

Eric B. Winsberg

PHILOSOPHY OF SCIENCE · PHILOSOPHY OF PHYSICS · PHILOSOPHY OF CLIMATE SCIENCE

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Employment

- 2014 - **Professor of Philosophy**, University of South Florida *Tampa, FL*
- 2006 - **Associate Professor of Philosophy**, University of South Florida *Tampa, FL*
- 2001 - **Assistant Professor of Philosophy**, University of South Florida *Tampa, FL*
- 1999 - **Postdoctoral Fellow**, Northwestern University *Evanston, IL*

Education

- 1999 **Ph.D. in History and Philosophy of Science**, Indiana University *Bloomington, IN*
- 1989 **B.A., History, Philosophy and Social Studies of Science and Medicine**, University of Chicago *Chicago, IL*

Visiting Fellowships

- 2020 **Visiting Scholar**, Institute for Practical Ethics, University of California *San Diego, CA, USA*
- 2016 **Senior Fellow**, Institute for Advanced Study, Leuphana University *Lüneburg, Germany*
- 2013 **Fellow**, Center for Advanced Study, MCMP, Ludwig Maximilians Universität *Munich, Germany*
- 2013 **Visiting Scholar**, Department of Philosophy, University of California *Berkeley, CA, USA*
- 2008 **Fellow**, Institute of Advanced Study, University of Durham *Durham, UK*
- 2006 **Fellow**, Center for Interdisciplinary Studies (ZiF), University of Bielefeld *Bielefeld, Germany*

Books

Philosophy and Climate Science *Cambridge University Press*

ERIC WINSBERG

2018

- Reviewed in: *Notre Dame Philosophical Reviews, the British Journal for Philosophy of Science, Philosophy of Science, Journal for General Philosophy of Science, and Ethics, Policy and Environment.*
- CHOICE Honorable Mention award, Atmospheric Science Librarians International

Science in the Age of Computer Simulation *University of Chicago Press*

ERIC WINSBERG

2010

- Short list for the 2011 Lakatos Award
- Reviewed in: *Science, Physics Today, Metascience, Notre Dame Philosophical Reviews, Theoria, Minds and Machines.*
- Author meets critics at 2011 Eastern APA

Cambridge Elements in Philosophy of Science: Scientific Models *Cambridge University Press*

ERIC WINSBERG

Under Contract

Climate Modeling: Philosophical and Conceptual Issues *Palgrave Macmillan*

ELISABETH S. LLOYD AND ERIC WINSBERG, EDS.

2018

- A collection of papers on the foundations of climate models. Contributors include Nancy Cartwright, Mathias Frisch, Reto Knutti, Michael Mann, Linda Mearns, Jonathan Rougier, Ben Santer, Nancy Cartwright, Elisabeth Lloyd, Jay Odenbaugh, Naomi Oreskes, Wendy Parker, and Eric Winsberg

Time's Arrow and the Origin of the Universe: Reflections on Time and Chance: Essays in Honor of David Albert's Work *Harvard University Press*

BARRY LOEWER, BRAD WESLAKE, AND ERIC WINSBERG, EDS.

2021

- A collection of papers on the foundations of statistical mechanics and the arrow of time.

Edited Journals

2014 **Special Issue on Climate Science**, *Journal for General Philosophy of Science*

Public Contributions

VIDEO

Science & Social Values: Values in Modelling

Harvard, S., Winsberg, E.

2020

A 7-part video series on scientific modelling and social values, with a focus on health economics.

PRINT MEDIA

Coronavirus: why it's dangerous to blindly 'follow the science' when there's no consensus yet

Winsberg, E., Schliesser, E., Levy, N.

2020

Climate and coronavirus: the science is not the same

Winsberg, E., Schliesser, E.

The New Statesman

2020

OTHER MEDIA

Epidemiological Modeling, Policy, and Covid-19

Winsberg, E., Symons, J., Kaufman, D.

Meaningoflife.tv

2020

Pandemic and Policy, a virtual conversation with Elizabeth Anderson (University of Michigan – Ann Arbor), Alexander Broadbent (University of Johannesburg) and Eric Winsberg (University of South Florida)

Winsberg, E., Broadbent, A., Anderson, E.

