

# JACO DE SWART

Massachusetts Institute of Technology  
77 Massachusetts Ave., Cambridge, MA  
deswart@mit.edu

## EDUCATION

---

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

## RESEARCH EXPERIENCE

---

<b>Massachusetts Institute of Technology</b> AIP Helleman Postdoctoral Fellow, Program in STS & Center for Theoretical Physics. Mentor: David Kaiser +Visiting scientist at <b>Harvard University's</b> Black Hole Initiative	08-2022 / 07-2025
<b>University of Amsterdam</b> Postdoctoral Researcher, Department of Anthropology Mentor: Annemarie Mol   FTE: 0.8	11-2021 / 06-2022
<b>University of Amsterdam</b> PhD Candidate, Institute of Physics Supervisors: Jeroen van Dongen & Gianfranco Bertone   FTE: 0.8	09-2016 / 10-2021
<b>Institute for Advanced Study, Princeton</b> Visiting Researcher, Program of Interdisciplinary Studies Host: Piet Hut	09-2019 / 11-2019
<b>Princeton University</b> Visiting Researcher, Dept. of Astrophysical Sciences & History of Science   Hosts: David Spergel, Michael Gordin	09-2014 / 11-2014

## PUBLICATIONS

---

### **Books**

de Swart, J. (2025). *How the Universe Went Missing: A History of Dark Matter*. MIT Press (Under Contract)

### **Journal Articles**

- de Swart, J. (2024). Five decades of missing mass. *Physics Today*, 77 (8), 34-43
- 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. (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

---

<b>The End of Purity: Contaminations and Cleanups in the Anthropocene</b>	09-2025
4S meeting in Seattle, '25	
<b>Putting Space in Place: Earthly Impacts of Astronomy and Space Science</b>	07-2025
Symposium at the International Congress of History of Science and Tech. '25	
<b>Un/Clean Science</b>	07-2024
Panel at EASST/4S meeting in '24	
<b>Equitable Astrophysics</b>	01-2024
Harvard Radcliffe workshop on responsible experiment siting, co-organizer	
<b>Harvard-Princeton-MIT 'Phunday'</b>	04-2023
Workshop in the history of the physical sciences, co-organizer	
<b>Ways of Knowing the Universe</b>	<i>postponed</i>
Panel at History of Science Society meeting '20	
<b>Dutch Graduate Conference in History of Science</b>	02-2019
Rolduc Abbey, Kerkrade (NL), co-organizer	
<b>Philosophy of Astrophysics in Practice</b>	07-2018
Philosophy of Science in Practice '18, Ghent (BE), ft. Mauricio Suárez a.o.	
<b>First Tylers Meeting on History of Astronomy and Physics</b>	04-2017
Tylers Museum, Haarlem (NL), co-organizer	

## TEACHING

---

*University of Amsterdam:*

<b>The Science and Life of Albert Einstein</b>	2019/2020/2021
Institute of Physics, Teaching Assistant	
<b>Reflection on Physics</b>	2019/2020
Institute of Physics, Teaching Assistant	
<b>Science in Action</b>	2019
Van 't Hoff Institute for Molecular Sciences, Teaching Assistant	
<b>Interdisciplinary Research Projects</b>	2016/2017/2018
Institute for Interdisciplinary Studies, Supervisor	
<b>Philosophy of Science</b>	2016/2017/2018
Institute for Interdisciplinary Studies, Lecturer	
<b>Turning Points in the Natural Sciences</b>	2014/2015/2016
Institute for Interdisciplinary Studies, TA & Coordinator	
<b>Electricity and Magnetism</b>	2010
Institute of Physics, Teaching Assistant	

## MEDIA APPEARANCES

---

### Video

NOVA PBS, 'Decoding the Universe: Cosmos' (22.05.2024)  
 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 Myserie' [Matter Myserie] (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)

**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.

**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](mailto:dikaiser@mit.edu)  
**Prof. Jeroen van Dongen**, University of Amsterdam, [j.e.a.f.vandongen@uva.nl](mailto:j.e.a.f.vandongen@uva.nl)  
**Prof. Gianfranco Bertone**, University of Amsterdam, [g.bertone@uva.nl](mailto:g.bertone@uva.nl)  
**Prof. Annemarie Mol**, University of Amsterdam, [a.mol@uva.nl](mailto:a.mol@uva.nl)  
**Prof. Piet Hut**, Institute for Advanced Study, Princeton, [pjet@ias.edu](mailto:pjet@ias.edu)