

Isaac Wilhelm

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RESEARCH AREAS

AOS: metaphysics, philosophy of science, philosophy of physics.

AOC: feminist philosophy, formal epistemology, logic, philosophy of biology, philosophy of mathematics.

EMPLOYMENT

National University of Singapore

Assistant Professor, Presidential Young Professorship

2021–present

EDUCATION

Rutgers University

Ph.D. Philosophy 2015-21

- Dissertation: “The Non-Fundamental: Explanation.”
- Committee: Barry Loewer (co-chair), Jonathan Schaffer (co-chair), David Albert, Karen Bennett, Jill North, Ted Sider, Michael Strevens (external).

M.S. Mathematics 2016-18

- Thesis: “Typical: A Theory of Typicality and Typicality Explanation.”
- Committee: Sheldon Goldstein (chair), Michael Kiessling, Joel Lebowitz.

Tufts University

M.A. Philosophy 2013-15

University of Chicago

B.A./B.A. Mathematics, Cinema and Media Studies (both honors) 2007-11

BOOKS

2022 **Logic and Justice**
Routledge.

ARTICLES (ACADEMIC)

Forthcoming **Intrinsicality and Entanglement**
Mind.

Forthcoming **Comparing Mathematical Explanations**
The British Journal for the Philosophy of Science.

Forthcoming **Typical: a Theory of Typicality and Typicality Explanation**
The British Journal for the Philosophy of Science.
- Featured in the OUP “Best of Philosophy 2019” article collection.

2021 **Centering the Principal Principle**
Philosophical Studies 178: 1897-1915.

2021 **Comparing the Structures of Mathematical Objects**
Synthese.

2021 **Explanatory Priority Monism**
Philosophical Studies 178: 1339-1359.

2021 **Grounding and Propositional Identity**
Analysis 81: 80-81.

2021 **The Counteridentical Account of Explanatory Identities**
The Journal of Philosophy 118: 57-78.

2020 **A Statistical Analysis of Luck**
Synthese 197: 867-885.

2020 **An Argument for Entity Grounding**
Analysis 80: 500-507.

2020 **Interventionist Explanation and the Problem of Single Variable Boundary Constraints**
Noûs 54: 945-955.

2020 **The Logic of Typicality**
In Valia Allori, ed., *Statistical Mechanics and Scientific Explanation: Determinism, Indeterminism and Laws of Nature*. World Scientific. (with Harry Crane)

2020 **The Stage Theory of Groups**
Australasian Journal of Philosophy 98: 661-674.

2019 **Celestial Chaos: The New Logics of Theory-Testing in Orbital Dynamics**
Studies in History and Philosophy of Modern Physics 65: 97-102.

- 2019 **The Ontology of Mechanisms**
The Journal of Philosophy 116: 615-636.
- 2018 **New Data on the Representation of Women in Philosophy Journals: 2004-2015**
Philosophical Studies 175: 1441-1464. (with Sherri Conklin and Nicole Hassoun)
- 2018 **The Representation of Belief**
Journal of Philosophical Logic 47: 715-732.

PUBLIC PHILOSOPHY

- Forthcoming **Mystical Rationality**
 In H. De Cruz and J. De Smedt, ed., *Avatar: The Last Airbender and Philosophy*. Blackwell.
- 2021 **Why Christians should welcome face masks**
Messenger (January/February) 170: 27.
- 2017 **From Ants to Quantum Non-Locality**
The Daily Ant: Philosophy Phriday. (with Eddy Chen)

PRESENTATIONS (SELECTED)

- “Grounds for Effective Theories”
 - Society for the Metaphysics of Science, online, Sept 2021.
- “Gender is Essential to Some, But Not All, Individuals”
 - Notre Dame Graduate Course, Oct 2020 (invited).
- “Centering the Everett Interpretation”
 - Laws Workshop, August 2020 (invited).
- “Pluralities, Counterparts, and Groups”
 - Social Ontology, July 2020.
- “Possible Worlds and the Upper Bound Problem”
 - Central APA (colloquium), New Orleans LA, February 2021.
 - Joint Session, University of Kent, July 2020.
- “Centering the Principal Principle”
 - Notre Dame Colloquium, January 2021.
 - Eastern APA (symposium), Philadelphia PA, January 2020.
 - Philosophy of Physics Workshop, CCNY, May 2019 (invited).
- “The Big Bang, Fine Tuning, and the Existence of God”
 - Look at Life, Richmond IN, April 2019 (invited).

“Typical”

- Eastern APA (symposium), New York NY, January 2019.
- Munich Center for Mathematical Philosophy, June 2018 (invited).

“Climate Surveying” (with Savannah Kincaid)

- Eastern APA, Skill Building and Improving the Profession MAP session, New York NY, January 2019.

“Explanatory Priority Monism”

- Central APA (colloquium), Denver CO, February 2019.
- FraMEPhys Workshop on Explanatory Pluralism, University of Birmingham, June 2018 (invited).

“Comparative Structure”

- Canadian Society for the History and Philosophy of Science, University of Regina, May 2018.
- Society for Exact Philosophy, University of Connecticut, May 2018.
- Eastern APA (colloquium), Savannah GA, January 2018.
- British Society for the Philosophy of Science, Edinburgh, July 2017.

“The Ontology of Mechanisms”

- Society for the Metaphysics of Science, Toronto, November 2019.
- Composition Workshop, Rutgers, May 2018 (invited).
- Rutgers-Bochum Workshop, April 2018 (invited).