University of Cambridge Public Seminar in History and Philosophy of Science

2020

Journal Articles

Causal Inference, Moral Intuition, and Modeling in a Pandemic

Harvard, S., Winsberg, E.

Philosophy of Medicine

2021

Don't Stop Thinking About Tomorrow!

Winsberg, E.

Pacific Philosophical Quarterly

2021

Value judgments in a COVID-19 vaccination model: a case study in the need for public involvement in health-oriented modelling

Harvard, S., Winsberg, E., Symons, J., Adibi, A.

Social Science & Medicine

2021

The Diversity of Philosophy Students and Faculty in the United States

Schwitzgebel, E., Bright, L.K., Jennings, C.D., Thompson, M. and Winsberg, E.

The Philosophers' Magazine

2021

The Epistemic Risk in Representation

Harvard, S., Winsberg, E.

Kennedy Institute of Ethics Journal

2021

- This Paper Attacks a Strawman, and the Strawman Wins: A reply to van Basshuyen and White** *Winsberg, E., Brennan, J., Surprenant, C.*
Kennedy Institute of Ethics Journal 2021
- A Modest Defense of Geoengineering Research** *Winsberg, E.*
Philosophy and Technology 2021
- How Government Leaders Violated Their Epistemic Duties during the SARS-CoV-2 Crisis** *Winsberg, E., Brennan, J., Surprenant, C.*
Kennedy Institute of Ethics Journal 2020
- Severe Weather Event Attribution: Why values won't go away** *Winsberg, E., Oreskes N., Lloyd, E.*
Studies in History and Philosophy of Science 2020
- Putting Races on the Ontological Map: a close look at Spencer's 'new biologism' of race.** *Winsberg, E.*
Biology & Philosophy Invited for special issue
- Hawking Radiation and Analogue Experiments: A bayesian analysis** *Dardashti, R., Hartmann, S., Thébault, K., Winsberg, E.*
Studies in History & Philosophy of Modern Physics 2019
- An Antidote for Hawkmoths: a response to recent arguments grounded in the topology of dynamical systems** *Nabergall, L., Navas, A., Winsberg, E.*
European Journal for Philosophy of Science 2018
- What does Robustness Teach us in Climate Science: a re-appraisal** *Winsberg, E.*
Sythese 2018
- Values and Evidence: How models make a difference** *Parker, W., Winsberg, E.*
European Journal for Philosophy of Science 2017
- The Adventures of Climate Science in the Sweet Land of Idle Dreams** *Winsberg, E., Goodwin, W.*
Studies in History and Philosophy of Modern Physics 2016
- Missing the Forest for the Fish: How much does the 'hawkmoth effect' threaten the viability of climate projections?** *Goodwin, W., Winsberg, E.*
Philosophy of Science 2016
- Confirmation via Analogue Simulation: What dumb holes could tell us about gravity** *Dardashti, R., Thébault, K., Winsberg, E.*
British Journal for the Philosophy of Science 2015
- Accountability and Values in Radically Collaborative Research** *Winsberg, E., Huebner, B., Kukla, R.*
Studies in History and Philosophy of Science 2014
- Bumps on the Road to Here (from Eternity)** *Winsberg, E.*
Entropy 14(3), 390-406 2012
- Values and Uncertainties in the Predictions of Global Climate Models** *Winsberg, E.*
Kennedy Institute of Ethics Journal 22 (2), 111-137 2012

