

Benjamin H. Feintzeig

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Curriculum Vitae

📄 <https://phil.washington.edu/people/benjamin-h-feintzeig>

Areas of Specialization

Philosophy of Physics, Philosophy of Science, Philosophy of Probability

Areas of Competence

History of Science, Metaphysics & Epistemology, Logic & Philosophy of Mathematics

Employment

2016-present **Assistant Professor**, *University of Washington*, Seattle, WA.

Education

- 2016 **Ph.D. in Philosophy (LPS)**, *University of California, Irvine*, Philosophy of physics emphasis, Dissertation: "On Algebraic Methods in Quantum Theories".
Committee: James Weatherall (chair), Jeffrey Barrett, John Manchak, Kyle Stanford
- 2014 **M.A. in Philosophy (LPS)**, *University of California, Irvine*.
- 2011 **B.A. in Physics & Philosophy**, *Dartmouth College*, summa cum laude, Honors Thesis: "Understanding Through Causation: A Four-Factor Approach to Scientific Explanation".
Advisor: Adina Roskies, Second Reader: John Kulvicki

Publications

- 2019 "Why be Regular?, part I," forthcoming in *Studies in the History and Philosophy of Modern Physics*, <https://doi.org/10.1016/j.shpsb.2018.10.007>
- 2019 "Why be Regular?, part II," forthcoming in *Studies in the History and Philosophy of Modern Physics*, <https://doi.org/10.1016/j.shpsb.2018.10.008>
- 2019 "Deduction and Definability in Infinite Statistical Systems," forthcoming in *Synthese*, Special Issue: Infinite Idealizations in Science. <https://doi.org/10.1007/s11229-017-1497-6>.
- 2018 "The classical limit of a state on the Weyl algebra," *Journal of Mathematical Physics*. 59: 112102
- 2018 "Toward an Understanding of Parochial Observables," *The British Journal for the Philosophy of Science*. 69.1: 161-191

- 2018 "On the Choice of Algebra for Quantization," *Philosophy of Science*. 85.1: 102-125
- 2017 "On Theory Construction in Physics: Continuity from Classical to Quantum," *Erkenntnis*. 82.6: 1195-1210.
- 2017 "On Noncontextual, Non-Kolmogorovian Hidden Variable Theories," (with Samuel C. Fletcher) *Foundations of Physics*. 47.2: 294-315.
- 2016 "Unitary Inequivalence in Classical Systems," *Synthese*. 193.9: 2685-2705.
- 2015 "On broken symmetries and classical systems," *Studies in the History and Philosophy of Modern Physics*. 52: 267-273.
- 2015 "Hidden Variables and Incompatible Observables in Quantum Mechanics," *The British Journal for the Philosophy of Science*. 66.4: 905-927.
- 2014 "Can the ontological models framework accommodate Bohmian mechanics?," *Studies in the History and Philosophy of Modern Physics*. 48A: 59-67.

Selected Working Papers

- "The classical limit as an approximation." (in submission)
- "The Geometry of the 'Gauge Argument'," with James Weatherall.
- "The classical limit of a symmetry-invariant state," with Thomas Browning.
- "Classical limits of unbounded observables"
- "How much old physics must new theories explain?"

Honors & Awards

- 2018 Royalty Research Fund Award & RRF Scholar, University of Washington
- 2016 Order of Merit Award for Outstanding Scholarship, University of California, Irvine
- 2014 Hanneke Janssen Memorial Prize for Master's work in History and Foundations of Physics, University of Nijmegen
- 2013-2016 National Science Foundation Graduate Research Fellowship
- 2013 Justine Lambert Graduate Prize in the Foundations of Science for "Hidden Variables and Incompatible Observables in Quantum Mechanics", University of California, Irvine
- 2013 A. Kimball Romney Prize for "Hidden Variables and Incompatible Observables in Quantum Mechanics", University of California, Irvine
- 2011-2016 Social Science Merit Fellowship, School of Social Sciences, University of California, Irvine
- 2011 Phi Beta Kappa Honor Society
- 2011 Story Prize for honors thesis in Philosophy, Dartmouth College
- 2010 Rufus Choate Scholar, Dartmouth College
- 2008 Waterhouse Research Award, Dartmouth College

