

HISTORY OF SCIENCE SOCIETY PHILOSOPHY OF SCIENCE ASSOCIATION



NOVEMBER 6-9, 2014
CHICAGO, ILLINOIS

Cover Design done using www.tagxedo.com. The titles of the papers on the HSS and PSA program were used to create the word cloud. The words 'science,' 'scientific,' 'history,' and 'philosophy' were removed from the word list. The design was inspired by a word cloud of the HSS session titles created by Henry Cowles (Yale University).

HISTORY OF SCIENCE SOCIETY
PHILOSOPHY OF SCIENCE ASSOCIATION

6-9 November 2014

Chicago, Illinois

TABLE OF CONTENTS

HSS Acknowledgements 2
HSS Officers and Program Chairs..... 4
Thank You to Volunteers 5
Westin Michigan Avenue Layout..... 6
Book Exhibit Layout 8
Chicago Local Guide 10
HSS Program 14
HSS Business Meeting Agenda..... 56
PSA Acknowledgements 57
PSA Governing Board and Program Committee..... 59
PSA Program 60
2014 PSA Prizes 95
Advertising 98
Index 112

HSS ACKNOWLEDGMENTS

Welcome to Chicago and the 2014 HSS and PSA conferences! Seeing as in almost every post-meeting survey, Chicago ranked among the top choices for a future conference site, we are delighted to return to the Windy City. The city's hotels are typically too expensive for our groups but thanks to the recession of 2008, we were able to negotiate an agreement that made rooms much more affordable (coffee, on the other hand, is another matter). I would like to express my gratitude to the many volunteers and workers who have contributed to the 2014 conferences. Their labor could be measured in days.

Our program co-chairs, Deborah Coen (Barnard College, Columbia University) and Matt Stanley (Gallatin School, New York University) provided the heavy lifting for the 2014 program, sorting through some 466 paper and poster proposals to create more than 90 sessions. When one considers that they must work with whatever comes over the transom, that they are charged with trying to avoid any overlap on themes and periods, that many people cannot present on x day for y reason, and that there is a no-duplication rule in effect, then you can appreciate the enormity of the puzzle that they pieced together. Although we received more proposals than we could accommodate, we believe that the 2014 program offers something for everyone. Thank you Debbie and Matt!

Our Local Arrangements Committee, chaired by Ken Alder and Bob Richards, helped in more ways than can be counted: from scouting potential reception sites, to securing graduate student help, and importantly, to raising funds to offset costs. They were bricks in the process and were joined by Tania Munz and Nick Huggett in their efforts. Nick not only carried the torch for PSA interests on the committee, he offered encyclopedic knowledge of the city, along with writing a “things to do and places to eat” essay that will benefit us all. Please pass along your thanks when you see these folks.

Our Committee on Meetings and Programs (CoMP), ably and patiently chaired by Rachel Ankeny, continued to work behind the scenes. As chair, Rachel provided ongoing support and exchanged countless email messages on the meeting. CoMP's judgment shapes the meeting, and I am grateful for their help. My son, Mason, created the Web registration interface back in 2006 -- all pro bono -- and he has his father's deep appreciation. All of these volunteers make the conference possible -- the Executive Office alone could not possibly shoulder the entire load.

The annual meeting functions because of the dedicated efforts of the HSS office staff, efforts that begin years before the actual conference: Greg Macklem, our Society Coordinator, continued to work behind the curtain on a mind-numbing array of details, from coffee breaks, to visa letters, to sending reminders to folks who can remember what Boyle ate for breakfast in 1688 but somehow forgot that they registered for the meeting last month. The fact that he replies to all queries with good humor and wit keeps everyone in the Executive Office within the narrow definition of what passes for sanity. Jessica Baron, our Director of Media and Engagement liaised with science writers, wrote press releases, and Tweeted and Facebooked multiple aspects of the conference, giving us a presence in the digital universe that is valuable beyond measure. Our Notre Dame students, Mousa Mohammadian and Janice Gunther, assisted with everything from proofreading the program, to scrutinizing travel grants, to setting up the book exhibit, to organizing the prize committees, to arranging the tickets for various events. They all have

my deep and abiding thanks.

As mentioned above, meeting in a large city, although agreeable in its variety, offers challenges as regards costs. Those expenses include coffee costing \$140/gallon, i.e. \$9.33/cup, and a/v bids coming in at \$85,000, i.e. not a typo. It seems that rising conference expenses, like death and taxes, are certainties but, fortunately, expenses are just one part of the formula. Support from our friends help mitigate costs, and absent their generosity attendees would shoulder the true costs of the meeting, resulting in registration fees of several hundred dollars. I would like to recognize in particular the University of Notre Dame for its hosting of the Executive Office; Northwestern University's The Weinberg College of Arts and Science (Mark Ratner, dean), The Graduate School (Dwight McBride, dean), The Department of History (Ken Alder, chair), and especially the Science in Human Culture Program (Hellen Tilley, director); the Morris Fishbein Center for the History of Science and Medicine at the University of Chicago, and the National Science Foundation (for its support of travel grants for graduate students, independent scholars, and recent PhDs -- SES-1354351). A list of other supporters can be found on the back cover of the program. I appreciate, beyond words, their support.

Because this is a joint meeting with PSA, I would like to thank Jessica Pfeifer, PSA's Secretary/Treasurer for her help and collaboration these many long months. In our regular calls to each other, we covered topics that embraced the world of meeting space square footage, coffee prices, event timing, food, and thousands of other details. PSA is exceedingly fortunate that someone of her talent would be willing to give so much of her time to the conference. (And I am lucky because of her endlessly good nature.) Her (and our) efforts were made all the easier due to PSA's most cooperative program chair, Chris Smeenk, who handled the complexities and challenges of the conference with unmatched aplomb.

Finally, the HSS Executive Committee provided understanding, encouragement, and wisdom on all aspects of the meeting—they too, have my profound thanks. And I cannot forget you, the attendees, who make this all worthwhile. Your presence, your contributions, and your involvement create a mix that cannot be replicated. And if you are not a member of the HSS, please join us -- it is our members who make all of this possible.

Jay Malone
HSS Executive Director
13 October 2014

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I wish to thank our volunteers whose terms will end in 2014. Their time and effort are the reason that the HSS is able to recognize superlative scholarship, to hold an annual meeting, to publish the highest-quality scholarship, to maintain a web presence, to nurture scholarship, and to promote interest in the history of science. I offer my deep-felt thanks to each one.

- Jay Malone, HSS Executive Director

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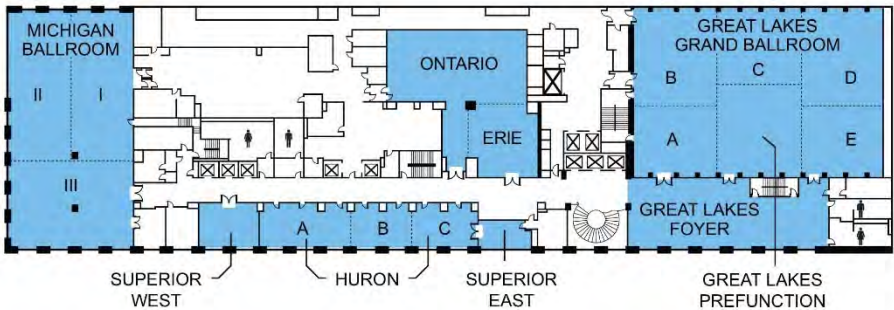
Westin Michigan Avenue Hotel

A few notes on the meeting space at the hotel:

- The registration desk will be in the Great Lakes Foyer.
- The childcare/nursing mothers room is Waveland, on the 5th floor.
- There are two banks of elevators in the hotel. We strongly recommend using the western set (near the hotel restaurant) to access the 16th level and the eastern set (near the concierge desk and Starbucks) to access the 5th level rooms.
- The meeting rooms in the Westin Chicago Avenue are named such that rooms on the same level have the same theme.

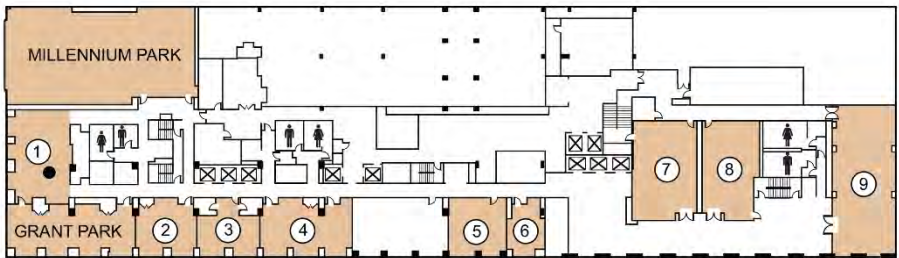
2nd Level – Great Lakes

The meeting rooms on the 2nd level extend the full length of the hotel.



3rd Level – Chicago Parks

The meeting rooms on the 3rd level extend the full length of the hotel.



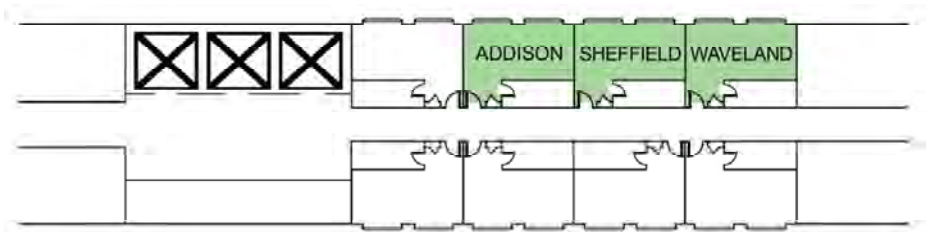
1. GRANT PARK FOYER
2. GARFIELD PARK
3. PARKS BOARDROOM

4. MARQUETTE PARK
5. JACKSON PARK
6. BURNHAM PARK

7. WASHINGTON PARK I
8. WASHINGTON PARK II
9. LINCOLN PARK

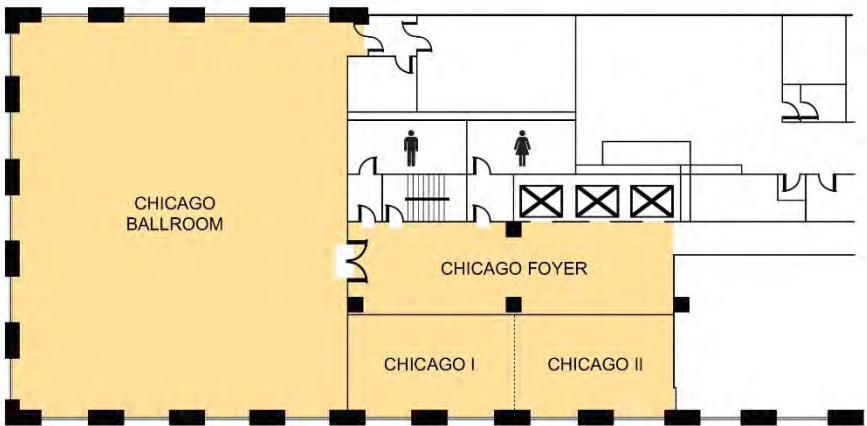
5th Level – Streets along Wrigley Field

The rooms on the 5th level are in the eastern section of the hotel.



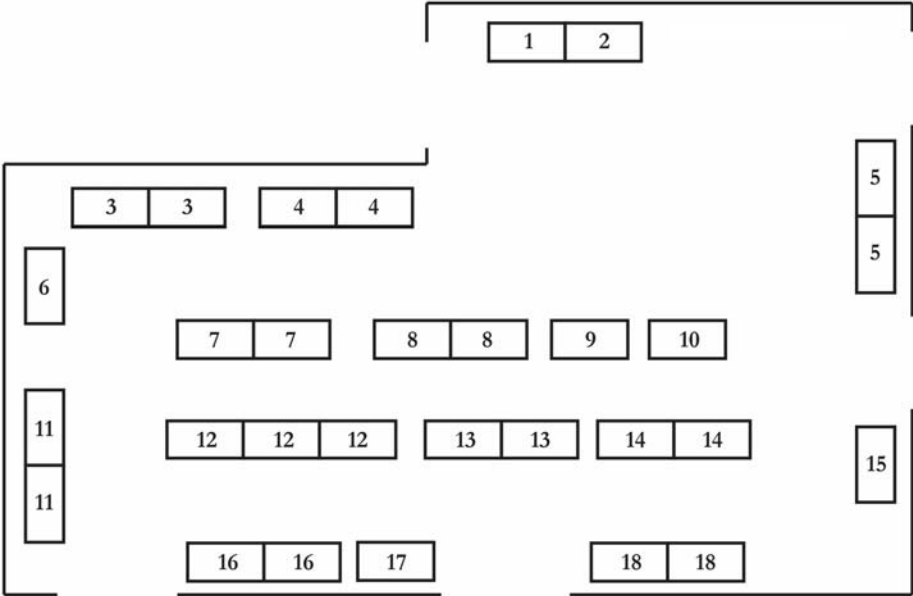
16th Level – Chicago Ballroom

The rooms on the 16th level are at the western end of the hotel.

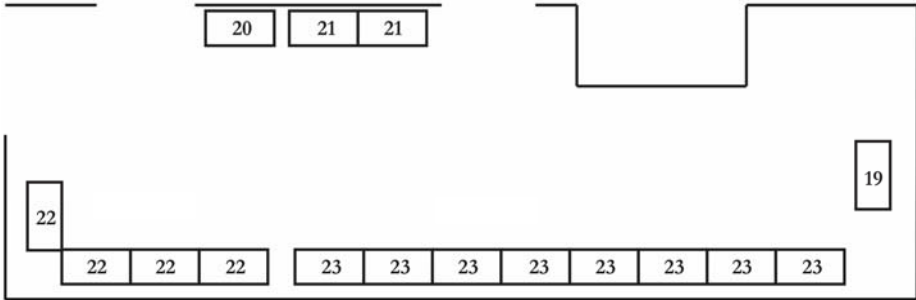


2014 BOOK EXHIBIT – GREAT LAKES BALLROOM A AND FOYER

NOTE: Drawings not to scale. The Great Lakes Ballroom is on the 2nd level.



Great Lakes Ballroom A and Prefunction Space



Great Lakes Ballroom Foyer

Listing by Table Number

1.....	Oxford University Press
2.....	Collective Book Exhibit
3.....	MIT Press
4.....	Ashgate
5.....	B & L Rootenberg Rare Books
6.....	Pickering & Chatto
7.....	Green Lion Press
8.....	Yale University Press
9.....	Palgrave Macmillan
10	University of Toronto Press
11	University of Alabama Press
12	Johns Hopkins University Press
13	Cambridge University Press
14	University of Pittsburgh Press
15	Chemical Heritage Foundation
16	Taylor & Francis
17	Routledge
18	Springer
19	ACLS Humanities E-Book
20	Elsevier
21	Brill
22	Scholar's Choice
23	University of Chicago Press

Listing by Exhibitor Name

ACLS Humanities E-Book.....	19
Ashgate.....	4
B & L Rootenberg Rare Books.....	5
Brill	21
Cambridge University Press	13
Chemical Heritage Foundation	15
Collective Book Exhibit.....	2
Elsevier.....	20
Green Lion Press	7
Johns Hopkins University Press	12
MIT Press	3
Oxford University Press	1
Palgrave Macmillan.....	9
Pickering & Chatto.....	6
Routledge.....	17
Scholar's Choice.....	22
Springer.....	18
Taylor & Francis	16
University of Alabama Press	11
University of Chicago Press	23
University of Pittsburgh Press	14
University of Toronto Press.....	10
Yale University Press.....	8

Local Guide – Chicago

This local guide was written by Nick Huggett. The HSS offers its thanks to Nick and the rest of our local arrangements team of Ken Alder, Bob Richards, and Tania Munz for their work on this year's conference. We are grateful for the many hours they have devoted to the 2014 HSS and PSA meetings.

Getting About

- Walk - Chicago is remarkably flat (though one of the few “hills” is the ramp up to and down from the Michigan Avenue Bridge over the Chicago River).
- Bike - If you don't bring your own, the extensive Divvy Bike system (<https://www.divvybikes.com>) gives unlimited biking (in 30 minute blocks) for a day for \$7.
- Taxi - Chicago taxis are very reasonable and plentiful downtown – if you are daring, download a rideshare app, such as Uber, and it's even cheaper (and perhaps easier if you are further from the center).
- CTA (Chicago Transit Authority) - <http://www.transitchicago.com>. Public transportation in Chicago is very useable. \$2.25 for a ride in cash (beware – no change is given), and multi day passes \$10 for one day or \$10 for three days (at some stores, or at the stations). There are many buses traveling along Michigan Ave., and the hotel is not far from the State and Chicago Red Line stop; both buses and station are wheelchair accessible. (In Chicago the lines are named for colors. Also be aware that the street name alone may not individuate a station: for instance the Chicago Avenue Red Line and Brown Line stations are distinct.) Unfortunately, the Blue line, which runs to O'Hare, does not come very close to the hotel.

Chicago is on a grid system: 0 N/S and 0 E/W is at Madison and State, in the Loop. In each compass direction the street numbers increase by exactly 400 for every half-mile: so, for instance, the hotel (at 909 N Michigan Ave.) is just over a mile north of Madison. Major streets (best for buses and taxis) are every half-mile (so multiples of 400).

Entertainment

From the Chicago Symphony Orchestra to Steppenwolf Theater, from B.L.U.E.S. Chicago to the famous improv theater Second City there's a lot to do if you take a night off from the meeting. The Chicago Reader (<http://www.chicagoreader.com>), Time Out Chicago (<http://www.timeout.com/chicago>), and NewCity (<http://newcity.com>) should cover what's on. Also, this year's conference coincides with the Chicago Humanities Festival, one of the largest such festivals in the world: <http://chicagohumanities.org/>.

What follows are a few subjective recommendations for eating and visiting, culled from various locals – though of course there are many other options.

STREETERVILLE, GOLD COAST AND MAGNIFICENT MILE

• Visiting

Museum of Contemporary Art - 220 E. Chicago Ave. (just around the corner from the hotel). The blockbuster show “David Bowie Is,” will be on during the meeting.

Oak Street Beach - Just north of the hotel on Michigan.

Shopping – Lots of it. Everywhere.

John Hancock Building - The observatory 360 Chicago has probably better views than the Willis Tower, but so does the Signature Lounge on the floor above, and a drink there is probably cheaper than admission to the observatory.

• Eating

\$ - In addition to the usual Starbucks, Corner Bakeries, Chipotles, etc., the following are quick and reasonably priced, in the general area of the hotel.

Foodlife - In the Water Tower Mall, at 835 N. Michigan. A quick and cheap(ish) place right by the hotel. Cafeteria-style, with a variety of options, including vegetarian (open 8:00-8:00 most days).

900 North Michigan Shops - 900 N. Michigan Ave. A bit fancier than a food court, but with several options from Freshii and Potbelly for take-out, to Thai and pizza sit-downs.

West Egg Café - 620 N. Fairbanks Ct. A popular, fancy diner (open 6:30-3:00 most days).

Dao Thai - 230 E. Ohio St. Good, convenient food (open 11:00-10:00 most days).

Epic Burger - 40 E. Pearson St. Craft burgers at slightly more than fast food prices (open 10:00-9:00 most days).

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Le Pain Quotidien - 10 E. Delaware Pl. European-style sandwiches, quiches, salads, and baked goods.

Eataly - 43 E. Ohio St. An Italian food court on steroids from Gelato to cheeses to a sit-down Mario Battali restaurant, there is something for everyone.

Oak Tree Restaurant and Bakery - 900 N. Michigan Ave. All-day breakfast and lunch (open 7:30-5:00, bakery open until 6pm).

Karyn's Cooked - 738 N. Wells St. A little bit further, but strictly vegan. (The sister restaurant, Karyn's on Green is a little further, but also recommended.)

Sayat-Nova - 157 E. Ohio St. Terrific food (Armenian – think Russian meets Mediterranean) and a wonderful, intimate atmosphere.

Slurping Turtle - 116 W. Hubbard St. Funky Japanese.

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Puck's Café – Wolfgang Puck's café inside the Museum of Contemporary Art. Closes with the museum (admission not needed), but excellent food and service in a stunning space.

Cicchetti - 671 N. St. Clair St. Trendy, very highly rated Italian restaurant. (Another excellent fine Italian restaurant nearby is Café Spaggia, at 980 N. Michigan Ave.)

Le Colonial - 937 N. Rush St. French Vietnamese fine dining, lovely atmosphere, good food. There are a number of superb restaurants in the same area.

LOOP (AND AROUND)

• Visiting

Millennium Park - 201 E. Randolph St. Mayor Daley's legacy project is a beautiful and popular park along Michigan Ave., well worth a walk around. Stop by the fountain, see the

Frank Gehry band shell, or take a picture with the Chicago skyline reflected in Anish Kapoor's Cloud Gate (affectionately known as "The Bean").

Art Institute of Chicago - 111 S. Michigan Ave. The Art Institute houses a world-class collection that any city would be proud of. Visitors are often especially amazed by the many major works from the nineteenth and twentieth centuries, but the collection also covers antiquity, and American and non-Western art. If you do one thing in Chicago, visit here.

Museum Campus - Michigan Ave. and Roosevelt Rd. The Field Museum, Adler Planetarium, and Shedd Aquarium are all located just north of Soldier Field (the Bears will be playing out of town the conference weekend). The 146 bus will take you there along Michigan Ave. from the hotel.

Architecture Tour - <http://www.architecture.org/tours>. Run by the Chicago Architecture Foundation, the boat tours along the Chicago River are an excellent and popular way to see some of the amazing buildings in the city – a museum of architecture since the great fire of 1871. It will still be running during the meeting. (If you make your own architecture walk, be sure to include Dearborn St. from Washington to Adams to see the monumental Picasso, Chagall, and Calder public works.)

• Eating

\$

Roti Mediterranean Grill - 33 N. Dearborn St. and 200 W. Randolph St. Very tasty and filling wraps.

NafNaf Grill - 309 W. Washington St. A Middle Eastern chain.

Native Foods - 218 S. Clarke St. A national vegan chain.

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Pastoral Artisan Cheese - 53 E. Lake St. 'Awesome' for lunch, great sandwiches: clever and fresh ingredients.

Caffe Bacci - 20 N. Michigan Ave, 2 N. LaSalle St and 231 S. LaSalle St. Fresh Italian cafeteria-style food.

Wildberry Pancakes and Café - 130 E. Randolph St. Good breakfast place.

Ceres Café - 141 W. Jackson Blvd. A dangerous happy hour and American food spot.

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Terzo Piano - 159 E. Monroe St. On the roof of the new Modern Wing on the Art Institute, the food and location are equally spectacular. Mostly for lunch, but well worth the (not so big) splurge – a good place to celebrate a successful symposium!

tesori - 65 E. Adams St. Classy and delicious Italian.

OTHER NEIGHBORHOODS

• Northwards Lakeview and Boystown

Lakeview - Other than the ebullient Boystown club and bar scene (3200-3600 N. Halsted St.), this neighborhood is a little more sedate and family oriented but has many great bars

and restaurants, without downtown prices. The Chicago Diner (3411 N. Halsted St.) is a busy and famous vegetarian restaurant (with another location in Logan Square). A fun kosher restaurant is Milt's Barbeque for the Perplexed (3411 Broadway). Also excellent is the long established Yoshi's (3257 N. Halsted St.), which serves Japanese-meets-French food (including vegetarian options). For drinks try Minibar (3341 N. Halsted St.) or Elixir (3452 N. Halsted St.). Take the Red Line to Belmont.

Andersonville - Another family and LGBT-friendly neighborhood, perhaps a little more youthful and edgy with lots of terrific places to eat in a very compact area: 5200-5600 N. Clark St. All very good are Reza's (5255 N. Clark St.) for Persian, Lalibela (5631 N. Ashland Ave.) for Ethiopian, Sunshine Cafe (5449 N. Clark St.) for homestyle Japanese, and Hamburger Mary's (5400 N. Clark St.). Beer enthusiasts should check out Hopleaf (5148 N. Clark St.), and Acre (5308 N. Clark St.); while for something stronger there are martinis at Marty's (1511 W. Balmoral Ave.). The area's Swedish heritage explains the Swedish-American Museum (5211 N. Clark St.), and Swedish Bakery (5348 N. Clark St.); less explicable, but excellent, is Vincent (1475 W. Balmoral Ave.), which serves American Bistro as well as Indonesian-Dutch food. Finally, in the area is the legendary Big Chicks (5024 N. Sheridan Rd.), Chicago Reader's best Gay Bar and best Lesbian Bar for 2014. Just two blocks east of Clark on Broadway are some of the city's best Vietnamese restaurants, especially the delicious and inexpensive Tank Noodle (4953 N. Broadway St.) for Pho and Ba Le for banh mi sandwiches on crusty French baguettes (5014 N. Broadway St., a Michelin Bib Gourmand pick) as well as the legendary Green Mill Jazz Club (4802 N. Broadway St.). Take the Red Line to Argyle or Berwyn.

Little India - A trip to Devon Ave. is worth it for authentic Indian food; you will be spoiled for choice. Unfortunately it is not conveniently reached by public transportation, and a bit of a way from downtown: but take a taxi to Devon Ave. and Western Ave. (6400 N and 2400 W).

• Westwards

Bucktown/Wicker Park - A buzzing neighborhood, with small galleries, bars, clubs, live music, and restaurants. The pole opposite of some of the fun dive bars, is the super-trendy mixology haven Violet Hour speakeasy (1520 N. Damen Ave.) if you can find it – the line after 7pm will help. Eat at Handle Bar (2311 W. North Ave.) for vegetarian food, or Trenchermen (2039 W. North Ave.) for American food in an ex-Turkish bathhouse. Irazu (1865 N. Milwaukee Ave.) is vegetarian-friendly Costa Rican café. And try Antique Taco (1360 N. Milwaukee Ave.) for tacos amidst antiques! On the way out west is Green Zebra (1460 W. Chicago Ave.), primarily vegetarian, and one of the best restaurants of any kind in the city. For Wicker Park take the Blue Line to Damen.

