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Acknowledgements from PSA Executive Director

Welcome to Atlanta and the Twenty-Fifth Biennial Meeting of the Philosophy of Science Association. Planning a PSA meeting is an enormous endeavor, requiring the dedication, knowledge, and resourcefulness of a large number of people. I am proud to have played a role in planning PSA2016, and I am deeply indebted to all those who have helped to make this meeting a success.

First and foremost, I would like to thank the PSA2016 Program Committee, and especially its chair, Wendy Parker. This year’s program is the largest ever, and Wendy, and the excellent Program Committee she assembled, worked tirelessly to wade through all of the submissions in an efficient manner to come up with an exceptional program. I owe enormous gratitude to Wendy. In addition to the normal, arduous task of being a program chair, she also helped me set up a new submission system. Long before the first paper was submitted, she (sometimes with baby in arms) and I spent hours on skype setting up our new system. Her patience, technical acuity, wisdom, and good humor made the job not only bearable, but oftentimes enjoyable. It has been a pleasure to work with her over the last two years.

I would also like to thank our first Poster Forum Chair, Alan Love, as well as the entire Poster Forum Committee, and Justin Kuster. Their hard work resulted in a phenomenal poster forum. Alan Love and Ken Waters had a vision of what a philosophy of science poster forum should be, and Alan, along with his committee and with Justin's proficient help, realized that vision beyond (at least my) wildest imagination.

I also owe thanks to various people who have been helping to run the PSA behind the scenes: to Alec Julien for helping to design everything associated with the PSA over the past three and a half years, including everything at this meeting, and for doing so with enormous patience with my lack of artistic vision; to our two Associate Directors, Thor Harris and Andy Bridges, for helping in countless ways and with great skill, insight, creativity, and alacrity; and to the very sharp and reliable UMBC students, DeeAnn Spicer, Khaled Elgendy, and especially Sarah Lipman. This meeting would not have been possible without Sarah’s, Thor’s, Andy’s, and Alec’s help.

Others have helped in specific ways with various aspects of the program. Thanks are owed to: Sandy Mitchell, Quayshawn Spencer, and Michael Weisberg for helping to organize our first public forum; Justin Biddle, our local arrangements coordinator, for helping in numerous ways; Dan Weiskopf for finding student volunteers to work registration; Rachel Ankeny for looking carefully through the PSA, HSS, and SLSA programs to identify sessions of mutual interest; Gary Hardcastle for helping Thor navigate the NSF grant procedures; Fred Kronz and Wenda Bauchspies for holding NSF Speed Dating sessions; Jeff Barrett, Andrea Woody, and Sarita Rosenstock for holding a Meet the Editors of Philosophy of Science session; to the participants of the Editors Panel, Jeff Barrett, Anjan Chakravartty, Roberta Millstein, Lydia Patton, and especially Wayne Myrvold for suggesting it in the first place; the numerous cognate societies for helping to enhance the meeting with the additional sessions on Thursday morning; Laura Ruetsche and the other members of the PSA Lecture and Awards Committee, Anjan Chakravartty, Peter
Godfrey-Smith, Elaine Landry, and Alison Wylie, for reading many, many, many excellent papers to decide on the PSA Early Career Essay Prizes; the hosts of the Interest Group Lunches for helping to make the PSA meetings more welcoming and for providing a space outside of the sessions for continued intellectual discussion of topics of interest; and the co-chairs of the Women's Caucus and JCSEPHS, Roberta Millstein, Julia Bursten, Rachel Ankeny, and Janet Stemwedel.

I would also like to thank the Executive Directors of SLSA and HSS, Carol Colatrella and especially Jay Malone. I, and the PSA, owe an enormous debt of gratitude to Jay Malone for the many years he, and the rest of the HSS office, have been involved in helping to run our conferences. While the administrative relationship between the PSA and HSS has changed, the bonds between our two societies are deep. I am especially appreciative of Jay’s generosity and wisdom over the last couple of years as we’ve been setting up our own central office. I am also grateful to Greg Macklem, the Society Coordinator for HSS. In addition to his hard work, prompt responses to questions, and sage advice, the humor he provided at all hours of the night over the past couple of months has helped me maintain my sanity.

I am also very thankful to the PSA Governing Board for its help in innumerable ways, and I am particularly grateful to Ken Waters for his hard work, his patience, his kindness, and his thoughtful guidance over the past two years. The presidency of the PSA is a working position, and our almost weekly skype meetings over the past two years have been among the most rewarding aspects of my job.

Given rising conference expenses (e.g. coffee at $9.33/cup and AV bids at over $60,000), support from our sponsors is crucial to keeping the meeting affordable. I would like to thank the following for their sponsorship of the meeting: National Science Foundation; UC Irvine Department of Logic and Philosophy of Science; Patrick Suppes Center for History & Philosophy of Science at Stanford University; Center for Philosophy of Science at the University of Pittsburgh; Minnesota Center for Philosophy of Science; University of Calgary Department of Philosophy; University of Chicago Press Journals; Springer; Carnegie Mellon University Department of Philosophy; Egenis, the Centre for the Study of Life Sciences at the University of Exeter; Rotman Institute of Philosophy; UC Davis Philosophy Department; University of Pittsburgh Department of History and Philosophy of Science; University of Waterloo Department of Philosophy; and especially UMBC for providing generous institutional support that has allowed me to do what I can to help fulfill the goals and mission of the PSA.

Most significantly, it is you, the participants, who make this meeting a success. It is your research, insights, and discussions that constitute the meeting. My heartfelt thanks go especially to you, the members of the PSA.

Jessica Pfeifer
PSA Executive Director
Acknowledgements from PSA2016 Program Chair

I would like to express my sincere thanks to a number of people. The PSA2016 Program Committee did an exemplary job, reading and evaluating a very large number of submissions in a thoughtful and prompt manner; I cannot thank them enough for all of their hard work. Chris Smeenk, the Program Chair for PSA2014, kindly shared his experience and wisdom at various stages, making my job much easier. Thanks also to PSA President Ken Waters, both for giving me the opportunity to serve as Program Chair and for providing exactly the input I needed at several challenging decision points. Finally, a huge thanks is owed to PSA Executive Director Jessica Pfeifer, who helped to keep everything on track from start to finish and who provided invaluable assistance and guidance at myriad points along the way.

Wendy Parker
PSA2016 Program Chair

Acknowledgements from PSA2016 Poster Forum Chair

I would like to thank all the members of the PSA Poster Forum committee for their diligence and timeliness during the reviewing process, as well as their input on a number of other details along the way. I am grateful to Justin Kuster for technical administration and correspondence assistance from beginning to end; this made using OpenConf easy and effective. Wendy Parker was generous and prompt in answering questions and offering help from the perspective of the PSA program committee. I also would like to thank Ken Waters for productive discussions during various stages of the planning for the inaugural Poster Forum and Jessica Pfeifer for website assistance, preparations related to physical space and poster mounting at the hotel, and coordinating the activities of the PSA Poster Forum committee with a myriad of other details for PSA 2016.

Alan C. Love
PSA2016 Poster Forum Chair
PSA Officers

President
C. Kenneth Waters, University of Calgary

President Elect
Sandra Mitchell, University of Pittsburgh

Past President
Helen Longino, Stanford University

PSA Governing Board
Rachel Ankeny, University of Adelaide
Anjan Chakravartty, University of Notre Dame
Peter Godfrey-Smith, CUNY Graduate Center & University of Sydney
Wendy S. Parker, Durham University
Alan Richardson, University of British Columbia
Laura Ruetsche, University of Michigan
Janet D. Stemwedel, San José State University
Michael Weisberg, University of Pennsylvania

PSA Executive Director
Jessica Pfeifer, University of Maryland, Baltimore County

PSA Associate Directors
Thorian Harris, University of Maryland, Baltimore County
Andrew Bridges, University of Maryland, Baltimore County

PSA2016 Program Committee
Wendy Parker, Durham University (Chair)
Marshall Abrams, University of Alabama, Birmingham
Evelyn Brister, Rochester Institute of Technology
Hasok Chang, Cambridge University
Mazviita Chirimuuta, University of Pittsburgh
Carol Cleland, University of Colorado, Boulder
Heather Douglas, University of Waterloo
Kenny Easwaran, Texas A&M University
Bas van Fraassen, San Francisco State University/Princeton University
Greg Frost-Arnold, Hobart and William Smith Colleges
Paul Griffiths, University of Sydney
Till Grüne-Yanoff, Royal Institute of Technology (KTH)
Valerie Hardcastle, University of Cincinnati
Joel Katzav, Eindhoven University of Technology
Eleanor Knox, King’s College London
Tarja Knuttila, University of South Carolina
Marc Lange, University of North Carolina, Chapel Hill
Sabina Leonelli, University of Exeter
Peter Lewis, University of Miami
Juha Saatsi, University of Leeds
Jan Sprenger, Tilburg University
Katie Steele, Australian National University
James Tabery, University of Utah
Marcel Weber, University of Geneva

PSA2016 Poster Forum Committee
Alan Love, University of Minnesota (Chair)
Kevin Elliott, Michigan State University
Doreen Fraser, University of Waterloo
Chris Haufe, Case Western Reserve
Kerry McKenzie, UCSD
Lydia Patton, Virginia Tech
Jutta Schickore, Indiana University – Bloomington
Rory Smead, Northeastern University
Janet Stemwedel, San Jose State University
PSA2016 Program

November 3 – 5, 2016
Atlanta, Georgia

Please be sure to read the printed errata for any updates to this program. Further updates and information during the meeting will be announced on the PSA Twitter feed (@phils-ciassoc), using hashtag #psa16.

Services

Onsite Childcare Services
Kids Camp, offered by Accent on Children’s Arrangements, will be in Chastain 1 (6th Floor).

<table>
<thead>
<tr>
<th>Kids Camp Hours</th>
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<tbody>
<tr>
<td>Thursday, November 3, 2016:</td>
<td>8:30am – 7:30pm</td>
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<tr>
<td>Friday, November 4, 2016:</td>
<td>7:15am – 8:45pm</td>
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<tr>
<td>Saturday, November 5, 2016:</td>
<td>7:00am – 7:30pm</td>
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**Hourly Rates (4 Consecutive Hours Minimum)**

| Children ages 6 months – 36 months: | $13 per hour |
| Children ages 3 years – 12 years:   | $11 per hour |

**Full Day Rates**

| Children ages 6 months – 36 months: | $125 |
| Children ages 3 years – 12 years:   | $100 |

Family/Nursing Mothers Room
Savannah D (9th Floor) has been designated as a childcare/nursing mothers room for the duration of the meeting. There will be a section of the room screened off for more privacy.

Quiet Room
Savannah E (9th Floor) has been designated a quiet room for the duration of the meeting.

Hospitality Room
On Friday and Saturday from 8:00am – 6:00pm Chastain 2 (6th Floor) will be open as a hospitality room for all PSA and HSS registrants.
Registration

How to Register

If you have already registered, come to the registration desk to pick up your materials.

If you have not yet registered, you can register on your own computer or mobile device by going to philsci.org, or there are computers at the registration area you can use. Then come to the registration desk to finalize your registration and pick up your materials.