Holism, Entrenchment, and the Future of Climate Model Pluralism <i>Studies in History and Philosophy of Modern Physics</i> 41 (3): 253-262	<i>Lenhard, J., and Winsberg, E.</i> 2012
A Tale of Two Methods <i>Synthese</i> 169 (3): 575-92	<i>Winsberg, E.</i> 2009
Laws and Chances in Statistical Mechanics <i>Studies in History and Philosophy of Modern Physics</i> 39 (4): 872-888	<i>Winsberg, E.</i> 2008
Handshaking Your Way to the Top: Inconsistency and falsification in intertheoretic reduction <i>Philosophy of Science</i> 73: 582-594	<i>Winsberg, E.</i> 2006
Models of Success vs. the Success of Models: Reliability without truth <i>Synthese</i> 152: 1-19	<i>Winsberg, E.</i> 2006
Laws and Statistical Mechanics <i>Philosophy of Science</i> 71: 707-718	<i>Winsberg, E.</i> 2004
Can Conditionalizing on the “Past Hypothesis” Militate Against the Reversibility Objections? <i>Philosophy of Science</i> 71: 489-504 winner of 2004 award for outstanding Philosophy of Science article by a recent Ph.D	<i>Winsberg, E.</i> 2004
Quantum Life: Interaction, entanglement, and separation <i>Journal of Philosophy C</i> : 80-97	<i>Winsberg, E. and Fine, A.</i> 2003
Simulated Experiments: Methodology for a virtual world <i>Philosophy of Science</i> 70: 105-125	<i>Winsberg, E.</i> 2003
Simulations, Models, and Theories: Complex physical systems and their representations <i>Philosophy of Science</i> 68: S442-S454	<i>Winsberg, E.</i> 2001
Sanctioning Models: The epistemology of simulation <i>Science in Context</i> 12 (3): 275-92	<i>Winsberg, E.</i> 1999
Encyclopedia Entries	
Computer Simulation in Science <i>Stanford Encyclopedia of Philosophy</i>	<i>Winsberg, E.</i> 2013
Computer Simulation and the Philosophy of Science <i>Philosophy Compass</i> , Vol. 4	<i>Winsberg, E.</i> 2009
Simulation <i>Oxford Companion to the History of Science</i>	<i>Winsberg, E.</i> 2002

Book Chapters

The Metaphysics of PROB and PH

Time's arrow and the Probability Structure of the World, EDITED BY LOEWER, B., WINSBERG, E. AND WESLAKE, B.,
HARVARD UNIVERSITY PRESS

Winsberg, E.

2021

Uncertainty Quantification in Climate Modelling

Philosophical and Conceptual Issues in Climate Modeling, EDITED BY WINSBERG, E. AND LLOYD, E., PALGRAVE
MACMILLAN

Winsberg, E.

2018

Success and Scientific Realism: Considerations from the Philosophy of Simulation

Routledge Handbook on Scientific Realism, EDITED BY JUHA SAATSI, ROUTLEDGE

Winsberg, E. and Mirza, A.

2017

Making an Author in Radically Collaborative Research

The Collective Dimensions of Science, EDITED BY WEISBERG, MAYO-WILSON AND BOYER, OXFORD UNIVERSITY
PRESS

Huebner, B., Kukla, R. and Winsberg,
E.

2017

Deflationism, Pragmatism, and Metaphysics

Aspects of Anti-Representationalism: Truth, Expression, Normativity, and Naturalism, EDITED BY STEVEN
GROSS, NICHOLAS TEBBEN, AND MICHAEL WILLIAMS, OXFORD UNIVERSITY PRESS

Kukla, R., and Winsberg, E.

2015

A Function for Fictions: Expanding the scope of science

Fictions in Science: Philosophical Essays on Modeling and Idealization EDITED BY SUAREZ, M., ROUTLEDGE

Winsberg, E.

2009

Value Judgments and the Estimation of Uncertainty in Climate Modeling

New Waves in the Philosophy of Science, EDITED BY MAGNUS, P.D., AND BUSCH, J., PALGRAVE MACMILLAN

Biddle, J. and Winsberg, E.

2009

Book Reviews

Nature, the Artful Modeler

Notre Dame Philosophical Reviews

Nancy Cartwright

2019

Simulation and Similarity

Notre Dame Philosophical Reviews

Michael Weisberg

2013

Science without Laws: Model Systems, Cases, Exemplary Narratives

Metascience, 18(2): 265-8

A. Creager & E. Lunbeck, eds

2009

Model-Based Reasoning Technology, Science, Values

Philosophy of Science

L. Magnani & N. Nersessian, eds.

2003

The Dappled World: Essays on the Boundaries of Science

Journal of Philosophy

with Frisch, M., Darling, K., and Fine, A.

