

Curriculum Vitae

Shannon Sylvie Abelson

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Current Affiliations

Postdoctoral Fellow	Stanford University McCoy Center for Ethics in Society/ Doerr School for Sustainability	2023-present
Associate Member	North American Nanohertz Observatory for Gravitational Waves	2022-present
Responsible Siting Working Group Co-Lead, Next Generation Event Horizon Telescope		2023-present

Education

Ph.D. Philosophy Minor: History and Philosophy of Science	<i>Indiana University, Bloomington, 2023</i>
Graduate Certificate, Astronomy	<i>Swinburne University, 2021</i>
Master of Arts, Philosophy	<i>Virginia Tech, 2015</i>
Bachelor of Arts Philosophy, German Magna Cum Laude Minor in History	<i>Stetson University, 2013</i>

AOS: Philosophy of Astrophysics and Astronomy, Space Sustainability and Security, Environmental Philosophy

AOC: Epistemology of Science, Space Environmentalism, General Philosophy of Science

Publications

- (2023) “[Simulation and Experiment Revisited: Temporal Data in Astronomy and Astrophysics](#)”
Edited Volume, *Philosophy of Astrophysics: Stars, Simulations, and the Struggle to Determine What Is Out There*, Synthese Library - Studies in Epistemology, Logic, Methodology, and Philosophy of Science, Eds. Nora Boyd and Siska de Baerdemaeker.
- (2022) “[Variety of Evidence in Multimessenger Astronomy](#),” *Studies in History and Philosophy of Science* 94: 133-142.
- (2022) “[The Fate of Tensor-Vector-Scalar Alternative Gravity](#),” *Foundations of Physics* 52 (1): 1-19.

Works in Progress

- Eliminative Reasoning in Astronomy and Astrophysics (*under review*)
- Quiet Skies and the Future of Satellite Constellations (*under review*)
- Machine Learning for Data-Driven Astronomy and Astrophysics (*manuscript*)
- Informed Consent and Responsible Telescope Siting (*manuscript*)

Research Presentations

Invited Presentations

- Maine Space Conference
Portland, Maine
“Normative Considerations for Dark and Quiet Skies”
October 23-24, 2024
- Black Hole Initiative
Invited Colloquium Series
Harvard University
“Eliminative Reasoning in Astronomy and Astrophysics”
March 14, 2022
- Lichtenberg Group for History and Philosophy of Physics
Invited Colloquium Series
University of Bonn
“The Fate of Tensor-Vector-Scalar Alternative Gravity”
April 27, 2021
- IU History and Philosophy of Science Fall Forum
“Testing Modified Gravity Models”
November 29, 2018

Refereed Presentations

- Astronomical Society of the Pacific: ASP 2024 August 22-24, 2024
Astronomy Across the Spectrum
“Responsible Siting at the Next Generation Event Horizon Telescope Collaboration”
- 7th Annual Black Hole Initiative Conference May 29, 2024
HPC Workshop
Harvard University, Cambridge, MA
"Informed Consent and Responsible Telescope Siting"
- American Philosophical Association- Pacific Division March 20-23, 2024
Philosophy of Physics Society
Portland, OR
"Mechanistic Evidence and the NANOGrav 15-Year Dataset"
- 10th Annual Space Traffic Management Conference February 27-28, 2024
Strauss Center, University of Texas, Austin
Austin, TX
"Quiet Skies and the Future of Satellite Constellations"
- 9th Annual Space Traffic Management Conference March 1-2, 2023
Austin, TX
“Attribution of Environmental Impact from Space Traffic: Challenges and Lessons from Climate Change Attribution”
- Philosophy of High Energy Physics March 26-27, 2022
Early Career Workshop
University of Pittsburgh
“Simulation and Experiment Revisited: Temporal Data in Astronomy and Astrophysics”
- AGPhil: Arbeitsgruppe Philosophie der Physik March 21, 2022
der Deutschen Physikalischen Gesellschaft e.V., Frühjahrstagung
(Working Group: Philosophy of Physics
The German Physical Society, Spring Meeting)
Heidelberg, Germany
“Holistic Eliminative Reasoning for Astronomy and Astrophysics”
- American Philosophical Association: Central Division February 25, 2022
Chicago, IL
“Simulation and Experiment Revisited: Temporal Data in Astronomy and Astrophysics”
- Indiana Philosophical Association November 13, 2021

“The Fate of Tensor-Vector-Scalar Alternative Gravity”

- 2020/2021 Philosophy of Science Association Meeting November 2020/2021
Poster Forum, Baltimore, MD
“Reducing Uncertainty in Multimessenger Astronomy
Using Simulation”
- 8th Integrated History and Philosophy of Science Conference July 15-17, 2020
(&HPS8) Arlington, VA
“Testing Modified Models of Gravity”
Moved to Asynchronous due to Covid-19
<https://www.youtube.com/watch?v=gS1wb6Zdno0>
- Society for Philosophy of Science in Practice July 7-10, 2020
East Lansing, MI.
“Variety of Evidence in Multimessenger Astronomy”
Cancelled due to Covid-19
- American Association of Philosophy Teachers/
American Philosophical Association Central Meeting 2020 February 28, 2020
Teaching Hub Poster Forum
“Teaching Climate Ethics Using a Model Climate Forum”
- History of Science Society Annual Meeting November 10, 2017
Toronto, ON
“Einstein And the Michelson-Morley Experiment:
The Context of Justification Revisited”
- Thirteenth Biennial History of Astronomy Workshop July 8, 2017
University of Notre Dame
“Explanation and Unification: A Closer Look at Aristotle’s
Astronomical Model”
- Arizona State University Graduate Philosophy Conference February 4, 2017
“Moritz Schlick on Confirmation, Observation, and Conceptual
Frameworks”