Logan Square - Reputedly the Williamsburg of the Midwest, a fun place to explore. Some interesting places to try are: D'Noche – Café con Leche before 4.30pm – (2710 N. Milwaukee Ave.) is a good Latin American restaurant. The wine bar Reno (2607 N. Milwaukee Ave.) serves all three meals (it's famous for Montreal-style bagels). Michelin starred Longman & Eagle (2657 N. Kedzie Ave.) is a highly rated whiskey bar with rich and fancy pub food. Cafe Lula (2537 N. Kedzie Ave.) was one of the first places in Logan Square's "renewal" and is everyone's favorite for spectacular brunch as well as lunch and dinner. The Whistler (2421 N. Milwaukee Ave.) is a hole in the wall, a quiet and relaxed speakeasy, with amazing cocktails. To get there take the Blue Line.

HISTORY OF SCIENCE SOCIETY MEETING PROGRAM

November 6 – 9, 2014

Chicago, Illinois

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 Twitter feed (@hssonline), using hashtag #hsspsa14.

Sessions will be held on four floors of the hotel. The session listings below include the level with the room name. The rooms are named with a common theme for each floor:

2nd level – The Great Lakes

3rd Level – Parks in Chicago

5th Level – Streets bordering Wrigley Field

16th Level – Chicago Ballroom

Fret not if your session is in one of the Wrigley Field rooms. Wrigley Field has proven to be quite kind to visitors for more than 100 years.

A note on the use of social media: This year the HSS will again take full advantage of all that social media (blogging, Twitter, Facebook, etc.) has to offer. That means you may see audience members on their mobile devices during talks. We want to encourage this kind of digital engagement among our members, so please keep in mind that if you see someone on their mobile device, they may simply be sending out messages about the conference to a wider audience. For those using social media during conference events, please be aware of your surroundings and keep it positive!

Childcare/Nursing Mothers Room: Waveland, on the 5th level, 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.

The hours for the book exhibit and registration desk are as follows:

Registration Desk

Thursday, 10:00 AM – 6:00 PM

Great Lakes Ballroom Foyer

Friday, 8:00 AM – 5:00 PM

Outside Superior East

Saturday, 8:00 AM – 5:00 PM

Outside Superior East

Sunday, 8:00 – 12:00 PM

Outside Superior East

Book Exhibit

Thursday, 6:30 PM – 8:45 PM

Great Lakes Ballroom A and Foyer

Friday, 8:00 AM – 5:00 PM

Great Lakes Ballroom A and Foyer

Saturday, 8:00 AM – 5:00 PM

Great Lakes Ballroom A and Foyer

Sunday, 8:00 AM – 11:00 AM

Great Lakes Ballroom and Foyer

THURSDAY NOVEMBER 6

12:00 PM – 3:30 PM

HSS Council Meeting

Lincoln Park (Level 3)

1:30 PM – 3:00 PM

Calibrating Self and Society in the Modern Human Sciences

Washington Park I (Level 3)

Chair: Mary S. Morgan (London School of Economics)

- “Tracking the Nineteenth-Century Self: Self-Monitoring and Phrenology in the U.S. and the Netherlands,” Fenneke Sysling (Utrecht University)
- “Mental Testing in Russian Child Science, 1901–1936,” Katya Mishuris (University of Michigan)
- “Making Flavor Objective: Tasting Panels, Sensory Science, and Flavor Research, 1945–1977,” Nadia Berenstein (University of Pennsylvania)
- “Intellectual Origins of the Quantification of American Sociology: The Case of Franklin H. Giddings,” Taku Iwatsuki (University of Pittsburgh)

Capturing Distance, Documenting Travel: Film, Photography, and Expeditionary Science

Michigan Ballroom I (Level 2)

Chair and Commentator: Daniela Bleichmar (University of Southern California)

Organizer: Lukas Rieppel (Brown University)

- “A Film Never Made: History, Science, and Memory in Liberia,” Gregg Mitman (University of Wisconsin)
- “‘Feeling Dear Old Egypt’: Affect and the Politics of Knowledge in the Archaeological Photographs of James Henry Breasted,” Elizabeth Wolfson (Brown University)
- “Locating the Central Asiatic Expedition: Science, Business, and Foreign Intelligence,” Lukas Rieppel (Brown University)

“The Center of Gravity of Mathematics Has Moved More Definitely Toward America”: The Mathematical Sciences in America, 1930–1950

Huron A (Level 2)

This session is sponsored by the Forum for the History of the Mathematical Sciences.

Chair: Albert Lewis (Educational Advancement Foundation)

Organizer: Karen Parshall (University of Virginia)

- “Celebrating the American Mathematical Endeavor: The Semicentennial of the American Mathematical Society, 1938,” Karen Parshall (University of Virginia)
- “Cultivating Mathematics: Emigré Mathematicians and New York University’s Graduate Department of Mathematics,” Brittany Shields (University of Pennsylvania)
- “From Vienna to New York: Abraham Wald’s Statistical Research and the American Mathematical Statistics Community,” Patti Hunter (Westmont College)
- “Creating a Life: Emil Artin in America,” Della Dumbaugh (University of Richmond)

Histories of Evolutionary Thought between Science and Philosophy

Great Lakes D (Level 2)

Chair: Sabetai Unguru (University of Tel-Aviv)

- “Charles Darwin’s Theory of Moral Sentiments: What Darwin Really Borrowed from Adam Smith,” Greg Priest (Stanford University)
- “William Whewell, Historical Scientist,” Aleta Quinn (University of Pittsburgh)
- “Weismannism Comes to America: Pragmatism and Evolution in the 1890s,” Trevor Pearce (University of North Carolina at Charlotte)
- “Bergsonian Science: Creative Evolution in the Twentieth Century,” Peter Collopy (University of Pennsylvania)

History of the History of Science in the U.S., 1940–1976—The Golden Age?

Millennium Park (Level 3)

Chair: Toby Appel (Yale University)

Organizer: Margaret Rossiter (Cornell University)

Chair: Joy Harvey (Independent Scholar)

- “George Sarton and Alexandre Koyré: Two Messengers of the History of Science,” Elise Aurières (University of Paris I, Pantheon-Sorbonne)
- “A Short History of the Yale Department of the History of Science and Medicine, 1960–77,” Margaret Rossiter (Cornell University)
- “Far from rejecting Tom?: Harvard and Thomas S. Kuhn, 1956–1976,” Joy Harvey (Independent Scholar)

Innovations in Animal Husbandry and Livestock Breeding and the Formation of New Forms of Expertise

Garfield Park (Level 3)

Chair: Bert Theunissen (Utrecht University)

Organizers: Jesper Oldenburger and Steven van der Laan (Utrecht University)

- “Fighting Salmonella: Struggles between Public Health and Agriculture in the Netherlands (1959–1978),” Floor Haalboom (University Medical Center Utrecht)
- “Artificial Fertilization in the Life Sciences of the 18th Century,” Barbara Orland (University of Basel)

- “Artificial Insemination in Dutch Pig Breeding: A Hard-Won Success,” Steven van der Laan (Utrecht University)
- “Sheep and Artificial Insemination: A Failure to Innovate,” Jesper Oldenburger (Utrecht University)

Paracelsus and His Readers: Alchemy, Gender Identity, and Imagination

Great Lakes E (Level 2)

Chair and Organizer: Jole Shackelford (University of Minnesota)

- “Paracelsus Was a Transmutational Alchemist,” Andrew Sparling (Independent Scholar)
- “Toxites as Paracelsian Advocate,” Chad Gunnoe (Aquinas College)
- “Syphilis and Imagination in Paracelsus’s Theory of Transplantation,” Hiro Hirai (Radboud University Nijmegen)
- “Sex Differentiation in the Later Works of Paracelsus as Precursors to Psychological Theories of Sexuality and Gender,” Amy Cislo (Washington University)

Scientific Objects and the Objects of Science

Marquette Park (Level 3)

Chair: Erica O’Neil (Arizona State University)

Organizers: Kate MacCord and Paige Madison (Arizona State University)

- “A Natural History of the Enamel Knot,” Kate MacCord (Arizona State University)
- “The Many Lives of Mosquito Nets: History of a Mundane Public Health Technology,” Kirsten Moore (Johns Hopkins Medical Institutions)
- “The Meandering Paths of the Feldhofer and the Gibraltar Neanderthals,” Paige Madison (Arizona State University)
- “From Browne to Andon: Building the Biography of the Jellyfish Aquarium,” Samantha Muka (University of Pennsylvania)

Trans-Atlantic Conduits: Circulating Scientific Knowledge in Early Modern Empires

Ontario (Level 2)

Chair and Commentator: Neil Safier (John Carter Brown Library)

Organizer: Marcelo Aranda (Stanford University)

- “Translating Empiricism: Spanish Books, Protestant English Translations, and the Invisible Early Modern Science of the Atlantic World,” Antonio Barrera-Osorio (Colgate University)
- “Fruit of the Ignatian Tree: Jesuits and their Students in the Circulation of Mathematical Knowledge in the late Seventeenth Century Spanish Empire,” Marcelo Aranda (Stanford University)
- “A Global Laboratory: Studies of Pandemic Diseases in the 1800s,” Julia Mansfield (Stanford University)

3:00 PM – 3:15 PM

Coffee Break

Great Lakes Ballroom Foyer (Level 2)

3:15 PM – 5:15 PM

Amerindian Knowledge and Science during the Long Enlightenment

Huron A (Level 2)

Chair and Commentator: William Eamon (New Mexico State University)

Organizer: Marcy Norton (George Washington University)

- “Mestisaje and The Royal Society,” Marcy Norton (George Washington University)
- “Beyond Erasure: Pehr Kalm and Indigenous Knowledge in Eighteenth-Century North America,” Christopher Parsons (Northeastern University)
- “Instructions in Independence: Amerindian Languages and National Science in the Early United States,” Cameron Strang (University of Nevada, Reno)

Contingency in Early Modern Science and Natural Philosophy

Millennium Park (Level 3)

Chair and Commentator: Matteo Valleriani (Max Planck Institute for the History of Science)

Organizer: Pietro Daniel Omodeo (Max Planck Institute for the History of Science)

- “Secundum quid and Determined Necessity in Scholastic and Early Modern Mechanics,” Pietro Daniel Omodeo (Max Planck Institute for the History of Science)
- “Contingency and Laws of Nature in Descartes’s Physics,” Rodolfo Garau (Max Planck Institute for the History of Science)
- “Kepler on Contingency and Matter,” Jonathan Regier (Université Paris 7 – Diderot)
- “Contingency in the Universe of Precision,” Ofer Gal (University of Sydney)

Economies of Nature: Accounting for Silk, Coal, and Filth

Great Lakes E (Level 2)

Chair: Lissa Roberts (University of Twente)

Commentator: Anya Zilberstein (Concordia University)

Organizer: Fredrik Albritton Jonsson (University of Chicago)

- “Circulating Filth: Chemical Accountancy and Waste Management in the Eighteenth-Century Dutch Republic,” Joppe van Driel (University of Twente)
- “Coal Futures 1789–1884,” Fredrik Albritton Jonsson (University of Chicago)
- “Coining Foliage into Gold: Genres of Scientific Storytelling and Mulberry Bubble, 1838–1839,” Emily Pawley (Dickinson College)

Einstein and the Relation between Physics and Mathematics

Michigan Ballroom I (Level 2)

Chair: Diana Buchwald (Einstein Papers Project, California Institute of Technology)

Organizers: Michel Janssen (University of Minnesota) and Christoph Lehner (Max Planck Institute for the History of Science)

- “Einstein as the Greatest of the Nineteenth Century Physicists,” John Norton (University of Pittsburgh)
- “Einstein’s 1913 Vienna Lecture: Modeling Gravitational Theory on Electrodynamics,” Michel Janssen (University of Minnesota) and Jürgen Renn (Max Planck Institute for the History of Science)
- “A Virtuous Theorist’s Theoretical Virtues: Einstein on Physics vs. Mathematics and Experience vs. Unification,” Jeroen van Dongen (Utrecht University)
- “Einstein’s Realism between Mathematics and Physics,” Christoph Lehner (Max Planck Institute for the History of Science)

Episodes in the History of Atmospheric Science

Marquette Park (Level 3)

Chair: Nancy Slack (The Sage Colleges)

- “Kites: The Rise and Fall of a Scientific Object,” David Teira and Juan M. Suay (Universidad Nacional de Educación a Distancia, Madrid)
- “A Ghost-Catching Weather Bureau: Psychical Research and Meteorology in Nineteenth-Century America,” Alicia Puglionesi (Johns Hopkins University)
- “Geographies and Policies of the Arctic Atmosphere: The Emergence of a Research Specialization in Canada,” Matthew Wallace (Université du Québec, Montréal)
- “Successfully Navigating Scientific Borderlands and Subcultures: Astronomer Walter Orr Roberts, The Sun-Earth Connection and the National Center of Atmospheric Research,” Joe Bassi (Embry-Riddle Aeronautical University)

Forum for the History of the Chemical Sciences Distinguished Lecture and Business Meeting

Ontario (Level 2)

- “If you can spray phlogiston, is it real?” Hasok Chang, University of Cambridge
- Award of the 2014 Partington Prize (4:45)
- Business Meeting for the Forum for the History of the Chemical Sciences

Methodology across the Life Sciences

Superior East (Level 2)

Sponsored by the Philosophy of Science Association

Chair: Richard Burian (Virginia Tech)

- “Atrazine Research and the Criteria of Characterized Adequacy,” Jack Powers (University of Minnesota)

- “Experiment and Animal Minds: Why Statistical Choices Matter,” Irina Meketa (Boston University)
- “You Can't Go Home Again - or Can You? 'Replication' Indeterminacy and 'Location' Incommensurability in Three Biological Re-Surveys,” Ayelet Shavit (Tel Hai College)

A Play of Scales? Modes of Generating Modern Biomedical Knowledge

Grant Park (Level 3)

Chair: Samantha Muka (University of Pennsylvania)

Organizers: Dmitriy Myelnikov and Kathryn Schoefert (University of Cambridge)

- “‘Small Scale Purifications Are No Longer Practical’: Scaling Up Retrovirus Research in the 1970s,” Robin Scheffler (Yale University)
- “‘A Boutique Operation’: Making Transgenic Mice in the 1980s,” Dmitriy Myelnikov (University of Cambridge)
- “‘Human Beings Aren’t Rabbits’ (Grünthal, 1966): Scales at Play in Non-Therapeutic Pharmaceutical Trials c.1940 – 1970,” Kathryn Schoefert (University of Cambridge)

Science and the Technocratic Making of Modern China

Great Lakes D (Level 2)

Chair and Commentator: Eugenia Lean (Columbia University)

Organizer: Shellen Wu (University of Tennessee, Knoxville)

- “The Social Network: Standardizing Scientific Terminology between Non-State and State Actors in Republican China,” David Luesink (University of Pittsburgh)
- “Electricity and China’s Military-Industrial Complex, 1937–1957,” Yingjia Tan (Yale University)
- “Mapping the Geography of Modern China,” Shellen Wu (University of Tennessee)

Women’s Resistance to and Appropriation of Eugenic Social Reforms

Washington Park I (Level 3)

Chair: Sally Gregory Kohlstedt (University of Minnesota)

Organizer: Katrina Jirik (University of Minnesota)

- “From Chicago to Shutesbury Mass: Isabelle Kendig’s Conflict with Charles Davenport,” Ben Harris (University of New Hampshire)
- “‘Doctor-less Birth Control’: Bringing Birth Control to California’s Migrant Workers, 1939–1942,” Kelly O’Reilly (Vanderbilt University)
- “‘The Eugenics of the Present Has Too Little of the Feminine in It’: Gendered Debates about Eugenic Marriage in the Progressive Era U.S.,” Susan Rensing (University of Wisconsin-Oshkosh)
- “The Best Interest of the Child: Choosing Placement in an Institution for the Feeble-Minded in Early Twentieth Century America,” Katrina Jirik (University of Minnesota)

5:30 PM – 7:00 PM

Plenary Session: Bounded Rationality and the History of Science

Chicago Ballroom (Level 16)

Chair and Commentator: Lorraine Daston, (Max Planck Institute for the History of Science)

Organizer: Colin Webster (University of California, Davis)

- “Looking for Limits: Configuring Minds, Mathematics, and Machines in the Mid-Twentieth Century,” Stephanie Dick (Harvard University)
- “Hypothesis Bound: Trial and Error in the Nineteenth Century,” Henry Cowles (Yale University)
- “Financial Bubbles and the Boundaries of Economic Rationality in the Past,” William Deringer (Columbia University)
- “Heuristic Medicine: the Methodists and Galen,” Colin Webster (University of California, Davis)

7:00 PM – 8:30 PM

Opening Reception

Great Lakes Ballroom and Foyer (Level 2)

Cash bar and light hors d'oeuvres

Social Engagement Activities of the Joint Caucus for Socially Engaged Philosophers and Historians of Science (JCSEPHS)

Great Lakes Ballroom (Level 2)

Organized by the Joint Caucus for Socially Engaged Philosophers and Historians of Science

Conveners: Sandra Mitchell (University of Pittsburgh)
Jane Maienschein (Arizona State University)
Rachel Ankeny (University of Adelaide)
Dawn Digrius (The California State University)
Julia Bursten (University of Pittsburgh)

- “Podcasts,” Carla Nappi (University of British Columbia)
- “Science Museums and Exhibitions,” Kate MacCord and Erica O’Neil (Arizona State University)
- “Engaging Federal Agencies and Committees,” Lee Zwanziger (U.S. Food and Drug Administration)
- “Instant HPS: Short Videos for a General Audience,” Sandy Mitchell, John Norton, and Trey Boone (University of Pittsburgh)
- “Using Social Media like Facebook and Twitter to Get Out the Message,” Paige Madison and Steve Elliott (Arizona State University)

- “Talking with the Press,” Naomi Oreskes (Harvard University)
- “How I got Inside the Beltway,” Jim Fleming (Colby College)
- “Communicating Science on Socially Relevant Topics,” Kevin Elliott (Michigan State University) and Dan McKaughan (Boston College)
- “Protecting At-Risk People and Consulting for Federal Agencies,” Kristin Shrader-Frechette, Dustin Crummett, Emily Spencer, and Rebecca Thomas (University of Notre Dame), and Christopher Glueck (Indiana University)
- “Deliberative and Participatory Projects on Food Value,” Rachel Ankeny and Heather Bray (University of Adelaide)
- “Toolbox Project,” Michael O’Rourke and Sean Valles (Michigan State University) and Chad Gonnerman (University of Southern Indiana)
- “Library Talks for the Public,” Dan Hicks (University of Western Ontario)
- “(History of) Science Cafés,” Jessica Baron (History of Science Society/University of Notre Dame)

8:45 PM – 10:00 PM

HSS/PSA Graduate and Early Career Caucus Mixer

The Grill on the Alley Restaurant

Join the PSA and GECC for an early careerists mixer following the opening night reception. Appetizers will be provided.

FRIDAY NOVEMBER 7

7:30 AM – 8:45 AM

HSS Women’s Caucus Breakfast (all are welcome)

Chicago Ballroom (Level 16)

Committee on Honors and Prizes Meeting

The Grill on the Alley Restaurant

9:00 AM– 11:45 AM (Break from 10:00 to 10:15)

The coffee break will be in the Great Lakes Ballroom Foyer (Level 2)

Agnotology – Its Untapped Potential

Huron A (Level 2)

Sponsored by the Philosophy of Science Association

Chair: Manuela Fernández Pinto (University of Helsinki)

- “Hermeneutical Injustice and Agnotology: The Case of the Disappearance of Asperger’s Syndrome,” Miriam Solomon (Temple University)
- “Agnotological Challenges: Coping with Biases in Research Direction and Assessment,” Martin Carrier (Bielefeld University)
- “How Ignorance Makes Morality Possible: Kant on the Limits of Scientific Knowledge,” Michael Friedman (Stanford University)
- “Should Some Knowledge Be Forbidden? The Case of Cognitive Differences Research,” Janet Kourany (University of Notre Dame)

Assessment I: Appraising Assessment. Defining Excellence, Competence, and Normalcy in the Nineteenth and Twentieth Centuries

Great Lakes D (Level 2)

Chair and Commentator: Ted Porter (University of California, Los Angeles)

Organizer: Melinda Baldwin (Harvard University)

- “The Referee, or the Appearance and Disappearance of a Scientific Reader,” Alex Csiszar (Harvard University)
- “How to Cheat on a Victorian Chemistry Exam,” James Elwick (York University)
- “‘What A Young Husband Should Know’: The Rhetoric of Science and Adult Sex Education at the Turn of the Twentieth Century,” Matthew Lavine (Mississippi State University)
- “Useful or Merely Excellent? Evaluating Proposals at the National Science Foundation, 1951–1976,” Melinda Baldwin (Harvard University)

Beyond the Laboratory: Animals and the Culture of Scientific Knowledge

Marquette Park (Level 3)

Chair and Commentator: Robert Mitchell (Eastern Kentucky University)

Organizer: Jeannette Vaught (University of Texas at Austin)

- “‘If Therefore We Would Obtain Such Property or Virtue, Let Us Seek for Such Animals’: Animals and the Magical Theology of Agrippa von Nettesheim,” Allison Kavey (John Jay College of Criminal Justice, CUNY)
- “Representing Animal Minds in Early Animal Autobiography: Charlotte Tucker’s *The Rambles of a Rat* (1857) and Nineteenth-Century Natural History,” Julie A. Smith (Independent Scholar)

- “Envisioning Living Tissue: Race, Animality, and Conflicts Over Vivisection in 1920s America,” Jeannette Vaught (University of Texas at Austin)
- “More than a Fox, Not Quite a Hound: Re-Thinking the Culture and Science of Domestication,” Amy Nelson (Virginia Tech)

Cultures of Work in the Human and Field Sciences

Erie (Level 2)

Chair and Commentator: Suman Seth (Cornell University)

Organizers: Wendy Doyon (University of Pennsylvania) and Marissa Petrou (University of California, Los Angeles)

- “Who Puts the Work in Fieldwork? Labor and Archaeological Discovery in Egypt,” Wendy Doyon (University of Pennsylvania)
- ~~“Defining Work, Picturing Gender: German Visual Anthropology of Late Spanish Colonial Philippines,” Marissa Petrou, (University of California, Los Angeles)~~
- “Landscapes of Leisure or Labor? Making Places for U.S. Field Biology in the Caribbean,” Megan Raby (University of Texas)
- “Legalizing Psychiatric Expertise: Emotions as Scientific Fact and Legal Proof in Modern Italy,” Daphne Rozenblatt (Max Planck Institute for Human Development)

Decisive and Divisive Brains: Making Identity Intelligible

Ontario (Level 2)

Chair: John Tresch (University of Pennsylvania)

Organizer: Tabea Cornel (University of Pennsylvania)

- “Homo-Eudaimonicus: Wisdom and Happiness in Post-Fordist Capitalism,” Francis McKay (University of Chicago)
- “Mirror Neurons and the Human-Animal Divide,” Katja Guenther (Princeton University)
- “Cause and Cure: Psychotropic Drugs and Negotiations of Mental Pathology in Nineteenth-Century France,” Sara Black (Rutgers)
- “The Teleological Mind: Neural Networks and Identity in 20th Century Cybernetics,” Nicholas Hirsch (University of California, San Diego)
- “Human Adult Neurogendering: Brain Plasticity and Sex Difference Research,” Tabea Cornel (University of Pennsylvania)

Epistemologies of Experimentation and Observation before 1900

Washington Park II (Level 3)

Chair: Nancy Hall (University of Delaware)

- “Unveiling Error: Robert Fludd, Thomas Browne, and the Harrow of Truth,” Lawrence Lipking (Northwestern University)
- “Truth without Testimony in Enlightenment Germany,” Kasper Risbjerg Eskildsen (Roskilde University)

- “Information Starvation and Experiment in the Age of Revolutions,” Iain Watts (Princeton University)
- “‘Control(led) Experiments’ in Late Nineteenth-Century Biomedicine,” Jutta Schickore (Indiana University Bloomington)
- “Revisiting the Discovery of Argon,” Theodore Arabatzis and Kostas Gavroglu (University of Athens)

History of Interdisciplinarity: What We Do and Do Not Know—and Why It Matters

Grant Park (Level 3)

Chair and Organizer: Hanne Andersen (Aarhus University)

- “Disciplinary Studies and the ‘New Disciplinary’ in Nanoscale Scientific Research,” Hanne Andersen (Aarhus University); Anne Markovich (University of Paris IV); Terry Shinn (University of Paris IV/CNRS)
- “Mathematics and the Sciences: Two-Way Interdisciplinarity,” Henrik Kragh Sørensen (Aarhus University)
- “Interdisciplinarity in Mission-Oriented Military Research: The Case of US Military Research Activities in Greenland during the Cold War,” Kristian Hvidtfeldt Nielsen (Aarhus University)
- “Boundary Work: Nanoscience Meets Philosophy at Material Surfaces,” Julia Bursten (University of Pittsburgh)
- “What We Know (and Particularly Do Not Yet Know) About Twentieth Century Interdisciplinary Science,” Ronald E. Doel (Florida State University)

Innovation in Postwar Biology

Garfield Park (Level 3)

Chair: Erik L. Peterson (University of Alabama)

- “Adolf Meyer-Abich and the Foundation of Theoretical Biology,” Gregory Moynahan (Bard College)
- “Mathematization and the Development of Methodology in Systematic Biology, 1960–1990,” Beckett Sterner (The Field Museum)
- “From Norm of Reaction to Phenotypic Plasticity: The Importance of Anthony Bradshaw’s Work for Understanding the Evolution of Genotype and Environment Interaction,” Antonine Nicoglou (IHPST Paris)
- “From ‘Signal Transducers’ to ‘Molecular Machines’: Membranes and the Re-Making of Life’s Materiality c. 1970–1990,” Mathias Grote (Technische Universität Berlin)
- “Blueprints and Bricks: DNA and the Origins of the DNA Nanotechnology Community,” Brian Tyrrell (University of California, Santa Barbara)

Nature in Numbers: Histories of Data in the Geosciences

Washington Park I (Level 3)

Chair: Katharine Anderson (York University)

Commentator: Sabina Leonelli (University of Exeter)

Organizer: Elena Aronova (Max Planck Institute for the History of Science)

- “Data Products and Outputs: Climate Services and the U.S. National Climate Program,” Vladimir Janković (University of Manchester)
- “Winning a Battle, Losing the War? The Rise of Climatology and the Dilemma of Data Diversity, 1870–1910,” Philipp Lehmann (Harvard University)
- “Doing Things with Data: The Politics and Practices of the World Data Centers, 1950s–1970s,” Elena Aronova (Max Planck Institute for the History of Science)
- “Auditory Data Analysis: Epistemic Listening Practices and the Formation of Scientific Sonification, 1960s–1990s,” Axel Volmar (McGill University)