Nancy Cartwright

2002

Wittgenstein, Finitism and the Foundations of Mathematics

Philosophy of Science

Mathieu Marion

2000

Summer Schools Taught

- 2022 **Climate Science: Historical, Philosophical and Sociological Issues**, University of Vienna
2018 **Philosophy of Cosmology**, Western University and University of California, Irvine

Vienna, Austria
Gonderich, Ontario

Invited keynotes, plenaries, etc.

Simulating Epidemics: Why the models failed us

WINTER SIMULATION CONFERENCE

Orlando, FL
December, 2020

Evidence in Simulation

SEVEN PINES CONFERENCE

Stillwater, Minnesota
June, 2018

Simulation in Cosmology

AMERICAN PHILOSOPHICAL ASSOCIATION PACIFIC DIVISION MEETING

- Invited symposium on physics and cosmology in practice

Washington, DC
April, 2017

'Testing this Extraordinary Scenario': Simulation and models of Big Bang cosmology

METHODOLOGY AND EPISTEMOLOGY IN COSMOLOGY CONFERENCE

- Plenary talk

Irvine, California
February, 2017

Confirmation in Analog and Computer Simulation

AMERICAN PHILOSOPHICAL ASSOCIATION EASTERN DIVISION MEETING

- Invited symposium on computer simulation

Washington, DC
January, 2016

Threats to Model Confidence: A Cautionary Tale

DESIGN MODELING SYMPOSIUM

- Keynote Address

Copenhagen, Denmark
October, 2015

How important is the Hawkmoth Effect for Climate Science?

KNOWLEDGE AND MODELS IN CLIMATE SCIENCE

- Plenary talk

Rotman Institute, London, ON, CA
October, 2014

Values and Uncertainties in Climate Modeling

VALUES AND NORMS IN MODELING

- Keynote Address

Eindhoven, Netherlands
June, 2012

Author Meets Critics: Science in the Age of Computer Simulation

AMERICAN PHILOSOPHICAL ASSOCIATION EASTERN DIVISION MEETING

- Critics: Isabelle Peschard, Wendy Parker

Washington, DC
December 2011

Verification and Validation

SCIENTIFIC MODELING AT SFU: THEMATIC YEAR 2011

- Keynote Address

IRMACS, Burnaby, BC, Canada
April, 2011

Other Presentations

SELECTED INVITED PRESENTATIONS SINCE 2013

The Joint Strategy in Simulation Modeling: Machine learning in parameterization

APPROXIMATION METHODS: HISTORICAL AND PHILOSOPHICAL PERSPECTIVES

Max Planck Institute for the History of Science, Berlin, Germany

June, 2021

10th Anniversary Conference of the Institute of Philosophy at the Leibniz University

SEVERE WEATHER EVENT ATTRIBUTION: WHY VALUES WONT GO AWAY

Leibniz University, Germany

June, 2021

Causal Inference in Non-linear Systems

UNDERSTANDING THE NATURE OF INFERENCE: CAUSATION AND CORRELATION

Franke Program in Science and the Humanities, Yale University

June, 2021

Covid Modeling: How it started, Where we are now.

GEORGE MASON PANDEMIC MODELING FORUM

George Mason University

March, 2021

Simulations and Dark Matter

AMERICAN PHYSICAL SOCIETY

Denver

March, 2021

What is a cause and why does it always precede its effect–Reply to Carlo Rovelli

UNDERSTANDING THE NATURE OF INFERENCE: CAUSATION AND CORRELATION

Franke Program in Science and the Humanities, Yale University

February, 2021

Models, Values, and Precaution

AMERICAN PHILOSOPHICAL ASSOCIATION, CENTRAL DIVISION MEETING

Online

February, 2021

Philosophy, Science and Pandemics: Why the models failed us

BARCELONA INSTITUTE FOR ANALYTIC PHILOPHY

Barcelona, Spain

November, 2020

Why study solar radiation management? A case study in the cost of acquiring new evidence

