physics and Metaphysics: Does Matter Matter?</i> , Amsterdam.
2024	History and Philosophy as Justification of Dark Matter Vossius Center for the History of Humanities and Sciences, University of Amsterdam.
2023	Whig History as Justification of Scientificality: A Case Study of Dark Matter Colloquium of Philosophy of Astronomy and Cosmology, Utrecht University.
2022	Scientific Realism and Empirical Confirmation: A Puzzle University of Gothenburg; Max Planck Institute for the History of Science, Berlin.
2021	Entity Realism and Dark Matter Vossius Center and Institute of Physics, University of Amsterdam.
2020	Against Methodological Continuity Department of Philosophy, University of Bristol.

Conference and Workshop Presentations

2023	History as Justification: A Case Study of the History of Dark Matter Amsterdam Meetings in Philosophy and History of Gravitation, University of Amsterdam.
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2022	Modest Scientific Realism and Belief in Astronomical Entities Philosophy of Science Association Biennial Meeting, Pittsburgh.
2021	Dark Matter, Evidence, and Theory Confirmation <i>Philosophy of Dark Matter, Epistemology of the LHC</i> , Bonn.
2019	Scientific Realism and Dark Matter University of Manchester.
2018	A Meta-inductive Argument for the Viability of Abduction in Science Workshop presentation, Norwegian University of Science and Technology, Trondheim.

Public Engagement and Digital Projects

forthcoming	Commissioned Public-facing Article The Institute of Art and Ideas (IAI).
2026	Interview on Dark-Matter Research Interviewed in June 2026 for a forthcoming article in <i>Scientific American</i> .
2025	Podcast Guest: “25. Vetenskapsfilosofi” <i>Filosofisk podcast</i> , 15 October 2025; discussion of philosophy of science with Erik Angner. Podcast website .
2024	Public-facing article on dark matter, “Vad tror man på, om man tror på mörk materia?” <i>Svensk Filosofi</i> , 4 december 2024 Magazine website .
2020	Public-facing Article on Everettian Quantum Mechanics and Explanatory Power <i>Loupe Magazine</i> , Bristol.
2023–2026	DAMADIA: Dark Matter Diagnostics Created the project’s public research website and interactive atlas. damadia.com .
2025–present	Interactive Bibliometric Analysis Dashboard R Shiny dashboard for bibliometric exploration of dark-matter research. Project website .
2025–present	Comparative Dark-Matter Funding Database and Data Report Quarto report comparing public dark-matter research funding across regions. Project website .

Academic Service

2021–present	Peer Reviewer British Journal for the Philosophy of Science; Philosophy of Science; Perspectives on Science; Foundations of Science; Synthese Reviews completed in 2026 for <i>Perspectives on Science</i> , <i>Foundations of Science</i> , and <i>Synthese</i> .
2021–2022	Workshop Organiser Philosophy of Supersymmetry, <i>Cambridge–Stockholm</i>
2019	Organiser <i>Doctoral Conference, Stockholm University</i>
2018	External Committee Member <i>Swedish Higher Education Authority</i> Evaluation of the doctoral programme at the Department of Philosophy, Linguistics and Theory of Science, University of Gothenburg.

Last updated: August 2026.