

Ryan O'Loughlin

Curriculum Vitae

Areas of Specialization: Philosophy of
Climate Science, Scientific Modeling,
Values in Science

Areas of Competence: History and
Philosophy of Science, Logic, Feminist
Philosophy, Environmental Philosophy

Department of Philosophy
Queens College CUNY
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EMPLOYMENT

2022- **Queens College City University of New York**
Assistant Professor of Philosophy

EDUCATION

- 2017-2022** **Ph.D. Indiana University-Bloomington (June 2022)**
History and Philosophy of Science
Dissertation: "The Role of Model Intercomparisons in Climate Science."
Chair: Elisabeth Lloyd
- 2015-2017** **M.A. Ohio University**
Philosophy
Thesis: "Thomas Kuhn and Perspectival Realism."
- 2010-2014** **B.S. University of Wisconsin-Stevens Point**
Sociology (cum laude)

PUBLICATIONS

Peer-reviewed Journal Articles

- 2023 O'Loughlin, R. "Diagnosing errors in climate model intercomparisons," in *European Journal for Philosophy of Science*. 13(2). 1-29. <https://doi.org/10.1007/s13194-023-00522-z>
- 2022 O'Loughlin, R., and Dan Li. "Model Robustness in Economics: the admissibility and evaluation of tractability assumptions," in *Synthese*. 200, 1-23. <https://doi.org/10.1007/s11229-022-03608-y>
- 2021 O'Loughlin, R. "Robustness Reasoning in Climate Model Comparisons" in *Studies in History and Philosophy of Science: Part A*. 85, 35-43. <https://doi.org/10.1016/j.shpsa.2020.12.005>
- 2020 O'Loughlin, R. "Seepage, Objectivity, and Climate Science" in *Studies in History and Philosophy of Science: Part A*. 81, 74-81. <https://doi.org/10.1016/j.shpsa.2019.07.002>

Invited papers, reviews, and other publications

20XX O'Loughlin, R. A review of Kevin Elliott's *Values in Science* (Cambridge Elements in Philosophy of Science). Accepted and scheduled for publication in the *Journal of Moral Philosophy* in 2024.

O'Loughlin R., and Stuart Gluck. "Confirmation and Robustness of Climate Models," a contribution to a collection of essays in honor of Elisabeth Lloyd, (eds. Ryan Ketcham and Mike Dietrich; under contract with Pittsburgh University Press)

2021 O'Loughlin R. "The Influence of Climate Contrarianism on Scientific Research" in the Fall issue (No. 104) of the Canadian Society for History and Philosophy of Science's *Communiqué* <https://cshps.ca/no-104-autumn-automne-2021/>

Works in Progress

The value of lower-skill climate models (under review)

Lower-skill models and justice in climate interventions research

Component-level understanding in XAI, with Dan Li and Travis O'Brien

Problems of justification in XAI, with Dan Li and Siyu Yao

Revisiting robustness in complex modeling, with Lisa Lloyd and Stu Gluck

AWARDS AND GRANTS

2023 PSC-CUNY Cycle 54 Research Grant, Summer (\$3500)

2022 Victor E. Thoren Graduate Student Research Fellowship, awarded to an exceptional student near the conclusion of their graduate career. Indiana University, HPSC dept.

2021 Travel Support from the National Science Foundation (Philosophy of Science Association Biennial Meeting)

2019 APA Graduate Student Stipend Award (Pacific Division American Philosophical Association meeting)

2018 Travel Support from the National Science Foundation (Philosophy of Science Association Biennial Meeting)

Indiana University's Graduate and Professional Student Government Travel Award for travel to 2019 Pacific Division American Philosophical Association meeting

2017 Mary Spetnagel Philosophy Award for outstanding accomplishments in the second year of graduate study. Ohio University, Department of Philosophy

Outstanding Teaching Assistant Award. Ohio University, Department of Philosophy

2016 Idus Murphree Award for outstanding performance in the first year of graduate study. Ohio University, Department of Philosophy

Student Achievement Award for work in scientific modeling and fictions; nominated by Yoichi Ishida. Ohio University, Department of Philosophy

