

JACO DE SWART

Massachusetts Institute of Technology
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EDUCATION

PhD History of Science University of Amsterdam	08-2016 / 02-2022
MSc Theoretical Physics University of Amsterdam	09-2011 / 06-2016
MA Philosophy University of Amsterdam	09-2011 / 08-2013
BA Philosophy University of Amsterdam	09-2010 / 08-2011
BSc Physics University of Amsterdam	09-2007 / 08-2010

RESEARCH EXPERIENCE

Massachusetts Institute of Technology AIP Helleman Postdoctoral Fellow, Program in STS & Center for Theoretical Physics. Mentor: David Kaiser + Visitor of the Harvard University Black Hole Initiative	08-2022 / 08-2024
University of Amsterdam Postdoctoral Researcher, Department of Anthropology Mentor: Annemarie Mol FTE: 0.8	11-2021 / 06-2022
University of Amsterdam PhD Candidate, Institute of Physics Supervisors: Jeroen van Dongen & Gianfranco Bertone FTE: 0.8	09-2016 / 10-2021
Institute for Advanced Study, Princeton Visiting Researcher, Program of Interdisciplinary Studies Host: Piet Hut	09-2019 / 11-2019
Princeton University Visiting Researcher, Dept. of Astrophysical Sciences & History of Science Hosts: David Spergel, Michael Gordin	09-2014 / 11-2014

PUBLICATIONS

Journal Articles

de Swart, J., Thresher, A.C., & Argüelles, C. A. (2024). The humanities can help make physics greener. *Nature Review Physics*, 6, 404-405

de Swart, J., Bertone, G. & van Dongen, J. (2017). How dark matter came to matter. *Nature Astronomy*, 1, 0059

Book Chapters

de Swart, J. (2020). Cosmology's Rebirth and the Rise of the Dark Matter Problem. In: A. Blum, R. Lalli and J. Renn (eds.), *The Renaissance of General Relativity in Context. Einstein Studies*, vol. 16. London: Birkhauser

Book Reviews

de Swart, J. (2019). Deciphering dark matter: the remarkable life of Fritz Zwicky, *Nature*, 573, 32-33

Other

De Swart, J. (2024). Five decades of missing mass. *Physics Today* (to appear August 2024)

de Swart, J. (2017). How we lost 85% of the universe. *Viewpoint*, 113, 11

Works in Progress

de Swart, J., & Mol, A. (2024). Cleaning a Dark Matter Detector: Ontologies, Normativities, and the Limits of Laboratory Experiments. *Social Studies of Science*. (Submitted for initial review)

de Swart, J. (2024). The origins of particle dark matter. *Nature Review Physics*. (Commissioned)

AWARDS

American Institute of Physics, Helleman Memorial Postdoctoral Fellowship	2022
Dutch Society for the Advancement of Science and Medicine, Travel Grant	2019
American Institute of Physics, Center for History of Physics, Grant-in-Aid	2014

INVITED TALKS

University of Chicago, Kavli Institute for Cosmological Physics (US)	04-2024
Harvard University, Laboratory for Particle Physics and Cosmology (US)	01-2024
Harvard University, Black Hole Initiative, Foundations Seminar (US)	12-2023
Columbia University, Department of Physics, Colloquium (US)	10-2023
Cornell University, Department of STS (US)	10-2023
UPenn, Department of History and Sociology of Science (US)	10-2023
Yale University, History and Foundations of Physics, Workshop (US)	04-2023
UC Santa Cruz, Santa Cruz Institute for Particle Physics (US)	03-2023
MIT Laboratory of Nuclear Science (US)	10-2022

Vossius Center for History of Humanities and Sciences, Amsterdam (NL)	05-2022
Max Planck Institute for History of Science, Online	04-2021
Institute for Advanced Study, Princeton NJ (US)	10-2019
National Air and Space Museum, Washington DC (US)	10-2019
Complutense University Madrid (ES)	06-2019
Kapteyn Institute for Astronomy, Groningen (NL)	06-2019
RWTH Aachen (DE)	02-2019
Karlsruhe Institute of Technology (DE)	01-2019
King's College London (EN)	12-2018
University of Heidelberg (DE)	06-2018
National Institute for High Energy Physics, Nikhef (NL)	12-2017
American Institute of Physics, College Park (US)	11-2014

CONFERENCE TALKS

EASST/4S, Amsterdam (NL)	07-2024
American Philosophical Society, Philadelphia (Online)	06-2020
History of Science Society, New Orleans (US)	<i>postponed</i>
Dutch Graduate Conference in History of Science, Rolduc (NL)	02-2019
Society for Philosophy of Science in Practice, Ghent (BE)	07-2018
European Philosophy of Science Association, Dusseldorf (DE)	09-2015
Society for Philosophy of Science in Practice, Aarhus (DK)	06-2015
Dutch Graduate Conference in Philosophy, Nijmegen (NL)	03-2015