Registration Hours

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Wednesday, Nov 2</td>
<td>4:00pm – 8:00pm</td>
<td>The Overlook – 6th Floor</td>
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<tr>
<td>Thursday, Nov 3</td>
<td>8:00am – 5:00pm</td>
<td>The Overlook – 6th Floor</td>
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<td>Friday, Nov 4</td>
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<tr>
<td>Saturday, Nov 5</td>
<td>8:30am – 5:00pm</td>
<td>Chastain Foyer – 6th Floor</td>
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Book Exhibit

Augusta Foyer & Augusta A & H (7th Floor)

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<th>Day</th>
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<tr>
<td>Thursday, Nov 3</td>
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<tr>
<td>Friday, Nov 4</td>
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<tr>
<td>Saturday, Nov 5</td>
<td>8:00am – 5:00pm</td>
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<tr>
<td>Sunday, Nov 6</td>
<td>8:00am – 10:30am</td>
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Hotel Floor Plans

SIXTH FLOOR

SEVENTH FLOOR

EIGHTH FLOOR
Map of Book Exhibit
### List of Exhibitors

#### Exhibitor Listing by Table Number

<table>
<thead>
<tr>
<th>Table Number</th>
<th>Exhibitor Name</th>
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<tbody>
<tr>
<td>1</td>
<td>Routledge</td>
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<td>2</td>
<td>University of Minnesota Press</td>
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<td>3</td>
<td>Scholar’s Choice</td>
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<td>4</td>
<td>Royal Society Publishing</td>
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<td>5</td>
<td>Collective Book Exhibit</td>
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<td>6</td>
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<td>Penn State University Press</td>
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<td>Johns Hopkins University Press</td>
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<td>MIT Press</td>
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<td>Green Lion Press</td>
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<td>17</td>
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<td>Brill</td>
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<tr>
<td>Yale University Press</td>
<td>6</td>
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</table>
Wednesday November 2, 2016

4:00PM – 8:00PM       PSA Governing Board Meeting (Chastain A (6th Floor))

4:00PM – 8:00PM       PSA2016 Registration Opens (The Overlook (6th Floor))

How to Register

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If you have not yet registered, you can register on your own computer or mobile device, or there are computers at the registration area you can use. Then come to the registration desk to finalize your registration and pick up your materials.
Thursday November 3, 2016

8:00AM – 7:00PM  Family Room and Nursing Room (Savannah D (9th Floor))

8:00AM – 5:00PM  PSA2016 Registration (The Overlook (6th Floor))

8:30AM – 7:30PM  Childcare Services: Kids Camp, offered by Accent on Children’s Arrangements (Chastain 1 (6th Floor))

9:00AM – 10:30AM  SESSION 1

**Conceptions of Geometry from Klein through Hilbert to Weyl** (Piedmont 1 (12th Floor))
Sponsored by the International Philosophy of Mathematics Association
Session Chair: Colin McLarty

*Weyl, Identity, Indiscernibility*
Otavio Bueno, University of Miami

*Hilbert’s Geometry and Mathematical Truth*
Eileen Nutting, University of Kansas

*Klein’s Erlangen Program and Physical Geometry in the Early Twentieth Century*
Sahotra Sarkar, University of Texas at Austin

**ISH Goes Extinct at the PSA** (Piedmont 2 (12th Floor))
Sponsored by the International Society for the History, Philosophy, and Social Studies of Biology
Session Chair: Adrian Currie

*Ambiguities in Paleontological Metaphysics*
Leonard Finkelman, Linfield College

*Increasing Complexity in Explanations of Macroevolutionary Stasis*
Derek Turner, Connecticut College

*Paleontological Science and Values*
Joyce C Havstad, Oakland University

**Learning about Unobservable Entities** (Piedmont 3 (12th Floor))
Sponsored by the Committee for Integrated History and Philosophy of Science
Session Chair: Hasok Chang

*Inaccessibility and the Growth of Knowledge About the Earth’s Deep Interior*
Teru Miyake

*Seeing Is Believing: A Historical Perspective on the Ontological Status of UFOs*
Kate Dorsch, University of Pennsylvania

*Perspectival Realism About What? Tracking the Electron Across Shifting Theoretical Perspectives*
Theodore Arabatzis, National and Kapodistrian University of Athens

*Comments:* Jutta Schickore, Indiana University

**Local Knowledge: Expertise, Method, and Value** (Piedmont 4 (12th Floor))
Sponsored by the Philosophy of Social Science Roundtable
Session Chair: Alison Wylie
The Dam Project: Who Are The Experts?
Eleonora Montuschi, University of Venice Ca’ Foscari; Pierluigi Barrotta, University of Pisa

Prospects for a Theory of Evidence for Non-quantitative Methods
Jaakko Kuorikoski, University of Helsinki

Values in Qualitative Data Collection
Julie Zahle, University of Copenhagen

Measurement and Causality in Medical Science (Piedmont 5 (12th Floor))
Sponsored by the International Philosophy of Medicine Roundtable
Session Chair: Leah McClimans

How Much Mortality Does Obesity Cause? Measuring Causality in Populations
Alex Broadbent, University of Johannesburg; Olaf Dammann, Tufts University School of Medicine

Heritability
Zinhle Mncube, University of Johannesburg

How Evidence-Based Medicine Brings the Connection Between Evidence and Measurement Into Focus
Benjamin Smart, University of Johannesburg

Clinical Outcome Assessments and Epistemic Risk
Leah McClimans, University of South Carolina

Taking the History and Philosophy of Science to School (Piedmont 6 (12th Floor))
Sponsored by the International History, Philosophy and Science Teaching Group
Session Chair: Harvey Siegel

History and Philosophy of Science and Science Education: A Symbiotic Relationship
Zoubeida R. Dagher, University of Delaware

The Value of History and Philosophy of Science for Science Teacher Education
Michael Clough, Iowa State University

Newton, Diagrammatic Reasoning, and Inquiry
Pierre Boulos, University of Windsor

Technology, Bias, and Scientific Knowledge (Piedmont 7 (12th Floor))
Sponsored by the Society for Philosophy and Technology
Session Chair: Ashley Shew

PTSD, Imaging, and Phenomenology
MaryCatherine McDonald, Old Dominion University

The Construction of Cleanliness
George Michael Glawson, University of South Carolina

A Feminist Standpoint Critique of Anti-Homeless Design
Robert Rosenberger, Georgia Tech

The New Quantification of Normals
Ashley Shew, Virginia Tech

Topics in Philosophy of Economics (Piedmont 8 (12th Floor))
Sponsored by the International Network for Economic Method
Session Chair: Caterina Marchionni

Economic Models and the Nature of Institutions
Brian Epstein, Tufts University
Reactivity: What Kind of Confound?
Maria Jimenez-Buedo, UNED

The Nature of Preferences
Erik Angner, Stockholm University

10:30AM – 10:45PM Coffee Break (12th Floor)

10:45AM – 12:15PM SESSION 2

Causal Judgment (Piedmont 1 (12th Floor))
Sponsored by the Society for Philosophy and Psychology
Session Chair: Christopher Hitchcock

The Selection of Path-Specific Effects
Christopher Hitchcock, California Institute of Technology

Explaining The Impact of Normality on Causal Intuitions: The Role of Sampling Propensities
Thomas Icard, Stanford University; Jonathan Kominsky, Yale University; Joshua Knobe, Yale University

The Moral Dimension of Implicit Verb Causality
Laura Niemi, Harvard University; Joshua Hartshorne, Boston University; Tobias Gerstenberg, MIT; Liane Young, Boston University

What Causal Illusions Might Tell Us About the Perception of Causation
Phillip Wolff, Emory University; Robert Thorstad

Chemistry as a Source of New Perspectives for the Philosophy of Science (Piedmont 2 (12th Floor))
Sponsored by the International Society for the Philosophy of Chemistry
Session Chairs: Eric Scerri / Olimpia Lombardi

A Tale of Seven Scientists and a New Philosophy of Science
Eric Scerri, UCLA

Diagnostics and the ’Deconstruction’ of Models
Grant Fisher, Korea Advanced Institute of Science and Technology

Lessons From the Baconian Sciences: The Case of Preparative Chemistry
William Goodwin, University of South Florida

What Does Quantum Chemistry Tell Us About the Relationship Between Theories and Models?
Juan Camilo Martínez, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET); Hernán Accorinti, Universidad de Buenos Aires

From Quantum Physics to Quantum Chemistry: Study Of a Transformation and Its Consequences Against Intertheoretic Reduction
Jean-Pierre Llored, Laboratory SPHERE, University Paris 7, France / Linacre College, Oxford, UK
Ground and Other Dependencies: On the Nature and Role of Verticality in Science
(Piedmont 3 (12th Floor))
Sponsored by the Society for the Metaphysics of Science
Session Chair: Lorenzo Casini

Humean Laws, Grounding and Scientific Explanation: The Disambiguation Strategy
Pablo Carnino, University of Geneva (Visiting at Princeton University at the time of the event)

Non-Causal Determination in Science: Compositional Realization or Ground?
Kenneth Aizawa, Rutgers University, Newark

Why Grounding Does Not Back Scientific Explanation
Carl Gillett, Northern Illinois University

Still No Work for a Theory of Grounding
Stuart Glennan, Butler University

New Directions in Philosophy of Biology (Piedmont 4 (12th Floor))
Sponsored by Minorities and Philosophy
Session Chair: M.A. Hunter

Feminist Values in Service of the Holobiont
Tamar Schneider Zipory, The University of California, Davis.

Biological Individuals, Communities, and Populations: How the Concept of Persons and Personhood Can Inform the Discourse
Denise Hossom, University of California, Davis

Germ-Line or Somatic Mutations? The Pitfalls and Concerns for Deleting and Replacing the Concept of “Race” in Human Genetics.
M.A. Hunter, The University of California, Davis/The London School of Economics and Political Science

Philosophy of Science and the Context of Science Pedagogy: Historical and Systematic Lessons from the USA in the Past Hundred Years (Piedmont 5 (12th Floor))
Sponsored by the International Society for the History of Philosophy of Science
Session Chair: Alan Richardson

Theorizing Science and Pedagogy in the Pre-Professional Era
Andrew Jewett, Harvard University

Connecting Inquiry and Values in Science Education: An Approach Based on John Dewey’s Perspective
Eun Ah Lee, The University of Texas at Dallas; Matthew J. Brown, The University of Texas at Dallas

Demarcation, Law, and the Schools: The Science/Non-Science Boundary Since the Dover Trial
Adam Shapiro, Independent Scholar

Socially Relevant Philosophy of Science on Three Kinds of Autonomy: Disciplinary, Bodily, and Community (Piedmont 6 (12th Floor))
Sponsored by the Consortium for Socially Relevant Philosophy of/in Science and Engineering
Session Chair: Sean Valles

Micro-Integration as a Form of Engaged Philosophy Work
Stephen Crowley, Boise State University; Chad Gonnerman, University of Southern Indiana; Michael O’Rourke, Michigan State University; Brian Robinson, Texas A&M University – Kingsville

Rethinking Public Health Ethics Ecologically
Jonathan Beever, The University of Central Florida; Nicolae Morar, The University of Oregon

Sean Valles, Michigan State University
Values, Risk, and Scientific Practice (Piedmont 7 (12th Floor))
Sponsored by the Society of Philosophy of Science in Practice
Session Chair: Rachel Ankeny

Measuring Inequality: The Role of Values and Inductive Risk
Robin Andreasen, University of Delaware; Heather Doty, University of Delaware

Inductive Risk and the Role of Values in Clinical Trials
Robyn Bluhm, Michigan State University

The Geography of Epistemic Risk
Justin Biddle, Georgia Institute of Technology; Rebecca Kukla, Georgetown University

11:45AM – 1:15PM  Creating Pathology (Ansley 1 (14th floor))

The session is part of the Society for Literature, Science, and the Arts Program.
Session Chair: Rebekah Pulsifer

Creating Schizophrenia: On the Looping Effects of Human Kinds
Andrew Gaedtke, University of Illinois at Urbana-Champaign

Pathologizing the Average
Rebekah Pulsifer, University of Illinois at Urbana-Champaign

Creatively Destructive: Autism, Neuroscience, and the Plasticity of Narrative
Ajitpaul Mangat, University at Buffalo

12:15PM – 1:30PM  Lunch Break

1:30PM – 3:30PM  SESSION 3

Scientific Creativity 2 (Ansley 8 (14th floor))
This session is part of the Society for Literature, Science, and the Arts Program
Session Chair: Kathleen Morrison

Foucauldian Biology: Thinking Across Disciplines
Kathleen Morrison, San Francisco State University

Creativity and Humanity: Jacob Bronowski, Philip Morrison and the Two Cultures
Brian McAllister, Albany State University

From Poetry to Responsibility: The Literary Technology of Scientific Philosophy in Rudolf Carnap and Hans Reichenbach
Alan Richardson, University of British Columbia

Methods of Malfuntion: Rethinking Glitch as “Research-Creation” Practice
Kyle Bohunicky, University of Florida
Contributed Papers: Causality and Causal Inference (Augusta F (7th Floor))
Session Chair: Hugh Desmond

Patterns, Information, and Causation
Holly Andersen, Simon Fraser University

Probabilistic Actual Causation
Luke Fenton-Glynn, University College London

A Bayesian Theory of Constitution
Michael Baumgartner, University of Geneva; Lorenzo Casini, University of Geneva