Newton, Mathematics, and Mechanism

Superior East (Level 2)

Sponsored by the Philosophy of Science Association

Chair: Katherine Brading (University of Notre Dame)

- “Mechanics in Geometry and in Natural Philosophy: Newton’s Programmatic Statement against Descartes,” Mary Domski (University of New Mexico)
- “Newton’s Surprising Struggle with Mechanistic Thinking,” Andrew Janiak (Duke University)
- “Newton’s Taxonomic Science,” Eric Schliesser (Ghent University)
- “Newton, the Galilean Tradition, and the Foundations of Mechanics,” Zvi Biener (University of Cincinnati):

Putting Pressure on Human Nature

Huron C (Level 2)

Sponsored by the Philosophy of Science Association

Chair: Matthew Kopec (Northwestern University)

- “Fertility Decline and Human Reproductive Decision-Making: Can the ‘Central Theoretical Problem of Human Sociobiology’ Tell us Anything about an Evolved Human Psychology?,” Heidi Colleran (University College, London)
- “Confronting Variation in the Social and Behavioral Sciences,” Stephen M. Downes (University of Utah)
- “Paradigmatic People,” Matt Haber (University of Utah)
- “What is Human Nature Good for?” Tim Lewens (University of Cambridge)

Under Threat: The Sciences of Extinction and Endangerment since 1850

Michigan Ballroom I (Level 2)

Chair and Commentator: Mark Barrow (Virginia Tech)

Organizers: Helen Anne Curry (University of Cambridge) and Alistair Sponsel (Vanderbilt University)

- “Doomed to Die: Endangered Races, Science and Modern Settler Colonialism,” Sadiyah Qureshi, (University of Birmingham)

- “Coral Reefs as Objects of Scientific Study, from Threatening to Threatened,” Alistair Sponsel (Vanderbilt University)
- “Endangered Maize: Agricultural Modernization and Genetic Conservation, 1935–1975,” Helen Anne Curry (University of Cambridge)
- “Extinction and the Value of Diversity,” David Sepkoski (Max Planck Institute for the History of Science)

What Chemistry Has Brought to Philosophy: Philosophical and Historical Perspectives

Great Lakes E (Level 2)

Co-Sponsored by the HSS Forum for the History of the Chemical Sciences and the Commission on the History of Modern Chemistry

Co-Chairs: Hasok Chang (University of Cambridge) and Yoshiyuki Kikuchi (The Graduate University for Advanced Studies, [SOKENDAI], Japan)

Commentator: Bernadette Bensaude-Vincent (Université Paris 1 – Panthéon Sorbonne, France)

Organizers: Brigitte Van Tiggelen (Mémosciences and Université de Louvain-la-neuve, Belgium) and Yoshiyuki Kikuchi (The Graduate University for Advanced Studies, [SOKENDAI], Japan)

- “Similarities – What Chemistry Brings to the Philosophy of Technoscience,” Alfred Nordmann (Technische Universität Darmstadt)
- “Know-how and Know-that as a Tool Kit,” Minwoo Seo (University of Cambridge)
- “Reconceptualizing Emergence from Chemistry: Connecting Continental and Analytic Philosophy,” Jean-Pierre Noël Llored (Ecole Polytechnique)
- ~~“Chemical Analysis and the Analysis of Mind: Elements for a Prehistory of Psychology,” Ronan De Calan (Université Paris 1 Panthéon Sorbonne)~~

12:00 PM – 1:15 PM

Bringing the “Archival Turn” to the History of Science

Ontario (Level 2)

Chair and Respondent: Ann Blair (Harvard University)

- “Archives, Science, and the State,” Barbara Naddeo (City College of New York)
- “Digital Archives of Science,” Brian Ogilvie (University of Massachusetts Amherst)
- “Archives and the History of Collecting,” Nicholas Popper (College of William and Mary)
- “Finding ‘Science’ in the Archives of the Spanish Monarchy,” Maria Portuondo (Johns Hopkins University)
- “What’s Not in the Archives?” Elizabeth Yale (University of Iowa)

Committee on Meetings and Programs Meeting

The Grill on the Alley Restaurant

Early Science Forum Business Meeting

Washington Park I (Level 3)

Forum for the History of the Mathematical Sciences Luncheon

The Grill on the Alley Restaurant

Forum for the History of Science in America, Distinguished Lecture and Business Meeting

Michigan Ballroom I (Level 2)

- “Why I Am a Presentist,” Naomi Oreskes (Harvard University)

Open Access – What’s Next?

Huron A (Level 2)

Chair: Soraya de Chadarevian (University of California, Los Angeles)

- Mary Ellen Davis, Executive Director, Association of College and Research Libraries
- Michael Magoulias, Director, University of Chicago Press Journals Division
- H. Floris Cohen, Editor, History of Science Society
- Steven Wheatley, Vice President, American Council of Learned Societies

Physical Science Forum Distinguished Lecture and Business Meeting

Erie (Level 2)

- “More Interesting than Science? The Physical Discoveries of Stanford Ovshinsky,” Lillian Hoddeson (University of Illinois)

Q&A Session Concerning NSF’s Newly Published STS Program Solicitation

Superior East (Level 2)

- Fred Kronz (National Science Foundation)

The solicitation should be published by Nov 7th; if not, this will be a Q&A session about the funding opportunities for historians and philosophers of science at NSF including the STS program and other programs.

Roundtable: The Ontological Turn: Ian Hacking and the History of Science

Grant Park (Level 3)

Commentator: John Zammito (Rice University)

Organizers: Henry Cowles (Yale University) and Laura Stark (Vanderbilt University)

- “Human Kinds,” Henry Cowles (Yale University)
- “Translated Kinds,” Carla Nappi (University of British Columbia)
- “Natural Kinds,” Lukas Rieppel (Brown University)
- “Moral Kinds,” Laura Stark (Vanderbilt University)

12:00 PM – 2:00 PM

Nominating Committee Meeting

Addison (Level 5)

1:30 PM – 3:30 PM

The Biologist as Public Intellectual in the 20th Century

Great Lakes E (Level 2)

Chair and Commentator: Cathryn Carson (University of California, Berkeley)

Organizer: Judy Johns Schloegel (Independent Scholar)

- “The Biological Philosophers: William Emerson Ritter and Herbert Spencer Jennings as Public Intellectuals,” Judy Johns Schloegel (Independent Scholar)
- “Women as Public Intellectuals: Rachel Carson, Charlotte Auerbach, Genetics, and Post-World War II Scientific Activism,” Marsha L. Richmond (Wayne State University)
- “The Power of Metaphor: Evolution and Economics in *The Selfish Gene*,” David K. Hecht (Bowdoin College)

The Body as Machine

Michigan Ballroom I (Level 2)

Chair: Andreas Killen (The City College of New York)

Organizer: Alexandra Bacopoulos-Viau (New York University)

- “Dispatches from the Beyond: The Medium as Telegraph in Early French Spiritism (1857-1869),” Alexandra Bacopoulos-Viau (New York University)
- “Wired Bodies and Sensitive Machines: Neurotic Identities of Italian Telegraph and Telephone Operators at the Turn of the Twentieth Century,” Paola Villa (University of Wisconsin)
- “The Machine as Body: Nikola Tesla’s Telautomaton,” Kendall Milar (University of California, Los Angeles)
- “Becoming ‘Le moteur humain’: ‘The Art of Work’ and ‘The Taylored Body,’” Fae Brauer (University of New South Wales)

Early Modern Atlantic Scientific Discourses

Erie (Level 2)

Chair and Organizer: Jaime Marroquin (George Washington University)

Commentator: Alejandra Fernandez (George Washington University)

- “Imperial Conquest and 17th c. Medical Contest in Abraham Cowley’s *Plantarum*,” Stephanie Shirilan (Syracuse University)

- “Circulating Images and the Production of Natural Knowledge,” Kay Etheridge (Gettysburg College)
- “Ethnography and Experience in Francisco Hernández’s Mexican Natural History,” Jaime Marroquin (George Washington University)

Euler: Mathematical Genius in the Enlightenment

Grant Park (Level 3)

Chair: Andre Wakefield (Pitzer College)

Commentator: Judy Grabiner (Pitzer College)

Organizer: Ronald Calinger (Catholic University of America)

- “Euler’s Berlin Period and the Foundations of Differential Calculus,” Robert Bradley (Adelphi University)
- “The Reception of Euler’s *Letters to a German Princess*: Science and Religion at the End of the Enlightenment,” Dominic Klyve (Central Washington University)
- “Euler: Return to St. Petersburg,” Ronald Calinger (Catholic University of America)

Fish, Fathoms, and Fair Winds: Contextualizing Marine Science within Changing Scientific Institutions, Cultures, and Communities, 1840–1940

Washington Park II (Level 3)

Chair: Christine Keiner (Rochester Institute of Technology)

Commentator: Michael Reidy (Montana State University)

Organizer: Jason Smith (U.S. Naval Academy)

- “The Common Highway: Matthew Fontaine Maury, Naval Science, and the American Maritime World,” Jason Smith (U.S. Naval Academy)
- “The Biotic Debate and the Disruption of Transatlantic Marine Naturalist Networks,” Rodolfo Alaniz (University of California, San Diego)
- “Regional Culture, Scientific Culture, and New England’s Rejection of Russell’s ‘Theory of Fishing,’ 1920–1934,” Matthew McKenzie (University of Connecticut)

Measuring People: Anthropometry as Practice, 1850–1950

Garfield Park (Level 3)

Chair: Saskia Bultman (Radboud University Nijmegen, The Netherlands)

Organizers: Saskia Bultman and Geertje Mak (Radboud University Nijmegen, The Netherlands)

- “Measuring Bodies and Intelligence: Physicians, Psychiatrists, and Prisoners in Puerto Rico’s Oso Blanco, 1930s–1950s,” Alberto Ortiz (University of Wisconsin)
- “From Body to Data: The Practicalities of Anthropometric Examination in the Dutch State Reformatory for Girls, 1905–1952,” Saskia Bultman (Radboud University Nijmegen)
- “Different Forms: Touching Details of Measured Humans’ Files around 1900 in The Netherlands,” Geertje Mak (Radboud University Nijmegen)

- “Anthropometry by Any Other Name: Beautiful Children, Homely Parents, and a Blueprint for ‘Marriage from the Standpoint of Art,’” Ry Marcattilio-McCracken (Oklahoma State University)

Race, Eugenics, and Bodily Identity

Washington Park I (Level 3)

Chair: Debbie Weinstein (Brown University)

- “‘Hue-man’ Nature: Migration, Genetics, and Alternate Evolutionary Frameworks in Post-WWII America,” J. Cecilia Cárdenas-Navía (Yale University)
- “‘A Change of Heart’: Racial Politics, Scientific Metaphor, and Coverage of the First Interracial Heart Transplant in the African American Press,” Maya Koretzky (National Institutes of Health)
- “Joshua Lederberg’s ‘Euphenics’: the Construction of Human Cloning Narratives in the 1960s,” Nathan Crowe (University of North Carolina Wilmington)
- “Facial Transplants: Decoding the Debates,” Sharrona Pearl (University of Pennsylvania)

Replicating Early Modern Materials, Observations, and Experiments

Ontario (Level 2)

Chair: James Voelkel (Chemical Heritage Foundation)

Organizer: Tawrin Baker (Indiana University)

- “Verdigris Emeralds, Red Lake Rubies and Ultramarine Sapphires: Recipes, Reconstructions and the Historiography of Gemstone Imitations in Art and Nature, 1400–1500,” Marjolijn Bol (University of Amsterdam)
- “Performing Early-Modern Dissections and Experiments on the Eye,” Tawrin Baker (Indiana University)
- “Laboratory Replication of Newton’s Chymistry,” William Newman (Indiana University)
- “Assessing Reproductions of Past Experiments,” Jed Buchwald (California Institute of Technology)

Scientific Exploration and Cross-Cultural Encounters

Marquette Park (Level 3)

Chair: John Gascoigne (University of New South Wales)

- “Observers on Other Worlds: Johannes Kepler and his Extraterrestrial Life,” Sarah Reynolds (Indiana University)
- “Finding Voices on Pitcairn and Norfolk Islands: The Practice of Linguistic Fieldwork on Two ‘Natural Laboratories’ in the Pacific,” Adrian Young (Princeton University)
- “A Shared Sense of Curiosity: Sven Hedin and the Public Yearning for Geography in the Early Twentieth Century,” Staffan Bergwik (Stockholm University)
- “The Discovery of the Other in Postwar Italian Science and Culture: De Martino’s Fieldwork in Salento and Biocca’s Expedition to Amazonia,” Daniele Cozzoli (Universitat Pompeu Fabra, Barcelona)

Who's in Charge? Alternative Actors in Late Nineteenth-Century Nutrition Science

Great Lakes D (Level 2)

Chair and Commentator: Richard Kremer (Dartmouth College)

Organizer: Elizabeth Neswald (Brock University)

- “When Experimental Subjects Kick Back: Resistance, Cooperation and Collaboration in Nutrition Experimentation,” Elizabeth Neswald (Max Planck Institute for the History of Science)
- “Life Reformers and Laboratories: On Nutrition Science in Modern Germany,” Corinna Treitel (Washington University)
- “Starving in a Science Pavilion. Giovanni Succi Challenges Doctors’ Authority at the 1888 Barcelona International Exhibition,” Agusti Nieto-Galan (Universitat Autònoma de Barcelona)

Workshop: Digital and Computational History of Science: Tools, Platforms, Networks, and Corpora, Part I

Chicago Ballroom (Level 16)

Chair: Alex Wellerstein (Stevens Institute of Technology)

Organizers: Sabine Brauckmann (Estonian Institute of Humanities), Frederick Gibbs (University of New Mexico), Manfred Laubichler (Arizona State University)

Each presentation is 15 minutes with 45 minutes of roundtable discussion concluding each part of the workshop.

- “Analyzing and Interpreting Born Digital Primary Sources,” Trevor Owens (Library of Congress)
- “Conceptual Change in Collaborative Network,” Erick Peirson (Arizona State University)
- “From Tagging to Mapping Historical Chinese Data,” Shih-Pei Chen, Martina Siebert, and Dagmar Schäfer (Max Planck Institute for the History of Science)
- “Deryc Painter and Nadya Bliss: Detecting Scientific Innovation,” Manfred Laubichler (Arizona State University)
- Roundtable Discussion

3:30 PM – 4:00 PM

Coffee Break

Great Lakes Ballroom Foyer (Level 2)

4:00 PM – 6:00 PM

Anthropological Engagement in the Postwar World

Washington Park II (Level 3)

Chair: Regna Darnell (University of Western Ontario)

Organizer: Adrianna Link (Johns Hopkins University)

- “The Post-War Expansion of American Anthropology and its Discontents,” Regna Darnell (University of Western Ontario)
- “A Living Journal: Current Anthropology as Action Anthropology,” Joshua Smith (University of Western Ontario)
- “Antropologia Engajada: Trajectories of Anthropological Activism in Post-War Brazil,” Rosanna Dent (University of Pennsylvania)
- “Anthropology for a World in Crisis: Sol Tax and the Center for the Study of Man, 1965–1976,” Adrianna Link (Johns Hopkins University)

Assessment II: Assessing Assessments

Ontario (Level 2)

Chair: Matthew Shindell (Harvard University)

Organizer: Jessica O’Reilly (College of Saint Benedict/Saint John’s University)

- “Institutional Settings, Institutional Actors: Expertise, Policy, and the U.S. National Academy of Sciences,” Matthew Shindell (Harvard University)
- ~~“Assessing Acid Rain during the Reagan Years: The U.S. National Acid Precipitation Assessment Program,” Milena Wazeck (University of East Anglia)~~
- “New Knowledge in Climate Assessments,” Jessica O’Reilly (College of Saint Benedict/Saint John’s University)
- “Constructing, Honoring, and Breaching the Science/Policy Boundary in Scientific Assessments,” Naomi Oreskes (Harvard University)

Between the Local and Global: National Pharmacopoeias in the Eighteenth and Nineteenth Centuries

Marquette Park (Level 3)

Chair: Seymour Mauskopf (Duke University)

Commentator: Abena Osseo-Asare (University of Texas, Austin)

Organizer: Joseph Gabriel (Florida State University)

- “Imperial Pharmacy? Felix Palacios’ Palestra Pharmaceutica and the Circulation of Materia Medica in the Spanish Atlantic World,” Matthew Crawford (Kent State University)
- “The Translocate in the Making of Chemistry in British India,” John Mathew and Seymour Mauskopf (Duke University)
- “The United States Pharmacopoeia and Problem of Intellectual Property,” Joseph Gabriel (Florida State University)

The Greater and Lesser Circulation of Scientific Concepts in Early Modern East Asia: Aristotle, Newton, and the New Lives of the Notion of Qi (Ch'i)

Great Lakes E (Level 2)

Chair and Commentator: Grace Shen (Fordham University)

Organizer: Qiong Zhang (Wake Forest University)

- “New Discourses on Qi as a Material Medium in Seventeenth Century China: The Case of the Fang School,” Qiong Zhang (Wake Forest University)
- “Sliding under the Signifier, Insisted Meaning: The Concept of Air and Qi in the Literatures of China Jesuits and Joseon Literati from 17th to 19th Centuries,” Kwon Soo Park (Chungbuk National University)
- “Confrontation and Conciliation of the Chi (Energy) Tradition with Newtonian Particle Theory in Late 18th-Century Japan,” Tomoko Onabe (University of Osaka)

The “Inner Life” in French Psycho-Physiology from the Late Enlightenment to the Late Nineteenth Century

Garfield Park (Level 3)

Chair and Organizer: Elizabeth Williams (Oklahoma State University)

- “The Animal Within: ‘Internal’ Sense, Instinct, and Psycho-Physiology in France, 1765–1832,” Anne Vila (University of Wisconsin)
- “Liberating the Inner Self: Heightened Sensibility, Intuition, and Imaginative Expression in the Philosophy of Maine de Biran,” Sean Quinlan (University of Idaho)
- “Silent Need, Clamorous Appetite: Civilization and the Degradation of Needs in Early Nineteenth-Century French Physiology,” Elizabeth Williams (Oklahoma State University)
- “Deafness, Language, and Human Evolution: Accessing Inner Life and Competing for One’s Discipline in Late Nineteenth-Century France,” Sabine Arnaud (Max Planck Institute for History of Science)

Mathematics and Mechanics

Washington Park I (Level 3)

Chair: Peter Machamer (University of Pittsburgh)

Organizer: Jean De Groot (Catholic University of America)

- “Mechanics and Mathematics in Peurbach’s *Theoricae Novae Planetarum*,” Edith Sylla (North Carolina State University)
- “Mathematics, Mechanics, and the Calculus Controversy,” Paul Wolfson (West Chester University of Pennsylvania)
- “The Kinematics of Leverage in Aristotle’s Scientific Milieu,” Jean De Groot (Catholic University of America)
- “Ontologizing Activity: Operational Representation and Problem-Solving in Analytic Mechanics,” Brian Hepburn (Wichita State University)

Modern Analytics Applied to the Past: New Perspectives on Pre-Modern Science and Medicine

Grant Park (Level 3)

Chair and Commentator: Lawrence M. Principe (Johns Hopkins University)

Organizer: Monica Green (Arizona State University) and Jennifer Rampling (Princeton University)

- “When History Becomes Science: Medieval Diseases in the Twenty-First Century,” Monica Green (Arizona State University)
- “Alternatives to Galenic Physiology in the Islamic World: The Evidence from the Commentary Tradition, 1200–1500 C.E.,” Nahyan Fancy (DePauw University)
- “Digitisation and the Vernacular: New Approaches to Medieval Scientific Instruments,” Seb Falk (University of Cambridge)

Questions of Causation in the History of Medicine

Addison (Level 5)

Chair: Bradford Harris (Stanford University)

- “The Long Prehistory of Electronic Cigarettes: ‘Project Ariel’ 1962 – 1966,” Stephan Risi (Stanford University)
- “Medical Nihilism: A Brief History,” Jacob Stegenga (University of Utah)
- “Koch’s Criteria of Disease Causation,” Lauren Ross (University of Pittsburgh)
- “Confronting the Parasite of Puerto Rico: Power, Politics, and Hookworm Disease, 1898–1917,” Linda Magana (University of Oxford)

Rot: Scientific, Social and Cultural Engagements with Putrefaction

Great Lakes D (Level 2)

Chair and Commentator: Carin Berkowitz (Chemical Heritage Foundation)

Organizer: Projit Mukharji (University of Pennsylvania)

- “What is Putrid about ‘Putrid’ Fever?,” Christopher Hamlin (University of Notre Dame)
- “Fermenting Vernaculars: Pasteur, Putrefaction and Colonial Agro-Industries, Bengal, 1900–1914,” Projit Mukharji (University of Pennsylvania)
- “All Aboard the Poo-Poo Choo-Choo: The Exportation of Human Waste and Environmental Justice in Post-War America,” Graham Mooney (Johns Hopkins University)

Technicians Visible and Invisible: Implications for Scientific Knowledge

Erie (Level 2)

Chair and Organizer: Park Doing (Cornell University)

Commentator: Peter Dear (Cornell University)

- “(In)visible Technicians, Scientists, and Fossils,” Caitlin Wylie (New Jersey Institute of Technology)

- “Techniques of Care, Techniques of Science: Interactions between Scientists and Welfare Technicians in Animal Behavior Genetics,” Nicole Nelson (University of Wisconsin)
- “Technicians as Scientific Authors at a Synchrotron Radiation Laboratory from 1993–1999: An Alternative Expertise?,” Park Doing (Cornell University)

Workshop: Digital and Computational History of Science: Tools, Platforms, Networks, and Corpora, Part II

Chicago Ballroom (Level 16)

Chair: Frederick Gibbs (University of New Mexico)

Organizers: Sabine Brauckmann (Estonian Institute of Humanities), Frederick Gibbs (University of New Mexico), Manfred Laubichler (Arizona State University)

Each presentation is 15 minutes with 45 minutes roundtable discussion concluding each part of the workshop.

- “From Deep Maps to Deep Networks,” Charles van den Heuvel (Royal Netherlands Academy of Arts and Sciences)
- “Extracting Semantic Networks,” Mark Schiefsky (Harvard University)
- “[Re]Constructing ‘Inedited’ Knowledge,” Cornelis J. Schilt (University of Sussex)
- “Mapping Interdisciplinarity and Expansion of Scientific Institutions,” Dirk Wintergrün (Max Planck Institute for the History of Science)
- Roundtable Discussion

6:15 PM – 7:15 PM

HSS Distinguished Lecture

Michigan Ballroom (Level 2)

“Science and the Political History of Pain”

Keith Wailoo (Princeton University)

Introduction by Angela Creager (Princeton University), HSS President



7:15 PM – 8:45 PM

Cambridge University Press/BSHS Hosted Reception

Lincoln Park (Level 3)

Cambridge University Press/BSHS hosted reception to launch new History of Science publishing opportunities.

7:30 PM – 8:30 PM

HSS at Work/GECC Networking Event

Great Lakes Ballroom Foyer (Level 2)

Sponsored by HSS at Work, HSS Graduate and Early Career Caucus, and the Chemical Heritage Foundation

Meet PhDs who have developed successful careers in a variety of fields, including business, museum work, consulting, and publishing. This event will allow attendees to ask questions and exchange ideas in an informal setting, and the evening will be punctuated by short comments from experts on various aspects of non-academic job searches. Refreshments will be provided.