PHILOSOPHY OF SCIENCE GROUP IN INDIA

National Institute of Advanced Studies, Bengaluru

September, 2020

A Modest Defense of Geoengineering Research

CLIMATE TECHNOLOGIES WORKSHOP

University of California, San Diego

April, 2020

Severe Weather Event Attribution: why values won't go away

INSTITUTE COLLOQUIUM, INSTITUTE FOR PRACTICAL ETHICS

University of California, San Diego

March, 2020

A Modest Defense of Geoengineering Research

DEPARTMENT COLLOQUIUM

Dalhousie University, NS, Canada

July, 2019

Severe Weather Event Attribution: why values won't go away

DEPARTMENT COLLOQUIUM

Boston University, MA

April, 2019

Philosophy and Climate Science

DEPARTMENT COLLOQUIUM

St Edwards University, TX

January, 2019

Simulation and Experiment

WORKSHOP ON ANALOG EXPERIMENTS

University of Bristol, UK

July, 2018

Values and Event Attribution

PHILOSOPHY AND POLITICS OF CLIMATE CHANGE

University of Chicago

April, 2018

Model Skill WILL SCIENCE REMAIN HUMAN	<i>Rome, Italy</i> March, 2018
Probability in Weather and Climate DEPARTMENT COLLOQUIUM	<i>Ruhr-Universität Bochum</i> June 2016
Confirmation in Analog and Computer Simulation DEPARTMENT COLLOQUIUM	<i>Leibniz Universität Hannover</i> April 2016
Confirmation in Analog and Computer Simulation INTERFERENCES EVENTS	<i>MECS, Universität Leuphana</i> January 2016
Confirmation in Analog and Computer Simulation MODELING AND REPRESENTATION CONFERENCE	<i>San Sebastian, Spain</i> December 2015
Reflections on the Relationship between Verification and Validation in Computer Simulation WORKSHOP ON "THE ART AND SCIENCE OF SIMULATION"	<i>Stuttgart, Germany</i> October 2015
Reflections on the Relationship between Verification and Validation in Computer Simulation WORKSHOP ON "HOW TO BUILD TRUST IN COMPUTER SIMULATIONS: TOWARDS A GENERAL EPISTEMOLOGY OF VALIDATION."	<i>Hannover, Germany</i> July 2015
Values and uncertainties in the predictions of global climate models WORKSHOP ON "UNCERTAINTY IN CLIMATE MODELING"	<i>Pittsburgh Center for the Philosophy of Science, PA</i> February 2015
The adventures of climate science in the sweet land of idle arguments WORKSHOP ON "CLIMATE MODELING AND PUBLIC POLICY" • joint work with William Goodwin	<i>University of Pittsburgh Philosophy Department, PA</i> February 2015
Confirmation via Analogue Simulation: What dumb holes could tell us about gravity MODELS AND EXPERIMENTS WORKSHOP • joint work with Radin Dardashti and Karim Thébault	<i>Geneva, Switzerland</i> June, 2014
How anti-realists could learn to stop worrying and love unobservables DEPARTMENT COLLOQUIUM	<i>University of Maryland</i> March, 2014
How anti-realists could learn to stop worrying and love unobservables REDUCTION AND EMERGENCE IN SCIENCE WORKSHOP	<i>LMU, Munich, Germany</i> July, 2013
Confirmation via Analogue Simulation: What dumb holes could tell us about gravity REDUCTION AND EMERGENCE IN SCIENCE WORKSHOP • with Radin Dardashti and Karim Thébault	<i>LMU, Munich, Germany</i> July, 2013
Handshaking Your Way to the Top MULTISCALE MODELING AND ARCHITECTURE. CENTER FOR INFORMATION TECHNOLOGY AND ARCHITECTURE	<i>Copenhagen, Denmark</i> May 2013

Fuzzy Modularity

CULTURES OF ENERGY SPRING SYMPOSIUM

Rice University, Houston, TX

April 2013

Climate Uncertainty and Ambiguity Aversion

LMPS COLLOQUIUM

UC, Berkeley

March 2013

SELECTED RECENT SUBMITTED PRESENTATIONS

Robustness Rebooted

PHILOSOPHY OF SCIENCE ASSOCIATION

Seattle Washington

November 2018

A Framework for Emergent Constraints in Climate Science

BRITISH SOCIETY FOR THE PHILOSOPHY OF SCIENCE

Oxford, UK

July, 2018

Missing the Forest for the Fish: uncertainty in climate modeling

PHILOSOPHY OF SCIENCE ASSOCIATION

- with William Goodwin

Chicago, IL

November 2014

Confirmation via Analogue Simulation: What Dumb Holes Could Tell us About Gravity

