

Alexander Williams Tolbert

Contact Information

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Education

PhD in Philosophy, University of Pennsylvania, 2019-2023
Advisers: Michael Kearns, Quayshawn Spencer, Anita Allen
Committee: Samuel Freeman, Aaron Roth, Scott Weinstein

M.A. in Statistics, The Wharton School, University of Pennsylvania, 2019-2023

M.S. in Biochemistry, Virginia Polytechnic Institute and State University, 2017-2019

M.A. in Philosophy, Virginia Polytechnic Institute and State University, 2017-2019

B.S. in Biology, University of Mobile, 2009-2013

Academic Appointments

Assistant Professor (Aug 2024-present)

Department of Quantitative Theory and Methods
Emory University

Postdoctoral Researcher (Aug 2023- July 2024)

Department of Quantitative Theory and Methods
Emory University

Visiting Graduate Scholar, Fall 2020

The Graduate School and University Center of the City University of New York
Supervisor: Charles Mills

Areas of Specialization

- Philosophy of Science
- Causal Inference
- Machine Learning (Learning Theory, Algorithmic Fairness)
- Game Theory
- Social & Political Philosophy
- Philosophy, Politics & Economics
- Philosophy of Race

Area of Concentration

Logic and Computation

Publications

1. Aaron Roth, Alexander Tolbert, and Scott Weinstein. Reconciling individual probability forecasts. In *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency*, pages 101–110, 2023
2. Alexander Williams Tolbert. Causal agnosticism about race: Variable selection problems in causal inference. *Philosophy of Science*, pages 1–11, 2024
3. Alexander Williams Tolbert. Philosophy of race and causation i: Challenges to race as a causal variables. *Philosophy Compass*, 2024. Forthcoming
4. Alexander Williams Tolbert. Philosophy of race and causation ii: Potential replies. *Philosophy Compass*, 2024. Forthcoming
5. Alexander Williams Tolbert. Why heterogeneous effects & stability undermine realism about race in social science. *Philosophy of the Social Sciences*, 2024. forthcoming

Accepted with Revisions

1. Alexander Williams Tolbert. Reevaluating the causal status of race in algorithmic decision-making: A critical examination of lily hu's constructivist approach. *Journal of Causal Inference*, 2024. Accepted with Revisions
2. Alexander Williams Tolbert. Two routes to algorithmic racial unfairness. *Synthese: An International Journal for Epistemology, Methodology and Philosophy of Science*, 2024. Accepted with Revisions
3. Alexander Williams Tolbert. An epistemic argument for reparations. *Synthese: An International Journal for Epistemology, Methodology and Philosophy of Science*, 2024. Accepted with Revisions
4. Alexander Williams Tolbert and Aaron Roth. Resolving the reference class problem at scale. *Philosophy of Science*, 2024. Accepted with Revisions

Manuscripts in Submission

1. Emily Diana and Alexander Williams Tolbert. Correcting underrepresentation and intersectional bias for classification. *Association for the Advancement of Artificial Intelligence*, 2024. Under Review
2. Emily Diana, Alexander Williams Tolbert, Kavya Richardson, and Avrim Blum. Adaptive algorithmic interventions for breaking pessimism traps in dynamic sequential decisions. *Association for the Advancement of Artificial Intelligence*, 2024. Under Review

Talks and Presentations

1. *PhilML'24| Eberhard Karls University of Tübingen*
Title: Causal Agnosticism About Race
Year: 2024
2. *First Paris Conference | Frontiers of Economics and Philosophy*
Title: Algorithms, Justice, and the Urban Ghetto
Year: 2024
3. *TTIC Colloquium*
Title: Causal Agnosticism About Race: Variable Selection Problems in Causal Inference
Year: 2024
4. *Philosophy of AI Conference (PhAI 2023)*
Title: Algorithms, Justice, and the Urban Ghetto
Year: 2023
5. *Biennial Meeting of the Philosophy of Science Association*
Title: Causal Race Agnosticism
Year: 2022
6. *TOC4Fairness Seminar, Simons Collaboration on the Theory of Algorithmic Fairness, supported by The Simons Foundation*
Title: Individual Probability, Reference Class Problem, Model Multiplicity, Reconciling Belief
Year: 2022
7. *Penn Law Symposium on Innovation and Criminal Justice*
Title: Algorithms in Criminal Justice (Panel)
Year: 2022
8. *Biennial Meeting of the Philosophy of Science Association*
Title: Against Predictive Invariance
Year: 2021
9. *Bias and Discrimination in Big Data and Algorithmic Processing Conference – BIAS*
Title: Against Predictive Invariance
Year: 2021
10. *Pacific Division Meeting: American Philosophical Association*
Title: Causation and Algorithmic (un)Fairness in Machine Learning
Year: 2021
11. *Eastern Division Meeting: American Philosophical Association*
Title: Causation and Algorithmic (un)Fairness in Machine Learning
Year: 2021
12. *Ernest E. Just Biomedical Society at the University of Pennsylvania*
Title: Causation and Algorithmic (un)Fairness in Machine Learning
Year: 2020
13. *Philosophy and Physical Computing Conference*
Title: Dynamics and Biochemical Kinds
Year: 2019
14. *Virginia Tech Department of Biochemistry Speakers in Biochemistry Series*
Title: Exploring the Ability of the Inositol 1,3,4 Trisphosphate 5/6-Kinase (ITPK) to Accommodate Inositol hexakisphosphate (InsP6)
Year: 2019
15. *Philosophy and Physical Computing Conference*
Title: Finding Natural Kinds
Year: 2018