TALKS AND PRESENTATIONS

Invited Talks

- 2024 [Scheduled] “Disagreements concerning robustness in climate science.” Song Wu Forum. Xi’an Jiaotong University (May) in Xi’an, China
- 2023 [Scheduled] “A philosophical take on error and lower-skill models in climate science.” Queens College School of Earth and Environmental Sciences Colloquium (Sept. 27th), Queens, NY
- “Why we should want models to disagree: the value of “bad” models in climate science.” NASA Goddard Institute for Space Studies (May 3), New York, NY
- 2022 “Why we should want models to disagree: the value of error diagnosis and low-skill models in climate science.” National Center for Atmospheric Research, Climate & Global Dynamics lab (Oct. 25) Boulder, CO; presented virtually

Peer-Reviewed Conference Presentations

- 2023 [Scheduled] “title,” Society for the Social Studies of Science 2023 conference (Nov. 8 - 11) Honolulu, HI.
- [Scheduled] “The value of error and failure in climate modeling: a philosophical perspective.” World Climate Research Programme Open Science Conference, (Oct. 23-27), in Kigali Rwanda; presenting virtually.
- “Diagnosing Errors in Climate Model Intercomparisons,” Long Island Philosophical Society, Annual Conference (April 1st) at St. John’s University, Queens NY.
- 2022 “Competition and pluralism in climate modeling,” Philosophy of Science Association 2022 Biennial meeting (Nov. 10-13) in Pittsburgh, PA
- 2021 “Tractability Assumptions, Holism, and Model Robustness,” [paper co-authored with Dan Li]. Philosophy of Science Association 2020 Biennial meeting (Nov. 11-14) in Baltimore, MD
- “Historical and Contemporary Climate Model Intercomparisons: Lessons for Pluralism in Modeling.” 8th Biennial Meeting of the European Philosophy of Science Association (Sept. 15-18); presented virtually
- “Climate model comparisons: history and philosophical implications.” Canadian Society for the History and Philosophy of Science Annual Meeting (May 29 – June 2) held virtually
- “Can we infer an absolute timescale via local data? Lessons from Paleoclimatology,” [paper co-authored with Dan Li]. Boston University Philosophy Grad Student Conference (April 22-23) held virtually
- 2019 “Climate Models: Robust and Explanatory.” 13th Graduate Climate Conference (Nov. 7-10) in Woods Hole, MA

“Objectivity, Seepage, and Climate Science.” Pacific Division American Philosophy Association meeting (April 17-20) in Vancouver, BC

“Objectivity, Seepage, and Climate Science.” 3rd IU Graduate Student Conference on the History and Philosophy of Science and Medicine (March 29th-30th), in Bloomington, IN

2018 * “A challenge to Seepage in the Global Warming ‘hiatus’.” American Geophysical Union meeting (Dec. 10-14), in Washington D.C.

* “A challenge to Seepage in the Global Warming ‘hiatus’.” Philosophy of Science Association Biennial meeting (Nov. 1-4) in Seattle, WA

2016 “The Problem with Regarding Models as Fictions.” Mid-South Philosophy Conference (Feb. 19-20) at Rhodes College in Memphis, TN

*Poster Presentation

RESEARCH EXPERIENCE & TRAINING

2018-2021 Research Assistant to Prof. Elisabeth Lloyd, Indiana University Bloomington.

2019&2021 Research Assistant for Elisabeth Lloyd’s “A Methodological Study of Big Data and Atmospheric Science,” (NSF #1754740) at the National Center for Atmospheric Research, Boulder, CO.

TEACHING EXPERIENCE & PEDAGOGY

Xi’an Jiaotong University

Introduction to Philosophy of Climate Science and Feminist Philosophy of Science. Scheduled for May 2024. Guest instructor. Department of Philosophy

Queens College-City University of New York

Intro to Philosophy (FA22, SP23, FA23)

Philosophy of the Environment (FA22, SP23)

Problems in Philosophy: Why should we trust (climate) models if they’re all wrong? (FA23)

-cross-listed philosophy and environmental sciences course

Indiana University-Bloomington

The Intricate Human: Global Climate Change: Linking Human and Planetary Health. Spring 2022. Teaching assistant. (Main instructors: Profs. Andrew Libby and Michael Wasserman).