A Deliberative Account of Causation
Alison Fernandes, University of Pittsburgh

Contributed Papers: Learning from Experiment (Augusta G (7th Floor))
Session Chair: Sarah Wieten

Does Replication Help With Experimental Biases in Clinical Trials?
David Teira, UNED; Jesús Zamora Bonilla, UNED

Three Arguments for Absolute Outcome Measures
Jacob Stegenga, University of Victoria; Jan Sprenger, Tilburg University

Trade-Offs Between Epistemic and Moral Values in Evidence-Based Policy
Donal Khosrowi, Durham University

Contributed Papers: General Philosophy of Science (Chastain C (6th Floor))
Session Chair: Beckett Sterner

Problems and Questions in Scientific Practice
Steve Elliott, Arizona State University

A Pursuitworthiness Account of Analogies in Science
Rune Nyrup, Durham University

The Method of Historical Case Studies: A Phylogenetic Approach
Samuel Schindler, Aarhus University; Raphael Scholl, University of Cambridge

How the Diachronic Theoretical Virtues Make an Epistemic Difference
Michael Keas, The College at Southwestern

Contributed Papers: Genetics (Chastain D (6th Floor))
Session Chair: Derek Skillings

Dissolving the Missing Heritability Problem
Pierrick Bourrat, The University of Sydney; Qiaoying Lu, Sun Yat-sen University

On Mechanistic Reasoning in Unexpected Places: The Case of Population Genetics
Lucas Matthews, University of Virginia

The Imitation Game: What Does “Recognition” in Mechanisms of Molecular Recognition Mean?
Ann-Sophie Barwich, Columbia University

Causal Specificity
Gry Oftedal, University of Oslo

Contributed Papers: Scientific Modeling (Chastain E (6th Floor))
Session Chair: Ashley Kennedy

A Distorted Reality: Models as Holistic Distortions
Collin Rice, Bryn Mawr College

Concrete Models and Holistic Modeling
Wei Fang, University of Sydney
On 'Models Of' and 'Models For' in Molecular Biology
Emanuele Ratti, University of Notre Dame

How to Stop Worrying About Model Microfoundationality: Lessons from Multiscale Cancer Modeling
Jacob P. Neal, University of Pittsburgh

Contributed Papers: Understanding Physical Theory (Chastain J (6th Floor))
Session Chair: Benjamin Jantzen

Kinematics, Dynamics, and the Structure of Physical Theory
Erik Curiel, Munich Center for Mathematical Philosophy (LMU Munich)

Invariance, Interpretation, and Motivation
Thomas Møller-Nielsen, University of Oxford

What Are Observables in Hamiltonian Theories? Testing Definitions With Empirical Equivalence
J. Brian Pitts, University of Cambridge

Equality and Separability in Gauge Theories
John Dougherty, University of California, San Diego

Contributed Papers: Ecology and Environment (Piedmont 1 (12th Floor))
Session Chair: Soazig Le Bihan

Are We to Blame? An Epistemic Assessment of Extreme Weather Event Attribution
Greg Lusk, University of Chicago

Modeling: Neutral, Null, and Baseline
William Bausman, University of Minnesota, Twin Cities

(Un)testability, Scientific Baselines, and Entrenched Theories
Michael Goldsby, Washington State University

Bottled Understanding: The Role of Lab-Work in Ecology
Adrian Currie, University of Cambridge

Contributed Papers: Formal Epistemology (Piedmont 2 (12th Floor))
Session Chair: Brad Armendt

A Popperian Doctrine on Probability Revisited
Bengt Autzen, University of Bristol

Accuracy, Conditionalization, and Probabilism
Peter Lewis, University of Miami; Don Fallis, University of Arizona

Inaccuracy and the Objection from Verisimilitude
Foad Dizadji-Bahmani, California State University Los Angeles

A Topological Explication of Empirical Simplicity
Kevin Kelly, Carnegie Mellon; Konstantin Genin, Carnegie Mellon

Contributed Papers: History of Philosophy of Science (Piedmont 3 (12th Floor))
Session Chair: Craig Fox

Responding to Ptolemy Versus Copernicus: Equivalence and Inequivalence in the Development of Scientific Methodology
Katherine Brading

Newton: From Certainty to Probability?
Kirsten Walsh, University of Calgary

Of Ballungen and Anarchism: The Influence of Otto Neurath on Paul Feyerabend
William Wilson, Virginia Tech

Duhemian Good Sense and Agent Reliabilism
Sindhuja Bhakthavatsalam, California State University, Northridge
**Contributed Papers: Psychology** (Piedmont 4 (12th Floor))
Session Chair: Jonathan Tsou

*The Puzzle of Skilled Behavior*
Carolyn Dicey Jennings, University of California, Merced

*What Basic Emotions Really Are: Encapsulated or Integrated*
Isaac Wiegman, Texas State University

*The Possibility of Unfelt Pains*
Justin Sytsma, Victoria University of Wellington; Kevin Reuter

*Anthropomorphism as Cognitive Bias*
Mike Dacey, Washington University in St. Louis

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**NSF Speed Dating: Science, Technology and Society PLUS**

**Cultivating Cultures for Ethical STEM** (The Overlook (6th Floor))

Two NSF Program Officers, Fred Kronz and Wenda Bauchspies from SBE/SES, will be at HSS/PSA/SLSA to meet with potential PIs in 15 minutes increments. The goal is to provide potential PIs the chance to pitch their research idea, to ask informational questions and to receive feedback on their projects for either the Science, Technology, and Society Program or Cultivating Cultures of Ethical STEM.

Sign-up sheets for scheduling appointments will be located near NSF Poster & table on The Overlook (6th Floor). Meetings will take place in the same location.

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**Coffee Break** (Chastain Foyer, Augusta Foyer, & 12th Floor)

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**SESSION 4**

**Contributed Papers: Quantum Physics** (Augusta F (7th Floor))
Session Chair: Armond Duwell

*Unreal Observables*
Bryan W. Roberts, LSE

*Idealizations, Essential Self-Adjointness, and Minimal Model Explanation in the Aharonov-Bohm Effect*
Elay Shech, Auburn University

*Retrocausation in Quantum Mechanics*
Mathias Frisch, Leibniz University Hannover; Michael Dascal, University of Maryland

*Reconciling Axiomatic Quantum Field Theory with Cutoff-Dependent Particle Physics*
Adam Koberinski, Western University

**Contributed Papers: Social Epistemology** (Augusta G (7th Floor))
Session Chair: Boaz Miller

*Agent-based Models of Dual-Use Research Restrictions*
Elliott Wagner, Kansas State University; Jonathan Herington, Kansas State University
Experimentation by Industrial Selection
Justin Bruner, Australian National University; Bennett Holman, Underwood International College, Yonsei University

Centralised Funding and the Division of Cognitive Labour
Shahar Avin, University of Cambridge

Novelty vs Replicability: Virtues and Vices in the Reward System of Science
Felipe Romero, Tilburg University

Contributed Papers: Decision Theory (Chastain C (6th Floor))
Session Chair: Simon Huttegger

Simplifying Choices
Paul Weirich, University of Missouri

Scientific Expertise, Risk Assessment, and Majority Voting
Thomas Boyer-Kassem, Tilburg University

Framing Decisions Under Deep Uncertainty
Casey Helgeson, London School of Economics and Political Science

Contributed Papers: Biological Individuality (Chastain D (6th Floor))
Session Chair: Raphael Scholl

Contingency and Individuality: A Plurality of Evolutionary Individuality Types
Alison McConwell, University of Calgary

On Mushroom Individuality
Daniel Molter, University of Utah

Rank Free Temporal Hierarchies: Life Cycles of the Rich and Complicated
Matthew Haber, University of Utah

Indexically Structured Ecological Communities
Christopher Lean, Australian National University

Contributed Papers: Selective Realism (Chastain E (6th Floor))
Session Chair: Hasok Chang

How to Make Selective Realism More Selective (and More Realist Too)
Massimiliano Badino, Universitat Autònoma de Barcelona – Massachusetts Institute of Technology

Against Selective Realism(s)
Dana Tulodziecki, Purdue University

Experimental Individuation and Retail Arguments
Ruey-Lin Chen, National Chung-Cheng University; Jonathon Hricko, National Yang-Ming University

Robust Realism for the Life Sciences
Markus Eronen, KU Leuven

Contributed Papers: Theories, Models and Representation (Chastain J (6th Floor))
Session Chair: John Matthewson

Scientific Representation and Theoretical Equivalence
James Nguyen, LSE

There Is a Special Problem of Scientific Representation
Brandon Boesch, University of South Carolina

Fictionalism, Models and Scientific Representation
Fiora Salis, London School of Economics
Contributed Papers: Applied Science and Engineering (Piedmont 1 (12th Floor))
Session Chair: Teru Miyake

Serendipity: An Argument for Scientific Freedom?
Baptiste Bedessem, Grenoble Alpes University; Stephanie Ruphy, Grenoble Alpes University

Ceteris Paribus Laws, Epistemic Reliability and Epistemic Trust in Applied Science
Michael Stoeltzner, University of South Carolina

Design Under Randomness: How Variation Affects the Engineering of Biological Systems
Tero Ijäs, University of Helsinki

Synthetic Biology and the Search for Alternative Genetic Systems: Taking How-Possibly Models Seriously
Rami Koskinen, University of Helsinki

Contributed Papers: Confirmation and Induction (Piedmont 2 (12th Floor))
Session Chair: Molly Kao

Measurement of Statistical Evidence: Picking Up Where Hacking (et al.) Left Off
Veronica J Vieland, Nationwide Children's Hospital & The Ohio State University

Inherent Complexity: A Problem for Statistical Model Evaluation
Jan-Willem Romeijn, University of Groningen

On Goodness of Fit
Jonathan Livengood, University of Illinois at Urbana–Champaign

Contributed Papers: Experiment, Data and Phenomena (Piedmont 3 (12th Floor))
Session Chair: Emily Parke

Phenomena and Objects of Research in the Cognitive and Behavioral Sciences
Uljana Feest, Leibniz Universität Hannover

Effects And Artifacts: Robustness Analysis And The Production Process
Vadim Keyser, UC Davis

The Evolution of Instruments for Empirical Investigation: How Different Are the Material and the Algorithmic Options?
Vincent Israel-Jost, Université Catholique de Louvain

Tacit Knowledge in Science
Enno Fischer

Contributed Papers: Explanation and Reduction in the Cognitive Sciences (Piedmont 4 (12th Floor)) Session Chair: Mark Couch

Multiple Realization and Robustness
Worth Boone, University of Pittsburgh

Multiple Realization and the Granularity of Description
John Zerilli, Australian National University

Structures, Dynamics and Mechanisms in Neuroscience — An Integrative Account
Holger Lyre, University of Magdeburg

What, When and How Do Rational Analysis Models Explain?
Samuli Poyhonen, University of Helsinki

Physics in the 19th and 20th Centuries (Piedmont 6 (12th Floor))
The session is part of the History of Science Society Program
Session Chair: Peter Ramberg

Mechanics without Mechanisms
Joshua Eisenthal, University of Pittsburgh

Einstein and Energy: ‘But Grossmann & I Believed That the Conservation Laws Were Not Satisfied’
J. Brian Pitts, University of Cambridge
The Americanization of the S-Matrix Program from Werner Heisenberg to Geoffrey Chew: The Rise and Fall of the Bootstrap Worldview (1960s–1970s)
Gustavo Rocha, State University of Feira de Santana

Did Scientists Use the “Scientific Method” to Establish 19th & 20th Century Theories?
Stephen Brush, University of Maryland

6:00PM – 7:15PM  Public Forum: How Should Race Be Used in Medicine?
Peachtree D (8th Floor)

Is there a genetic basis for racial differences that support differences in diagnoses and treatment? Do differences in social factors among races provide useful medical information?

The forum invites the public to join a historian and a philosopher in exploring these complex questions. Michael Yudell, Department of Community Health and Prevention, Drexel University, will defend the view that race should only be used to explore social causes of health, disease, and drug response. Robin Andreasen, Department of Linguistics & Cognitive Science, University of Delaware, will argue that race should be used to explore both social and genetic causes of health, disease, and drug response. Quayshawn Spencer, Department of Philosophy, University of Pennsylvania, will moderate the forum.