Awards Presentations

- 2020 Nelson Dissertation Fellowship Lecture September 18, 2020
Indiana University Bloomington
“Variety of Evidence in Multimessenger Astronomy”

Academic Work Experience

Instructor of Record

- Instructor of Record, Environmental Ethics (Stanford) Winter 2024
The course considered ethical questions that confront us in our dealings with the natural world, looking at subjects such as: climate change, conservation, environmental justice, economic approaches to the environment, access to and control over natural resources, pollution, technology, and environmental activism. Our inquiries were framed with leading ethical theories and divided by ecosystem, dedicating time to each unique environment and its specific nuances: aquatic, land, and aerospace.
- Instructor of Record, Business and Morality (IU) Spring 2021
Original course designed entitled, “Business and Sustainability” that examined ethical business practice in light of concerns in the domain of broad sustainability, including environmental, economic, social, and cultural sustainability.
- Instructor of Record- Introduction to Ethics (IU) Spring 2019
Original course designed entitled, “Climate Ethics” that examined contemporary ethical concerns related to global climate change.
- Instructor of Record- Introduction to Ethics (IU) Spring 2018
Original course designed entitled, “Ethics and Star Trek” that examined classical ethical theories using supplemental science fiction case studies.

Standalone Instructor

- Associate Instructor, Public Speaking Fall 2022

Associate Instructor/Research Assistant

- Associate Instructor, Bioethics Fall 2020
- Associate Instructor- Symbolic Logic Fall 2018
- Research Assistant to Professor Sandra Shapshay Fall 2017
- Associate Instructor- Philosophical Methods Spring 2017
- Associate Instructor- Introduction to Ethics Fall 2016
- Graduate Teaching Assistant- Morality and Justice Spring 2015
- Graduate Teaching Assistant- Morality and Justice Fall 2014
- Graduate Teaching Assistant- Knowledge and Reality Spring 2014
- Graduate Teaching Assistant- Knowledge and Reality Fall 2013

Grader and Tutor

- Grader and Tutor, Virtue Ethics Fall 2021
- Grader and Tutor, Classics in Philosophy of Art Spring 2021
- Grader and Tutor, Medieval Philosophy Fall 2020
- Grader and Tutor, Virtue Ethics Spring 2020
- Grader and Tutor, Medieval Philosophy Fall 2019

Professional Development and Professional Experience

- Associate Member, NANOGrav 2022-present
- Public Speaking Pedagogy Training Module (35 hours) August 8-12, 2022
- Administrative Assistant, Haven Health Care 2022-present
- Representative, Department Climate Committee 2021-2022
IU Department of Philosophy
- Certificate, R Programming August 2020
- 2020 Indiana Black Expo Education Conference July 14-16, 2020
- Referee, Studies in History and Philosophy of Modern Physics 2019-present
- Chair, session on “Models in Science” November 5, 2018
2019 Philosophy of Science Association Meeting
- Co-President, Virginia Tech Graduate Philosophy Club Fall 2014- Spring 2015
Planned and organized the department’s annual graduate conference.
- Commenter November 15, 2014
Virginia Tech Graduate Conference on Pragmatism
- Philosophy Department Delegate Fall 2013- Spring 2014
Virginia Tech Graduate Assembly

Awards and Fellowships

- President’s Diversity Dissertation Fellowship, Indiana University 2021-2022
- Ewing Graduate Essay Prize 2021
- James B. Nelson Dissertation Fellowship, Indiana University 2019- 2020
- Bo and Lynn Clark Graduate Essay Prize 2017
- Academic Excellence Award, Indiana University 2016
- College of Arts and Sciences Fellowship, Indiana University 2015- 2016
- Phi Beta Kappa, National Academic Honor Society 2014- present
- Marjorie Grene Prize in Philosophy, Virginia Tech 2015
- Ronald L. and Margaret Smith Hall Philosophy Award 2013
- Omicron Delta Kappa, National Leadership Honors Society 2013- present

Sample Syllabi Available For:

- Environmental Ethics (100 level)
- Business and Sustainability (200 level)
- Climate Ethics (100 level)

- Star Trek and Ethics (100 level)
- Introduction to Philosophy of Science (100 level)
- Introduction to Ethical Theory (100 level)
- Introduction to Philosophy: Metaphysics and Epistemology (100 level)
- Philosophy of Technology (3-400 level and above)
- Space Sustainability (2-300 level)
- Immanuel Kant (300 level and above)
- History of Analytic Philosophy (200 level)