8:00 PM – 9:30 PM

Everything You Wanted to Know About Negotiating a Job Offer, but Were Afraid to Ask [MOVED TO SATURDAY, 12:00 IN GRANT PARK]

Huron A (Level 2)

Sponsored by the HSS Graduate and Early Career Caucus

Presenter: Erin Thomas (Yale University)

Chair and Organizer: Bridget Collins (University of Wisconsin-Madison)

Physical Sciences and the Great War

Erie (Level 2)

Chair and Organizer: Suman Seth (Cornell University)

Presenters:

- David Aubin (Université Pierre-et-Marie-Curie)
- Jeffrey Johnson (Villanova University)
- Suman Seth (Cornell University)
- Chen-Pang Yeang (University of Toronto)
- Gregory Good (American Institute of Physics)

SATURDAY NOVEMBER 8

7:30 AM – 8:45 AM

Committee on Education Meeting

The Grill on the Alley Restaurant

Committee on Research and the Profession Meeting

The Grill on the Alley Restaurant

Osiris Editorial Board Meeting

The Grill on the Alley Restaurant

HSS President's International Breakfast

The Grill on the Alley Restaurant

8:00 AM – 8:45 AM

Earth and Environment Forum Business Meeting

Huron A (Level 2)

HSS at Work Business Meeting

Erie (Level 2)

9:00 AM – 11:45 AM (Break from 10:00 to 10:15)

The coffee break will be in the Great Lakes Ballroom Foyer (Level 2)

Experimental Decisions: Radiation and Genetics in Japan

Huron A (Level 2)

Chair and Commentator: Luis Campos, University of New Mexico

Organizer: Lisa Onaga, Nanyang Technological University

- “Radiation and Spiritualism in the Empire of Japan,” Maika Nakao (Keio University)
- “Instruments of Modernity: Rentogen in Pre-War Japan,” Shi-Lin Loh (Harvard University)

- “Tracing the Low-Dose Question in Japan,” Lisa Onaga (Nanyang Technological University)
- “Genetics and the U.S.-Japan Relationship in the 1950s,” Kaori Iida (The Graduate University for Advanced Studies [SOKENDAI], Japan)

Historical Tracers and the Historiography of Science

Great Lakes E (Level 2)

Chair and Commentator: Angela Creager, Princeton University

Organizer: Evan Hepler-Smith, Princeton University

- “Between Regulation and Information: Tracing Chemical Novelty,” Evan Hepler-Smith (Princeton University)
- “Semaphores, Signals, and the History of Humankind: Alan Lomax’s Choreometrics Project (1965–1985),” Whitney Laemmler (University of Pennsylvania)
- “Beat Policing and Forensic DNA Databases in Twenty-First Century Crime Control,” Hilary Robinson (Massachusetts Institute of Technology)
- “Latent Analyses: Mining Networks, Traffic Analysis and Government Surveillance,” Matthew Jones (Columbia University)

The Institution as Laboratory: Captive Bodies and the Production of Scientific Knowledge

Michigan Ballroom I (Level 2)

Chair: Carla Bittel (Loyola Marymount University)

Organizer: Courtney Thompson (Yale University)

- “Madman or Heretic? The Inquisition and the Uses of a Madhouse in Colonial Mexico,” Christina Ramos (Harvard University)
- “Directly at War with the Gallows’: Phrenology in the Prison, 1830–1860,” Courtney Thompson (Yale University)
- “Lying-In: Obstetrical Space and Authority in Nineteenth-Century Philadelphia,” K.A. Woytonik (University of New Hampshire)
- “‘The Library as Laboratory’: Bibliotherapy and the Clinical Study of Literature as Medicine, 1940–1960,” Monique Dufour (Virginia Tech)
- “Discerning Patterns of Abnormality: Institutionalized Patients and the Postwar Delineation of Genetic Disease,” Andrew Hogan (Creighton University)

Mathematical Laboratory/Paper Physics: Concepts, Pedagogy, and Methods of Mathematical Physics

Erie (Level 2)

Chair: Tilman Sauer (University of Bern)

Organizer: Massimiliano Badino (Universitat Autònoma de Barcelona/Massachusetts Institute of Technology)

- “On Mathematical Practices and Cultures of Mechanics: The Secular Equation in the 19th Century,” Frédéric Brechenmacher (École Polytechnique)

- “The ‘Physicization’ of Mathematics and Early Twentieth Century Reforms in General Education,” Ion Mihailescu (Harvard University)
- “Boltzmann in Oxford: How Mathematics Molds Physical Concepts,” Massimiliano Badino (Universitat Autònoma de Barcelona / Massachusetts Institute of Technology)
- “Was Václav Hlavatý (1894–1969) ‘Einstein’s Elementary Mathematician?’” Helena Durnova (Masaryk University)
- “Density Functional Theory: How Mathematical Physics Launched a Revolution in Materials Physics and Quantum Chemistry,” Andrew Zangwill (Georgia Tech)

Re-Appropriation and Memory in Early Science

Garfield Park (Level 3)

Chair: Courtney Roby (Cornell University)

Commentator and Organizer: Jacqueline Feke (University of Chicago)

- “Appropriating Eratosthenes: Is Rehabilitation Still Possible?,” James Evans (University of Puget Sound)
- “Re-Appropriating Pliny in Late Antiquity and A Forgotten Pliny Epitome in the Vergilian commentator Servius,” Paul Keyser (Independent Scholar)
- “From Petosiris to Ptolemy: Authorities for Celestial Knowledge in Late Antique Omen Interpretation,” Zoë Misiewicz (New York University)
- “Re-Appropriating Visual Knowledge: Image Reuse in Printed Works on Medicine in the Fifteenth and Sixteenth Centuries,” Allen Shotwell (Ivy Tech)

Scientific Agriculture and the State

Washington Park I (Level 3)

Chair: Diane Paul (University of Massachusetts Boston)

- “Chemistry and the British Board of Agriculture,” Frank James (The Royal Institution)
- “The Lie of Philippine Mahogany: Transnational Definitions of Species for Science, Power, and Trade,” Emily K. Brock (Max Planck Institute for the History of Science)
- “Whose Trees? Disputes Over the Origin of the Yoshino Cherry and Cherry Blossom Festivals in Korea,” Manyong Moon (Korea Advanced Institute of Science and Technology)
- “The Beginning of an ‘Exceptional Era’ in Australia? Early Genetic Modification Research Regulation and its Implications for Public Understanding of Science,” Rachel Ankeny and Heather Bray (University of Adelaide)
- “Loving the Country, But Not Necessarily the State: American-Trained Chinese Agricultural Scientists, 1920s–30s,” Xuan Geng (University of Minnesota)

Shapes and Contours of Early Modern Knowledge

Grant Park (Level 3)

Chair: JB Shank (University of Minnesota)

Organizer: Surekha Davies (Western Connecticut State University)

- “Collecting Faces: Physiognomic Data in the Early Modern Print,” Stephanie Leitch (Florida State University)
- “Cartography, Ethnology and Epistemology: World Maps as Visual Encyclopedias,” Surekha Davies (Western Connecticut State University)
- “On the Same Page: Early Modern Collection and Inscription,” Claudia Swan (Northwestern University)
- “Collecting Adepts: Joachim Morsius, the Alchemical Republic, and Early Modern Social Media,” Vera Keller (University of Oregon)
- “‘But Nonetheless Man Imagines Them To Be So’: Athanasius Kircher and *Lapides figuratae* in Text and Image,” Rebecca Zorach (University of Chicago)

Technoscience as Practice: Creating Communities/Constructing the Self

Great Lakes D (Level 2)

Chair and Organizer: Thomas Stapleford (University of Notre Dame)

Commentator: Andrea Woody (University of Washington)

- “The Historiography of Practice,” Thomas Stapleford (University of Notre Dame)
- “Practices as a Framework for History and Social Science,” Daniel Hicks (University of Western Ontario)
- “The ‘Methodical Production of Genius’: Collective Practice and Chemical Theory in Emil Fischer’s Laboratory,” Catherine Jackson (University of Wisconsin)
- “Drawing Trust: Circuit Diagrams and the Lost Practices of Cold-War Electronics,” Edward Jones-Imhotep (York University)

Testing Drugs and Trying Cures in the Early Modern World

Marquette Park (Level 3)

Chair and Commentator: Claudia Stein (University of Warwick)

Organizers: Alisha Rankin (Tufts University) and Elaine Leong (Max Planck Institute for the History of Science)

- “Trying Medicine in the Historiography of Early Modern Experiment,” Evan R. Ragland (University of Alabama, Huntsville)
- “The Live Chicken Cure for Plague Buboes: Medical Experimentation in Late Medieval and Early Modern Europe,” Erik Heinrichs (Winona State University)
- “Medical Experimentalism in the Ottoman Empire: An Introduction for Beginners,” B. Harun Küçük (Max Planck Institute for the History of Science)
- “Homemade Trials: Recipes and ‘Experimentation’ in the Early Modern Household,” Elaine Leong (Max Planck Institute for the History of Science)

The “Three-Man Paper” and its Ramifications

Ontario (Level 2)

Co-Chairs: William Summers (Yale University) and Phillip Sloan (University of Notre Dame)

Organizers: Pnina Abir-Am (Brandeis University) and Phillip Sloan (University of Notre Dame)

- “The Three-Man Paper, the Bohr-Debates, and Schrödinger’s *What is Life?*,” Phillip Sloan (University of Notre Dame)
- “Light and Life: The Emergence of the Photosynthetic Unit from the Delbrück Seminars,” Kärin Nickelsen (Ludwig Maximilian University of Munich)
- “Biophysics without Molecular Biology,” Richard Beyler (Portland State University)
- “The Early Years of the American Phage Group: Replication of the Delbrück Seminar in Berlin?,” William Summers (Yale University)
- ~~“The ‘Theoretical Biology Club’ in London, the ‘Delbrück Seminar’ in Berlin, and the ‘Club de Physiologie Cellulaire’ in Paris: Social Origins of Collective Creativity in Early Molecular Biology,” Prina Abir Am (Brandeis University)~~

9:00 AM – 12:00 PM

Committee on Publications Meeting

Parks Boardroom (Level 3)

12:00 PM – 1:15 PM

Forum for History of Human Science Distinguished Lecture and Business Meeting

Michigan Ballroom I (Level 2)

- “Everyone’s Autobiography of Gertrude Stein,” Ken Alder (Northwestern University)

Forum for the History of Science in Asia Business Meeting

Huron A (Level 2)

Historians of Science Watching COSMOS: Interpretive Challenges and Teaching Opportunities

Erie (Level 2)

Organized by the HSS Committee on Education

Chair: James Evans (University of Puget Sound)

Organizers: Kristin Johnson (University of Puget Sound) and Joseph D. Martin (Michigan State University)

Participants:

- Lloyd Ackert (Drexel University)
- Benjamin Gross (Chemical Heritage Foundation)
- Darin Hayton (Haverford College)
- David Kirby (University of Manchester)
- Bruce Lewenstein (Cornell University)
- Joseph D. Martin (Michigan State University)

- W. Patrick McCray (University of California, Santa Barbara)
- Catherine Westfall (Michigan State University)

Joint Caucus for Socially Engaged Philosophers and Historians of Science Business Meeting

Ontario (Level 2)

Roundtable: HSS and the Permeable Academy

Washington Park I (Level 3)

Sponsored by HSS at Work

Chair: Angela Creager (Princeton University)

Commentator: Carin Berkowitz (Chemical Heritage Foundation)

Organizer: Tania Munz (Northwestern University)

- “Maintaining a Scholarly Identity without a University to Back You Up,” Carin Berkowitz (Chemical Heritage Foundation)
- “History at Large – A Perspective from the AHA,” James Grossman (American Historical Association)
- “Finding Your Way Outside Academe,” Lesley Lundeen (University of Chicago)
- “Fashioning A Life as an Independent Historian,” Audra Wolfe (The Outside Reader)

Roundtable: Science and Supranationalism: Exploring the History of Science in Intergovernmental Organizations

Washington Park II (Level 3)

Chair, Commentator, and Organizer: Rachel Rothschild (Yale University)

Presenters:

- John Krige (Georgia Tech)
- Helen Rozwadowski (University of Connecticut)
- Jacob Darwin Hamblin (Oregon State University)
- Amy Sayward (Middle Tennessee State University)
- Ronald Doel (Florida State University)
- Arthur Daemmrich (University of Kansas)

12:00 PM – 2:00 PM

Finance Committee Meeting

Burnham Park (Level 3)

1:30 PM – 3:30 PM

Assessment III: Publication and Peer Review

Michigan Ballroom I (Level 2)

Chair: Bruce Lewenstein (Cornell University)

- “Refereeing in Action at the *Philosophical Transactions*, 1850–1890,” Aileen Fyfe (University of St. Andrews)
- “Publishing Britain’s Scientific Sphere: Macmillan and Co. as Publishers of Science, 1860–1890,” Sylvia Nickerson (IHPST, University of Toronto)
- “Tracing the Paper Trail of the *Philosophical Transactions*: Correspondence, Referees’ Reports and Proofs, 1850-1885,” Julie McDougall-Waters (University of St. Andrews)
- “History of Editorial Peer-Review in Scientific Journals: Factors Influencing Publication in French and English Scientific Society, 1665–1830,” Stacy Wykle (University of Illinois, Urbana-Champaign)

The History of the Humanities—A Challenge to the History of Science?

Great Lakes D (Level 2)

Commentator: Ingrid Rowland (University of Notre Dame School of Architecture)

Chair: Dagmar Schäfer (Max Planck Institute for the History of Science)

Organizers: Rens Bod and Julia Kursell (University of Amsterdam)

- “Patterns in Humanities and Sciences: Aller-Retour,” Rens Bod (University of Amsterdam) and Johanna Sprondel (Stanford University)
- “Precisely. Differentiating Accuracy, Precision, and Exactitude in the Sciences and Humanities,” Jimena Canales (University of Illinois at Urbana-Champaign) and Markus Krajewski (Bauhaus University Weimar)
- “Methods and Concepts in the Loop of Exchange: Historians Investigating Life and Life Scientists Testing History,” Soraya de Chadarevian (University of California, Los Angeles) and Julia Kursell (University of Amsterdam)

The Politics of Discovery: The Physical Sciences in the 20th and 21st Centuries

Erie (Level 2)

Chair and Organizer: Amy Fisher (University of Puget Sound)

- “Jefferson Laboratory Sets Intent into \$500 million of Concrete: Desire, Bureaucracy, and Innovation in the New Big Science,” Catherine Westfall (Michigan State University)
- “What Constitutes Discovery?: Chemists, Physicists, and the Synthesis of Heavy Elements,” Ann Robinson (University of Massachusetts, Amherst)
- “Teller vs. Pauling: The Debate over Disarmament and the Peacetime Uses of Nuclear Weapons,” Amy Fisher (University of Puget Sound)
- “Engineering as the Driver of Technoscience: Or, Tilting at Windmills in Mars Exploration,” Erik Conway (Jet Propulsion Laboratory)

Post-Colonial Life and Politics of Colonial Science

Huron B (Level 2)

Chair and Commentator: Susan Burns (University of Chicago)

Organizer: Hiromi Mizuno (University of Minnesota)

- “Evolutionary Ecology and the Transwar: Japanese Expeditions from Mongolia to Mahale, 1938–1958,” Sakura Christmas (Harvard University)
- “Empowering Hungnam: The Transwar Legacy of Japanese Scientific, Technological, and Industrial Development of a Korean City,” Walter Grunden (Bowling Green State University)
- “Visualizing the Network of Fertilizer under and after the Japanese Empire,” Hiromi Mizuno (University of Minnesota)

The Scientific Animal

Marquette Park (Level 3)

Chair: Paul White (University of Cambridge)

- “Dogs, Science, and the State: Inventing the Canine Hero in the Fight for the Health of the American Nation, 1948–1966,” Robert Kirk (University of Manchester) and Edmund Ramsden (Queen Mary, University of London)
- “‘What the boys in the laboratory have been up to’: Space Dogs, Cold War Vivisection, and the ‘Muttnick Affair,’” Ryan Shapiro (Massachusetts Institute of Technology)
- “Kant’s Denial that Animals Have Consciousness,” Curtis Sommerlatte (Indiana University, Bloomington)
- “Making Natural History Anatomical: Edward Tyson and Comparative Anatomy in Seventeenth-Century England,” Emelin Miller (University of Minnesota)

The Transformation of Psychiatry in Twentieth-Century Italy, Denmark, and the United States

Superior West (Level 2)

Chair: David Robinson (Truman State University)

- “From ‘Lifetime Psychosis’ to ‘Wartime Neurosis’: How Italian Mind and Brain Sciences Escaped From the Asylum during the Great War,” Sultana Banulescu (CUNY Graduate Center)
- ~~“Exploring Predispositions and Predictors: High Risk Schizophrenia Research and Visions of Prevention at Psykologisk Institut, Copenhagen, 1960–1990,” Marie Reinholdt (CERMES 3, site CNRS)~~
- “The Biological Revolution in Psychiatry: A Purely Logical Choice?,” Brian Casey (Northwestern University)
- “A ‘Model Schizophrenia’: Amphetamine Psychosis and the Transformation of American Psychiatry,” Justin Garson (Hunter College/CUNY)

Transmission and Exchange of Scientific Knowledge Before 1600

Garfield Park (Level 3)

Chair: Cassandra Hatton (Bonhams)

- “How Social Boundaries Limit Access to Indigenous Knowledge: Case Studies from Sixteenth-Century India,” Matthew Sargent (California Institute of Technology)
- “Scholarly and Scientific Exchange in the Eastern Mediterranean in the 15th and 16th Centuries,” Robert Morrison (Bowdoin College)
- “Fathallah al-Shirwani and the Transmission of Science from Samarqand to Istanbul,” Scott Trigg (University of Wisconsin-Madison)
- “The Problems of Aristotle’s Mechanics,” Peter McLaughlin (University of Heidelberg)

Transnational Technology Networks and Knowledge-Diffusion during the Cold War

Ontario (Level 2)

Chair: Daniel Kevles (Yale University)

Commentator: Jacob Hamblin (Oregon State University)

Organizer: Jay Sarkar (Harvard University)

- “Helping and Hindering Allies: The Transnational Circulation of Nuclear Information between the U.S. and Europe from the Late 50s to the Early 70s,” John Krige (Georgia Tech)
- “Transnational Networks of Nuclear Scientists and North-South Technological Cooperation during the Cold War: The Case of India, 1950–1974,” Jay Sarkar (Harvard University)
- “Dreams of Transnational Uranium Enrichment: International Ambitions of the Dutch Ultracentrifuge Program, 1955–1962,” Abel Streefland (Leiden University)
- “Know-how and International Transmission of Industrial Science in the Cold War,” Douglas O’Reagan (University of California, Berkeley)

Women’s Bodies and Sexuality in the History of Science and Medicine

Grant Park (Level 3)

Chair: Sherrie Lyons (Empire State College)

- “The Hazards of Lying-in: Rudolf Virchow’s Experimental Research on Deep Vein Blood Clotting,” Kate Grauvogel (Indiana University Bloomington)
- “The ‘Smooth Flow’ of Birth: Streamlining the Obstetrical Oeuvre of Joseph B. Delee, 1930–1940,” Caitjan Gainty (King’s College London)
- “Mesmerism, Sexuality, and Medicine: ‘Karezza’ and the Sexual Reform Movement,” Heinz Schott (Universität Bonn)
- “The Blinding Lights of the Blazing World: Margaret Cavendish’s Utopias as Gendered Discourses on Proper Sensory Perception,” Andrew Kettler (University of South Carolina)

1:30 PM – 4:00 PM

Narrating Order

Lincoln Park (Level 3)

Sponsored by the Philosophy of Science Association

Chair: Rachel Ankeny (University of Adelaide)

- “Theories as Narratives: The Fisher-Wright Controversy,” Alirio Rosales (University of British Columbia)
- “Does Form Trump Content in Clinical Case Reports?,” Brian Hurwitz (King’s College London):
- “Making Credible Narratives of Society,” Mary S. Morgan (London School of Economics):
- “Narrative Order and the Problem of Chance,” John Beatty (University of British Columbia):

Philosophy of Interdisciplinarity

Huron A (Level 2)

Sponsored by the Philosophy of Science Association

Chair: Evelyn Brister (Rochester Institute of Technology)

- “Philosophy of Interdisciplinarity: Mapping The Issues,” Hanne Andersen (Aarhus University)
- “Problems, Problem Spaces and Interdisciplinarity,” Brian Hepburn (Wichita State University)
- “Interventionist Omissions: A Critical Study of Mechanistic Explanation in Biology,” Melinda Fagan (University of Utah)
- “Social and Biological Mechanisms of Disease,” Federica Russo (University of Amsterdam) and Michael Kelly (National Institute for Health and Care Excellence)
- “Mathematics in Interdisciplinary Modelling: the Case of Quasi-Crystals,” Henrik Kragh Sørensen (Aarhus University)

1:30 PM – 5:00 PM

Poster session

Great Lakes Ballroom E and Foyer (Level 2)

Poster Prize sponsored by Elsevier

- “From Private to Public: The Acquisition, Preservation, and Availability of Archival Materials from the Norman Collection of Molecular Biology,” Chrystal Carpenter (J. Craig Venter Institute)
- “The Styles of Early Experimental Evolution,” Kele Cable (University of Minnesota)

- “Protective Pictures: The Role of the Image in Plant Patents,” Xan Chacko (University of California, Davis)
- “Deciphering Mathematical Problems of the ‘Shoebox Collection’ of the Paul A.M. Dirac Papers at Florida State University,” Kathleen Clark (Florida State University)
- “*Darlingtonia californica*: The History of an Iconic American Plant,” Maura Flannery (St. John’s University)
- “Galileo Galilei: *De motu antiquiora scripta mea*,” Raymond Fredette (Independent Scholar)
- “Engineering: Applied Science or Not?,” Eunjeong Ma (Pohang University of Science and Technology)
- “Remaking the Past: 3D Methods in HPS and STS,” Isaac Record (University of Toronto)
- “Looking at Rocks like Abraham Gottlob Werner,” Peter Schimkat (Independent Scholar)
- “Changing Facets of Digital Pre-face of Science Museums: Three Case Studies,” Anwasha Chakraborty and Federico Nanni (University of Bologna)
- “Early Psychosis Intervention in Post-War France and Germany: Historical Representations of Prevention and the Mapping of Scientific Communities,” Emmanuel Delille (Humboldt University of Berlin)
- “The Medieval Counting Table,” Cheryl Periton (University of Notre Dame)
- “Taxidermy and Science Education: From Carl Akeley to Emily Graslie,” Christy Tidwell (South Dakota School of Mines & Technology)

3:30 PM – 4:00 PM

Coffee Break

Great Lakes Ballroom Foyer (Level 2)

4:15 PM – 6:15 PM

Biology, Ecology, and Society after World War Two

Ontario (Level 2)

Chair: Frederick R. Davis (Florida State University)

- “W.D. Hamilton and the Theory of Inclusive Fitness: Constructing a Science of Society in the Post-War Decades,” Sarah Swenson (University of Oxford)
- “Virtual Water: Natural Resources in the Wake of Neoliberalism,” Kaitlin Stack Whitney (University of Wisconsin-Madison)
- “Paul Sears and Barry Commoner on Project Chariot: Struggle for the Soul of Ecology,” Gene Cittadino (New York University)

The Corpse as Scientific Object

Huron B (Level 2)

Chair: Carol Pal (Bennington College)

- “Investigating the Holy Bodies of Men: Medical Disagreements about Physical Manifestations of Holiness in the Body at Rome, 1550–1620,” Nicholas Overgaard (University of Toronto)
- “Robert Boyle on Ferments and Fermentation,” Ashley Inglehart (Indiana University)
- “‘It Lives!’ Frankenstein and the Formation of Public Scientific Discourse,” John Robbins (Tufts University)
- “A Mortuary with a View: The Crumbles Bungalow Murder and the Spectacle of Interwar English Homicide Investigation,” Neil Pemberton (CHSTM, University of Manchester)

Documenting and Defining Human Subjects: Historical Reflections on the Questionnaire

Great Lakes C (Level 2)

Chair: Andrew Ruis (University of Wisconsin-Madison)

Commentator: John Carson (University of Michigan)

Organizer: Judith Kaplan (Max Planck Institute for the History of Science)

- “Questionnaires and the Epistemological Space of German Anthropology,” Daniel Midena (University of Copenhagen)
- “‘Basic’ Word Lists and the Universal Linguistic Subject,” Judith Kaplan (Max Planck Institute for the History of Science)
- “Questionnaire and Interview in the Social Research of Paul F. Lazarsfeld,” Eric Hounshell (University of California, Los Angeles)

Early Modern Scientific Networks

Great Lakes D (Level 2)

Chair: Daniel Margocsy (Hunter College – CUNY)

Organizers: Daniel Margocsy (Hunter College – CUNY) and Paola Bertucci (Yale University)

- “Material Networks: Artisans, Savants and Metals in Early Eighteenth-Century France,” Paola Bertucci (Yale University)
- “Poison Trials and the (Mis?) Communication of Experiments in Sixteenth-Century Europe,” Alisha Rankin (Tufts University)
- “The Republican Army of Letters,” Daniel Margocsy (Hunter College - CUNY)
- “Indigo in the Laboratory: Michel Adanson in Senegal,” Mary Terrall (University of California, Los Angeles)

Evidence in Mathematical Understanding

Marquette Park (Level 3)

Chair and Commentator: Emily Grosholz (Pennsylvania State University)

Organizer: Abram Kaplan (Columbia University)

- “The Sense and Sensibility of Distributions,” Michael Barany (Princeton University)
- “The Figure and Other Forms of Geometric Evidence,” Jemma Lorenat (Jussieu/University of Paris, Simon Fraser University)
- “Natural Mathematics and the Account of Error,” Abram Kaplan (Columbia University)

Making Data and Making Sense of Data: Histories of Information in Public Health Science and Practice

Lincoln Park (Level 3)

Chair and Organizer: Aaron Mauck (Harvard University)

- “Data under Development,” Emily Harrison (Harvard University)
- “Integrating Genomics into State Public Health Programs,” Laura Senier (Northeastern University)
- “Searching the Microbial Sea for Epidemiologic Relevance: From Molecular to Genomic Epidemiology in Public Health, 1990s – Present,” Angie Boyce (Cornell University)
- “Mapping Biocultural Pathways: Telomere Length and the Transformation of Social Epidemiology,” Aaron Mauck (Harvard University)

Military Science, Industry, and the Public in the Cold War

Erie (Level 2)

Chair: Thomas Lassman (Smithsonian Institution)

- “The Dispute over the Establishment of the Institute for Nuclear Study and Socio-Cultural Meanings of Nuclear Physics in Cold War Japan,” Kenji Ito (The University of Tokyo)
- “A Chokepoint of Oceanography: Cold War Surveillance and the Contested Sovereignty of Gibraltar,” Lino Camprubi (Max Planck Institute for the History of Science) and Samuel Robinson (The University of Manchester).
- “From Handmaiden to ‘Proper Intellectual Discipline’: Computer Science, the NSF, and the Status of Applied Science in 1960s America,” Janet Abbate (Virginia Tech)
- “Explaining the Atom: Science Education for Survival in the Atomic Age, 1945–1957,” Bonnie Gidzak (University of Minnesota)

Representing Scientific Knowledge in 19th-Century Philadelphia

Garfield Park (Level 3)

Chair: Mark Barrow (Virginia Tech)

Commentator: Gregory Nobles (Georgia Tech)

Organizer: Jonathan Grunert (Virginia Tech)

- “An Inimitable Picture: Dynamic Perception in William Bartram’s Natural History,” Elizabeth Athens (Yale University)

- “The Lithographer as Agent of Change: J.T. Bowen and Natural History Illustration,” Jonathan Grunert (Virginia Tech)
- “Cutting and Casting: Thomas Eakins & Anatomical Study in Gilded Age Philadelphia,” Naomi Slipp (Boston University)

Science and the Making of Post-Colonial National Identities

Grant Park (Level 3)

Chair: Jim Secord (University of Cambridge)

- “Natural History and Leading the Good Life in Nineteenth-Century Chile,” Patience Schell (University of Aberdeen)
- “Building Identities as Geologists in Liberated Korea by Dissociating Themselves from Japan,” Jung H. Won (Seoul National University)
- “New Wine in New Bottles: Technical Education and the Marketing of Electricity in India, 1900–1915,” Animesh Chatterjee (Independent Scholar)
- “The High Horizon: Science and Art in Argentina,” Lewis Pyenson (Western Michigan University)

Thought Experiments as an Epistemic Practice in the Natural and Social Sciences, 1830–1930

Washington Park I (Level 3)

Chair: Bernhard Kleeberg (University of Konstanz)

Commentator: Charles Camic (Northwestern University)

Organizer: Julian Bauer (University of Konstanz)

- “A Day in the Life: Charles Lyell’s Geological Daydreams,” Adelene Buckland (King’s College London)
- “Experimenting with Thoughts, Experimenting with Scripture: Ernst Mach On and In Thought Experiments,” Julian Bauer (University of Konstanz)
- “Max Weber’s ‘Ideal Types’: A Theory and its Practice,” Florian Ernst (University of Konstanz)

Transnational Biomedical Expertise in Modern China

Huron A (Level 2)

Chair: Fa-ti Fan (Binghamton University – SUNY)

Organizer: Lijing Jiang (American Philosophical Society)

- “The Vital Link between Laboratory and Home: Scientific Nursing in Wartime China,” Shenglan Li (Binghamton University)
- “Going to Taiwan: Chinese American Biomedical Scientists and U.S.-Taiwan Scientific Exchanges,” Zuoyue Wang (California State University, Pomona)
- “Comparative Study on the Developments of the Contraceptive Pills in China and in the U.S.,” Haiyan Yang (Peking University)
- “The Troubled Escape from Chinese Lysenko: Questioning Pseudoscience in Postwar U.S.-China Contacts of Biology,” Lijing Jiang (American Philosophical Society)

6:30 – 7:15 PM

HSS Prize Ceremony

Chicago Ballroom (Level 16)

7:15 – 8:15 PM

Joint Reception: HSS/PSA

Great Lakes Ballroom and Foyer (Level 2)

Cash bar and light hors d'oeuvres.