Michael Yudell is Chair and Associate Professor in the Department of Community Health and Prevention at the Dornsife School of Public Health at Drexel University. He earned his PhD in Sociomedical Sciences at Columbia University, and he specializes in the history and ethics of public health.

Robin Andreasen is Associate Professor in the Department of Linguistics & Cognitive Science at the University of Delaware. She earned her PhD in philosophy at the University of Wisconsin at Madison, and she specializes in philosophy of biology and philosophy of social science.

Quayshawn Spencer is Assistant Professor in the Department of Philosophy at the University of Pennsylvania. He earned his PhD in philosophy at Stanford University, and he specializes in philosophy of science, philosophy of biology, and philosophy of race.

Sponsors:

Stanford | Patrick Suppes Center for History & Philosophy of Science
UMBC | MINNESOTA CENTER FOR PHILOSOPHY OF SCIENCE
University of Waterloo | Rotman Institute of Philosophy
University of Pittsburgh | Centre for the Study of Life Sciences
University of Pennsylvania | Carnegie Mellon University
7:30PM – 8:30PM  
**Joint PSA, HSS, and SLSA Opening Reception**
(including Activities for Social Engagement, sponsored by the Joint Caucus for Socially Engaged Philosophy and History of Science) Augusta Ballroom (7th Floor)

Hors d’oeuvres

Sponsored by:

![The University of Chicago Press Journals](image)

**Activities for Social Engagement**

Organized by the Joint Caucus for Socially Engaged Philosophy and History of Science

Conveners: Rachel Ankeny and Janet Stemwedel

Participants will share a variety of socially engaged projects, highlighting lessons learned from their experiences, challenges that remain, promising strategies, and best practices, at least some of which will be captured in collectable “trading cards.”

8:45PM – 9:45PM  
**PSA Welcoming Reception for Graduate Students, Early Career Scholars, and New Attendees**
(Meehan’s Public House)

All graduate students, early career scholars, and those new to PSA Biennial Meetings are welcome to come enjoy some appetizers and get to know one another and the officers of the PSA.

(Entrance to Meehan’s Public House is on Floor 6 of the Westin, behind Chastain J.)

Hors d’oeuvres

Sponsored by:

![Center for Philosophy of Science and University of Pittsburgh](image)
Friday November 4, 2016

7:15AM – 8:45PM  Childcare Services: Kids Camp, offered by Accent on Children's Arrangements (Chastain 1 (6th Floor))

8:00AM – 7:00PM  Family Room and Nursing Room (Savannah D (9th Floor))

8:00AM – 6:00PM  Hospitality Room (Chastain 2 (6th Floor))

8:00AM – 6:00PM  Quiet Room (Savannah E (9th Floor))

8:00AM – 5:00PM  Book Exhibit (Augusta Foyer & Augusta A & H (7th Floor))

8:30AM – 5:00PM  PSA2016 Registration (The Overlook (6th Floor))

7:45AM – 8:45AM  Philosophy of Science Editorial Board Meeting
(Chastain C (6th Floor))

9:00AM – 11:30AM  SESSION 5
(Includes Coffee Break 10:00–10:15 (Chastain Foyer, Augusta Foyer & 12th Floor))

Symposium: Models and Computer Simulations in Astrophysics (Augusta F (7th Floor))
Session Chair: Eric Winsberg

Tracing the Path of Justification for LCDM
Melissa Jacquart, University of Western Ontario

Simplicity and Simplifications in Astrophysical Modelling
Sibylle Anderl, Institut de Planétologie et d'Astrophysique de Grenoble (IPAG)

Modeling Star Formation Over Cosmic Time. The Schmidt Law: “Not Even Wrong”
Barry Madore, Carnegie Institution for Science

Observing the Invisible
Michael Weisberg, University of Pennsylvania

Selective Realism and Inverse Methods
Paul Humphreys, University of Virginia

Symposium: New Perspectives on the Evolution of the Mind (Augusta G (7th Floor))
Session Chair: Carrie Figdor

The Evolution of the Sense of Fairness
Sarah Brosnan, Georgia State University
The Representational Basis of the Evolution of Theorizing
Hayley Clatterbuck, University of Rochester

The Evolution of Altruism
Gualtiero Piccinini, University of MO – Saint Louis; Armin Schulz, University of Kansas

The Role of Emotional Expressions in the Evolution of Communication
Andrea Scarantino, Georgia State University

A Moderate Evolutionary Psychology
Armin Schulz, University of Kansas

Symposium: How are Economic Models Used (and How Should They Be?) (Chastain C
(6th Floor))
Session Chair: Roberto Fumagalli

Striking The Optimal Balance: Theoretical Versus Empirical Methods in Economics
Anna Alexandrova, Cambridge University; Robert Northcott, Birkbeck College, University of London

The Main Failure of Economics 101: Misleading Students With an Equilibrium Model
Lawrence Boland, Simon Fraser University

A Defense of Equilibrium Reasoning in Economics
Jennifer Jhun, University of Pittsburgh

The Peculiar Logic of the Black-Scholes Formula
James Weatherall, University of California, Irvine

Symposium: Science, Values, and Wishful Thinking (Chastain D (6th Floor))
Session Chair: Inmaculada de Melo-Martin

A Taxonomy of Wishful Thinking
Daniel Hicks, AAAS; Kevin Elliott, Michigan State University

Pragmatism and the Problem of Wishful Thinking
Matthew J. Brown, The University of Texas at Dallas

Wishful Thinking and Knowledge-For
Sharon Crasnow, Norco College

Values, Desires, and Evidence in Climate Science
Kristen Intemann, Montana State University

Are the Right Values All You Need? A Critical Examination of a Proposed Solution to the Problem of Wishful Thinking
Daniel Steel, University of British Columbia; Heather Douglas, University of Waterloo

Symposium: Integrating Explanatory Strategies Across the Life Sciences (Chastain E
(6th Floor))
Session Chair: Peter Distelzweig

Cancer Systems Biology: A New Approach to Biological Explanation?
Anya Plutynski, Washington University in St. Louis; Marta Bertolaso, Università Campus Bio-Medico di Roma

Neutral Spaces and Topological Explanations in Evolutionary Biology: Lessons From Some Landscapes and Mappings
Philippe Huneman, CNRS

Strategies of Explanatory Abstraction in Molecular Systems Biology
Nicholas Jones, University of Alabama in Huntsville
Symposium: Evidence in Action (Chastain J (6th Floor))
Session Chair: Robyn Bluhm

Evidential Reasoning Beyond Induction
Julian Reiss, Durham University

Two Cheers for Randomised Controlled Trials (RCTs)
Sarah Heilmann, Dartington Social Research Unit; Conrad Heilmann, Erasmus University Rotterdam

Establishing Causal Claims in Medicine
Jon Williamson, University of Kent

Symposium: Bayesianism in Cognitive Science and Neuroscience: An Assessment
(Piedmont 1 (12th Floor))
Session Chair: Maria Serban

Bayesian Psychology and the Vindication Of Human Rationality
Richard Samuels, The Ohio State University

Bayesian Cognitive Science, Rational Constructivism, and Implications for Epistemology
Fei Xu, UC Berkeley

Mechanistic Bayesian Cognitive Science?
David Danks, Carnegie Mellon University

An Interventionist Analysis of Bayesian Cognitive Science
Michael Rescorla

Is Cognitive and Neural Processing Bayesian?
Edouard Machery, University of Pittsburgh

Symposium: Causation, Intervention and the Flow of Information (Piedmont 2 (12th Floor))
Session Chair: Karola Stotz

Tracking the Evolution of Causal Control
Brett Calcott, University of Sydney

The Causal and Information Architecture of Biological Networks
Sara Walker, Arizona State University; Hyunju Kim, Arizona State University

Causation, Information and Specificity
Brad Weslake, NYU Shanghai

Intervention and the Flow of Information
Paul Griffiths, University of Sydney; Arnaud Pocheville, University of Sydney

Symposium: Concepts of Fundamentality in Physics & Philosophy (Piedmont 3 (12th Floor))
Session Chair: Steven Savitt

Beyond Fundamentality
Jonathan Schaffer, Rutgers University

Structuralism in the Idiom Of Determination
Kerry McKenzie, UC San Diego

Fundamentality, Composition and Modality
Joseph Melia, University of Oxford

Fundamental Determinables in Fundamental Physics
Jessica Wilson, University of Toronto

Fundamentality in Physics: The Case of Information
Chris Timpson, University of Oxford
Symposium: Philosophy of Statistics in the Age of Big Data and Replication Crises  
(Piedmont 4 (12th Floor))

Session Chair: Edward Rigdon

Controversy Over the Significance Controversy
Deborah Mayo, Virginia Tech

Surrogate Science: How Fisher, Neyman-Pearson, and Bayes Were Transformed into the Null Ritual
Gerd Gigerenzer, Max Planck Institute for Human Development

Confirmationist and Falsificationist Paradigms in Statistical Practice
Andrew Gelman, Columbia University

Exploratory Research is More Reliable Than Confirmatory Research
Clark Glymour, Carnegie Mellon University

11:45AM – 1:30PM  Lunch Break

12:00PM – 1:00PM  Meet the Editors:  
Inside the Journal *Philosophy of Science*  
Chastain E (6th Floor)

Jeff Barrett, Editor-in-Chief  
Andrea Woody, Associate Editor (Editor-in-Chief as of 1 July 2017)  
Sarita Rosenstock, Managing Editor

1:30PM – 3:30PM  SESSION 6

Symposium: General Relativity in Its Second Century  (Augusta F (7th Floor))

Session Chair: Sarita Rosenstock

GR, Effective at Cosmological Scales?  
Chris Smeenk, Western University

What Have We Learned About Quantum Gravity from the Black Hole Information Paradox?  
Daniel Harlow

The (a)temporal Emergence Of Spacetime  
Nick Huggett, University of Illinois at Chicago; Christian Wüthrich, University of Geneva

Spacetime Functionalism and General Relativity  
Eleanor Knox, King’s College London

Symposium: Intervention and Progress: Optogenetics and Control over Neural Systems  
(Augusta G (7th Floor))

Session Chair: Denis Larrivee
Tool Development: How Experiment-Driven Sciences Progress
John Bickle, Mississippi State University/University of Mississippi Medical Center

Optogenetics and Maker’s Knowledge: Foundations for a Theory of Translational Progress
Carl Craver

Memory and Optogenetic Intervention: Separating the Engram from the Ecphory
Sarah Robins, University of Kansas

Understanding Scientific ‘Progress and Its Problems’ via the Case Study of Optogenetics
Jacqueline Sullivan, University of Western Ontario

Symposium: Digital Humanities and the Philosophy of Science (Chastain C (6th Floor))
Session Chair: Monika Piotrowska

Evotext and the Philosophy of Science
Charles Pence, Louisiana State University; Grant Ramsey, KU Leuven

Darwin’s Semantic Voyage
Jaimie Murdock, Indiana University; Colin Allen, Indiana University; Simon DeDeo, Indiana University

Research, Outreach, and Education Systems: The HPS Repository, Embryo Project, and MBL History Project
Kate MacCord, Arizona State University; Jane Maienschein, Arizona State University; Steve Elliott, Arizona State University

Detecting and Explaining Innovations in Science with Big-Data Computational Methods and Modeling
Manfred Laubichler, Arizona State University and Santa Fe Institute

Symposium: Getting Down to Business: Problems and Solutions for Industry-Funded Research (Chastain D (6th Floor))
Session Chair: Evelyn Brister

Citizen Participation in Industry-Driven Medical Research: An Analysis of the Ethical and Epistemic Costs
Manuela Fernández Pinto, Universidad de los Andes

Measures and Countermeasures: How to Evaluate Attempts to Address Funding Bias
Bennett Holman, Yonsei University

Improving Industry-Funded Research with Criteria for Objectivity
Kevin Elliott, Michigan State University

Structures for Trust: Individual and Social Levels of Analysis for Industry Collaborations
Heather Douglas, University of Waterloo

Commentary: Martin Carrier, Bielefeld University

Symposium: Contexts of Scientific Explanation (Chastain E (6th Floor))
Session Chair: Andrew Wayne

Contextual Interaction in Biological Explanation
Gillian Barker, University of Western Ontario