Work Experience

Jun 2022 – Amazon Web Services (Remote)

Fall 2022 *Research Scientist II Intern*

Supervisor: Peter Hallinan

Research Topic: Algorithmic Harm and Bias Database (Working Paper)

Language: Python

Jun 2021 – Amazon Web Services (Remote)

Sep 2021 *Research Scientist Intern*

Supervisor: Peter Hallinan

Research Topic: An Algorithmic Framework for Bias

Language: Python

Jun 2022 – Wharton Sports Analytics and Business Initiative, University of Pennsylvania, Philadelphia, PA
Aug 2022 *Instructor*

Supervisor: Abraham J. Wyner

Duties: Instructor for Money-ball Academy, a program designed to draw in talented middle and high school students from minority and underrepresented backgrounds into coding and data science.

Language: R

Service

- Founder and Organizer, W. E. B. Du Bois, Ida B. Wells Symposium on Socially Aware Data Science and Ethical Issues in Modeling (2022-)
- Founder and Organizer, University of Pennsylvania Philosophy of Computation and Data Workshop (2021-)
- Organizer, Penn-Rutgers Philosophy of Race Reading Group (2020-)
- Africana Summer Institute Fellow, University of Pennsylvania (2020-2021)
- Co-President, Minorities and Philosophy, Virginia Tech (2018-2019)
- Editorial assistant, HOPOS: The Journal of the International Society for the History of Philosophy of Science (2018-2019)

Teaching Assistantships

University of Pennsylvania

- VLST 101: Eye, Mind, and Image (Spring 2022)
- PHIL 025-001: Philosophy of Science (Fall 2021)
- PHIL 077: Philosophy of Law (Spring 2021)
- PHIL 277-001: Justice, Law, and Morality (Fall 2020)

Virginia Polytechnic Institute and State University

- PHIL 2125: History of Modern Philosophy (Fall 2018)
- PHIL 1304: Morality and Justice (Spring 2017)
- PHIL 1304: Knowledge and Reality (Fall 2017)

Selected Coursework

University of Pennsylvania

- Philosophy of Race (Spring 2022)
- Modern Statistical Learning Theory (Spring 2022)
- Mathematics of High-Dimensional Data (Spring 2022)
- Algorithmic Fairness (Fall 2021)
- Theoretical Machine Learning & Algorithms (Fall 2021)
- Observational Studies (Spring 2021)
- Modern Data Mining (Spring 2021)
- Kant and Kantian Moral Constructivism (Spring 2021)
- Introduction To Africa and African Diaspora Thought (Fall 2020)
- Mathematical Foundations of Computer Science (Fall 2020)
- Introduction to Nonparametric Methods and Log-linear Models (2020)
- Liberalism and Challenges of Racial and Economic Justice (2020)
- Mathematical Logic (Spring 2020)
- Modern Political Philosophy (Spring 2020)
- Plato's Republic (Fall 2019)
- Applied Regression and Analysis of Variance (Fall 2029)
- The Methodology of Political Philosophy (Fall 2029)

Virginia Polytechnic Institute and State University

- Intermediate Philosophy of Science (Fall 2018)
- Issues in Bioethics (Spring 2018)
- Intermediate Philosophy of Biology (Spring 2018)
- Advanced Logic: Set Theory, Analysis, and Model Theory (Spring 2018)
- Kant's Critique of Pure Reason (Fall 2017)
- Symbolic Logic (Fall 2017)
- Origins of Analytic Philosophy (Fall 2017)

Programming Skills

■ Proficient

R
Python

■ Familiarity

SQL
Java

■ Everyday Workflow

LaTeX
Git

Awards

- Fontaine Fellow, University of Pennsylvania (2019-2023)
- Graduate Scholar, Multicultural Academic Opportunities Program, Virginia (2017-2019)

References

Name Prof. Michael Kearns
Reference Type Research (Thesis Advisor)
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Name Prof. Quayshawn Spencer
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Name Prof. Anita Allen
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Website <https://www.law.upenn.edu/faculty/aallen2/>
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Name Prof. Samuel Freeman
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Reference Type Research
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