This is a ticketed event.

SUNDAY, NOVEMBER 9, 2014

8:30 AM – 9:30 AM

HSS Business Meeting

Great Lakes E (Level 2)

9:30 – 11:30 AM

The Alchemy of the Unexpected: Interpreting Alchemical Sources from Antiquity to the Seventeenth Century

Washington Park I (Level 3)

Sponsored by the HSS Forum for the History of the Chemical Sciences

Chair and Organizer: Jennifer Rampling (Princeton University)

- “Technical Knowledge and Epistemic Values in Ancient Assyrian Procedure Texts,” Eduardo Escobar (University of California, Berkeley)
- “Alchemy between City and Cloister: Poetry, Blackmail, and Expertise in English Religious Houses,” Jennifer Rampling (Princeton University)
- “A Gift to the Sons of Rum: Turkish Alchemical Poems of the Seventeenth Century,” Tuna Artun (Rutgers University)
- “The Alchemical Emblem Book and Early Modern Game Theory: *Atalanta fugiens* (1618),” Donna Bilak (Chemical Heritage Foundation)

The Latter-Day Lyceum: Pushing the Boundaries of Catholic Aristotelianism, 1500–1750

Ontario (Level 2)

Chair and Commentator: Mordechai Feingold (California Institute of Technology)

Organizer: Jean-Olivier Richard (Johns Hopkins University)

- “Exegetical Exercises and Judaic Legends: Fortunio Liceti against Francisco Suarez,” Eva Del Soldato (University of Pennsylvania)
- “Divination in Dreams and the Alleged Impiety of Aristotle,” Craig Martin (Oakland University)
- “Between the Miraculous and the Mundane: The Jesuit War on the Occult,” Mark Waddell (Michigan State University)
- “Men in the Machine: Père Castel and the Art of Avoiding Catastrophes,” Jean-Olivier Richard (Johns Hopkins University)

Music, Acoustics, and Rhythm in the Sciences

Grant Park (Level 3)

Chair: David L. Seim (University of Wisconsin-Stout)

- “Turning Music into Sound: Vincenzo Galilei’s Contributions to Acoustics,” Marina Baldissera Pacchetti (University of Pittsburgh)
- “Sound and Vision: Visuality and the Role of Acoustics in the Birth of Modern Ophthalmology in Seventeenth-Century Europe,” Richard Spiegel (Princeton University)
- “‘The Harmonium within Us’: Ether, Ethereality, and Early Romantic Ideas about Music and the Nerves,” Carmel Raz (Yale University)
- “Folding into Being: Early Embryology and the Epistemology of Rhythm, 1760–1830,” Janina Wellmann (Leuphana University Lüneburg)
- “Music and the Arsenal: Artillery, Sound, and Science in Woolwich, 1800–1850,” Simon Werrett (University of Washington, Seattle)

Number and Narratives: New Approaches to the History of the Mathematical Sciences

Marquette Park (Level 3)

Chair and Organizer: Emily Redman (University of Massachusetts, Amherst)

Commentator: Massimo Mazzotti (University of California, Berkeley)

- “Geometries of Power,” Amir Alexander (University of California, Los Angeles)
- “The Housewife Problem: Applied Mathematics and Efficient Economics in the National Security State,” Theodora Dryer (University of California, San Diego)
- “Cause by Number: Jerome Cornfield and Statistical Narratives,” Christopher Phillips (NYU Gallatin)
- “Measuring Worth: Constructing Narrative of Value for Precollege Mathematics Education in the United States,” Emily Redman (University of Massachusetts, Amherst)

Scientific Expertise in the Peripheral and the Emerging Contexts of Science

Huron A (Level 2)

Chair and Commentator: Alexander Levine (University of South Florida)

Organizer: Deepanwita Dasgupta (East Tennessee State University)

- “Periphery on the Centre: C.V. Raman, Colonial Physics and Indian Modernity,” Somaditya Banerjee (University of Idaho)
- “The Surface of a Star, a Peripheral Scientist, and an Equation on Ionization,” Deepanwita Dasgupta (East Tennessee State University)
- “Human Origins at the End of the World: Francisco Moreno, Florentino Ameghino, and the Invention of Prehistoric South America,” Ashley Kerr (University of Idaho)
- “Japanese Malacology 1790–1925: Zoology in the Non-Alphabetic Realm,” Paul Callomon (Academy of Natural Sciences of Drexel University)

SciViroTech, or Science that Materially Changed the World

Erie (Level 2)

Chair, Commentator, and Organizer: Roger Turner (Dickinson College)

- “Bringing California to the Table: Myer E. Jaffa and the Pure Food Movement,” Kimberly Killion (University of California, Berkeley)
- “Mendeleev’s Maps, Measures and the Magnetic Mountain,” Lydia Xynogala (Cooper Union)
- “The Year of Balloons and Fireflies: Operation FuGo and the Militarization of Fire Suppression,” Jameson Karns (University of California, Berkeley)
- “The Century 21 Exposition: Building Confidence in a Space Age Fair in Seattle 1955-1962,” James D. Skee (University of California, Berkeley)

Theoretical Change in the History of Physics

Garfield Park (Level 3)

Chair: Bruce J. Hunt (University of Texas at Austin)

- “Euler’s Mechanics as Opposition to Leibnizian Dynamics,” Nobumichi Ariga (National Museum of Nature and Science, Japan)
- “Dimensional Analysis in the Nineteenth Century,” Sybil de Clark (University of Arizona)
- “The Conservation of Energy in the Netherlands,” Frans van Lunteren (VU University of Amsterdam)
- “The Origins of Schwinger’s Euclidean Green’s Functions,” Michael Miller (University of Pittsburgh)
- “Quantum Mechanisms and the Microscopic-Macroscopic Divide,” Daniela Monaldi (York University)

Where are the Go-Betweens Going?

Millennium Park (Level 3)

Chair: Janet Browne (Harvard University)

Commentator: Kapil Raj (Ecole des Hautes Etudes)

Organizer: Jordan Goodman (University College London)

- “Knowledge of the ‘Non-Expert’: Chemistry, Botany, and Peasants in 1960s Mexico,” Gabriela Soto Laveaga (University of California, Santa Barbara)
- “Pharmacological Go-Betweens in the Atlantic World,” Ben Breen (University of Texas)
- “Confident Men and Confidence Men: Taxonomy and Local Agents in Joseph Pitton de Tournefort’s Eastern Mediterranean Voyage, 1700–1702,” Jordan Kellman (University of Louisiana at Lafayette)
- “Spot the Go-Between(s): Joseph Banks, Knowledge, and Interpreters for the Macartney Embassy to China, 1792,” Jordan Goodman (University College London)

2:00 – 3:00 PM

Elizabeth Paris Memorial Lecture for Socially Engaged History and Philosophy of Science: “From Einstein’s Clocks to the Refusal of Time,” Peter Galison, Harvard University

The Fourth Presbyterian Church of Chicago – Buchanan Chapel at the Gratz Center (1 block from meeting hotel)

This talk is part of the Chicago Humanities Festival and is a ticketed event (tickets for this event are sold out). You can find more information at <http://chicagohumanities.org/events/2014/journeys/peter-galison-from-einsteins-clocks-to-the-refusal-of-time>.



Image by Rich Niewiowski Jr

HSS 2014 Business Meeting Agenda
Sunday, 9 November, 8:30 – 9:30 a.m.
Great Lakes Ballroom E (2nd Level)

All HSS members are welcome. Refreshments will be served.

President's Welcome
Angela Creager

Approval of Minutes
(Minutes available at www.hssonline.org)

Executive Director's Report
Jay Malone

Editor's Report
H. Floris Cohen

Treasurer's Report
Adam Apt

Committee Reports
Synopsis by Jay Malone

Strategic Planning
Presentation of the new HSS Strategic Plan

Electronic copies of the reports are available. Please visit www.hssonline.org and look for the Business Meeting link on the 2014 Meeting page.

Acknowledgements from the PSA Executive Secretary

Welcome to Chicago and the Twenty Fourth Biennial Meeting of the Philosophy of Science Association. As I have quickly learned, 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 PSA2014, and I am deeply indebted to all those who have helped make this meeting a success.

First and foremost, I would like to thank the PSA2014 Program Committee, and especially its chair, Chris Smeenk. Not only is this year's program the largest ever, but the committee received 32% more submissions than in 2012. Chris and the excellent Program Committee he assembled worked tirelessly to wade through all of these submissions in a timely manner to come up with an exceptional program. To Chris I owe the deepest gratitude. His task has at times been overwhelming, but has brought wisdom, good cheer, and patience to the endeavor, even while moving partway across the continent. It has been a pleasure to work with him.

There are others who have helped in numerous ways with the meeting. Rachel Ankeny and the HSS Program Chairs, Deborah Coen and Matt Stanley, helped to ensure that there are ample possibilities for intellectual interaction between historians and philosophers of science. Sandy Mitchell, Fred Kronz, Jeff Barrett, Sandy Clark, and Rachel Mason Dentinger helped organize additional events to enrich the meeting in various ways, especially, I hope, for younger scholars. Thanks also to the numerous cognate societies for helping to broaden and enhance the meeting with the additional Sunday sessions.

The meeting would not be possible without Jay Malone, the Executive Director of the History of Science Society, and his staff, especially Greg Macklem. Much of the planning for the PSA meeting is undertaken by the HSS, and I and the PSA have benefited enormously from Jay's expertise and skills. Jay's knowledge, patience, and good humor over the many months of planning have been essential to keeping me sane while navigating the complexities of running a meeting. I would also like to thank the Local Arrangements Committee, made up of Bob Richards, Ken Alder, Tania Munz, and Nick Huggett, for their help with local arrangements and especially for their work on putting together the guide to Chicago's attractions and restaurants. Thanks also to Hannah Rubin for keeping our presenters informed, to Alec Julien for creating our website, and to Greg Strack for helping to keep it updated.

I am also thankful to the PSA Governing Board for its guidance, and especially Helen Longino for her patience and wisdom throughout the past two years. Andrea Woody has been an invaluable resource, and I am deeply indebted to Gary Hardcastle, whose generosity and patience seems boundless. I would not have been able to perform my job without his astute guidance and constant support.

Given rising conference expenses (e.g. coffee at \$9.33/cup), support from our friends is crucial to keeping the meeting affordable. I would like to thank the following for their sponsorship of the meeting: University of Notre Dame; National Science Foundation; The Weinberg College of Arts and Sciences, Northwestern University; The Graduate School, Northwestern University; The Department of History, Northwestern University; Science in Human Culture Program, Northwestern University; Morris Fishbein Center for the

History of Science and Medicine at the University of Chicago; University of Chicago Press; University of Chicago Press, Journals Division; University of Maryland, Baltimore County; Pfizer; The Chemical Heritage Foundation; Brent Dibner, Dibner Institute; Miles Davis; Educational Advancement Foundation; Albert C. Lewis; David Kaiser; Science, Technology and Society Program at the University of Michigan; Program in Science, Technology and Society at the Massachusetts Institute of Technology; Department of Logic and Philosophy of Science at the University of California, Irvine; School of Social Sciences, University of California, Irvine; Center for Philosophy of Science at the University of Pittsburgh; Program for History and Philosophy of Science at the University of Notre Dame; and the Minnesota Center for Philosophy of Science, University of Minnesota.

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
Executive Secretary and Treasurer
Philosophy of Science Association

Acknowledgements from the PSA2014 Program Chair

I first wish to thank Helen Longino and the Governing Board for opportunity to serve as program chair. I thank the PSA for funding that supported my efforts, and to my department for allowing me to devote my time to external service. In taking on this task, I have been fortunate to collaborate with a terrific group of colleagues whose efforts I gladly acknowledge here. First and foremost are members of the program committee, all of whom reviewed an unreasonably large number of symposia and contributed papers on tight deadlines, and contributed in other ways too numerous to list. It has been a pleasure to work with them all, and I gladly thank them for agreeing to serve the profession in this way. The editorial staff at *Philosophy of Science*, in particular Hannah Rubin, insured that the review process worked smoothly with Editorial Manager, and I am indebted to Jeff Barrett for guidance and advice about a number of issues. Sarah Gallagher wrote perl scripts for statistical analysis of the reviews and submission demographics. I thank Rachel Ankeny for looking carefully through both the HSS and PSA programs to identify sessions of mutual interest. The entire process would have been much more chaotic but for the detailed guide prepared by Andrea Woody, who also answered countless questions as the process unfolded. Gary Hardcastle provided invaluable advice from his extensive experience organizing previous meetings. I am grateful to Jay Malone for arranging sufficient rooms to accommodate the growth of the meeting, and to Greg Macklem for mitigating conflicts with HSS sessions and handling sundry logistical issues. But my greatest debt of gratitude by far is owed to Jessica Pfeifer, who has guided my efforts -- and kept my task from becoming overwhelming -- throughout the entire process. Last, and certainly not least, I want to thank all of the scholars who submitted the fruits of their research to be presented at the PSA. The strength of the program derives from your fascinating and inspiring work.

Chris Smeenk, PSA2014 Program Chair

PSA Officers

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PHILOSOPHY OF SCIENCE ASSOCIATION PROGRAM

November 6 – 9, 2014

Chicago, Illinois

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 HSS Twitter feed (@hssonline), using hashtag #hsspsa14.

Sessions will be held on four floors of the hotel. The levels are included with the room for each session on the program. The rooms are also named with a common theme for each floor:

- 2nd level – The Great Lakes
- 3rd Level – Parks in Chicago
- 5th Level – Streets bordering Wrigley Field
- 16th Level – Chicago Ballroom

Fret not if your session is in one of the Wrigley Field rooms. Wrigley Field has proven to be quite kind to visitors for more than 100 years.

Childcare/Nursing Mothers Room: Waveland, on the 5th level, 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.

The hours for the book exhibit and registration desk are as follows:

Registration Desk

- Thursday, 10:00 AM – 6:00 PM
Great Lakes Ballroom Foyer
- Friday, 8:00 AM – 5:00 PM
Outside Superior East
- Saturday, 8:00 AM – 5:00 PM
Outside Superior East
- Sunday, 8:00 – 12:00 PM
Outside Superior East

Book Exhibit

- Thursday, 6:30 PM – 8:45 PM
Great Lakes Ballroom A and Foyer
- Friday, 8:00 AM – 5:00 PM
Great Lakes Ballroom A and Foyer
- Saturday, 8:00 AM – 5:00 PM
Great Lakes Ballroom A and Foyer
- Sunday, 8:00 AM – 11:00 AM
Great Lakes Ballroom and Foyer

Wednesday November 5

4:30 PM - 7:30 PM

Meeting of the PSA Governing Board

Parks Boardroom – Level 3

Thursday November 6

9:00 AM - 1:00 PM

Meeting of the PSA Governing Board

Parks Boardroom – Level 3

Session 1 (1:30 PM - 3:00 PM)

Contributed Papers: Mathematics and Complexity

Superior East – Level 2

- Otavio Bueno (University of Miami): What Does a Mathematical Proof Really Prove?
- Nicolas Fillion (Simon Frasier University) and Sorin Bangu (University of Bergen): Solutions in the Mathematical Sciences and Epistemic Hierarchies
- Cyrille Thomas Imbert (Archives Poincaré, CNRS, Université de Lorraine): Realism about the complexity of physical systems without realist commitments to their scientific representations

Chair: Andrew M. Winters (University of South Florida)

Contributed Papers: Explanation in Physics

Huron C - Level 2

- Michael E. Cuffaro (LMU Munich): How-Possibly Explanations in Quantum Computer Science
- Chris Pincock (Ohio State University): Newton, Laplace and Salmon on Explaining the Tides
- Lina Jansson (Nanyang Technological University): Making Room for Explanatory Fictions within Realism

Chair: Armond Duwell (University of Montana)

Contributed Papers: Realism and Unconceived Alternatives

Great Lakes B - Level 2

- P. Kyle Stanford (University of California, Irvine): Catastrophism, Uniformitarianism, and a Realism Dispute that Makes a Difference
- Matthew S. Sample (University of Washington): Stanford's Unconceived Alternatives from the Perspective of Epistemic Obligations
- Greg Frost-Arnold (Hobart and William Smith Colleges): Should a Historically Motivated Anti-Realist be a Stanfordite?

Chair: Jonathan Rosenberg (University of Washington)

Contributed Papers: Mechanistic Explanations in Biology

Michigan Ballroom II - Level 2

- William Bechtel (University of California, San Diego): Biological Mechanisms Don't Exist Except as Theoretical Posits
- Derek John Skillings (CUNY): Mechanistic Explanation of Biological Processes
- Justin Garson (Hunter College – CUNY): Why (a Form of) Function Indeterminacy is Still a Problem for Biomedicine, and How Seeing Functional Items as Components of Mechanisms Can Solve it

Chair: Lindley Darden (University of Maryland)

Contributed Papers: Phylogeny and Taxonomy

Superior West - Level 2

- Bengt Autzen (London School of Economics): The Star Tree Paradox in Bayesian Phylogenetics
- Lucas John Matthews (University of Utah): Embedded Mechanisms and Phylogenetics
- P.D. Magnus (University at Albany SUNY): What the 19th Century Knew about Taxonomy and the 20th Century Forgot

Chair: Wes Anderson (Arizona State University)

Contributed Papers: Contingency

Washington Park II – Level 3

- Hayley Clatterbuck (University of Wisconsin, Madison): Contingency and the Origin of Life
- Stefan Linquist (University of Guelph): Against Lawton's Contingency Thesis, or, Why the Reported Demise of Community Ecology is Greatly Exaggerated
- Jake Wright (University of Missouri): The Moral of the Story: What Does the Evolutionary Contingency Thesis Teach Us About Biological Laws?

Chair: Francesca Merlin (IHPST, Université Paris 1)

Contributed Papers: Psychology and Neuroscience

Grant Park – Level 3

- Guillermo Del Pinal (Ruhr Universität Bochum) and Marco J. Nathan (University of Denver): Bridge Laws and the Psycho-Neural Interface
- ~~Uljana Feest (Leibniz Universität Hannover): Physicalism, Introspection, and Psychophysics: The Carnap/Duncker Exchange~~
- Elena Walsh (The University of Sydney): Top-Down 'Causation' and Developmental Explanation

Chair: Luis H. Favela (University of Cincinnati)

Contributed Papers: Individuality and Indiscernibility in Quantum Mechanics

Erie – Level 2

- Joshua Norton (University of Illinois at Chicago): Weak Discernibility and Relations Between Quanta
- Benjamin Jantzen (Virginia Tech): Why Talk about 'Non-Individuals' Is Meaningless
- Tomasz Bigaj (University of California, San Diego): Quantum Particles, Individual Properties, and Discernibility

Chair: F. A. Muller (Erasmus University Rotterdam and Utrecht University)

Contributed Papers: Values, Underdetermination, and Risk

Great Lakes C – Level 2

- Daniel J. Hicks (Western University): Genetically Modified Crops and the Underdetermination of Evidence by Epistemology
- Ingo Brigandt (University of Alberta): Social Values Influence the Adequacy Conditions of Scientific Theories: Beyond Inductive Risk
- Brandon Holter (University of Calgary): Rudner's Challenge and the Epistemic Significance of Inductive Risk

Chair: Susann Wagenknecht (IUPUI)

Contributed Papers: Locality, Entanglement, and Information

Huron B – Level 2

- Gábor Hofer-Szabó (Hungarian Academy of Sciences) and Péter Vecsernyés (Hungarian Academy of Sciences): Bell's Local Causality for Philosophers
- Malcolm Forster (University of Wisconsin, Madison): How the Quantum Sorites Phenomenon Strengthens Bell's Argument
- Olimpia Lombardi (CONICET/University of Buenos Aires), Sebastian Fortin (CONICET/University of Buenos Aires), and Leonardo Vanni (CONICET/University of Buenos Aires): A Pluralist View about Information

Chair: David Glick (University of Rochester)

HSS Session: Histories of Evolutionary Thought between Science and Philosophy

Great Lakes D – Level 2

- Greg Priest (Stanford University): Charles Darwin's Theory of Moral Sentiments: What Darwin Really Borrowed from Adam Smith
- Aleta Quinn (University of Pittsburgh): William Whewell, Historical Scientist
- Trevor Pearce (University of North Carolina at Charlotte): Weismannism Comes to America: Pragmatism and Evolution in the 1890s
- Peter Collopy (University of Pennsylvania): Bergsonian Science: Creative Evolution in the Twentieth Century

Chair: Sabetai Unguru (University of Tel-Aviv)

Session 2 (3:15 PM - 5:15 PM)

Contributed Papers: Foundations of Probabilistic Inference

Garfield Park – Level 3

- Jiji Zhang (Lingnan University) and Kun Zhang (Max Planck Institute for Intelligent Systems): Likelihood and Consilience: On Forster's Counterexamples to the Likelihood Theory of Evidence
- Greg Gandenberger (University of Pittsburgh): Why I am not a Methodological Likelihoodist
- Yann Benétreau-Dupin (Western University): Blurring Out Cosmic Puzzles
- Susanna Rinard (Harvard University): Imprecise Probability and Higher Order Vagueness

Chair: Theo Kuipers (University of Groningen)

Contributed Papers: Confirmation Theory

Erie – Level 2

- Daniel Malinsky (Carnegie Mellon University): Hypothesis Testing, "Dutch Book" Arguments, and Risk
- Kevin T. Kelly (Carnegie Mellon University), Konstantin Genin (Carnegie Mellon University), and Hanti Lin (Australian National University): A Topological Theory of Empirical Simplicity
- Aki Lehtinen (University of Helsinki): Derivational Robustness and Indirect Confirmation
- Benjamin Bewersdorf (University of Groningen): Total Evidence, Uncertainty, and A Priori Beliefs

Chair: Susan Vineberg (Wayne State University)

Contributed Papers: Epistemology

Superior West - Level 2

- Soazig Le Bihan (University of Montana) and Armond Duwell (University of Montana): Enlightening Falsehoods: A Modal View of Scientific Understanding
- Ioan Muntean (University of Notre Dame): Genetic Algorithms in Scientific Discovery: a New Epistemology?
- Susann Wagenknecht (Centre for Science Studies, AU): A Double Notion of Knowing and Knowledge
- Marion Vorms (University Paris 1): Spatial Representations in Science: Towards a Typology

Chair: Jason Leddington (Bucknell University)

Contributed Papers: Mechanistic Explanation

Great Lakes B - Level 2

- Tudor Baetu (University of Maryland): The Completeness of Mechanistic Explanations

- Marco Jacob Nathan (University of Denver) and Alan C. Love (University of Minnesota): The Idealization of Causation in Mechanistic Explanation
- Benjamin Sheredos (University of California, San Diego): Ontic Accounts of Explanation Cannot Support Norms of Generality and Systematicity
- Frédéric-I. Banville (Western University): Accounting for the Dynamics of Inquiry in Neuroscience

Chair: Stuart Glennan (Butler University)

Contributed Papers: Spacetime and Quantities

Huron B – Level 2

- Zee R. Perry (New York University): Intensive and Extensive Quantities
- John Dougherty (University of California, San Diego): A Few Points on Gunky Space
- Jill North (Cornell University): The Structure of Spacetime: A New Approach to the Spacetime Ontology Debate
- Steven F. Savitt (University of British Columbia): I ♥ ♦s

Chair: Brian Woodcock (University of Wisconsin, Eau Claire)

Contributed Papers: Methodology across the Life Sciences

Superior East – Level 2

- Jack Powers (University of Minnesota): Atrazine Research and the Criteria of Characterized Adequacy
- Irina Mikhalevich (Washington University in St. Louis): Experiment and Animal Minds: Why Statistical Choices Matter
- Ayelet Shavit (Tel Hai College): You Can't Go Home Again - or Can You? 'Replication' Indeterminacy and 'Location' Incommensurability in Three Biological Re-Surveys

Chair: Richard Burian (Virginia Tech)

Contributed Papers: Trials and Placebos

Washington Park II – Level 3

- Bennett Holman (University of California, Irvine): Why Most Sugar Pills are not Placebos
- Jeremy Howick (University of Oxford) and John Worrall (London School of Economics): What Counts as a Placebo is Relative to a Target Disorder and Therapeutic Theory: Defending a Modified Version of Grünbaum's Scheme
- Spencer Phillips Hey (McGill University): Theory Testing and Implication in Clinical Trials
- Jonathan Fuller (University of Toronto): The Confounding Question of Confounding Causes in Randomized Trials

Chair: Serife Tekin (Daemen College)

Contributed Papers: Cognitive Neuroscience

Great Lakes C – Level 2

- Mikio Akagi (University of Pittsburgh): Going Against the Grain: Functionalism and Generalization in Cognitive Science
- Rosa Cao (NYU): Where Information Fades Away: Some Limitations of Informational Explanations in Neuroscience
- Maurice Lamb (University of Cincinnati) and Anthony Chemero (University of Cincinnati): Understanding Dynamical Models in Cognitive Science

Chair: Vanessa Bentley (University of Cincinnati)