“Intrinsicality and Quantum Entanglement”

- Fifth International Summer School in the Philosophy of Physics, Saig, July 2017.
- Canadian Philosophical Association, Toronto, May 2017.

“Lawhood and Computational Tractability”

- Pacific APA (colloquium), Seattle WA, April 2017.
- Western Canadian Philosophical Association, University of Alberta, October 2016.

“Sufficient and Necessary Conditions for Representability”

- NASSLLI, Rutgers University, July 2016.

“Chaos Regained: On the Possibility of a New Era of Orbital Dynamics”

- Society for the Philosophy of Science in Practice, Rowan University, June 2016.
- History of Philosophy of Science Conference, University of Minnesota, June 2016.

“Quantity, Property, and Fundamental Law”

- The Metaphysics and Epistemology of Grounding and Fundamentality, CUNY, December 2015.

COMMENTS

“Bohmian Mechanics and Local Reductive Explanation,” Alexander Franklin, Society for the Metaphysics of Science, online, September 2021.

“Constraining Inductive Metaphysical Inferences by Help of Internal Unification,” Kian Salmikhani, Society for the Metaphysics of Science, New York NY, October 2017.

“Grounding, Dependence and Mathematical Explanation,” Bill D’Alessandro, Eastern APA, Baltimore MD, January 2017.

GRANTS AND AWARDS

Presidential Young Professorship (\$375,000 USD)	2021-26
Rutgers Excellence Fellowship for Doctoral Studies (declined)	2021-22
SCP-Templeton Graduate Fellowship for Cross-Training in Physics (\$30,000)	2017-18
Rutgers Excellence Fellowship for Doctoral Studies	2015-17
Summer Special Studies Award (x2)	2016-17
Rutgers Conference Travel Award (x4)	2016-19
Kartemquin Labs Film Screening Review	2013
Fire Escape Films: Travel Grant	2012
Chicago Filmmakers Sponsorship Grant	2012
Seidel Scholars PRISM Grant for Film Equipment (co-recipient)	2011

TEACHING

National University of Singapore

- Chance and Credence (online)	Fall 2021
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Rutgers

- Introduction to Formal Reasoning and Decision-Making (online)	Summer 2020
- Introduction to Formal Reasoning and Decision-Making	Fall 2019
- Bioethics (online)	Summer 2019
- Introduction to Philosophy of Science	Spring 2019
- Introduction to Philosophy	Summer 2018
- NJ Educational Opportunity Fund for disadvantaged students.	

Additional Teaching Experience (select courses)

- <u>Grade School</u>	
- Summer Program for Gifted Youth, two courses (Northwestern)	2013-14
- Saturday Program for Gifted Youth, twelve courses (Northwestern)	2011-13
- Young Scholar’s Program, two courses (UChicago)	2008-10
- <u>Adult Education</u>	
- Conversation: ESL (Whatcom Literacy Council)	2021

- Mathematics: ESL (Whatcom Literacy Council) 2021
- Dark Foan Tutoring
- Tutoring business owner and founder; 22 full-time students. 2011-13

SERVICE

- Referee 2017-present
- *Analysis, British Journal for the Philosophy of Science, Canadian Journal of Philosophy, Ergo, Erkenntnis, European Journal for Philosophy of Science, Journal of the APA, Noûs, Philosophical Studies, Philosophy of Science, Statistical Science, Studies in History and Philosophy of Science, Theoria.*
- Climate Committee, Rutgers Philosophy Department 2015-20
- Organized, or co-organized, three departmental climate surveys.
 - Organized the Rutgers Undergraduate Philosophers Mentorship program.
- Managing Editor 2019-20
- Oxford Studies in Philosophy of Religion, Volume 9.
 - Oxford Studies in Metaphysics, Volume 12.
- Marc Sanders Prizes 2019-20
- Organizer for the Sanders Prize in Philosophy of Religion.
 - Organizer for the Sanders Prize in Metaphysics.
- Metro Area Philosophy of Science (MAPS) 2017-19
- Organized three to five talks for the MAPS group each semester.
- Rutgers-Columbia Workshop: Quantum Field Theories 2018
- Co-organized a two-day international workshop on the philosophy of QFT.
- MAPS Pre-Workshop Workshop 2018
- Organized an international workshop on structure in physics.
- Philosophy of Science Reading Group 2016-18, 2020
- Organized the Rutgers philosophy of science reading group.
- Filming/Editing Talks and Courses 2016-18
- Foundations of Probability Seminar.
 - Metaphysics of Fine Tuning Conference.
 - Center for Philosophy of Religion, Marc Sanders Lectures.
- Data Collection on Representation of Women in Philosophy 2016
- Project to determine proportion of journal publications by women.

FILM PRODUCTION

Sanders Lectures: 2017, 2018

2018 (Fall). 2 hours; credited as editor. Published online.

2018 (Spring). 2 hours; credited as editor. Published online.

2017. 2 hours; credited as editor. Published online.

Luke Barnes on Fine Tuning, Rutgers Philosophy of Religion 2017

2 hours; credited as editor: audio and video recording of Luke Barnes' 2017 lecture on fine tuning, sponsored by the Rutgers Center for the Philosophy of Religion. Published online.

Newton's Principia

75 hours; 2015; credited as editor: audio and video recording of a two-semester course on the science and philosophy of Newton's *Principia*.

American Diner

105 minutes; 2013; credited as director, DP, editor: a documentary about three small-town diners. Screenings: Kartemquin, Chicago; Doc Films, Chicago.

The Point

15 minutes; 2011; credited as director, sound producer, DP, editor: a documentary about Promontory Point. Screenings: Film Studies Center, University of Chicago.