Toward an Eikonic Conception of Explanation: Why We Should Leave the Ontic Conception Behind
Alisa Bokulich, Boston University

Explanatory Relevance and Contrastive Explanation
Christopher Pincock, Ohio State University

Explanation, Context, and Aims: Limitations of the Erotetic Account Against the Backdrop of Synthetic Chemistry
Andrea Woody, University of Washington
Symposium: Evidence for the Significance of Developmental Plasticity in Evolution
(Chastain J (6th Floor))
Session Chair: Ingo Brigandt

*Developmental Plasticity and Common Cause Explanation*
Carol Cleland, University of Colorado (Boulder)

*What Is The Signature Of Plasticity?*
Karen Kovaka

*Mechanisms of Phenotypic Robustness and Plasticity: Two Sides of the Same Coin*
H. Frederik Nijhout, Duke University; Michael C. Reed, Duke University

*Cryptic Genetic Variation in Natural Populations: A Predictive Framework*
Cris Ledon-Rettig

Symposium: Causality and Interdependence in Ecology (Piedmont 1 (12th Floor))
Session Chair: Michael Goldsby

*Generalizability and Interdependence in Ecological Research*
Alkistis Elliott-Graves, Rotman Institute, University of Western Ontario

*Understanding ‘Interdependence’ in Ecology: Implications for Environmental Ethics*
Roberta L. Millstein, University of California, Davis

*Complex Experiments: Using Agent-Based Models to Provide Causal Insight Into Ecological Community Structure*
Steven L Peck, Brigham Young University

*Constraints as Causes*
Christopher Eliot, Hofstra University

Symposium: Formal Methods and Social Epistemology (Piedmont 2 (12th Floor))
Session Chair: Shahar Avin

*Games, Evolution, and Intersectionality*
Liam Kofi Bright; Justin P. Bruner; Cailin O'Connor

*Why Journal Editors Play Favorites*
Remco Heesen, Carnegie Mellon University

*Ethics, Uncertainty, and the Benefits of Scientific Diversity*
Kevin Zollman, Carnegie Mellon University

*Exploratory Experimentation in Neuroscience: The Gendered Connectome*
Morgan Thompson, University of Pittsburgh

Symposium: Matters of Scale: Multiscale Modeling Across the Sciences (Piedmont 3 (12th Floor))
Session Chair: Isaac Record

*Emergence, Autonomy, Multiscale Modeling*
Robert Batterman, University of Pittsburgh

*Multiscale Modeling in Nanoscience: Beyond Non-Mereological Relations*
Julia Bursten, University of Kentucky

*What to Do About Scale? Challenges for Interdisciplinary Research at Multiple Scales*
Melissa Charenko, University of Wisconsin-Madison

*Scale-Dependency and Downward Causation in Biology*
Sara Green

Symposium: Multiple Realizability in a Physical World (Piedmont 4 (12th Floor))
Session Chair: Gualtiero Piccinini

*A Physicalist Account of Multiple Realizability in the Special Sciences*
Meir Hemmo, University of Haifa
Computationalism, Multiple Realizability, and Autonomy
Thomas Polger, University of Cincinnati

The Empirical Case Against Multiple Realization
Lawrence Shapiro, University of Wisconsin–Madison

A Reductive Physicalist Account of the Autonomy of Psychology
Orly Shenker, The Hebrew University of Jerusalem

2:00PM – 5:00PM  NSF Speed Dating: Science, Technology and Society
PLUS Cultivating Cultures for Ethical STEM
(The Overlook (6th Floor))

Two NSF Program Officers: Fred Kronz and Wenda Bauchspies from SBE/SES will be at HSS/PSA/SLSA to meet with potential PIs in 15 minutes increments. The goal is to provide potential PIs the chance to pitch their research idea, to ask informational questions and to receive feedback on their projects for either the Science, Technology, and Society Program or Cultivating Cultures of Ethical STEM.

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3:30PM – 3:45PM  Coffee Break (Chastain Foyer, Augusta Foyer, & 12th Floor)

3:45PM – 5:15PM  SESSION 7

Contributed Papers: Information (Chastain C (6th Floor))
Session Chair: Michael Cuffaro

The Semantics Latent in Shannon Information
Alistair Isaac, University of Edinburgh

The Deflationary View of Information Reloaded: Communication and Manipulability
Olimpia Lombardi, CONICET–University of Buenos Aires; Cristian López, CONICET–University of Buenos Aires

Contributed Papers: Evolutionary Biology I (Chastain E (6th Floor))
Session Chair: Robert Richardson

Natural Selection, Mechanism, and the Statistical Interpretation
Fermin Fulda, University of Western Ontario

The Causal Homology Concept
Jun Otsuka, Kobe University

Universal Common Ancestry, Luca, and the Tree of Life: Three Distinct Hypotheses About the Evolution of Life
Joel Velasco, Texas Tech University
Contributed Papers: Biological Functions (Chastain J (6th Floor))
Session Chair: Mathieu Charbonneau

Functional Explanation and Functional Equivalents
James DiFrisco, Konrad Lorenz Institute for Evolution and Cognition Research

Against Organizational Functions
Justin Garson, Hunter College – CUNY

Contributed Papers: Physics: Classical Meets Quantum (Augusta F (7th Floor))
Session Chair: Mathias Frisch

Intimate Connections: Symmetries and Conservation Laws in Quantum Vs. Classical Mechanics
Pablo Ruiz de Olano, University of Notre Dame

On Theory Construction in Physics: Continuity from Classical to Quantum
Benjamin Feintzeig, University of California, Irvine

Classical Limit and Quantum Logic
Sebastian Fortin, CONICET–University of Buenos Aires; Federico Holik, CONICET–IFLP

Contributed Papers: Statistical Mechanics (Augusta G (7th Floor))
Session Chair: Marian Gilton

Mind The Gap: Boltzmannian Vs Gibbsian Equilibrium
Charlotte Werndl, University of Salzburg; Roman Frigg, LSE

Irreversibility in the Derivation of the Boltzmann Equation
Vincent Ardourel, UCL (Louvain)

A Tale of Two Entropies
Carina Prunkl, University of Oxford

Contributed Papers: Classification and Natural Kinds (Piedmont 1 (12th Floor))
Session Chair: Justin Bzovy

Definitions of Life — Why Should We Care (in Astrobiology and Elsewhere)?
Tarja Knuuttila, University of South Carolina; Andrea Loettgers, University of Bern, University of Geneva

Assessing Stable Property Cluster Kinds
Eduardo Martinez, University of Michigan

Natural Kinds: Toning Down the Realist Hype
Zdenka Brzovic, University of Rijeka

Contributed Papers: Game Theory (Piedmont 2 (12th Floor))
Session Chair: Liam Bright

Responsiveness and Robustness in the David Lewis Signalling Game
Carl Brusse, The Australian National University; Justin Bruner

Inclusive Fitness and the Problem of Honest Communication
Justin Bruner, Australian National University; Hannah Rubin, University of California, Irvine

Information Dynamics in Learned Referential Signalling Games: Two Sources of Entropy
Matthew Spike, ANU
Contributed Papers: Indispensability of Mathematics (Piedmont 3 (12th Floor))
Session Chair: Christopher Pincock

*Mathematical Explanation and the Optimization Fallacy*
Samantha Wakil, UNC-Chapel Hill; James Justus, Florida State University

*Dynamical Systems Theory and Explanatory Indispensability*
Juha Saatsi, University of Leeds

*Is the Enhanced Indispensability Argument Circular?*
Manuel Barrantes

Contributed Papers: Psychiatry (Piedmont 4 (12th Floor))
Session Chair: Catherine Stinson

*Reductionism and Anti-Reductionism About Mental Disorders: Not Where the Action Is*
Alyssa Ney, University of California, Davis

*Challenging the Mechanistic View of Psychiatry*
Caterina Marchionni, University of Helsinki

*The Premises and Promises of Precision Psychiatry*
Kathryn Tabb, Columbia University; Maël Lemoine, Université de Tours

5:30PM – 6:00PM  **2016 PSA Members Business Meeting**
(Augusta F (7th Floor))

All members of the PSA are encouraged to attend the meeting. Learn what the PSA has been doing, and come share ideas for the future. This is your PSA. Coffee, tea, and cookies provided.

Agenda:
- President’s Welcome: C. Kenneth Waters
- Executive Director’s Report: Jessica Pfeifer
- Program Chair’s Report: Wendy Parker
- Poster Chair’s Report: Alan Love
- New Business

6:15PM – 8:30PM  **PSA Poster Forum and Reception**
(Peachtree Ballroom (8th Floor))

Sponsored by:

[UCI Department of Logic and Philosophy of Science]
PSA Posters:

1. Using Documentaries to Teach Evolutionary Theory (Michael Weisberg, University of Pennsylvania; Deena Weisberg, University of Pennsylvania; Ernesto Vaca, Galápagos Naturalist Guides)

2. Parameterization as a Framework for Modeling Contested Scientific Concepts (Mikio Akagi, Texas Christian University)

3. Information Processing Artifacts (Neal Anderson, University of Massachusetts Amherst)

4. Science as a Problem Solving Activity: A Framework for Teaching Philosophy to Science Students (Frédéric-I. Banville, University of Western Ontario; Jessey Wright, University of Western Ontario)

5. Some Philosophical Challenges Concerning the Inclusion of Social Norms in Epidemiological Models (Bert Baumgaertner, University of Idaho)

6. Conceptual Change, Models and Science Education (Dragana Bozin, University of Oslo)

7. Citation Rates and Gender in Philosophy of Science (Evelyn Brister, Rochester Institute of Technology)

8. A New Look at Levels of Organization (Daniel Brooks, Konrad Lorenz Institute)

9. Justify Analogical Inferences About the Mental Capacities of Other Animals? (Shereen Chang, University of Pennsylvania)

10. On the Causation and Constitution of the Immunological Holobiont (Lynn Chiu, University of Bordeaux/CNRS)

11. Drug Facts and Value-Laden Labels: Contraceptive Controversy at the FDA (Christopher Cho-Glueck, Indiana University Bloomington)

12. Technique-Driven Research: Clarifying the Nature of Exploratory Experimentation (David Colaco, University of Pittsburgh)

13. On the Roles of Conceptual Definitions and Construct Theories in Humanistic Measurement (Laura Cupples, University of South Carolina)

14. Qualitative Methods in Philosophy of Science: What Can We Learn from Talking to Scientists? (Haixin Dang, University of Pittsburgh)

15. Funding Interdisciplinary Research (David Danks, Carnegie Mellon University; Denise Caruso, Carnegie Mellon University; Liam Bright, Carnegie Mellon University)

16. Holobionts and Biofilms Are Not as a Rule “Units of Selection”, But the Metabolic Interaction Networks They Support, Replicating by Recruitment, Arguably Are. (W. Ford Doolittle, Dalhousie University; Austin Booth, Dalhousie University)

17. From Biological Practice to Scientific Metaphysics (Max Dresow, University of Minnesota; Katherine Liu, University of Minnesota)

18. The Epistemology of Rational Constructivism (Mark Fedyk, Mount Allison University; Fei Xu, UC Berkeley)

19. Sleeping Beauty and Logical Decision Theory (Ronny Fernandez, UMBC)

20. Fitness Measures and Abstraction (Ronny Fernandez, UMBC; Jessica Pfeifer, UMBC)

21. Teaching SRPOS: University of Waterloo PhD in Applied Philosophy (Doreen Fraser, University of Waterloo; Teresa Branch-Smith, University of Waterloo; Heather Douglas, University of Waterloo; Carla Fehr, University of Waterloo; Patricia Marino, University of Waterloo; Kathryn Plaisance, University of Waterloo)

22. Coordinating Measurement and World in Medicine: A Model-Based Approach to the Introduction of the Metric System Standardization in the XIXth and XXth Centuries (Luciana Garbayo, University of Central Florida)

23. Exploratory Science: A Case Study from Within (Devin Gouvêa, University of Chicago)

24. Information Theoretic Tools for the Philosophy of Causation (Paul Griffiths, University of
25. Investigating Data Journeys Across Scientific Fields (Gregor Halfmann, University of Exeter; Niccolo Tempini, University of Exeter; Sabina Leonelli, University of Exeter)