Contributed Papers: Axiomatic and Heuristic Approaches to Quantum Field Theory

Huron C - Level 2

- Bihui Li (University of Pittsburgh): Coarse-Graining as a Route to Microscopic Physics: The Renormalization Group in Quantum Field Theory
- Jonathan Bain (NYU): Pragmatists and Purists on CPT Invariance in Relativistic Quantum Field Theories
- Michael Miller (University of Pittsburgh): Haag's Theorem and Successful Applications of Scattering Theory
- Michael Stoeltzner (University of South Carolina): On Virtues and Vices of Axiomatic Quantum Field Theory

Chair: Doreen Fraser (University of Waterloo)

Contributed Papers: Issues in Classical Physics

Michigan Ballroom II - Level 2

- Kirsten Walsh (University of Otago): Phenomena in Newton's *Principia*
- Marton Gomori (Eötvös University) and Laszlo E. Szabo (Eötvös University): How to Move an Electromagnetic Field?
- Charlotte Werndl (University of Salzburg) and Roman Frigg (London School of Economics): Rethinking Boltzmannian Equilibrium
- Conor Mayo-Wilson (LMU Munich): Structural Chaos

Chair: Eric Winsberg (University of South Florida)

HSS Session: Einstein and the Relation between Physics and Math

Michigan Ballroom I – Level 2

- John Norton (University of Pittsburgh): Einstein as the Greatest of the Nineteenth Century Physicists
- Michel Janssen (University of Minnesota) and Jürgen Renn (Max Planck Institute for the History of Science): Einstein's 1913 Vienna Lecture: Modeling Gravitational theory on Electrodynamics
- Jeroen van Dongen (Utrecht University): A Virtuous Theorist's Theoretical Virtues: Einstein on Physics vs. Mathematics and Experience vs. Unification

- Christoph Lehner (Max Planck Institute for the History of Science): Einstein's Realism between Mathematics and Physics

Chair: Diana Buchwald (Einstein Papers Project, California Institute of Technology)

HSS Session: Contingency in Early Modern Science and Natural Philosophy

Millennium Park – Level 3

- Pietro Daniel Omodeo (Max Planck Institute for the History of Science): Secundum quid and Determined Necessity in Scholastic and Early Modern Mechanics
- Rodolfo Garau (Max Planck Institute for the History of Science): Contingency and Laws of Nature in Descartes's Physics
- Jonathan Regier (Université Paris 7 – Diderot): Kepler on Contingency and Matter
- Ofer Gal (University of Sydney): Contingency in the Universe of Precision
- Matteo Valleriani (Max Planck Institute for the History of Science): Commentary

Chair: Matteo Valleriani (Max Planck Institute for the History of Science)

5:30 PM - 6:30 PM

Meet the Editors: Inside the Journal *Philosophy of Science*

Erie – Level 2

- Jeffrey Barrett (*Philosophy of Science* Editor-in-Chief, former PSA Program Chair)
- Andrea Woody (*Philosophy of Science* Associate Editor, former PSA Program Chair)

History of Science Society Plenary Session (5:30 PM - 7:00 PM)

Bounded Rationality and the History of Science

Chicago Ballroom – Level 16

Chair and Commentator: Lorraine Daston (Max Planck Institute for the History of Science)

Organizer: Colin Webster (Columbia University/University of California, Davis)

- Stephanie Dick (Harvard University): Looking for Limits: Configuring Minds, Mathematics, and Machines in the Mid-Twentieth Century
- Henry Cowles (Princeton University): Hypothesis Bound: Trial and Error in the Nineteenth Century
- William Deringer (Columbia University): Financial Bubbles and the Boundaries of Economic Rationality in the Past
- Colin Webster (Columbia University/University of California, Davis): Heuristic Medicine: the Methodists and Galen

7:00 PM - 8:30 PM

Joint PSA/HSS Opening Reception

Great Lakes Ballroom – Level 2

Concurrently in adjacent area:

Activities for Social Engagement

Organized by the Joint Caucus for Socially Engaged
Philosophers and Historians of Science

Conveners: Sandy Mitchell, Jane Maienschein, Rachel Ankeny,
Dawn Digrius, and Julia Bursten

- **Podcasts** with Carla Nappi (University of British Columbia)
- **Science museums and exhibitions** with Kate MacCord (Arizona State University) and Erica O’Neil (Arizona State University)
- **Engaging Federal agencies and committees** with Lee Zwanziger (U.S. Food and Drug Administration)
- **Instant HPS: Short Videos for a general audience** with Sandy Mitchell (University of Pittsburgh), John Norton (University of Pittsburgh), and Trey Boone (University of Pittsburgh)
- **Using social media (e.g. Facebook and Twitter) to get out the message** with Paige Madison (Arizona State University) and Steve Elliott (Arizona State University)
- **Talking with the Press** with Naomi Oreskes (Harvard University)
- **How I got Inside the Beltway** with Jim Fleming (Colby College)
- **Communicating science on socially relevant topics** with Kevin Elliott (Michigan State University) and Dan McKaughan (Boston College)
- **Protecting at-risk people and consulting for federal agencies** with Kristin Shrader-Frechette (University of Notre Dame), Dustin Crummett (University of Notre Dame), Emily Spencer (University of Notre Dame), Rebecca Thomas (University of Notre Dame), and Christopher Glueck (Indiana University)
- **Deliberative and participatory projects on food value** with Rachel Ankeny (University of Adelaide) and Heather Bray (University of Adelaide)
- **Toolbox Project** with Michael O’Rourke (Michigan State University), Sean Valles (Michigan State University), and Chad Gonnerman (University of Southern Indiana)
- **Library Talks for the public** with Dan Hicks (Western University)
- **(History of) Science Cafes** with Jessica Baron (History of Science Society/University of Notre Dame)

8:45 PM - 10:00 PM

HSS/PSA Graduate Student and Early Career Mixer

The Grill on the Alley Restaurant

Join the PSA and GECC for an early careerists mixer following the opening night reception. Appetizers will be provided.

Sponsored by the Center for Philosophy of Science at the University of Pittsburgh

center for
**PHILOSOPHY
OF SCIENCE**

Friday November 7

7:45 AM – 8:45 AM

***Philosophy of Science* Editorial Board Meeting**

Parks Boardroom – Level 3

Session 3: 9:00 AM - 11:45 AM (Break from 10:00 AM – 10:15 AM)

Symposium: Learning from Others

Huron B – Level 2

- Mikaël Cozik (Paris-Est, IUF and IHPST): Opinion Pooling and Bayesian Updating
- Jan-Willem Romeijn (University of Groningen): Pooling and Voting: Trust as Truth-Conduciveness
- Denis Bonnay (ENS Paris): Pooling, Partial Updates, and Independence
- Olivier Roy (Bayreuth): All Agreed: DeGroot Meets Aumann
- Richard Bradley (LSE): Learning from Others: Conditioning vs. Averaging

Chair: Simon Huttegger (University of California, Irvine)

Symposium: Measuring What?

Superior West - Level 2

- Eran Tal (University of Cambridge): Measurement, Models and Coherence
- Anna Alexandrova (University of Cambridge) and Dan Haybron (St. Louis University): Is Construct Validity Valid?
- Leah McClimans (University of South Carolina) and Erik Angner (George Mason University): Measurement in Medicine

- Jacob Stegenga (University of Utah): Measuring Effectiveness

Chair: Brian Hood (University of West Florida)

Symposium: Perspectivism

Great Lakes B - Level 2

- Michela Massimi (University of Edinburgh): Making Realism Perspectival
- Paul Teller (University of California, Davis): Perspectival Realism?
- Mazviita Chirimuuta (University of Pittsburgh): Vision, Perspectivism, and Haptic Realism
- Sandra D. Mitchell (University of Pittsburgh): Perspectives, Representation and Integration
- Ronald N. Giere (University of Minnesota): Philosophical Perspectivism

Chair: Werner Callebaut (Konrad Lorenz Institute)

Symposium: Scientific Method Revisited

Millennium Park – Level 3

- Elliott Sober (University of Wisconsin, Madison): Is the Question of Global Versus Local Theories of Scientific Inference a Pseudo-Problem? The Test Case of Parsimony
- Clark Glymour (Carnegie Mellon University): Reliable (?) Methods for Finding Reliable Methods
- Samuel Schindler (Aarhus University): On the Necessity of a Scientific Method
- Ioannis Votsis (Düsseldorf Center for Logic and Philosophy of Science): Principia Universalis
- Nancy Cartwright (University of California, San Diego and Durham University): Loose Talk Kills: What's Worrying about Unity of Method

Chair: Paul Roth (University of California, Santa Cruz)

Symposium: Agnotology—Its Untapped Potential

Huron A – Level 2

- Miriam Solomon (Temple University): Hermeneutical Injustice and Agnotology: The Case of the Disappearance of Asperger's Syndrome
- Martin Carrier (Bielefeld): Agnotological Challenges: Coping with Biases in Research Direction and Assessment
- Michael Friedman (Stanford): How Ignorance Makes Morality Possible: Kant on the Limits of Scientific Knowledge
- Janet Kourany (Notre Dame): Should Some Knowledge Be Forbidden? The Case of Cognitive Differences Research

Chair: Manuela Fernández Pinto (University of Helsinki)

Symposium: What's New in Network Analysis?

Great Lakes C – Level 2

- Danielle S. Bassett (University of Pennsylvania): Human Brain Network Dynamics
- Carl F. Craver (Washington University): Graphing the Brain's Dark Energy: How Network Analysis Contributes to Our Mechanistic Understanding of Complex Systems
- Philippe Huneman (Université Paris I Sorbonne): Network Analysis and Mechanistic Models in Community Ecology: Is Realism the Crucial Difference?
- Sonia Kéfi (Université de Montpellier 2): Ecological Networks – Challenges and Opportunities
- Daniel Kostic (University of Belgrade): Does Network Analysis Provide a Novel Kind of Topological Explanations in Life and Brain Sciences?

Chair: David Barack (University of Pennsylvania)

Symposium: Complex Life Cycles, Reproduction and Evolution

Michigan Ballroom II - Level 2

- Peter Godfrey-Smith (CUNY): Complex Life Cycles and the Evolutionary Process
- Matthew D. Herron (University of Montana): Fitness and Individuality in Complex Life Cycles
- Maureen A. O'Malley (University of Sydney): Reproduction without Bottlenecks: Multilineal Units of Evolution
- James R. Griesemer (University of California, Davis): Life Cycle Complexity: Reproducing Systems and their Developmental Contexts

Chair: Thomas Pradeu (Paris-Sorbonne University)

Symposium: Conceptions of Space, Time and Spacetime

Lincoln Park – Level 3

- Gordon Belot (University of Michigan): Does Time Flow Equally in General Relativity?
- Jeremy Butterfield (Trinity College, Cambridge) and Sebastian De Haro (University of Amsterdam): Two Kinds of Under-Determination of Spacetime Structure
- John Manchak (University of California, Irvine): On Gödel and the Ideality of Time
- Philip Ehrlich (Ohio University): Are Points (Necessarily) Unextended?

Chair: Carolyn Brighthouse (Occidental College)

Symposium: Putting Pressure on Human Nature

Huron C - Level 2

- Heidi Colleran (University College, London): Fertility Decline and Human Reproductive Decision-Making: Can the 'Central Theoretical Problem of Human Sociobiology' Tell us Anything about an Evolved Human Psychology?
- Stephen M. Downes (University of Utah): Confronting Variation in the Social and Behavioral Sciences

- Matt Haber (University of Utah): Paradigmatic People
 - Tim Lewens (University of Cambridge): What is Human Nature Good for?
- Chair: Matthew Kopec (Northwestern University)

Symposium: Newton, Mathematics, and Mechanism

Superior East – Level 2

- Mary Domski (University of New Mexico): Mechanics in Geometry and in Natural Philosophy: Newton's Programmatic Statement against Descartes
- Andrew Janiak (Duke): Newton's Surprising Struggle with Mechanistic Thinking
- Eric Schliesser (Ghent): Newton's Taxonomic Science
- Zvi Biener (University of Cincinnati): Newton, the Galilean Tradition, and the Foundations of Mechanics

Chair: Katherine Brading (University of Notre Dame)

HSS Session: What Chemistry Has Brought to Philosophy: Philosophical and Historical Perspectives

Great Lakes E – Level 2

- Alfred Nordmann (Technische Universität Darmstadt): Similarities – What Chemistry Brings to the Philosophy of Technoscience
- Minwoo Seo (University of Cambridge): Know-how and Know-that as a Tool Kit
- Jean-Pierre Noël Llored (Ecole Polytechnique): Reconceptualizing Emergence from Chemistry: Connecting Continental and Analytic Philosophy
- ~~Ronan De Calan (Université Paris 1 Panthéon Sorbonne): "Chemical Analysis and the Analysis of Mind: Elements for a Prehistory of Psychology"~~
- Bernadette Bensaude-Vincent (Université Paris 1 – Panthéon Sorbonne, France): Commentary

Co-Chairs: Hasok Chang (University of Cambridge) and Yoshiyuki Kikuchi (The Graduate University for Advanced Studies, [SOKENDAI], Japan)

HSS Session: History of Interdisciplinarity: What We Do and Do Not Know – and Why it Matters

Grant Park – Level 3

- Hanne Andersen (Aarhus University), Anne Markovich (University of Paris IV), and Terry Shinn (University of Paris IV/CNRS): Disciplinarity Studies and the 'New Disciplinarity' in Nanoscale Scientific Research
- Henrik Kragh Sørensen (Aarhus University): Mathematics and the Sciences: Two-Way Interdisciplinarity
- Kristian Hvidtfeldt Nielsen (Aarhus University): Interdisciplinarity in Mission-Oriented Military Research: The Case of US Military Research Activities in Greenland during the Cold War
- Julia Bursten (University of Pittsburgh): Boundary Work: Nanoscience Meets Philosophy at Material Surfaces

- Ronald E. Doel (Florida State University): What We Know (and particularly do not yet know) About Twentieth Century Interdisciplinary Science

Chair: Hanne Andersen (Aarhus University)

(12:00 PM - 1:15 PM)

Q&A Session Concerning NSF's Newly Published STS Program Solicitation

Superior East – Level 2

- Fred Kronz (National Science Foundation)

The solicitation should be published by Nov 7th; if not, this will be a Q&A session about the funding opportunities for historians and philosophers of science at NSF including the STS program and other programs.

Open Access – What's Next?

Huron A – Level 2

Sponsored by the History of Science Society

- Mary Ellen Davis, Executive Director, Association of College and Research Libraries
- Michael Magoulias, Director, University of Chicago Press Journals Division
- H. Floris Cohen, Editor, History of Science Society
- Steven Wheatley, Vice President, American Council of Learned Societies

Roundtable: The Ontological Turn: Ian Hacking and the History of Science

Grant Park – Level 3

Sponsored by the History of Science Society

Organizers: Henry Cowles (Yale University) and Laura Stark (Vanderbilt University)

- “Human Kinds,” Henry Cowles (Yale University)
- “Translated Kinds,” Carla Nappi (University of British Columbia)
- “Natural Kinds,” Lukas Rieppel (Brown University)
- “Moral Kinds,” Laura Stark (Vanderbilt University)
- Commentary, John Zammito (Rice University)

Forum for the History of Science in America, Distinguished Lecture and Business Meeting

Michigan Ballroom I (Level 2)

- “Why I Am a Presentist,” Naomi Oreskes (Harvard University)

Session 4 (1:30 PM - 3:30 PM)

Symposium: Principal Principle

Michigan Ballroom II - Level 2

- Gergei Bana (INRIA, Paris): On the Formal Consistency of the Principal Principle
- Zalan Gyenis (Hungarian Academy of Sciences) and Miklos Rédei (London School of Economics): Measure Theoretic Analysis of Consistency of the Principal Principle
- Ittay Nissan-Rozen (Hebrew University): Contrastive Explanations, Crystal Balls and the Inadmissibility of Historical Information
- Carl Hofer (Western University): Commentary

Chair: James Joyce (University of Michigan)

Contributed Papers: Game and Decision Theory

Superior East – Level 2

- Alexandru Marcoci (London School of Economics): Solving the Absentminded Driver Problem Through Deliberation
- J. McKenzie Alexander (London School of Economics): Cheap Talk, Reinforcement Learning and the Emergence of Cooperation
- Jian Shen (City University of New York): Gradual Revelation: A Signaling Model
- Bennett Holman (University of California, Irvine) and Justin Bruner (Australian National University): The Problem of Intransigently Biased Agents

Chair: Patrick Forber (Tufts University)

Contributed Papers: Varieties of Realism

Great Lakes B - Level 2

- Alberto Cordero-Lecca (City University of New York): Where's the Beef? Selective Realism and Truth-Content Identification
- Leah Henderson (Carnegie Mellon University): Should the Debate over Scientific Realism Go Local?
- Boaz Miller (Tel Aviv University): What is Hacking's Argument for Entity Realism Anyway?
- Dana Tulodziecki (Purdue University): Realist Continuity, Approximate Truth, and the Pessimistic Meta-Induction

Chair: K. Brad Wray (SUNY Oswego)

Contributed Papers: Mechanisms in Neuroscience

Lincoln Park – Level 3

- Carlos Zednik (University of Osnabrueck): Are Systems Neuroscience Explanations Mechanistic?
- Mark Povich (Washington University in St. Louis): Mechanisms and Model-Based fMRI

- Joseph B. McCaffrey (University of Pittsburgh): Neural Multi-Functionality and Mechanistic Role Functions
 - Colin Klein (Macquarie University): Brain Regions as Difference-Makers
- Chair: Catherine Stinson (Ryerson University)

Contributed Papers: Metaphysics

Huron B – Level 2

- Olin Matthew Robus (University of Washington): Does Science License Metaphysics?
- Luke Fenton-Glynn (University College, London): Ceteris Paribus Laws and Minutis Rectis Laws
- Michael Townsen Hicks (Rutgers University): Solving the Coordination Problem
- Tarja Knuuttila (University of South Carolina): Abstract and Concrete: Towards an Artifactual Theory of Fiction in Science

Chair: Joshua Filler (Ripon College)

Contributed Papers: Fitness, Individuals and Kinds

Huron A – Level 2

- Charles H. Pence (Louisiana State University) and Grant Ramsey (University of Notre Dame): Is Organismic Fitness at the Basis of Evolutionary Theory?
- Harold Kincaid (University of Cape Town): Open Empirical and Methodological Issues in the Individualism-Holism Debate
- Karen Kovaka (University of Pennsylvania): Biological Individuality and Scientific Practice
- Matthew H. Slater (Bucknell University): In Favor of the (Possible) Reality of Race

Chair: Sun Kyeong Yu (Minnesota State University, Mankato)

Contributed Papers: Evolved Minds

Huron C - Level 2

- Yasha Rohwer (University of Missouri): Iterated Theory of Mind and the Evolution of Human Intelligence
- Elizabeth O'Neill (University of Pittsburgh): Which Causes of Moral Beliefs Matter
- Isaac Wiegman (Washington University in St. Louis): Evidential Criteria of Homology: Adjudicating Competing Homology Claims

Chair: Gary Hardcastle (Bloomsburg University)

Contributed Papers: Spacetime in Relativity and Beyond

Millennium Park – Level 3

- James Brian Pitts (University of Cambridge): Historical and Philosophical Insights about General Relativity and Space-time from Particle Physics
- Craig Callender (University of California, San Diego) and Christian Wüthrich (University of California, San Diego): What Becomes of a Causal Set

- Nick Huggett (University of Illinois at Chicago) and Tiziana Vistarini (Rutgers University): Deriving General Relativity from String Theory
- Syman Stevens (University of Oxford): The Dynamical Approach as Practical Geometry

Chair: Edward Slowik (Winona State University)

Contributed Papers: Idealizations in Physics

Great Lakes C – Level 2

- Martin King (University of Guelph): Idealization and Explanation in Physics
- ~~Elay Sheeh (University of Pittsburgh): Can an Idealization be Essential?~~
- Julie Jebeile (University Paris 4) and Ashley Graham Kennedy (Florida Atlantic University): Idealization in the Process of Model Explanation

Chair: Andrew Wayne (University of Guelph)

Contributed Papers: Confirmation in Scientific Practice

Superior West - Level 2

- Ann-Sophie Barwich (The KLI Institute): A Fine Nose for Timeliness: The Discovery of the Olfactory Receptors and the Question of Novelty
- Adrian Wüthrich (Technische Universität Berlin): The Higgs Discovery as a Diagnostic Causal Inference
- Molly Kao (Western University): Unification in the Old Quantum Theory
- Wolfgang Pietsch (Technische Universität München): Aspects of Theory-Ladenness in Data-Intensive Science

Chair: Richard DeWitt (Fairfield University)

Session 5 (4:00 PM - 6:00 PM)

Contributed Papers: Bayesianism

Great Lakes C – Level 2

- Olav Benjamin Vassend (University of Wisconsin, Madison): Confirmation Measures and Sensitivity
- Kevin Coffey (NYU, Abu Dhabi): Quine-Duhem through a Bayesian Lens
- Stephan Hartmann (LMU Munich): A New Solution to the Problem of Old Evidence
- Ilho Park (Chonbuk National University): Conditionalization and Credal Conservatism

Chair: Brad Armendt (Arizona State University)

Contributed Papers: Formal Models in Biology

Huron A – Level 2

- Simon M. Huttegger (University of California, Irvine), Justin P. Bruner (University of California, Irvine), and Kevin J.S. Zollman (Carnegie Mellon University): The Handicap Principle is an Artifact
- Hannah Rubin (University of California, Irvine): The Phenotypic Gambit

- Bryan Chambliss (University of Arizona): Optimality and Bayesian Perceptual Systems
- Marshall Abrams (University of Alabama at Birmingham): Coherence, Muller's Ratchet, and the Maintenance of Culture

Chair: Yoichi Ishida (Ohio University)

Contributed Papers: Measurement and Data

Sheffield – Level 5

- Teru Miyake (Nanyang Technological University): Reference Models: Using Models to Turn Data into Evidence
- Conrad Heilmann (Erasmus University): A New Interpretation of the Representational Theory of Measurement
- James Nguyen (London School of Economics): Why Data Models do not Supply the Target Structure Required by the Structuralist Account of Scientific Representation
- Sabina Leonelli (University of Exeter): What Counts as Scientific Data? A Relational Framework

Chair: John Huss (University of Akron)

Contributed Papers: Explanation

Superior West - Level 2

- Andrea I. Woody (University of Washington): Re-orienting Discussions of Scientific Explanation: A Functional Perspective
- James Alexander Overton (Independent Scholar): Explanation in Science
- Rune Nyrupe (Durham University): How Explanatory Reasoning Justifies Pursuit: A Peircean View of IBE

Chair: Joseph Pitt (Virginia Tech)

Contributed Papers: Causation

Lincoln Park – Level 3

- David Danks (Carnegie Mellon University): The Mathematics of Causal Capacities
- Totte Harinen (King's College London): Normal Causes for Normal Effects
- Maria Kronfeldner (Bielefeld University): When Specificity Trumps Proximity

Chair: James Woodward (University of Pittsburgh)

Contributed Papers: Psychiatry

Huron C - Level 2

- Nicholas Gaddis Zautra (Indiana University Bloomington): Embodiment, Interaction, and Experience: Toward a Comprehensive Model in Addiction Science
- Kathryn Tabb (University of Pittsburgh): Psychiatric Progress and the Assumption of Diagnostic Discrimination
- Kari L. Theurer (Trinity College): More Information, Better Explanations: Reductionism in Biological Psychiatry

- Anke Bueter (Leibniz University Hannover): Is it Time for an Etiological Revolution in Psychiatric Classification?

Chair: Jonathan Tsou (Iowa State University)

Contributed Papers: Methodology in the Social Sciences

Huron B – Level 2

- Rosa Willemijn Runhardt (London School of Economics): Evidence for Causal Mechanisms in Social Science: Recommendations from Woodward's Manipulability Theory of Causation
- Robert Northcott (Birkbeck College, London): Opinion Polling and Election Predictions
- Alexandre Marcellesi (University of California, San Diego): External Validity: Is There Still a Problem?
- Chiara Lisciandra (Tint Centre of Excellence in the Philosophy of the Social Sciences): Robustness Analysis as a Non-empirical Confirmatory Practice

Chair: Wenceslao J. Gonzalez (University of A Coruña, Spain)

Symposium: Newtonian Relativity

Millennium Park – Level 3

- George E. Smith (Tufts University): Newtonian Relativity: An Understressed Corollary, an Unnoticed Manuscript
- Robert DiSalle (Western University): The Newtonian Theory of Relativity
- Craig W. Fox (Western University): In Pursuit of Foundations
- Howard Stein (University of Chicago): Commentary

Chair: William Harper (Western University)

Contributed Papers: Science and Public Policy

Great Lakes B - Level 2

- Matthew J. Brown (The University of Texas at Dallas) and Joyce C. Havstad (Field Museum of Natural History): The Disconnect Problem in Science and Policy
- Arnon Keren (University of Haifa): Science and Informed, Counterfactual, Democratic Consent
- Till Grüne-Yanoff (Royal Institute of Technology (KTH)): Why Behavioural Policy Needs Mechanistic Evidence
- Stephanie Ruphy (Université Pierre Mendès-France): Which forms of limitation of the autonomy of science are epistemologically acceptable (and politically desirable)?

Chair: Kevin Elliott (Michigan State University)

Contributed Papers: Measurement Problem and Primitive Ontology

Superior East – Level 2

- Joshua Rosaler (University of Minnesota): Is de Broglie-Bohm Theory Specially Equipped to Recover Classical Behavior?

- Charles Thorne Sebens (University of Michigan, Ann Arbor): Killer Collapse: Empirically Probing the Philosophically Unsatisfactory Region of GRW
 - Vincent Lam (University of Lausanne): In Search of a Primitive Ontology for Quantum Field Theory
 - Thomas Pashby (University of Pittsburgh): Quantum Mechanics for Event Ontologists
- Chair: Alyssa Ney (University of Rochester)

6:15 PM - 7:15 PM

Bridging the Philosophy/Science Divide: Getting Philosophy of Science Heard in Science Communities

Erie – Level 2

Panelists:

- Carole J. Lee (University of Washington)
- Sandra Mitchell (University of Pittsburgh)
- Elliott Sober (University of Wisconsin, Madison)
- James O. Weatherall (University of California, Irvine)

HSS Distinguished Lecture

Michigan Ballroom – Level 2

Keith Wailoo (Princeton University):
Science and the Political History of Pain



7:15 PM - 8:15 PM

PSA Reception

Chicago Ballroom – Level 16

Cash bar and light hors d'oeuvres



Sponsored by the Department of Logic and Philosophy of Science at University of California, Irvine

8:00 PM -9:30 PM

Everything You Wanted to Know About Negotiating a Job Offer, but Were Afraid to Ask [MOVED TO SATURDAY, 12:00 IN GRANT PARK]

Huron A – Level 2

Sponsored by the HSS Graduate and Early Career Caucus

Presenter: Erin Thomas, Yale University

Chair and Organizer: Bridget Collins, University of Wisconsin-Madison

Saturday November 8

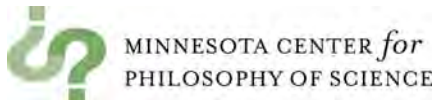
7:00 AM - 8:45 AM

PSA Women’s Caucus Breakfast Meeting

Chicago Ballroom – Level 16

All are welcome. Breakfast and socializing begins at 7:00 AM. The meeting will begin promptly at 7:30.