Geoengineering and Climate Change: the ethical, the practical, and the wicked, a self-designed undergraduate course. Fall 2021. Main Instructor. Selected by Board of

Educational Programmers and the Collins Faculty Curriculum Committee. Collins Living and Learning Center

Scientific Reasoning, an undergraduate course. Spring 2018, Fall 2019, Spring 2020*, Fall 2020*, Spring 2021*. Main Instructor. Department of History and Philosophy of Science and Medicine

Environmental Science, a 2-week summer course for high school students. Summer 2019. Co-instructor. Foundations in Science and Mathematics Program

Evolution and Creationism, an undergraduate course. Fall 2017. Teaching Assistant (Main Instructor: Prof. Elisabeth Lloyd). Course was a cross-listed Social and Historical Studies College of Arts and Sciences course

*Taught online, combination of synchronous and asynchronous class structure

Ohio University

Principles of Reasoning, an undergraduate course. Summer 2016, Fall 2016, and Spring 2017. Main Instructor. Department of Philosophy

Principles of Reasoning, an undergraduate course. Fall 2015 and Spring 2016. Teaching Assistant. (Main Instructors: Prof. Yoichi Ishida (Fall) and Prof. Alfred Lent (Spring)). Department of Philosophy

Pedagogy

Intercultural Competence Certificate (earned in Fall 2021). Professional training to develop skills in intercultural communication and collaboration.

DEPARTMENTAL SERVICE

Queens College-City University of New York

2022-2023 External Member of SEES search committee
Philosophy lecturer-line search committee member
Advisor for undergraduate senior thesis (Leonard Wu)
Co-led (with Dan Li) Philosophy Club discussion:
 “‘How not to be replaced by AI: decision making and human values in a
 changing world” (May 10th, Campbell Dome)

Indiana University-Bloomington

2020-2022 IU HPS Graduate Student Weekly Writing Group (Organizer)
2018-2019 Chair (President), IU HPS Graduate Student Association
2017-2018 Social Chair, IU HPS Graduate Student Association

PROFESSIONAL SERVICE AND AFFILIATIONS

Referee for Academic Journals

- 2023 European Journal for Philosophy of Science
- 2021 The British Journal for the Philosophy of Science; Science of the Total Environment Journal (x2)

Conference Planning and Commentary

- 2022 American Geophysical Union 2022 Meeting. Convener for session “Making Climate Models & Data Actionable: Evaluating and Quantifying Uncertainty in Climate Models and Emulators”
- 2021 Philosophy of Science Association 2020 Biennial Meeting. Chair for session, “Why Trust Science?”
- 2021 Canadian Society for the History and Philosophy of Science. Chair for session on climate science and policy
- IU HPS Workshop on Ethical, Epistemological, and Historical Perspectives on Public Health and Wellness (program committee)
- 2020 Central Division APA. Chicago, IL, Feb. 26-29. Commentary for Corey Dethier’s “Statistically indistinguishable ensembles and the evaluation of climate models”
- 2019 IU HPS Women’s Conference. Bloomington, IN, Oct. 26th (Co-lead organizer with Luma Melo)
- 3rd Annual IU HPS grad student conference. Bloomington, IN, March 29-30th. Program committee and commentary for Ilyas Manakkadavan’s “New Reproductive Technology: Medical Discourse, Belief and Faithful Reasoning: ‘Islamic’ Response from Muslims of Kerala”
- 2018 2nd IU Annual IU HPS grad student conference. Bloomington, IN, March 23-24th. Program committee and commentary for Mousa Mohammadian’s “From Peirce’s Abduction to Lipton’s Inference to the Best Explanation: Two Historical Developments Fill the Gap”

Memberships

Philosophy of Science Association
Canadian Society for the History and Philosophy of Science
American Philosophical Association
American Geophysical Union
European Philosophy of Science Association

Outreach

Science Fest at Indiana University-Bloomington (2017, 2018)

Makah Water Foundation in Cameroon, Africa. Study abroad volunteer trip (Winter 2013)

LANGUAGES

English (native)

Mandarin Chinese (lower intermediate proficiency in both speaking and reading)