26. Scientists’ Conceptions of Good Research Methods (Nora Hangel, Indiana University; Jutta Schickore, Indiana University)

27. Toward a New Approach to Causal Selection (Brian Hanley, University of Calgary)

28. Problem Based Learning at the Intersection of Philosophy and Technology (Maralee Harrell, Carnegie Mellon University)

29. What the Brain Does by Itself: The Role of Endogenous Brain Activity in Resting State Functional Connectivity Studies (Philipp Haueis, Berlin School of Mind and Brain, Max Planck Institute for Human Cognitive and Brain Sciences)

30. Good Economic Measurement (Conrad Heilmann, Erasmus Universiteit Rotterdam)

31. Causal Selection, Causal Significance, and Realism about Effect Size (Benjamin Henke, Washington University in St. Louis)

32. Modeling Biologist-Philosopher Collaborations, 1950–2000 (Phillip Honenberger, Dartmouth College; Michael Dietrich, Dartmouth College)

33. Revisiting Friedman's F53: Hedging, Karl Popper, Frank Knight, And Max Weber (Paul Hoyningen-Huene, Universität Zürich)

34. Teaching Philosophy of Science: Representation in Engagement (Vadim Keyser, San Francisco State University)

35. De-Idealization – No Easy ‘Reversals’ (Tarja Knuuttila, University of South Carolina; Mary Morgan, London School of Economics)

37. Reciprocal Conceptual Frameworks for Neural System Autonomy and Behavior (Denis Larrivee, Loyola University Chicago)

38. How Can Linguistics Benefit Neurolinguistics? An Instrumentalist Approach (Chia-Hua Lin, University of South Carolina)


40. Teaching Contemporary Philosophy of Science: The Challenge (James Marcum, Baylor University)

41. Toward a Practice Oriented Integration of the Mind-Brain Sciences (Noel Martin, University of California, San Diego)

42. Perspectival Modeling in Primary Schools (Michela Massimi, University of Edinburgh; Casey McCoy, University of Edinburgh; Franklin Jacoby, University of Edinburgh)

43. Reconsidering Scientific Representation (Dana Matthiessen, University of Pittsburgh)

44. Big Data and The Evaluation of Expertise (Darcy McCusker, University of Washington)

45. Scientific Authorship, Autonomy and the Identification of Unethical Practices (Barton Moffatt, Mississippi State University)

46. Fundamental Disagreements in Evolutionary Dynamics (Aydin Mohseni, University of California, Irvine)

47. Advantageous Approximation: The Importance of Feasible Reasoning in Pure and Applied Mathematics (Robert H C Moir, Western University)

48. Toward A New Account of Neurobiological Experimentation: Re-Examining the Need for Consistency in Neurobiological Research (Nedah Nemati, Mississippi State University; John Bickle, Mississippi State University/University of Mississippi Medical Center)

49. The Biological Reality of Race Does not Underwrite the Social Reality of Race: A Response to Spencer (Kamuran Osmanoglu, University of Kansas)

50. The Severity Approach to Demarcation (Jack Parker, Carnegie Mellon University)
51. Is “Assisted Reproduction” Reproduction? (Monika Piotrowska)
52. Information and Explanation: A Dilemma for the Ontic Conception (Mark Povich, Washington University in St. Louis)
53. Establishing Constitutive Relevance in Mechanisms (Emily Prychitko, Washington University in St. Louis)
54. Exploring the Philosophical Implications of Optimal Control in the Sciences (OptiSci) over Vast Length and Time Scales (Herschel Rabitz, Princeton University; Andrea Woody, University of Washington; Benjamin Russell Russell, Princeton University; Katharine Moore Tibbetts, Virginia Commonwealth University; XiaoJiang Feng, Princeton University; Jinhai Chen, Princeton University; Mohammed Seyedsayamdost, Princeton University)
55. Beans, Dynamics, and Embodied Cognition (Vicente Raja, University of Cincinnati)
56. Opening the Black Box Exercise (Isaac Record, Michigan State University)
57. Three Practical Exercises For Teaching the Philosophy of Science (Olin Robus, University of Washington)
59. Causal Explanation in Biology: More Than Mechanisms (Lauren Ross, University of Calgary / University of California, Irvine)
60. Decision Theory for Doctors (Sherrilyn Roush, King’s College London)
61. Modeling without Representationalism (Guilherme Sanches de Oliveira, University of Cincinnati)
62. Can Intuitions Be Empirical Evidence: The Case of Generative Linguistics (Carlos Santana, University of Utah)
63. Science and Mathematical Truth (Guillaume Schlaepfer, University of Geneva)
64. Biological Individuality and Pluralism: The Case of Holobionts (Sinan Sencan, University of Calgary)
65. Immunity, Development and the Microbiota (IDEM): Understanding the Continuous Construction of Biological Identity (Derek Skillings, University of Bordeaux/CNRS; Lynn Chiu, University of Bordeaux/CNRS; Leonardo Bich, University of Bordeaux/CNRS; Thomas Pradeu, University of Bordeaux/CNRS)
66. The Interaction of Two Signaling Systems: A Game Theoretic Analysis (Lindley Slipetz, University of Wisconsin–Madison)
67. Einstein @ Rotman (Chris Smeenk, Western University)
68. Using Cyberspace Topics to Motivate Students to Learn Philosophy (Joel Smith, Carnegie Mellon University)
69. The Role of Phenomenal Character in Determining Scientifically Useful Sensory Categories (Alison Springle, University of Pittsburgh)
70. From N=1 Clinical Trials to n-of-one Clinical Reasoning: Omics-Based Personalized Medicine Requires Treating Every Patient as an n-of-1 “Natural Kind” (Alok Srivastava, Tremont Research Institute)
71. The Evaluation and Interpretation of Systematic Uncertainty (Kent Staley, Saint Louis University)
72. Representational Explanation in Computational Neuroscience (Imran Thobani, Simon Fraser University)
74. Comorbidity and Psychiatric Disease Classification (Hanna van Loo, University Medical Center Groningen; Jan-Willem Romeijn, University of Groningen)
75. Interpreting Genetic Drift: A Challenge to the Analogy with Brownian Motion and a Case for a Way Forward (Eugene Vaynberg, University of Pennsylvania)
76. Culture and the Classification of Mental Disorders (Tuomas Vesterinen, University of Helsinki)
77. Evidence and Mechanistic Reasoning: A Matter of Inductive Risk (Sarah Wieten, University of Durham)
78. Integrating Generic and Genetic Explanations of Biological Phenomena (William Wimsatt, University of Minnesota; Alan Love, University of Minnesota)

79. Constraints, Causal Powers, and Mechanistic Causation (Jason Winning, University of California, San Diego)

80. Scientific Modeling and Limits to the Value-Free Ideal (Eric Winsberg, University of South Florida; Wendy Parker, Durham University)

82. Hierarchies of Fundamentalities, in Scientific Explanation and Metaphysical Depth (Aaron Sidney Wright, Stanford University)

83. The Lab Associates Program: Training and Preparing Graduate Students for Interdisciplinary work with Neuroscientists (Jessey Wright, University of Western Ontario; Robert Foley, Rotman Institute of Philosophy & Brain and Mind Institute)

84. Is Methodological Adaptationism Really so Dangerous? (Mingjun Zhang, University of Pennsylvania)

**NSF Speed Dating: Science, Technology and Society**
**PLUS Cultivating Cultures for Ethical STEM**

(8th Floor Terrace near the Peachtree Ballroom)

Two NSF Program Officers, Fred Kronz and Wenda Bauchspies from SBE/SES, will be at HSS/PSA/SLSA to meet with potential PIs in 15 minutes increments. The goal is to provide potential PIs the chance to pitch their research idea, to ask informational questions and to receive feedback on their projects for either the Science, Technology, and Society Program or Cultivating Cultures of Ethical STEM.

Table will be set up on the 8th Floor Terrace near the Peachtree Ballroom. Meetings on a “first come, first up” basis.
### Saturday November 5, 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7:00AM – 7:30PM</td>
<td>Childcare Services: Kids Camp, offered by Accent on Children’s Arrangements (Chastain 1 (6th Floor))</td>
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<tr>
<td>8:00AM – 7:00PM</td>
<td>Family Room and Nursing Room (Savannah D (9th Floor))</td>
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<tr>
<td>8:00AM – 6:00PM</td>
<td>Hospitality Room (Chastain 2 (6th Floor))</td>
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<tr>
<td>8:00AM – 6:00PM</td>
<td>Quiet Room (Savannah E (9th Floor))</td>
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<tr>
<td>8:00AM – 6:00PM</td>
<td>Book Exhibit (Augusta Foyer &amp; Augusta A &amp; H (7th Floor))</td>
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<tr>
<td>8:30AM – 5:00PM</td>
<td>PSA2016 Registration (Chastain Foyer (6th Floor))</td>
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<tr>
<td>7:00AM – 8:45AM</td>
<td><strong>PSA Women’s Caucus Breakfast</strong> (Augusta C &amp; D (7th Floor))</td>
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<td>All are welcome. Breakfast and socializing from 7:00–7:30. Meeting will start promptly at 7:30.</td>
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### 9:00AM – 11:45AM  
**SESSION 8**

Includes Coffee Break 10:00–10:15 (Chastain Foyer, Augusta Foyer & 12th Floor)

**Contributed Papers: Laws of Nature** (Chastain C (6th Floor))

Session Chair: Viorel Paslaru

*Making Fit Fit*  
Michael Hicks, Oxford University

*Minimal Anti-Humeanism*  
Harjit Bhogal, New York University

*Complexity and Generalization in the Special Sciences*  
Hugh Desmond, KULeuven

*Arguing for Ceteris Paribus Laws by Means of Shift (of Mechanism) Provisos*  
Matthias Unterhuber

*Interventions and Counternomic Reasoning*  
Peter Tan, University of Virginia
Symposium: Post Mechanism: Explanation in 21st Century Biology (Chastain D (6th Floor))
Session Chair: Lindley Darden

Explanatory Understanding Without Tracking Mechanism Operation
Ingo Brigandt, University of Alberta

From Design Principles to Biological Explanation
Maria Serban, University of Copenhagen; Sara Green, University of Copenhagen

The Best of Both Worlds? Reverse-Engineering Regulatory Systems
Johannes Jaeger, Konrad Lorenz Institute (KLI), Klosterneuburg, AT

Tackling Complexity in a Non-mechanistic Fashion: Spatiotemporal Aspects
Arnon Levy, The Hebrew University of Jerusalem; William Bechtel, UCSD

Symposium: Major Evolutionary Transitions: Concepts, Methods, and Future Directions
Chastain E (6th Floor)
Session Chair: Alex Levine

Models of Major Evolutionary Transitions
Russell Powell, Boston University

On Major Transitions in Evolution 2.0
Maureen O’Malley, University of Bordeaux

Novelty, Innovations and the Major Evolutionary Transitions
Douglas Erwin, National Museum of Natural History

A Darwinian Approach to Major Transitions in Evolution: Evolution of Individuality in the Volvocine Green Algae
Richard Michod, University of Arizona

An Engineering Approach to the Major Transitions in Individuality
Daniel McShea, Duke University

The Final Transition: Reconciling Margulis and Lewontin
W. Ford Doolittle, Dalhousie University

Non-Selectionist Explanations of Major Transitions
Robert Brandon, Duke University

Symposium: The Public Understanding of Science: Philosophical and Empirical Approaches (Chastain J (6th Floor))
Session Chair: Miriam Solomon

On the Epistemic Significance of Predictive Success
Chris Haufe, Case Western Reserve University

The Public Understanding of What? Layperson’s Epistemic Needs, the Division of Cognitive Labor, and the Demarcation of Science
Aron Keren, University of Haifa

Epistemic Equality and Public Participation in Science: A Model of Distributive Epistemic Justice in the Context of Justification
Boaz Miller, Bar Ilan University; Meital Pinto, Carmel Academic Center

Understanding and Trusting Science
Matthew Slater, Bucknell University; Joanna Huxster, Bucknell University

Understanding and Acceptance of Evolutionary Theory in the United States
Deena Skolnick Weisberg, University of Pennsylvania; S. Emlen Metz, University of Pennsylvania; Michael Weisberg, University of Pennsylvania
Contributed Papers: Spacetime Physics (Augusta F (7th Floor))
Session Chair: Nina Emery