Sponsored by the Minnesota Center for Philosophy of Science



Session 6: 9:00 AM – 11:45 AM (Break from 10:00 AM – 10:15 AM)

Coffee break in the Great Lakes Ballroom Foyer – Level 2

Symposium: Formal Methods

Great Lakes B - Level 2

- Hans Halvorson (Princeton University): Categories of Scientific Theories
- Sahotra Sarkar (University of Texas at Austin): Models and Theories in Evolutionary Biology
- Thomas W. Barrett (Princeton University): How to Count Structure
- James O. Weatherall (University of California, Irvine): Understanding Gauge

Chair: Benjamin Feintzeig (University of California, Irvine)

Contributed Papers: Modeling and Simulation

Huron C - Level 2

- Roberto Fumagalli (University of Bayreuth & London School of Economics): No Learning from Minimal Models
- Sherrilyn Roush (King's College London): The Epistemic Superiority of Experiment to Simulation
- ~~Anna Mari Rusanen (University of Helsinki): On Relevance~~
- Alisa Bokulich (Boston University): Frankenmodels, Or a Cautionary Tale of Coupled Models in the Earth Sciences
- Emre Keskin (University of South Florida): Collective Success of Cosmological Simulations

Chair: Collin Rice (Lycoming College)

Symposium: Non-Causal Explanation in the Sciences

Lincoln Park – Level 3

- Holly Andersen (Simon Fraser University): Causal versus Non-causal Explanations: Competitors or Complements?
- Marc Lange (University of North Carolina, Chapel Hill): Two Kinds of Identity Explanations
- Alexander Reutlinger (LMU Munich): Scientific Explanation and Non-causal Dependence
- Lawrence Shapiro (University of Wisconsin, Madison): Mechanism or Bust? Explanation in Psychology and Neuroscience

Chair: Laura Ruetsche (University of Michigan)

Symposium: Beyond the Lab Experiment

Superior West - Level 2

- Sharon Crasnow (Norco College): Mixed Methods in Political Science: Natural Experiments, Causal Process Observations, and Evidence for Use
- Roberta L. Millstein (University of California, Davis): Cause-finding practices in studies of ecological-evolutionary interactions
- Emily Parke (University of Pennsylvania): Experiments, Simulations, and Surprises
- Eric Desjardins and Marco Van De Wiel (Western University): Predicting, Explaining and Exploring with Computer Simulations in Geomorphology

Chair: Christopher Eliot (Hofstra University)

Symposium: 50 Years of Inclusive Fitness

Michigan Ballroom II – Level 2

- Ullica Segerstrale (Illinois Institute of Technology): Hamilton's Struggles with Inclusive Fitness and Kin Selection
- Patrick Forber (Tufts University) and Rory Smead (Northeastern University): The Evolution of Spite, Recognition, and Morality

- David C. Queller (Washington University in St. Louis): Inclusive Fitness and the Evolution of Eusociality
 - Samir Okasha (University of Bristol): Inclusive Fitness, Non-Additivity, and Rational Agency
 - Jonathan Birch (Christ's College, Cambridge): The Trait-Relativity of Inclusive Fitness
- Chair: Frederic Bouchard (University of Montreal)

Symposium: Unifying the Mind-Brain Sciences

Great Lakes C – Level 2

- Muhammad Ali Khalidi (York University): Critical Questions about the Critical Period
- Gualtiero Piccinini (University of Missouri – St. Louis) and Trey Boone (University of Pittsburgh): The Cognitive Neuroscience Revolution
- Jacqueline Sullivan (Western University): Experimentation and Construct Stabilization in Neuroscience
- Daniel Weiskopf (Georgia State University): Integrative Science and the Many-Models Problem

Chair: Carrie Figdor (University of Iowa)

Symposium: Chemical Structure

Superior East – Level 2

- Julia Bursten (University of Pittsburgh): Surface Tension
- Joyce C. Havstad (Field Museum of Natural History): Messy Chemical Kinds
- Robin F. Hendry (Durham University): Structure as Abstraction
- Michael Weisberg (University of Pennsylvania): Structure, Functional Groups, and Idealization

Chair: Robert Batterman (University of Pittsburgh)

Symposium: How Adequate are Causal Graphs and Bayes Networks?

Huron B – Level 2

- Alexander Gebharter (Heinrich Heine University Düsseldorf) and Gerhard Schurz (Heinrich Heine University Düsseldorf): A Modeling Approach for Mechanisms Featuring Causal Cycles
- Lorenzo Casini (University of Geneva) and Jon Williamson (University of Kent): How to Model Mechanisms
- Marie Kaiser (University of Cologne): Modeling Spatially and Structurally Complex Mechanisms
- Marcel Weber (University of Geneva): On the Incompatibility of Dynamical Biological Mechanisms and Causal Graph Theory

Chair: Mara Harrell (Carnegie Mellon University)

Symposium: What Kind of Climate Evidence does Policy Need?

Millennium Park – Level 3

- Mathias Frisch (University of Maryland): Calibrating Climate Simulations and the Problem of Old Evidence
- William M. Goodwin and Eric Winsberg (University of South Florida): Missing the Forest for the Fish
- Roman Frigg and Erica Thompson (London School of Economics): Using Evidence to Inform Good Climate Policy Decisions
- Wendy Parker (Durham University): Evaluating Climate Models with “Observational” Data from Simulations
- Katie Steele (London School of Economics) and Charlotte Werndl (University of Salzburg): Model Selection Theory and Cross-Validation – the Need for a More Nuanced View on Use-Novelty

Chair: Michael Goldsby (Washington State University)

Symposium: Curie's Principle

Washington Park II – Level 3

- John Norton (University of Pittsburgh): Curie's Truism
- Bryan Roberts (LSE): Curie's Hazard: From Electromagnetism to Symmetry Violation
- Elena Castellani (University of Florence): Which Curie's Principle?
- Jenann Ismael (University of Arizona): Curie's Principle: Comments and Applications

Chair: Kerry McKenzie (University of California, San Diego)

12:00 PM - 1:15 PM

Joint Caucus for Socially Engaged Philosophers and Historians of Science (JCSEPHS) Business Meeting

Ontario – Level 2

Session 7 (1:30 PM - 4:00 PM)

Symposium: How many Sigmas to Discovery?

Washington Park II – Level 3

- Robert D. Cousins (University of California, Los Angeles): Unresolved Philosophical Issues Regarding Hypothesis Testing in High Energy Physics
- Allan Franklin (University of Colorado, Boulder): The Rise of the Sigmas
- Deborah G. Mayo (Virginia Tech): Statistical flukes, the Higgs Discovery, and 5 Sigma
- Kent Staley (Saint Louis University): Inductive Risk and the Higgs Boson

Chair: Vitaly Pronskikh (Fermilab)

Symposium: Explanation: Communication, Representation, Objectivity

Millennium Park – Level 3

- Arnon Levy (Hebrew University): Against the Ontic Conception of Explanation
- Angela Potochnik (University of Cincinnati): Putting Communication First
- Michael Strevens (NYU): Idealization: Ontic, Semantic, or Pragmatic? All of the Above.
- Laura Franklin-Hall (NYU): Between Explanatory Objectivity and Explanatory Anthropocentrism

Chair: Sarah Robins (University of Kansas)

Symposium: Narrating Order

Lincoln Park – Level 3

- M. Norton Wise (University of California, Los Angeles): Narratives and Simulations
- Alirio Rosales (University of British Columbia): Theories as Narratives: The Fisher-Wright Controversy
- Brian Hurwitz (King's College London): Does Form Trump Content in Clinical Case Reports?
- Mary S. Morgan (London School of Economics): Making Credible Narratives of Society
- John Beatty (University of British Columbia): Narrative Order and the Problem of Chance

Chair: Rachel Ankeny (University of Adelaide)

Symposium: Moral Emotions

Great Lakes B - Level 2

- Michael J. Deem and Grant Ramsey (University of Notre Dame): Guilt as an Evolutionary Problem
- Edouard Machery (University of Pittsburgh): Emotions and the Distinction Between Moral and Non-Moral Norms
- Cailin O'Connor (University of California, Irvine): A Model of Guilt as an Individual Adaptation
- Jay Odenbaugh (Lewis & Clark College): A Guilt Trip: Moral Judgment, Expressivism, and the Basic Emotions

Chair: Isaac Wiegman (Washington University, St. Louis)

Contributed Papers: Bias and Trust

Washington Park I – Level 3

- Carole J. Lee (University of Washington, Seattle): Commensuration Bias in Peer Review
- Sarah Richardson (Harvard University): The Concept of Gender Bias in Science
- Felipe Romero (Washington University in St. Louis): Infectious Falsehoods

- Carlo Martini (Center of Excellence in the Philosophy of the Social Sciences): The Limits of Trust in Interdisciplinary Science
- Robin Zheng, M.D. (University of Michigan): Responsibility, Causality, and Social Inequality

Chair: Elizabeth Victor (William Paterson University)

Symposium: Quantifying Life

Superior East – Level 2

- Louis Narens (University of California, Irvine): Measurement and the Meaningfulness Problem
- Günter P. Wagner (Yale University): The Critical Role of Measurement Theory in the Biological Sciences
- Philipp Mitteroecker (University of Vienna) and Simon M. Huttegger (University of California, Irvine): How to Measure Phenotypic Variation?
- Veronica J. Vieland (Ohio State University) and Hasok Chang (University of Cambridge): Replication, Measurement and Biological Evidence

Chair: Robert Richardson (University of Cincinnati)

Symposium: Population Concepts and Race

Huron C - Level 2

- Quayshawn Spencer (University of San Francisco): Do Humans have Continental Populations?
- Lisa Gannett (St. Mary's University): From Genetics to Genomics: Still Making Populations
- Jonathan Kaplan (Oregon State University): Populations, Clusters, and “Racial Realism:” A Partial Taxonomy of Key Concepts
- M.A. Hunter (University of California, Davis): Populations, Individuals, and Biological Race

Chair: Charissa S. Varma (University of Cambridge)

Symposium: Foundations of Gravity and Thermodynamics

Michigan Ballroom II - Level 2

- Erik Curiel (LMU Munich): Classical Black Holes Are Hot
- Craig Callender (University of California, San Diego) and John Dougherty (University of California, San Diego): Black Hole Thermodynamics: More Than an Analogy?
- Karim Thébault (LMU Munich), Eric Winsberg (University of South Florida), and Radin Dardashti (LMU Munich): Confirmation via Analogue Simulation: What Dumb Holes Can Tell Us about Gravity
- Robert Wald (University of Chicago): Black Hole Thermodynamics: The Current State of Play

Chair: Samuel Fletcher (LMU Munich)

Symposium: Naturalism and Values

Great Lakes C – Level 2

- Daniel Steel, Michael O'Rourke, and Chad Gonnerman (Michigan State University): Scientist Attitudes on Three Philosophical Theses regarding Values in Science: Data from the Toolbox Project
- Heather Douglas, John Turri, and Wesley Buckwalter (University of Waterloo): Inductive Risk and Data on Values in Science
- Kristen Intemann (Montana State) and Inmaculada de Melo-Martín (Weill Cornell Medical College): Evaluating the Naturalistic Turn: Should We Care What Scientists Actually Think or Do?
- Justin Biddle (Georgia Tech): Naturalism, Values, and the Social Organization of Research

Chair: Boaz Miller (Hebrew University and Bar Ilan University)

Symposium: Philosophy of Interdisciplinarity

Huron A – Level 2

- Hanne Andersen (Aarhus University): Philosophy of Interdisciplinarity: Mapping the Issues
- Brian Hepburn (Wichita State University): Problems, Problem Spaces and Interdisciplinarity
- Melinda Fagan (University of Utah): Interventionist Omissions: A Critical Study of Mechanistic Explanation in Biology
- Federica Russo (University of Amsterdam) and Michael Kelly (National Institute for Health and Care Excellence): Social and Biological Mechanisms of Disease
- Henrik Kragh Sørensen (Aarhus University): Mathematics in Interdisciplinary Modelling: the Case of Quasi-Crystals

Chair: Evelyn Brister (Rochester Institute of Technology)

HSS Session: The History of the Humanities – A Challenge to the History of Science?

Great Lakes D – Level 2

- Rens Bod (University of Amsterdam) and Johanna Sprondel (Stanford University): Patterns in Humanities and Sciences: Aller-Retour
- Jimena Canales (University of Illinois at Urbana-Champaign) and Markus Krajewski (Bauhaus University Weimar): Precisely. Differentiating Accuracy, Precision, and Exactitude in the Sciences and Humanities
- Soraya de Chadarevian (University of California, Los Angeles) and Julia Kursell (University of Amsterdam): Methods and Concepts in the Loop of Exchange: Historians Investigating Life and Life Scientists Testing History
- Ingrid Rowland (University of Notre Dame School of Architecture): Commentary

Chair: Dagmar Schäfer (Max Planck Institute for the History of Science)

Organizers: Rens Bod and Julia Kursell (University of Amsterdam)

HSS Session: Publication and Peer Review

Michigan Ballroom I – Level 2

- Aileen Fyfe (University of St. Andrews): Refereeing in Action at the *Philosophical Transactions*, 1850–1890
- Sylvia Nickerson (IHPST, University of Toronto): Publishing Britain's Scientific Sphere: Macmillan and Co. as Publishers of Science, 1860–1890
- Julie McDougall-Waters (University of St. Andrews): Tracing the Paper Trail of the *Philosophical Transactions*: Correspondence, Referees' Reports and Proofs, 1850–1885
- Stacy Wykle (University of Illinois, Urbana-Champaign): History of Editorial Peer-Review in Scientific Journals: Factors Influencing Publication in French and English Scientific Society 1665–1830

Chair: Bruce Lewenstein (Cornell University)

HSS Session: Transmission and Exchange of Scientific Knowledge before 1600

Garfield Park – Level 3

- Matthew Sargent (California Institute of Technology): How Social Boundaries Limit Access to Indigenous Knowledge: Case Studies from Sixteenth-Century India
- Robert Morrison (Bowdoin College): Scholarly and Scientific Exchange in the Eastern Mediterranean in the 15th and 16th Centuries
- Scott Trigg (University of Wisconsin-Madison): Fathallah al-Shirwani and the Transmission of Science from Samarkand to Istanbul
- Peter McLaughlin (University of Heidelberg): The Problems of Aristotle's Mechanics

Chair: Cassandra Hatton (Bonhams)

HSS Session: Transnational Technology Networks and Knowledge-Diffusion in the Cold War

Ontario – Level 2

- John Krige (Georgia Tech): Helping and Hindering Allies: The Transnational Circulation of Nuclear Information between the U.S. and Europe from the Late 50s to the Early 70s
- Jay Sarkar (Harvard University): Transnational Networks of Nuclear Scientists and North-South Technological Cooperation during the Cold War: The Case of India, 1950–1974
- Abel Streefland (Leiden University): Dreams of Transnational Uranium Enrichment: International Ambitions of the Dutch Ultracentrifuge Program, 1955–1962
- Douglas O'Reagan (University of California, Berkeley): Know-how and International Transmission of Industrial Science in the Cold War

Chair: Daniel Kevles (Yale University)

Organizer: Jay Sarkar (Harvard University)

4:15 PM - 4:45 PM

2014 PSA Members Business Meeting

Great Lakes B - Level 2

All PSA members are encouraged to attend.

Agenda:

- *President's Welcome*
Helen Longino
- *Executive Secretary's Report*
Jessica Pfeifer
- *Program Chair Report*
Chris Smeenk
- *New Business*

4:15 PM - 6:15 PM (Overlap with PSA Business Meeting and PSA Awards and Presidential Address)

HSS Session: Thought Experiments as an Epistemic Practice in the Natural and Social Sciences, 1830-1930

Washington Park I – Level 3

- Adelene Buckland (King's College London): A Day in the Life: Charles Lyell's Geological Daydreams
- Julian Bauer (University of Konstanz): Experimenting with Thoughts, Experimenting with Scripture: Ernst Mach On and In Thought Experiments
- Florian Ernst (University of Konstanz): Max Weber's 'Ideal Types': A Theory and its Practice
- Charles Camic (Northwestern University): Commentary

Chair: Bernhard Kleeberg (University of Konstanz)

Organizer: Julian Bauer (University of Konstanz)

HSS Session: Evidence in Mathematical Understanding

Marquette Park – Level 3

- Michael Barany (Princeton University): The Sense and Sensibility of Distributions
- Jemma Lorenat (Jussieu/University of Paris, Simon Fraser University): The Figure and Other Forms of Geometric Evidence
- Abram Kaplan (Columbia University): Natural Mathematics and the Account of Error
- Emily Grosholz (Pennsylvania State University): Commentary

Chair: Emily Grosholz (Pennsylvania State University)

5:30-7:00 PM

PSA Awards and PSA Presidential Address

Michigan Ballroom – Level 2

Presentation of Awards

2013 PSA Graduate Student Essay Award

Naftali Weinberger

2013 Recent Ph.D. Essay Award

Charles Rathkopf

2014 Women’s Caucus Prize in Feminist Philosophy of Science

Helen Longino

2014 Hempel Award

Elliott Sober

See pages 95-97 for more about the award recipients

Presidential Address



Introduction

C. Kenneth Waters
(University of Calgary)

Helen Longino

(Stanford University)

“Foregrounding the Background: Pandoran Explorations in Philosophy of Science.”

7:15 PM - 8:15 PM

PSA/HSS Joint Reception

Great Lakes Grand Ballroom – Level 2

Cash bar and light hors d'oeuvres

This is a ticketed event.

Sunday November 9

9:00 AM - 11:30 AM Symposia Sponsored by Cognate Societies

Pedagogy Panel: A New Paradigm for Graduate Education: A Joint Research Course for Science, Engineering, and Philosophy of Science PhD. Students

Washington Park II – Level 3

Organizer: Vivian Weil (Illinois Institute of Technology)

- Vivian Weil (Illinois Institute of Technology): Introduction
- John Hasler (Illinois Institute of Technology): Ethical Issues that Arise in Collaboration across Disciplines
- Monica Solomon (University of Notre Dame): Sociocultural Factors in Scientific Collaboration: Some Reflections
- Ming Yin (Illinois Institute of Technology): Scientific International Collaboration
- Eric Brey (Illinois Institute of Technology): A Joint Research Course for Philosophy of Science, Engineering, and Science Graduate Students: An Engineer's Perspective
- Kevin Elliott (Michigan State University): Reflections from a Course Reviewer

Interdisciplinary Explanations in Economics

Sheffield – Level 5

Sponsored by the **International Network for Economic Method (INEM)**

Organizer: David Teira (UNED, Madrid)

- Melissa Vergara Fernandez (Erasmus University Rotterdam): Economic Explanations Come from Clusters, not from Models
- Mariam Thalos (University of Utah): On the Deployment of Decision Theory in Economic Modeling
- C. Tyler DesRoches (University of British Columbia): Economics and Basic Ecological Goods
- Jesus Zamora-Bonilla (UNED, Madrid), Social Sciences Are Natural (Though they Can't Be)

Heterogeneity in Medicine and Psychiatry: Empirical Strategies, Conceptual Problems

Michigan Ballroom II – Level 2

Sponsored by the **International Philosophy of Medicine Roundtable (IPMR)**

Organizer: Julian Reiss (Durham University)

- Brendan Clarke (University College, London): Homogeneous Reference Classes in Medicine
- Samantha Kleinberg (Stevens Institute of Technology): Replication and the Need for Simulated Data
- Maël Lemoine (Tours University): The Fuzzy Disease — What Is the Epidemiological Homogeneity of Major Depressive Disorder?
- Julian Reiss (Durham University): Heterogeneity in Carcinogenesis
- David Teira (UNED, Madrid) and Giovanni Boniolo (European Institute of Oncology, Milan): Testing Oncological Treatments in the Era of Personalized Medicine

A HOPOS Sampler: Exemplary Work in the History of the Philosophy of Science

Superior East – Level 2

Sponsored by **The International Society for the History of Philosophy of Science (HOPOS)**

Organizers: David Marshall Miller (Iowa State University) and Gary Hardcastle (Bloomsburg University)

- Jutta Schickore (Indiana University): Methodologies in Context
- Barnaby Hutchins (Ghent University): Reduction, Integration and Mechanism in Descartes's Biology
- Jennifer Jhun (University of Pittsburgh): A Lesson from Economic History: Idealization and Ceteris Paribus Clauses
- Janet Folina (Macalester College): Poincaré and Structuralism in the Philosophy of Mathematics

Chair: David Marshall Miller (Iowa State University)

Causation, Kinds, and Structure in Chemical Theory

Huron B – Level 2

Sponsored by the **International Society for Philosophy of Chemistry (ISPC)**

Organizer: Michael Weisberg (University of Pennsylvania)

- Georgie Statham (University of Cambridge): Contrastive Causal Claims in Organic Chemistry: Controlling Reactions by Manipulating the Reaction Conditions
- Karen R. Zwier (University of Pittsburgh): Interventionist Causation in Chemical Thermodynamics
- Marina Paola Banchetti-Robino (Florida Atlantic University): The Function of Microstructure in Boyle's Chemical Philosophy: 'Chymical Atoms' and Structural Explanation
- Juan Camilo Martínez González (FONCyT, Buenos Aires): From Substances to Atoms: Electronegativity Reconsidered
- Jordan Bartol (University of Leeds): Natural Kinds in Chemistry and Biochemistry:

The Wrong Tools for the Job?

- Josh Hunt (University of Cambridge): Understanding Ligand Field Theory through Symmetry

Chair: Klaus Ruthenberg

Perspectives in the Philosophy of Mathematics

Addison – Level 5

Sponsored by **The Philosophy of Mathematics Association (PMA)**

- Audrey Yap (University of Victoria): Noether’s Mathematical Structuralism
- Geoffrey Hellman (University of Minnesota): Mereological Geometry
- W.W. Tait (University of Chicago): Towards the Unity of Mathematics: Classical and Constructive Reasoning

Chair: Elaine Landry (University of California, Davis)

Recent Trends in the Philosophy of Social Science

Huron C - Level 2

Sponsored by the **Philosophy of Social Science Roundtable**

Organizer: Paul A. Roth

- James Bohman (Saint Louis University): Republicanism Then and Now
- David Henderson (University of Nebraska, Lincoln): Human Sentiment and Human Cooperation
- Mark Risjord (Emory University): Interpretation, Culture, and Cognition
- Paul A. Roth (University of California, Santa Cruz): Reviving the Philosophy of History
- Stephen Turner (University of South Florida): Normativity and Social Science

Enriching Philosophy of Science through Collaborative and Feminist Approaches

Lincoln Park – Level 3

Sponsored by **The Consortium for Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE)** and **The Association for Feminist Epistemologies, Methodologies, Metaphysics, and Science Studies (FEMMSS)**

Organizers: Nicolae Morar (University of Oregon) and Carla Fehr (University of Waterloo)

- Carla Fehr (University of Waterloo): FEMMSS as a SRPoiSE Ally
- Sean Valles (Michigan State University): A SRPoiSE Case Study: Obstacles to Defining and Explaining the “Hispanic Paradox”
- Stephen Crowley (Boise State University): Philosophical Facilitation of Interdisciplinary Research: The Story of the Toolbox Project
- Kathryn S. Plaisance (University of Waterloo): Enhancing the Toolbox Project through Feminist Philosophy

Technology and the Production of Scientific Knowledge: Reflections on Converging Territories

Superior West - Level 2

Sponsored by the **Society for Philosophy and Technology (SPT)**

Organizer and Chair: Shannon Vallor, Santa Clara University

- Annamaria Carusi (University of Copenhagen): Systems Biomedicine and Computational Technologies: Instituting a Domain of Science and Application
- Robert P. Crease (Stony Brook University): Muon G-2 Experiments: Precision Science and the Scientific Process
- Don Ihde (Stony Brook University): Instrumental Phenomenological Variations
- Shannon Vallor (Santa Clara University): The Automation of Scientific Inquiry: AI, Scientific Virtue and The Value Problem

Approaches in the Philosophy of Science in Practice

Michigan Ballroom I – Level 2

Sponsored by the **Society for Philosophy of Science in Practice (SPSP)**

Organizer: Mieke Boon (University of Twente)

- Sara Green (University of Pittsburgh): Should Empirical Results lead to Revision of Philosophical Accounts?
- Nancy J. Nersessian (Harvard University): Investigating Discovery Practices: Studies of Integrative Systems Biology Labs
- Marcel Boumans (University of Amsterdam and Erasmus University Rotterdam): Philosophy of Science-Outside-the-Laboratory
- Mieke Boon (University of Twente) and Annamaria Carusi (University of Copenhagen): Philosophy of Science into Practice

Chair: Rachel Ankeny (University of Adelaide)

9:30 AM - 11:30 AM

HSS Session: Theoretical Change in the History of Physics

Garfield Park – Level 3

- Nobumichi Ariga (National Museum of Nature and Science, Japan): Euler's Mechanics as Opposition to Leibnizian Dynamics
- Sybil de Clark (University of Arizona): Dimensional Analysis in the Nineteenth Century
- Frans van Lunteren (VU University of Amsterdam): The Conservation of Energy in the Netherlands
- Michael Miller (University of Pittsburgh): The Origins of Schwinger's Euclidean Green's Functions
- ~~Daniela Monaldi (York University): Quantum Mechanisms and the Microscopic-Macroscopic Divide~~

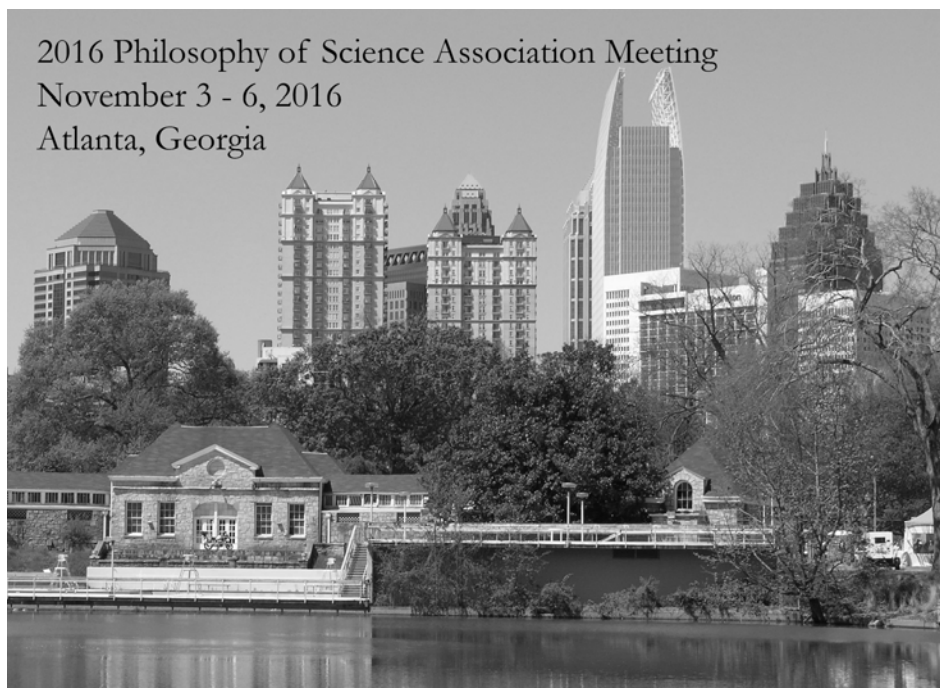
Chair: Bruce J. Hunt (University of Texas at Austin)

2:00 PM - 3:00 PM

Elizabeth Paris Memorial Lecture for Socially Engaged History and Philosophy of Science

“From Einstein’s Clocks to the Refusal of Time,” Peter Galison, Harvard University

The Fourth Presbyterian Church of Chicago – Buchanan Chapel at the Gratz Center (1 block from meeting hotel). This talk is part of the Chicago Humanities Festival and is a ticketed event. You can find more information at <http://chicagohumanities.org/events/2014/journeys/peter-galison-from-einsteins-clocks-to-the-refusal-of-time>.



