Carina Prunkl

Academic Appointments and Affiliations

| Research Fellow, Institute for Ethics in AI, University of Oxford | 2020-2023 |
|---|------------|
| Senior Research Scholar, Future of Humanity Institute, University of Oxford | 2018-2020 |
| Research Affiliate, Black Hole Initiative, Harvard University | since 2019 |
| Other Appointments | |
| Ethics Advisor, Artificial Intelligence Lab, VU Brussels | since 2021 |
| Ethics Advisor, Digital Catapult | 2021-2022 |
| Ethics Advisor , "Prediction of radiotherapy side effects using explainable AI for patient communication and treatment modification", Horizon Europe Framework Programme | 2022–2026 |
| Education | |
| DPhil Philosophy , University of Oxford | 2014-2018 |
| MSt Philosophy of Physics (Distinction), University of Oxford | 2013-2014 |
| MSc Physics (equiv. First Class Honours), Freie Universität Berlin | 2011-2013 |
| BSc Physics, Freie Universität Berlin | 2007-2011 |
| Publications | |

Journal Publications "LUCID: Exposing Algorithmic Bias through Inverse Design" with C. Mazijn, J. Danckaert, and V. Ginis. *Proceedings of the 37th AAAI Conference on Artificial Intelligence* (forthcoming). "Epistemic Injustice and Algorithmic Profiling" with S. Milano. *Philosophical Studies* (forthcoming).

Books

"Entropy" Cambridge Elements - Philosophy of Physics, J.O. Weatherall (ed.), Cambridge University Press, (forthcoming 2022).

[&]quot;How objective is thermodynamics?" with K. Robertson. *Philosophy of Science* (forthcoming).

[&]quot;Human Autonomy in the Age of Artificial Intelligence" Nature Machine Intelligence (2022) 4.2: 99-101.

[&]quot;Is there a trade-off between human autonomy and the 'autonomy' of AI systems?" *Philosophy and Theory of Artificial Intelligence 2021*, ed. Müller, C, Springer Cham (2022).

[&]quot;Institutionalising Ethics in AI through Broader Impact Requirements" with C. Ashurst, M. Anderljung, H. Webb, J. Leike, and A. Dafoe. *Nature Machine Intelligence* (2021) 3:104–110.

[&]quot;We might be afraid of black-box algorithms" with C. Véliz, M. Phillips-Brown, and T. Lechterman. *Journal of Medical Ethics* (2021) 47.5:339-340.¹

[&]quot;Toward Trustworthy AI Development: Mechanisms for Supporting Verifiable Claims" with M. Brundage et al. *Report* (2020), http://www.towardtrustworthyai.com/.

[&]quot;Beyond Near-and Long-Term: Towards a Clearer Account of Research Priorities in AI Ethics and Society." *Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society* (2020) pp. 138–143.

[&]quot;On the Equivalence of Thermodynamic and von Neumann Entropy" *Philosophy of Science* (2020), 87, 2:262–280.

[&]quot;On the Thermodynamical Cost of Some Quantum Interpretations" with C. Timpson. *Studies in History and Philosophy of Modern Physics* (2018) 63:114–122.

[&]quot;Impulsivity, self-control, and hypnotic suggestibility" with V. Ludwig et al. *Consciousness and Cognition* (2013) 22(2):637–653.

¹ This is an invited, internally peer-reviewed commentary.

Manuscripts "LUCID–GAN: Conditional Generative Models to Locate Unfairness" with A. Algaba, C. Mazijn, J. Danckaert, and V. Ginis *SSRN 4289597*.

"Artificial Intelligence and Human Autonomy—a philosophical perspective", (journal submission).

"Simulation Intelligence: Towards a New Generation of Scientific Methods" with A. Lavin et al. arXiv:2112.03235.

Blog posts

"A Guide to Writing the NeurIPS Impact Statement" (with C. Ashurst, M. Anderljung, J. Leike, Y. Gal, T. Shevlane, A. Dafoe), Medium post, 13/05/2020.

SELECTED INVITED TALKS AND CONFERENCE CONTRIBUTIONS

2022.....

Transatlantic Dialogue on Humanity and AI Regulation (Paris); Blavatnik School of Government; Institute for Advanced Study in Toulouse.

2021.....

Philosophy of Science meets Machine Learning (Tübingen); Workshop Responsible AI in the Defence Sector (Oxford); 4th Conference on Philosophy and Theory of Artificial Intelligence (Goetheburg); The Oxford Union; Surrey Centre for Law and Philosophy.

2020.....

AAAI/ACM Conference on AI, Ethics, and Society; Women Leading in AI; University of Michigan; AI Lab, Vrije Universiteit Brussel; European Institute for Participatory Media; Senate, Mexico City; London School of Economics.

POLICY ENGAGEMENT

• United Nations Interregional Crime and Justice Research Institute (UNICRI); Centre for Data Ethics and Innovation, UK; Ministry of Defence, UK; UK2070 Independent Commission, UK; Senate, Mexico; EU Delegation in Russia; Congress, Mexico.

TEACHING EXPERIENCE

Ethics of AI, Lecturer and Tutor

- · University of Oxford (MSt Practical Ethics)
- University of Oxford (3rd year philosophy undergraduates) 2021
- Scuola Internazionale Superiore di Studi Avanzati, Trieste (PhD in computer science) 2021
- Thales Akademie, Germany (professionals)
- Said Business School, University of Oxford (professional fellows)

 2019
- Oxford Artificial Intelligence Society (undergraduates and graduates) 2019

Governance of AI. Lecturer

 Department of Engineering Sciences, University of Oxford (PhD in Autonomous Intelligent Machines and Systems)

Other teaching (Oxford): Logic (undergraduate); Advanced Philosophy of Physics (graduate); Philosophy of Science (undergraduate); Quantum Theory and Quantum Computation (undergraduate)

Awards and Funding

| Santander-CIDOB '35 under 35 Future Leaders' list | 2021 |
|---|-----------|
| Oxford Vice Chancellor's Fund Award | 2017 |
| BSPS Doctoral Scholarship Award | 2014–2017 |
| Konrad Adenauer Foundation Scholarship | 2008-2013 |

Languages

German (mother tongue), English (business fluent), French (fluent), Spanish (intermediate)