Regularity Relationalism And The Constructivist Project
Syman Stevens

The Mach-Einstein Principle of 1917-1918
Gordon Belot

Literal vs Careful Interpretations of Scientific Theories: The Vacuum Approach to the Problem of Motion in General Relativity
Dennis Lehmkuhl, California Institute of Technology

Black Holes, Information Loss and the Measurement Problem
Elias Okon, National Autonomous University of Mexico; Daniel Sudarsky, National Autonomous University of Mexico

Doubt For Dawid’s Non-Empirical Theory Assessment
Cristin Chall, University of South Carolina

Symposium: The Renormalization Group in Particle Physics: Structures, Scales, and (Anti-)Realisms (Augusta G (7th Floor))
Session Chair: Kent Staley

The Renormalization Group, Approximate Truth and Local Realism
James Fraser, University of Leeds

Effective Theories and Ineffective Interpretations
Laura Ruetsche, University of Michigan

Between Instrumentalism and Realism: A Developmental Perspective on the Renormalization Group
Leif Hancox-Li, University of Southern California

The Applicability of Renormalization Group Methods from the Perspectives of Two Wilsons
Doreen Fraser, University of Waterloo

Why Are There Ultraviolet Divergences At All?
Michael Miller, University of Pittsburgh

Symposium: Animal Cognition and Animal Welfare (The PSA Women’s Caucus Prize Symposium) (Piedmont 1 (12th Floor))
Session Chair: Mark Fedyk

Animal Cognition and Human Values: A Framework
Jonathan Birch, London School of Economics and Political Science

Inductive Risk in Animal Mindreading Research
Marta Halina, University of Cambridge

Animal Persons
Kristin Andrews, York University

A Continuum of Suffering?
Colin Allen, Indiana University – Bloomington

Gerrymandering the “Ethics” of Animal Research
Lori Marino, The Kimmela Center for Animal Advocacy

Symposium: Data in Time: The Epistemology of Historical Data (Piedmont 2 (12th Floor))
Session Chair: James McAllister

Time-Scales of Data Use: On the Life Cycles, Ontology and Understanding of Biological Data
Sabina Leonelli, University of Exeter
Legacy Data, Radiocarbon Dating and Robustness Reasoning
Alison Wylie, University of Washington / Durham University

Visualization, Narrative, and Historical Data: Paleontology in the 19th Century
David Sepkoski, Max Planck Institute for the History of Science

Preserving and Re-Using Case Reports: On Data Standardisation in Medicine
Rachel Ankeny, University of Adelaide

Comments: James McAllister, University of Leiden

Symposium: Galileo and Philosophy of Science (Piedmont 3 (12th Floor))
Session Chair: Joseph Pitt

Galileo’s Models of Intelligibility
Peter Machamer, University of Pittsburgh

Galilean Idealization and the Inertial Principle
Maarten Van Dyck, Ghent University

Galileo on the Power and Limits of Thought Experiments
Carla Rita Palmerino, Radboud University, Nijmegen (The Netherlands)

Models of Intelligibility in Galileo’s Mechanical Science
David Marshall Miller, Iowa State University

Euler’s Galilean Philosophy of Science
Brian Hepburn, Wichita State University

Symposium: Medical Evidence (Piedmont 4 (12th Floor))
Session Chair: Luciana Garbayo

Pragmatic Trials: What Can We Learn From Them
Nancy Cartwright, UCSD & Durham Univ

Meta-Evidence and the Evaluation of Therapies
Jonathan Fuller, University of Toronto

Diagnostic Evidence and Medical Value
Ashley Kennedy

Clinical Reasoning: The Bayesian Approach
Luis Flores, King’s College London; Jonathan Fuller, University of Toronto
**JCSEPHS Business Meeting & Mentoring Event**
(Augusta E (7th Floor))

*How Do I ‘Do’ Socially Engaged Philosophy and History of Science? Lessons from Experienced Colleagues*

The Joint Caucus on Socially Engaged Philosophy and History of Science (JCSEPHS) invites you to a ‘mentoring’ event, which aims to allow anyone interested in learning more about various aspects of socially engaged philosophy and history of science to meet with those with experience to discuss social engagement in the context of PHS. The format will allow rotation between mentors over the course of the event, with various themes elected as key discussion points (but with flexibility as to let the discussion flow!). Themes include: translating your research to engage with lawmakers/politicians and affect policymaking; how to publish scholarly articles that can contribute to social engagement in PHS; non-academic career pathways utilizing socially-engaged history/philosophy of science; alternative ways of publishing and conveying ideas regarding social engagement activities (e.g., social media); and how to get grant, philanthropic, or other funding to support social engagement activities.

The session will begin with a short business meeting for the caucus (10 minutes) followed by the mentoring session. Please bring your lunch. All are welcome to attend!

**Editors Panel: Discussion of Journal Procedures and Advice on How to Get Your Work Published**
(Chastain E (6th Floor))

Jeffrey A. Barrett, Editor-in-Chief, Philosophy of Science
Anjan Chakravartty, Editor-in-Chief, Studies in History and Philosophy of Science Part A
Roberta Millstein, Co-Editor, Philosophy and Theory in Biology
Wayne Myrvold, Co-Editor, Studies in History and Philosophy of Modern Physics
Lydia Patton, Associate Editor (as of January 2017, Editor), HOPOS

**Roundtable: Historians, Philosophers, and the AAAS Science and Technology Policy Fellowship**
(Chastain G (6th Floor))

The session is part of the History of Science Society Program
Session Chair: Janet Browne

*History, Policy, and Ethics at the Environmental Protection Agency*
Melinda Gormley, University of California, Irvine

*When History Meets the “Endless Frontier”: A Historian’s Journey Inside NSF*
Elise Lipkowitz, National Science Foundation

*EPA and Chemical Safety for Sustainability*
Daniel Hicks, American Association for the Advancement of Science
1:30PM – 3:30PM

SESSION 9

**Contributed Papers: Economics** (Chastain C (6th Floor))
Session Chair: Wenceslao J. Gonzalez

*Economists’ Concept of Choice: An Experimental Study*
Michiru Nagatsu, University of Helsinki; Kaire Põder, Tallinn University of Technology

*On the Epistemic Value of Non-Robust Toy Models*
Nicolas Wüthrich, London School of Economics and Political Science

*The Epistemic Benefits of Generalization in Economic Modelling*
Aki Lehtinen, University of Helsinki; Caterina Marchionni, University of Helsinki

**Contributed Papers: Science, Values and Society** (Chastain D (6th Floor))
Session Chair: Janet Kourany

*Non-Epistemic Values, Scientific Practice, and Political Legitimacy*
Paul Franco, University of Washington-Seattle

*On Epistemically Detrimental Dissent: Contingent Enabling Factors V. Stable Difference Makers*
Soazig Le Bihan, University of Montana; Iheanyi Amadi, University of Montana

*Using Democratic Values in Science: An Objection and (Partial) Response*
S. Andrew Schroeder, Claremont McKenna College

*Exploring the Moral Terrain of Science Around Flint, Michigan*
Jon Rosenberg, University of Washington

**Contributed Papers: Mechanisms** (Chastain E (6th Floor))
Session Chair: Marta Bertolaso

*Constructing Diagrams to Understand Phenomena and Mechanisms*
Benjamin Sheredos, UC San Diego; William Bechtel, UC San Diego

*Mechanisms Without Mechanistic Explanation*
Naftali Weinberger, Tilburg University

*The Identification-Problem of Mechanisms and Weak Mechanistic Realism*
Tobias Schönwitz

*Real Patterns in Biological Explanation*
Daniel Burnston, Tulane University

**Contributed Papers: Explanation & Understanding** (Chastain J (6th Floor))
Session Chair: Michael Lissack

*Levels of Reasons and Causal Explanation*
Bradford Skow, MIT

*Abstraction, Multiple Realizability, and the Explanatory Value of Omitting Irrelevant Details*
Matthew Haug, The College of William & Mary

*How Do Idealizing Models Provide Understanding-Why?*
Insa Lawler, University of Duisburg-Essen

*Non-Factive Understanding: A Statement and Defense*
Yannick Doyle, Middlebury College; Spencer Egan, Middlebury College; Noah Graham, Middlebury College; Kareem Khalifa, Middlebury College
Contributed Papers: Quantum Mechanics and Realism (Augusta F (7th Floor))
Session Chair: Aaron Sidney Wright

Scientific Realism and Primitive Ontology
Valia Allori, Northern Illinois University

A Proposal for a Coherent Ontology of Fundamental Entities.
Diego Romera-Maltrana, Pontificia Universidad Católica de Valparaíso; Federico Benitez, Universität Bern

The Information-Theoretic Interpretation of Quantum Mechanics & Ontic Structural Realism
Lucas Dunlap, Western University

Swapping Something Real
David Glick, University of Oxford

Contributed Papers: Cosmology and Spacetime Physics (Augusta G (6th Floor))
Session Chair: Nick Huggett

On the Inextendibility of Spacetime
John Manchak

Can Typicality Arguments Dissolve Cosmology’s Flatness Problem?
C.D. McCoy, University of California San Diego

Simplicity and Unification in Cosmological Model Selection
Yann Benétreau-Dupin, University of Pittsburgh

Taking Up Superspace — What Would It Take to Be a Realist About Superspace?
Tushar Menon, University of Oxford

Contributed Papers: Medicine and Health (Piedmont 1 (12th Floor))
Session Chair: M.A. Hunter

An “Ecological” Model of Disability
Marco Jacob Nathan, University of Denver; Jeffrey M. Brown, University of Denver

Modeling Cancer as an Infectious Disease
Katherine Liu, University of Minnesota; Alan Love, University of Minnesota; Michael Travisano, University of Minnesota

Evolutionary Mismatch and Health: Three Issues
Rick Morris, University of California, Davis

Science and Proven Experience: A Swedish Variety of Evidence-Based Medicine?
Johannes Persson, Lund University; Niklas Vareman, Lund University; Annika Wallin, Lund University; Lena Wahlberg, Lund University; Nils-Eric Sahlin, Lund University

Contributed Papers: Neuroscience (Piedmont 2 (12th Floor))
Session Chair: Alison Springle

Crash Testing an Engineering Framework in Neuroscience: Does the Idea of Robustness Break Down?
M. Chirimuuta, University of Pittsburgh

Does the Brain Respect Basic Emotion Theory? Pattern Classification and Correspondence in FMRI Research
Joseph McCaffrey, University of Pittsburgh

Hierarchies in the Visual System
Bryan Chambliss, University of Arizona; Oisin Deery

Causally Interpreting Hodgkin and Huxley
David Evan Pence, University of Pittsburgh
Symposium: Natural Kinds and Mind Independence (Piedmont 3 (12th Floor))
Session Chair: Zdenka Brzovic

**Mind-Dependent Kinds**
Muhammad Ali Khalidi, York University

**Natural Kinds, Mind Independence, and Defeasibility**
Marc Ereshefsky, University of Calgary

**The Mind-Independence Standard for Natural Kind Realism**
Laura Franklin-Hall, New York University

**Cross-Cultural Convergence and Mind-Independence**
David Ludwig, Vrije Universiteit Amsterdam

Symposium: Transforming Computation (Piedmont 4 (12th Floor))
Session Chair: Greg Lusk

**Code Is Fluid: How Computational Models Move and Adapt to New Settings and Applications**
Ann Johnson, Cornell University

**The Discovery and Justification of Mathematical Knowledge in the Light Of Modern Computational Methods**
Nicolas Fillion, Simon Fraser University

**Holism, Or the Degeneration of Modularity — A Methodological Challenge for Validation**
Johannes Lenhard, Bielefeld University, Germany

Roundtable: Science Studies and LGBTQ+ Activism Inside and Outside the Academy (Chastain I (6th Floor))
The session is part of the History of Science Society Program
Session Chair: Luis Campos

**Essential(ist) Tensions Between Science, LGBTQ Studies, and LGBTQ Activism**
Donald Opitz, DePaul University

**When the Historical is Personal: Queer Families and the Law**
Susan Rensing, University of Wisconsin–Oshkosh

**HSS and LGBT(Q) Issues: From New Orleans to Atlanta**
Garland Allen, Washington University in St. Louis

**Queering Scientific Journalism: Some Reflections on How to Bring Queer/Cuir History into a Larger Audience**
Fabrizzio McManus, Universidad Nacional Autónoma de México