PHILOSOPHY OF SCIENCE ASSOCIATION

- with Radin Dardashti and Karim Thébault

Chicago, IL

November 2014

Confirmation via Analogue Simulation: What Dumb Holes Could Tell us About Gravity

BRITISH SOCIETY FOR THE PHILOSOPHY OF SCIENCE

- with Radin Dardashti and Karim Thébault

Cambridge, UK

November 2014

Deflationism, Pragmatism and Metaphysics

FLORIDA PHILOSOPHICAL ASSOCIATION

- with with Rebecca Kukla

Orlando, Florida

November 2012

Deflationism, Pragmatism and Metaphysics

NEW SCIENCE—NEW RISKS: CENTER FOR PHILOSOPHY OF SCIENCE

University of Pittsburgh, PA

March 2012

Levels of Shared Epistemic Norms

EUROPEAN PHILOSOPHY OF SCIENCE ASSOCIATION

Athens, Greece

October, 2011

Laws and Chances in Statistical Mechanics

EUROPEAN PHILOSOPHY OF SCIENCE ASSOCIATION

Amsterdam, Netherlands

October, 2009

Service

Profession

APA SMALL GRANT AWARD TO STUDY TRENDS IN UNDERGRADUATE PHILOSOPHY MAJOR AMONG UNDERREPRESENTED GROUPS (WITH ERIC SCHWIZGEBEL AND MORGAN THOMPSON); MENTOR FOR PSA'S UNDERREPRESENTED PHILOSOPHY OF SCIENCE SCHOLARS PROGRAM

Diversity Work

Profession

NSF; NATIONAL HUMANITIES CENTER; SSHRC (CANADA); FWF (AUSTRIA); NWO (NETHERLANDS); DFG (GERMANY); WELLCOME TRUST (UK).

Grant review

Profession*Journal referee*

PHILOSOPHY OF SCIENCE; BRITISH JOURNAL FOR THE PHILOSOPHY OF SCIENCE; PHILOSOPHER'S IMPRINT; ERKENNTNIS; SYNTHESE; STUDIES IN HISTORY AND PHILOSOPHY OF SCIENCE; STUDIES IN HISTORY AND PHILOSOPHY OF MODERN PHYSICS; STUDIES IN HISTORY AND PHILOSOPHY OF BIOLOGY; PERSPECTIVES ON SCIENCE; INTERNATIONAL STUDIES IN PHILOSOPHY OF SCIENCE; COGNITIVE SCIENCE; ENTROPY; KENNEDY INSTITUTE OF ETHICS JOURNAL; PHILOSOPHY OF TECHNOLOGY; PUBLIC AFFAIRS QUARTERLY; SIMULATION AND GAMING; ERASMUS JOURNAL FOR PHILOSOPHY AND ECONOMICS

Profession*Manuscript review*

CAMBRIDGE UNIVERSITY PRESS; UNIVERSITY OF CHICAGO PRESS; ROUTLEDGE; PRENTICE-HALL.

Profession*Program Committees*

PHILOSOPHY OF SCIENCE ASSOCIATION; MODELS AND SIMULATIONS CONFERENCES: (MS1, MS2, MS3, MS4, MS5, MS7); INCONSISTENCY ROBUSTNESS

Department*USF Philosophy*

UNDERGRADUATE ADVISOR; UNDERGRADUATE COMMITTEE (CHAIR); DIRECTOR OF PLACEMENT; PHILOSOPHY OF MIND SEARCH COMMITTEE (CO-CHAIR); SPECIAL COMMITTEE ON LOGIC AND CRITICAL THINKING (CHAIR); GRADUATE COMMITTEE; TENURE AND PROMOTION COMMITTEE (CHAIR).

University*USF*

HONORS AND AWARDS COMMITTEE; INSTRUCTOR PROMOTIONS COMMITTEE; SPECIAL GRADE GRIEVANCE COMMITTEE.

Languages**Fluent**

ENGLISH; FRENCH

Intermediate

GERMAN