Presentations

Invited Presentations

- 12/2017 “Quantization, Approximation, and Interpretation”, Foundations of Quantum Theory Book Workshop, London School of Economics
- 11/2017 “Deduction and Definability in Infinite Statistical Systems”, Workshop on Category Theory in Physics, Mathematics, and Philosophy, International Center for Formal Ontology, Warsaw.
- 4/2017 Comments on “What Do Symmetries Tell Us About Structure?” by Thomas Barrett, Pacific Division of the American Philosophical Association, Seattle.
- 1/2017 “On Noncontextual, Non-Kolmogorovian Hidden Variable Theories,” Department of Mathematics Probability Seminar, University of Washington.
- 4/2016 “On Noncontextual, Non-Kolmogorovian Hidden Variable Theories,” Institute for Quantum Studies, Chapman University.
- 2/2016 “Toward an Understanding of Parochial Observables,” Department of Philosophy, University of Washington.
- 1/2016 “Toward an Understanding of Parochial Observables,” Department of History and Philosophy of Science, University of Pittsburgh.
- 1/2016 “On Noncontextual, Non-Kolmogorovian Hidden Variable Theories,” Quantum Foundations, Perimeter Institute for Theoretical Physics.
- 1/2016 “Toward an Understanding of Parochial Observables,” Division of the Humanities and Social Sciences, California Institute of Technology.
- 12/2014 “Unitary Inequivalence in Classical Systems,” Irvine-Munich Workshop on the Foundations of Classical and Quantum Field Theories, Munich Center for Mathematical Philosophy.

Contributed Presentations

- 7/2018 “How much old physics must new theories explain?”, Workshop on Theory Construction, Montreal.
- 7/2018 “Quantization, Approximation, and Interpretation”, Foundations of Physics, Utrecht.
- 7/2018 “Quantization, Approximation, and Interpretation”, British Society for Philosophy of Science, Oxford.
- 9/2017 “Quantization, Approximation, and Interpretation”, European Philosophy of Science Association, Exeter.
- 11/2016 “On Theory Construction in Physics: Continuity from Classical to Quantum,” Philosophy of Science Association, Atlanta.
- 3/2016 “On Theory Construction in Physics: Continuity from Classical to Quantum,” Irvine-Princeton-Pittsburgh Conference on the Mathematical and Conceptual Foundations of Physics, University of Pittsburgh.
- 2/2016 “Topological Considerations in the Construction of Quantum Theories,” Topological Philosophy Workshop, International Center for Formal Ontology, Warsaw.
- 9/2015 “Unitary Inequivalence in Classical Systems,” European Philosophy of Science Association, Dusseldorf.

- 4/2015 "Toward an Understanding of Parochial Observables," Graduate Workshop in Mathematical Philosophy, Munich Center for Mathematical Philosophy.
- 3/2015 "Symmetry Breaking in Classical Systems," Irvine-Princeton-Pittsburgh Conference on the Mathematical and Conceptual Foundations of Physics, Princeton.
- 3/2014 "The Geometry of the Gauge Argument," Irvine-Princeton-Pittsburgh Conference on the Mathematical and Conceptual Foundations of Physics, University of California, Irvine.
- 7/2013 "Hidden Variables and Commutativity in Quantum Mechanics," Foundations of Physics, Munich Center for Mathematical Philosophy.
- 5/2013 "Hidden Variables and Commutativity in Quantum Mechanics," Philosophy of Logic, Math, and Physics Graduate Conference, University of Western Ontario.
- 4/2013 "Hidden Variables and Commutativity in Quantum Mechanics," Irvine-Princeton-Pittsburgh Conference on the Mathematical and Conceptual Foundations of Physics, University of Pittsburgh.
- 10/2012 "Hidden Variables and Commutativity in Quantum Mechanics," Southern California Philosophy of Physics Reading Group.
- 10/2010 "Disjunctive Definitions and the Reduction of Mendelian Genetics," N.N.E. Philosophical Association.

Teaching Experience

University of Washington

- Phil 160, Perspectives on Science, Reason, and Reality (Winter 2017, Fall 2017, Fall 2018)
- Phil 460, Introduction to Philosophy of Science (Fall 2016, Fall 2018)
- Phil 470, Intermediate Logic (Winter 2018)
- Phil 482, Philosophy of Physics (Spring 2017, Fall 2017)
- Phil 560, Seminar: Philosophy of Probability (Spring 2018)

University of California, Irvine

- **Instructor**
 - LPS 60, Making Modern Science (Summer 2014)
- **Teaching Assistant**
 - LPS 30, Intro to Symbolic Logic (Winter 2012, Spring 2012)
 - LPS 60, Making Modern Science (Summer 2012)
 - Soc Sci H1G, Honors: Naturalized Epistemology (Fall 2012)
 - Phil 4, Intro to Ethics (Winter 2013)

Professional and Academic Service

- 2018 **Organizer**, *Philosophy of Probability Workshop*, University of Washington.

- 2017 **Organizing Committee**, *Epistemology in the Real World Workshop*, University of Washington.
- 2017-present **Co-organizer (with Andrea Woody)**, *O'Hara Lecture Series in Philosophy of Physics*, University of Washington.
- 2013-2014 **Recruitment & Outreach Coordinator**, *Department of Logic and Philosophy of Science*, University of California, Irvine.
- Referee**, *Philosophy of Science*, *British Journal for the Philosophy of Science*, *European Journal for the Philosophy of Science*, *Studies in the History and Philosophy of Modern Physics*, *Logique et Analyse*, *Review of Symbolic Logic*, *Journal of Mathematical Physics*, *Physics Letters A*, *Erkenntnis*, *Foundations of Physics*.

Affiliations

American Philosophical Association, European Philosophy of Science Association, Philosophy of Science Association