**Commentator:** Luis Campos (University of New Mexico)

Representation and Translation 2: Representation, from Minds to Worlds (Ansley 3 (14th floor))
The session is part of the Society for Literature, Science, and the Arts Program
Session Chair: Jay Labinger

**Code, Labor, and Translation in Early Computing**
Brian Lennon, Pennsylvania State University

**A More than Wild Surmise: Representing Hyperobjects**
Ellen McManus, Dominican University

**Representing Molecular Biology: Bringing the Scientist Back In**
Steven J. Oscherwitz

**Reading Thoughts and Writing Novels Using EEG Signals**
Frances Lucretia Van Scoy, West Virginia University, Dana Coester, West Virginia University
### 3:30PM – 3:45PM
**Coffee Break** (Chastain Foyer, Augusta Foyer, & 12th Floor)

### 3:45PM – 5:15PM
**SESSION 10**

#### Contributed Papers: Interdisciplinarity (Chastain C (6th Floor))
Session Chair: Donal Khosrowi

- *Who is Afraid of Scientific Imperialism?*
  Roberto Fumagalli, University of Bayreuth; London School of Economics; University of Pennsylvania

  S. Andrew Inkpen, University of Pittsburgh; C. Tyler DesRoches, Arizona State University

#### Contributed Papers: Evolutionary Biology II (Chastain D (6th Floor))
Session Chair: Lynn Chiu

- *Ecological Bottlenecks: Microbial Multicellularity as a Response to Environmental Stress*
  Makmiller Pedroso, Towson University

- *Imprecise Probability and Biological Fitness*
  Marshall Abrams, University of Alabama at Birmingham

- *Genealogy and Evolvability*
  Celso Antonio Alves Neto, Leibniz Universitat Hannover

#### Contributed Papers: Scientific Realism (Chastain E (6th Floor))
Session Chair: Anjan Chakravartty

- *Eight Myths About Scientific Realism*
  Alberto Cordero, CUNY Graduate Center & Queens College CUNY

- *A General Case for Scientific Realism... And for Anti-Realism*
  Ioannis Votsis, New College of the Humanities; Jamie Rumbelow, New College of the Humanities

- *No Escape for No Miracles: The No-Miracles Argument and the Base-Rate Fallacy*
  Amanda Bryant, CUNY Graduate Center
Contributed Papers: Bayesian Inference (Chastain J (6th Floor))
Session Chair: Susan Vineberg

Bayesian Statistical Inference and Approximate Truth
Olav Benjamin Vassend, University of Wisconsin – Madison

Hypothesis Competition Beyond Mutual Exclusivity
Jonah Schupbach, University of Utah; David Glass, University of Ulster

Pragmatism and Objectivity in Subjective Bayesianism
Colin Elliot, University of Tilburg

Contributed Papers: Classical Physics (Augusta F (7th Floor))
Session Chair: Anthony Ferrucci

Interventionist Causation in Thermodynamics
Karen Zwier, Drake University

Equivalent and Inequivalent Formulations of Classical Mechanics
Thomas Barrett, Princeton University

Regularity Comparativism About Mass in Newtonian Gravity
Niels Martens, University of Oxford

Contributed Papers: Mathematics (Augusta G (7th Floor))
Session Chair: Nicolas Fillion

The ‘Miracle’ of Applicability? The Curious Case of the Simple Harmonic Oscillator
Sorin Bangu, Univ. of Bergen

On the Differential Calculus and Mathematical Constraints
Noah Stemeroff; Charles Dyer

Poincare on the Foundation of Geometry in the Understanding
Jeremy Shipley, McHenry County College

Contributed Papers: Perspectives on Diversity (Piedmont 1 (12th Floor))
Session Chair: Eleanor Gilmore-Szott

The Synergy of Biases and Stereotype Threats in Science and Philosophy
Anna Leuschner, Leibniz Universität Hannover

Challenging the Dichotomy of Cognitive and Non-Cognitive Values: Feminist Values and Evolutionary Psychology
Silvia Ivani, Tilburg University; Jan Sprenger, Tilburg University

Two Roads Diverged in a Wood: Indifference to the Difference Between ‘Diversity’ and ‘Heterogeneity’ Should Be Resisted on Epistemic and Moral Grounds
Ayelet Shavit, Tel Hai College; Anat Kolumbus, Tel Hai College; Aaron M. Ellison, Harvard University

Contributed Papers: Metaphysics (Piedmont 2 (12th Floor))
Session Chair: Richard Creath

A Tale of Two Pluralism: Why Science Needs Metaphysics
Jamie Shaw, Western University

In Defense of the Actual Metaphysics of Race
Quayshawn Spencer, University of Pennsylvania

From Macroscopic to Microscopic: The Curious Case of the Mole
J.E. Wolff, The University of Hong Kong
Contributed Papers: Natural Kinds: The Case of Species (Piedmont 3 (12th Floor))
Session Chair: Phillip Honenberger

Eliminative Pluralism: The Case of Species
Matthew Barker

Scientific Realism and Historical Essences: The Case of Species
Marion Godman, Helsinki University

Aristotelian Species Pluralism
Justin Bzovy, Western University

Contributed Papers: Psychometrics (Piedmont 4 (12th Floor))
Session Chair: Harvey Siegel

RTM and Psychometrics as Partial Approaches To Measurement
Elina Vessonen, University of Cambridge

Disambiguating Latent Variables
S. Brian Hood, University of West Florida

5:30PM – 7:00PM PSA Awards Ceremony and Presidential Address
(Peachtree D (8th Floor))

Presentation of Awards

2014 PSA Recent Ph.D. Essay Award
Mathieu Charbonneau

2015 PSA Recent Ph.D. Essay Award
Leif Hancox-Li
John Matthewson

2016 PSA Graduate Student Essay Award
John Dougherty

2016 PSA Women’s Caucus Prize Symposium
“Animal Cognition and Animal Welfare”
Jonathan Birch, Marta Halina, Kristin Andrews, Colin Allen, and Lori Marino

2016 PSA Women’s Caucus Prize in Feminist Philosophy of Science
Victoria Pitts-Taylor

2016 Hempel Award
Brian Skyrms

(See pages 53–55 to read more about the reward recipients.)
Presidential Address

Introduction: Helen Longino, Stanford University

Presidential Address: C. Kenneth Waters, University of Calgary

7:00PM – 8:00PM PSA Closing Reception

Hors d’oeuvres. This is a ticketed event.

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Sunday November 6, 2016

8:00AM – 12:00PM  Quiet Room (Savannah E (9th Floor))

8:00AM – 10:30AM Book Exhibit (Augusta Foyer & Augusta A & H (7th Floor))

9:00AM – 11:00AM  **Darwin: Organisms, Principles, Texts, Archives**
(Chastain D (6th Floor))

The session is part of the History of Science Society Program

Session Chair: Khadija Fouad

*The World as Archive: Charles Darwin’s Conception of the ‘Book of Nature’*
Greg Priest, Stanford University

*A Reappraisal of Darwin’s Engagement with the Work of William Sharp Macleay*
Aaron Novick, University of Pittsburgh

*‘See Mr. Darwin’s Journal, in the Colonial Library’: An Education in Coral Geology for Mid-Victorian Era Readers*
Anne Ricculli, Drew University

*Cunning, Killer Orchids*
Jim Endersby, University of Sussex

10:15AM – 11:45AM  **The Truth of Fictions** (Ansley 3 (14th Floor))

The session is part of the Society for Literature, Science, and the Arts Program

Session Chair: Alfred Nordmann

*Emerson’s Tribunal of Truth: Fiction and the Relational Real*
Laura Dassow Walls, University of Notre Dame

*Fictions and Explanatory Failure*
Gordon M. Purves, Sacred Heart University

*Imagination Extended and Embedded: An Artifactual Account of Models and Fiction*
Tarja Knuuttila, University of South Carolina, University of Helsinki

*Representation, Simulation and Acting: Henry James’s “The Real Thing” and what is Right with Wrong Assumptions*
Michael G. Festl, Universitat St. Gallen
The Governing Board of the Philosophy of Science Association is pleased to announce that the recipient of the Carl Gustav Hempel Award for 2016 is Brian Skyrms. The Hempel Award was established in 2012 to recognize lifetime scholarly achievement in the philosophy of science, and to acknowledge the example of scholarly excellence and collegiality set by Professor Hempel (1905–1997). Brian Skyrms is Distinguished Professor of Logic and Philosophy of Science at the University of California, Irvine, and Professor of Philosophy at Stanford University. He is the third recipient of the Hempel Award.

Skyrms has been a leader for many decades in the epistemological side of philosophy of science, and is a particularly central figure in debates about induction, Bayesianism, and subjective probability. His books in this area include Choice and Chance: An Introduction to Inductive Logic (four editions, 1966 to 2000), Pragmatics and Empiricism (1984), and The Dynamics of Rational Deliberation (1990), along with many classic articles. More recently Skyrms has done ground-breaking work on evolutionary models of social behavior, especially cooperative and communicative behaviors. His three elegant books in this area, Evolution of the Social Contract (1996), The Stag Hunt and the Evolution of Social Structure (2004), and Signals (2010) are already regarded as classics, and have initiated a large and exciting literature following his lead. With models that are always as simple as they could possibly be, but no simpler, Skyrms has changed the direction of discussions of meaning and information, and explored rich and unexpected mappings between evolutionary theory and decision theory.

Skyrms has written a total of six sole-authored books, co-authored one with Persi Diaconis, published two collections of papers, and edited or co-edited another seven books. He is a member of the National Academy of Sciences, a winner of the 1999 Lakatos Award, and was President of the PSA (2004-2006) and the Pacific Division of the American Philosophical Association (2000-2001). Lectures include the 2014 David K. Lewis Lecture, Princeton University, the 2013 Wesley Salmon Lecture, University of Pittsburgh, the 2010 Ernest Nagel Lectures Carnegie-Mellon University, the 2008 Jack Smart Lecture Australian National University, the 2006 Hans Reichenbach Lecture, UCLA, and the 2005 Ludwig Wittgenstein Lectures at the University of Bayreuth. He has also done a huge amount of work building the successful Logic and Philosophy of Science Department at UC Irvine, and has advised numerous students who are now teaching in leading departments around the world and who continue the Skyrms tradition of rigorous and creative philosophy of science.
2016 PSA Women’s Caucus Prize in Feminist Philosophy of Science

Victoria Pitts-Taylor’s 2016 book, *The Brain’s Body: Neuroscience and Corporeal Politics* (Duke University Press) draws on feminist philosophy, feminist science studies, queer theory, and disability studies to uncover and analyze key epistemological and ontological assumptions in contemporary neuroscience research. The book uses these tools to explore and critique neuroscientific phenomena and the way they are understood in neuroscientific practice. In addition to critique, the author argues for the usefulness of an alternative conception of the brain as plastic, social, and embodied. This book contributes to a growing literature of feminist philosophy of science and science studies engaging directly with the specifics of current scientific practice both critically and constructively.

2016 Women’s Caucus Prize Symposium
“Animal Cognition and Animal Welfare”

The 2016 PSA Women’s Caucus Prize Symposium, organized by Jonathan Birch, was selected from a very competitive pool of applicants for its exceptional quality and relevance to our membership. “Animal Cognition and Animal Welfare” brings together philosophers working in different areas — philosophy of cognitive science, philosophy of biology, and philosophy of animal cognition — with a distinguished neuroscientist and animal rights activist. The symposium includes three women, including one senior philosopher (Kristin Andrews), one junior philosopher (Marta Halina), and one neuroscientist (Lori Marino). The proposed talks respond to work by female philosophers, especially Heather Douglas’s work on inductive risk. The discussion of inductive risk in this context also, we believe, holds special interest to the membership of the Women’s Caucus as this is an area that has recently seen a great deal of productive work by female philosophers of science.

Participants:

Jonathan Birch, Marta Halina, Kristin Andrews, Colin Allen, and Lori Marino
2014 PSA Recent Ph.D. Essay Award


2015 PSA Recent Ph.D. Essay Award


2016 PSA Graduate Student Essay Award

John Dougherty, University of California, San Diego for “Equality and Separability in Gauge Theories”.

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