ORGANIZED SYMPOSIA & CONFERENCES

Putting Space in Place: Earthly Impacts of Astronomy and Space Science	07-2025
Symposium at the International Congress of History of Science and Tech. '25	
Un/Clean Science	07-2024
Panel at EASST/4S meeting in '24	
Equitable Astrophysics	01-2024
Harvard Radcliffe workshop on responsible experiment siting, co-organizer	
Harvard-Princeton-MIT 'Phunday'	04-2023
Workshop in the history of the physical sciences, co-organizer	
Ways of Knowing the Universe	<i>postponed</i>
Panel at History of Science Society meeting '20	
Dutch Graduate Conference in History of Science	02-2019
Rolduc Abbey, Kerkrade (NL), co-organizer	
Philosophy of Astrophysics in Practice	07-2018
Philosophy of Science in Practice '18, Ghent (BE), ft. Mauricio Suárez a.o.	
First Tylers Meeting on History of Astronomy and Physics	04-2017
Tylers Museum, Haarlem (NL), co-organizer	

TEACHING

University of Amsterdam:

The Science and Life of Albert Einstein

2019/2020/2021

Institute of Physics, Teaching Assistant Reflection on Physics	2019/2020
Institute of Physics, Teaching Assistant Science in Action	2019
Van 't Hoff Institute for Molecular Sciences, Teaching Assistant Interdisciplinary Research Projects	2016/2017/2018
Institute for Interdisciplinary Studies, Supervisor Philosophy of Science	2016/2017/2018
Institute for Interdisciplinary Studies, Lecturer Turning Points in the Natural Sciences	2014/2015/2016
Institute for Interdisciplinary Studies, TA & Coordinator Electricity and Magnetism	2010
Institute of Physics, Teaching Assistant	

OUTREACH

Organizer: Rock 'n' Roll Academy	2020
Talk series on science and rock music at Hard Rock Hotel Amsterdam.	
Presenter: Veronica Academy	2019-2020
Presenter of a web series on the science behind science fiction.	
Table guest: Studio Max Live	2013-2014
Live guest for science news at a talk show on Dutch public television.	

MEDIA APPEARANCES

Video

NOVA PBS, Decoding the Universe: Cosmos (tba)
 NTR Kokhuis, 'Donkere Materie' [Dark Matter] (07.10.2023)
 Universiteit van Nederland, 'Wat is donkere materie' [What is Dark Matter?] (24.05.2022)
 Folia Magazine, on *Nature Astronomy* publication (02.03.2017)

Newspaper

NRC, 'De Zoektocht naar Donkere Materie' [The Search for Dark Matter] (14.10.2022)
 New Scientist NL, 'New Eyes on the Universe' (18.05.2022)
 De Volkskrant, 'Materie Mysterie' [Matter Mysterie] (29.04.2022)
 Het Parool, 'De Geboorte van Donkere Materie' [The Birth of Dark Matter] (19.02.2022)
 Algemeen Dagblad, 'Eureka' column (07.11.2020)
 Folia Magazine, on rock-'n'-roll academy (08.10.2020)

Podcasts

Verrukkelijke Wetenschap, 'Wat is donkere materie?' (26.10.2022)
 Universiteit van Nederland, 'Wat is donkere materie' (09.01.2022)
 Radio Swammerdam, on dark matter (18.02.2019)
 Makkelijk Praten Podcast, on dark matter research (27.08.2018)

Live

NPO Radio 1, 'OVT', on Maarten Schmidt (25.09.2022)
 RTL 4, 'Beau', table guest on black holes (12.05.2022)
 NPO Radio 1, 'De nacht van' (14.04.2022)

NPO Radio 1, 'OVT', on dark matter (19.01.2022)
 Nationale Wetenschapsagenda, live stream on black holes (7.10.2021)
 New Scientist, book release 'Steven Hawking' (08.09.2020)
 NPO Radio 1, on new dark matter results (02.08.2020)

Features

Jansen, J. & Jansen, D. (2020). *Corona tot Z*. Fontaine Uitgevers, pp. 35-36
 Tijd voor Max, on 'Corona tot Z' (02.12.2020)

PROFESSIONAL ACTIVITIES

Member: Next-Generation Event Horizon Telescope: History, Philosophy, and Culture Working Group, Black Hole Initiative, Harvard University	2023-
Reviewer: MIT Press, Studies in History and Philosophy of Modern Physics, European Journal for Philosophy of Science, Centaurus	2018 -
Member: Advisory Board of Institute for Interdisciplinary Studies, UvA	2017-2022
Member: Institute of Physics PhD Council, University of Amsterdam	2018-2021
Member: Faculty of Science PhD Council, University of Amsterdam	2016-2018

OTHER

Bassist in semi-professional rock band X Raiders 2008 -
 Highlights include shows on Dutch national television, a tour in Taiwan, and collaboration with a Grammy-nominated producer

City cleaning at volunteering collective Troep Troep 2020 -
 Founder of a large collective to clean the streets of Amsterdam of litter. Highlights include a large interview in a Dutch newspaper.

Language
 Dutch – Native; English - Fluent; German – Conversational.

REFERENCES

Prof. David Kaiser, Massachusetts Institute of Technology, dikaiser@mit.edu
Prof. Jeroen van Dongen, University of Amsterdam, j.e.a.f.vandongen@uva.nl
Prof. Gianfranco Bertone, University of Amsterdam, g.bertone@uva.nl
Prof. Annemarie Mol, University of Amsterdam, a.mol@uva.nl
Prof. Piet Hut, Institute for Advanced Study, Princeton, piet@ias.edu