2016 Philosophy of Science Association Meeting
November 3 - 6, 2016
Atlanta, Georgia

Image by Daniel Mayer

2014 Hempel Award

The Governing Board of the Philosophy of Science Association is pleased to announce that the recipient of the Carl Gustav Hempel Award for 2014 is Elliott Sober. Professor Sober is William F. Vilas Research Professor and Hans Reichenbach Professor in the Department of Philosophy at the University of Wisconsin. 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).



Professor Sober has played a formative role in the establishment of the field of philosophy of biology and has also made essential contributions to the topics of causality and confirmation. He has brought standards of philosophical rigor, clarity, and deep knowledge of evolutionary theory to his philosophical practice, which inspired many younger philosophers to enter the field of philosophy of biology. His books include the ground-breaking *The Nature of Selection* (1984), *Reconstructing the Past – Parsimony, Evolution, and Inference* (1988), *Evidence and Evolution – the Logic Behind the Science* (2008), and, with David Sloan Wilson, *Unto Others – the Evolution and Psychology of Unselfish Behavior* (1997). Each of these books has initiated philosophical literature exploring and developing the issues articulated in them. Professor Sober publishes in scientific as well as philosophical publications, establishing the relevance of philosophy of biology to biologists, and the relevance of philosophy of science to scientists more generally. His forthcoming book *Ockham's Razors* extends the treatment of the concerns of his first book, *Simplicity* (1975).

Professor Sober has also contributed to the profession's teaching mission by editing or authoring books intended for use in courses. Among these is his 1993 *Conceptual Issues in Evolutionary Biology – an Anthology*, for decades the indispensable textbook in philosophy of biology. He has also ventured beyond philosophy of biology in the coauthored *Reconstructing Marxism – Essays on Explanation and the Theory of History* (1992).

While Professor Sober is a sought after visitor in all corners of the academic world, he has also been an active mentor to his students, supervising dissertations

of scholars who have themselves become major contributors in the philosophy of science. He has also served the profession in multiple capacities, including as President of the Central Division of the American Philosophical Association, as President of the Philosophy of Science Association, as Secretary (1991-1999) and currently as President (2012-2016) of the International Union of History and Philosophy of Science and Technology – Division of Logic, Methodology, and Philosophy of Science, and has been elected to serve as Chair of Section L (History and Philosophy of Science) of the American Association for the Advancement of Science. Recipient of numerous awards, he is a fellow of the Linnean Society of London and of the American Association for the Advancement of Science.

The letters nominating Professor Sober for the award all spoke of his intellectual generosity, his open-mindedness, and his willingness and ability to listen. As a trailblazing scholar and as an exemplary citizen of the scholarly world, he is indeed a fitting recipient of the 2014 Hempel Award for lifetime accomplishment in the philosophy of science.

2014 Women's Caucus Prize in Feminist Philosophy of Science



The PSA Women's Caucus is pleased to announce that the 2014 Women's Caucus Prize is being awarded to Helen Longino for her book, *Studying Human Behavior: How Scientists Investigate Aggression and Sexuality*. The PSA Women's Caucus Prize is awarded biennially for the best book, article, or chapter published in English in the area of feminist philosophy of science within the five years prior to each PSA meeting.

2013 Essay Awards

The **2013 Recent Ph.D. Essay Award** is being given to Charles Rathkopf for: "Localization and Intrinsic Function," *Philosophy of Science*, 80, 2013, 1-21.



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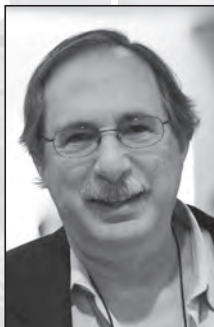
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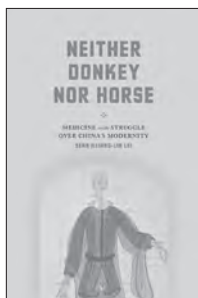
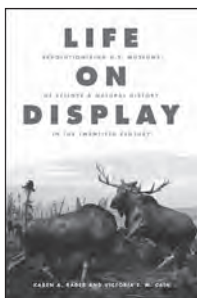
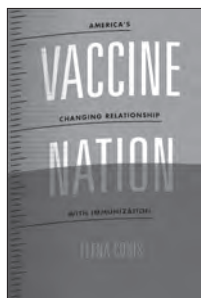


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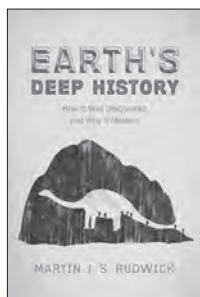
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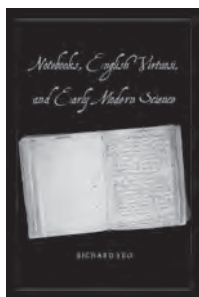


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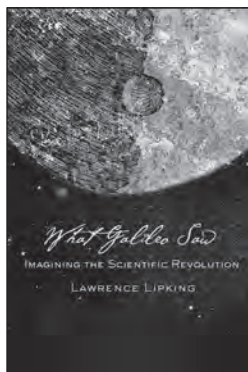
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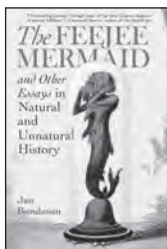
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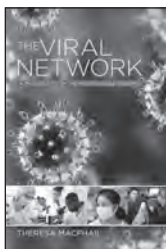
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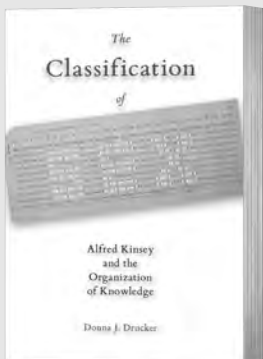
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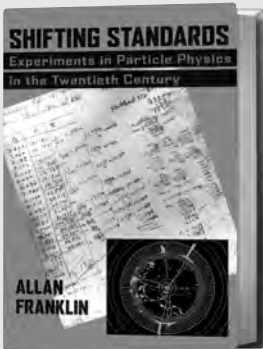
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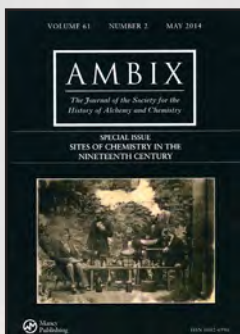
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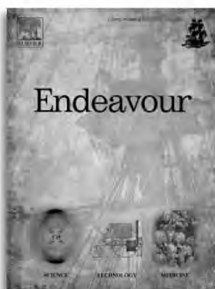
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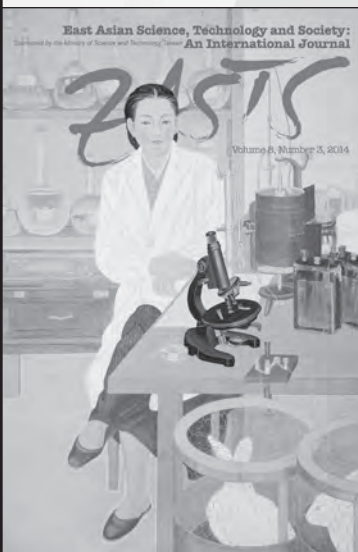
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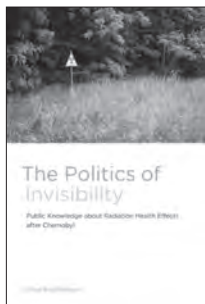
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Index

Abbate, Janet.....	50	Bassi, Joe.....	19
Abir-Am, Pnina.....	41, 42	Batterman, Robert.....	82
Abrams, Marshall.....	77	Bauer, Julian.....	51, 88
Ackert, Lloyd.....	42	Beatty, John.....	47, 84
Akagi, Mikio.....	66	Bechtel, William.....	59, 62
Alaniz, Rodolfo.....	30	Belot, Gordon.....	71
Alder, Ken.....	2, 3, 4, 10, 42, 57	Benétreau-Dupin, Yann.....	64
Alexander, Amir.....	53	Bensaude-Vincent, Bernadette.....	27, 72
Alexander, J. McKenzie.....	74	Bentley, Vanessa.....	66
Alexandrova, Anna.....	59, 69	Berenstein, Nadia.....	15
Andersen, Hanne.....	25, 47, 72, 73, 86	Bergwik, Staffan.....	31
Andersen, Holly.....	59, 81	Berkowitz, Carin.....	35, 43
Anderson, Katherine.....	4, 25	Bertucci, Paola.....	49
Anderson, Wes.....	62	Bewersdorf, Benjamin.....	64
Angner, Erik.....	69	Beyler, Richard.....	42
Ankeny, Rachel.....	24, 21, 22, 40, 47, 58, 59, 68, 84, 93	Biddle, Justin.....	86
Appel, Toby.....	16	Biener, Zvi.....	26, 72
Apple, Rima.....	5	Bigaj, Tomasz.....	63
Apt, Adam J.....	4, 5, 56	Bilak, Donna.....	52
Arabatzis, Theodore.....	25	Birch, Jonathan.....	82
Aranda, Marcelo.....	17	Bittel, Carla.....	39
Ariga, Nobumichi.....	54, 93	Black, Sara.....	24
Armendt, Brad.....	59, 76	Blair, Ann.....	27
Arnaud, Sabine.....	34	Bleichmar, Daniela.....	4, 5, 15
Aronova, Elena.....	26	Bod, Rens.....	44, 86
Artun, Tuna.....	52	Bohman, James.....	92
Athens, Elizabeth.....	50	Bokulich, Alisa.....	81
Aubin, David.....	37	Bol, Marjolijn.....	31
Aurières, Elise.....	16	Boniolo, Giovanni.....	91
Autzen, Bengt.....	62	Bonnay, Denis.....	69
Bacopoulos-Viau, Alexandra.....	29	Boon, Mieke.....	93
Badino, Massimiliano.....	39, 40	Boone, Trey.....	68, 82
Baetu, Tudor.....	64	Bouchard, Frederic.....	82
Bain, Jonathan.....	66	Boumans, Marcel.....	93
Baker, Tawrin.....	31	Boyce, Angie.....	50
Baldwin, Melinda.....	23	Brading, Katherine.....	26, 72
Banchetti-Robina, Marina Paola.....	91	Bradley, Richard.....	69
Banerjee, Somaditya.....	54	Bradley, Robert.....	30
Bangu, Sorin.....	61	Brauckmann, Sabine.....	32, 36
Banulescu, Sultana.....	45	Brauer, Fae.....	29
Banville, Frédéric-I.....	65	Bray, Heather.....	22, 40, 68
Barack, David.....	71	Brechenmacher, Frédéric.....	39
Barany, Michael.....	50, 88	Breen, Ben.....	55
Baron, Jessica.....	2, 22, 68	Brey, Eric.....	90
Barrera-Osorio, Antonio.....	17	Brigandt, Ingo.....	63
Barrett, Jeffrey.....	57, 58, 67	Brighthouse, Carolyn.....	71
Barrett, Thomas W.....	80	Brister, Evelyn.....	47
Barrow, Mark.....	26, 50	Brister, Evelyn.....	86
Bartol, Jordan.....	91	Brock, Emily K.....	40
Barwich, Ann-Sophie.....	76	Brown, Matthew J.....	78
Bassett, Danielle S.....	71	Browne, Janet.....	4, 5, 54
		Bruner, Justin P.....	74, 76

Buchwald, Diana.....	19, 67	Conway, Erik.....	4, 44
Buchwald, Jed.....	31	Cordero-Lecca, Alberto.....	74
Buckland, Adeline.....	51, 88	Cornel, Tabea.....	24
Buckwalter, Wesley.....	86	Cousins, Robert D.....	83
Bueno, Otavio.....	61	Cowles, Henry.....	inside cover, 3, 21, 28, 67, 73
Bueter, Anke.....	78	Cozick, Mikael.....	69
Bultman, Saskia.....	30	Cozzoli, Daniele.....	31
Burian, Richard.....	19, 65	Crasnow, Sharon.....	81
Burns, Susan.....	45	Craver, Carl F.....	71
Bursten, Julia.....	21, 25, 68, 72, 82	Crawford, Matthew.....	33
Butterfield, Jeremy.....	71	Creager, Angela.....	4, 36, 39, 43, 56
Cable, Kele.....	47	Crease, Robert P.....	93
Calinger, Ronald.....	30	Crowe, Nathan.....	31
Callebaut, Werner.....	70	Crowley, Stephen.....	92
Callender, Craig.....	75, 85	Crummett, Dustin.....	22, 68
Callomon, Paul.....	54	Csiszar, Alex.....	23
Camic, Charles.....	51, 88	Cuffaro, Michael E.....	61
Campos, Luis.....	38	Curiel, Erik.....	85
Camprubi, Lino.....	50	Curry, Helen Anne.....	26, 27
Canales, Jimena.....	44, 86	Daemmrlich, Arthur.....	43
Cao, Rosa.....	66	Danks, David.....	77
Cárdenas-Navia, J. Cecilia.....	31	Dardashti, Radin.....	85
Carpenter, Chrystal.....	47	Darnell, Regna.....	33
Carrier, Martin.....	23, 70	Dasgupta, Deepanwita.....	54
Carson, Cathryn.....	4, 29	Daston, Lorraine.....	21, 67
Carson, John.....	49	Dauben, Joseph.....	4, 5
Cartwright, Nancy.....	70	Davies, Surekha.....	40
Carusi, Annamaria.....	93	Davis, Frederick R.....	48
Casey, Brian.....	45	Davis, Mary Ellen.....	28, 73
Casini, Lorenzo.....	82	De Calan, Ronan.....	27
Castellani, Elena.....	83	De Calan, Ronan.....	72
Chacko, Xan.....	48	De Chadarevian, Soraya.....	28, 44, 86
Chakraborty, Anwasha.....	48	De Clark, Sybil.....	54, 93
Chakravartty, Anjan.....	59	De Groot, Jean.....	34
Chambliss, Bryan.....	77	De Haro, Sebastian.....	71
Chang, Hasok.....	19, 27, 72, 85	De Melo-Martin, Inmaculada.....	86
Chatterjee, Animesh.....	51	Dear, Peter.....	35
Chemero, Anthony.....	66	Deem, Michael J.....	84
Chen, Shih-Pei.....	32	Del Pinal, Guillermo.....	62
Chirimuuta, Mazviita.....	21, 70	Del Soldato, Eva.....	53
Christmas, Sakura.....	45	Delille, Emmanuel.....	48
Cislo, Amy.....	17	Dent, Rosanna.....	33
Cittadino, Gene.....	48	Dentinger, Rachel Mason.....	5, 57
Clark, Constance.....	5	Deringer, William.....	21, 67
Clark, Kathleen.....	48	Desjardins, Eric.....	81
Clark, Sandy.....	57	DesRoches, C. Tyler.....	90
Clarke, Brendan.....	91	DeWitt, Richard.....	76
Clatterbuck, Hayley.....	62	Dick, Stephanie.....	21, 67
Coen, Deborah.....	2, 4, 57	Digrius, Dawn.....	21, 68
Coffey, Kevin.....	76	DiSalle, Robert.....	78
Cohen, H. Floris.....	4, 28, 56, 73	Doel, Ronald E.....	25, 43, 73
Colleran, Heidi.....	26, 71	Doing, Park.....	35, 36
Collins, Bridget.....	37, 80	Domski, Mary.....	26, 72
Collopy, Peter.....	16, 63	Dougherty, John.....	65, 86

Douglas, Heather.....	86	Fuller, Jonathan.....	65
Downes, Stephen M.....	26, 71	Fumagalli, Roberto.....	81
Doyon, Wendy.....	24	Fyfe, Aileen.....	44, 87
Dryer, Theodora.....	53	Gabriel, Joseph.....	33
Dufour, Monique.....	39	Gainty, Caitjan.....	46
Dumbaugh, Della.....	16	Gal, Ofer.....	18, 67
Dupré, John.....	59	Galison, Peter.....	55, 94
Durden, Tyler.....	8	Gallagher, Sarah.....	58
Durnova, Helena.....	40	Gandenberger, Greg.....	64
Duwell, Armond.....	61, 64	Gannett, Lisa.....	85
Eamon, William.....	18	Garau, Rodolfo.....	18, 67
Ehrlich, Philip.....	71	Garson, Justin.....	45, 62
Eliot, Christopher.....	81	Gascoigne, John.....	31
Elliott, Kevin.....	22, 59, 68, 78, 90	Gavroglu, Kostas.....	25
Elliott, Steve.....	21, 68	Gebharter, Alexander.....	82
Elwick, James.....	23	Geng, Xang.....	40
Ernst, Florian.....	51, 88	Genin, Konstantin.....	64
Escobar, Eduardo.....	52	Gibbs, Frederick.....	32, 36
Eskildsen, Kasper Risbjerg.....	24	Gidzak, Bonnie.....	50
Etheridge, Kay.....	30	Giere, Ronald N.....	70
Evans, James.....	4, 5, 40, 42	Glennan, Stuart.....	65
Fagan, Melinda.....	47, 59, 86	Gliboff, Sander.....	4, 5
Falk, Seb.....	35	Glick, David.....	63
Fan, Fa-Ti.....	51	Glueck, Christopher.....	22, 68
Fancy, Nahyan.....	35	Glymour, Clark.....	70
Favela, Luis H.....	62	Godfrey-Smith, Peter.....	71
Feest, Uljana.....	62	Goldsby, Michael.....	83
Fehr, Carla.....	92	Golinski, Jan.....	4
Feingold, Mordechai.....	53	Gomori, Marton.....	66
Feintzeig, Benjamin.....	80	Gonnerman, Chad.....	22, 68, 86
Feke, Jacqueline.....	40	González, Juan C.M.....	91
Fenton-Glynn, Luke.....	75	Gonzalez, Wenceslao J.....	78
Fernández Pinto, Manuela.....	23, 70	Good, Gregory.....	37
Fernandez, Alejandra.....	29	Goodman, Jordan.....	55
Figdor, Carrie.....	82	Goodwin, William M.....	83
Filler, Joshua.....	75	Gordin, Michael.....	4
Fillion, Nicolas.....	61	Grabiner, Judy.....	30
Fisher, Amy.....	44	Grauvogel, Kate.....	46
Flannery, Maura.....	48	Green, Monica.....	35
Fleming, Jim.....	22, 68	Green, Sara.....	93
Fletcher, Samuel.....	85	Gregory, Frederick.....	5
Folina, Janet.....	91	Griesemer, James R.....	59, 71
Forber, Patrick.....	59, 74, 81	Grosholz, Emily.....	49, 88
Forster, Malcolm.....	63	Gross, Benjamin.....	42
Fortin, Sebastian.....	63	Grossman, James.....	43
Fox, Craig W.....	78	Grote, Mathias.....	25
Franklin, Allan.....	83	Grunden, Walter.....	45
Franklin-Hall, Laura.....	84	Grunert, Jonathan.....	50, 51
Fraser, Doreen.....	59, 66	Grüne-Yanoff, Till.....	78
Fredette, Raymond.....	48	Guenther, Katja.....	24
Friedman, Michael.....	23, 70	Guerrini, Anita.....	5
Frigg, Roman.....	66, 83	Gunnoe, Chad.....	17
Frisch, Mathias.....	83	Gunther, Janice.....	2
Frost-Arnold, Greg.....	61	Gyenis, Zalan.....	74

Haalboom, Floor	16	Hutchins, Barnaby	91
Haber, Matt	26, 72	Huttegger, Simon M.	59, 69, 76, 85
Hall, Nancy	24	Igo, Sarah	4
Halvorson, Hans	80	Ihde, Don	93
Hamblin, Jacob Darwin	43	Iida, Kaori	39
Hamblin, Jacob	46	Imbert, Cyrille Thomas	61
Hamlin, Christopher	35	Ingelhart, Ashley	49
Hardcastle, Gary	57, 58, 75, 91	Ishida, Yoichi	77
Harinen, Totte	77	Ismael, Jenann	83
Harper, William	78	Ito, Kenji	50
Harrell, Mara	82	Iwatsuki, Taku	15
Harris, Ben	20	Jackson, Catherine	41
Harris, Bradford	35	James, Frank	40
Harrison, Emily	50	Janiak, Andrew	26, 72
Hartmann, Stephan	76	Janković, Vladimir	26
Harvey, Joy	16	Janssen, Michel	19, 66
Hasier, John	90	Jansson, Lina	61
Hatton, Cassandra	46	Jantzen, Benjamin	63
Havstad, Joyce C.	78, 82	Jebeile, Julie	76
Haybron, Dan	69	Jhun, Jennifer	91
Hayton, Darin	42	Jiang, Lijing	51
Hecht, David K.	29	Jirik, Katrina	20
Heilmann, Conrad	77	Johnson, Jeffrey	37
Heinrichs, Erik	41	Johnson, Kristin	42
Hellman, Geoffrey	92	Jones, Matthew	39
Henderson, David	92	Jones-Imhotep, Edward	41
Henderson, Leah	74	Jonsson, Fredrik	18
Hendry, Robin F.	82	Joyce, James	74
Hepburn, Brian	34, 47, 86	Julien, Alec	57
Hepler-Smith, Evan	39	Kaiser, David	5
Herbert, Sandra	5	Kaiser, Marie	82
Herron, Matthew D.	71	Kao, Molly	76
Hey, Spencer Phillips	65	Kaplan, Abram	50, 88
Hicks, Daniel J.	22, 41, 63, 68	Kaplan, Jonathan	85
Hicks, Michael Townsen	75	Kaplan, Judith	49
Hirai, Hiro	17	Karns, Jameson	54
Hirsch, Nicholas	24	Kavey, Allison	23
Hoddeson, Lillian	28	Kéfi, Sonia	71
Hoefler, Carl	74	Keiner, Christine	30
Hofer-Szabó, Gábor	63	Keller, Vera	41
Hogan, Andrew	39	Kellman, Jordan	55
Holman, Bennett	65, 74	Kelly, Kevin T.	64
Holter, Brandon	63	Kelly, Michael	47, 86
Hood, Brian	70	Kennedy, Ashley Graham	76
Hounshell, Eric	49	Keren, Arnon	78
Howick, Jeremy	65	Kerr, Ashley	54
Huggett, Nick	2, 10, 57, 76	Keskin, Emre	81
Huneman, Philippe	71	Kettler, Andrew	46
Hunt, Bruce J.	54, 93	Kevles, Daniel	46, 87
Hunt, Josh	92	Keyser, Paul	40
Hunter, M.A.	85	Khalidi, Muhammad Ali	82
Hunter, Patti	16	Kikuchi, Yoshiyuki	27, 72
Hurwitz, Brian	47, 84	Killen, Andreas	29
Huss, John	77	Killion, Kimberly	54

Kincaid, Harold	75	Lipking, Lawrence	24
King, Martin	76	Lisciandra, Chiara	78
Kirby, David.....	42	Llored, Jean-Pierre Noël.....	27, 72
Kirk, Robert	45	Lobardi, Olimpia	63
Kleeberg, Bernhard	51, 88	Loh, Shi-Lin.....	38
Klein, Colin	59, 75	Longino, Helen	57, 59, 88, 89, 96
Kleinberg, Samantha	91	Lorenat, Jemma.....	50, 88
Klyve, Dominic.....	30	Love, Alan C.	65
Knuutila, Tarja.....	75	Lucier, Paul.....	4
Kohlstedt, Sally Gregory	5, 20	Luesink, David	20
Kopec, Matthew	26, 72	Lundeen, Lesley	43
Koretzky, Maya.....	31	Lyons, Sherrie.....	46
Kostic, Daniel	71	Ma, Eunjeong.....	48
Kourany, Janet	23, 70	MacCord, Kate.....	17, 21, 68
Kovaka, Karen	75	Machamer, Peter.....	34
Krajewski, Markus	44, 86	Machery, Edouard	21, 84
Kremer, Richard	32	Macklem, Greg.....	2, 57, 58
Krige, John	43, 46, 87	Madison, Paige	17, 21, 68
Kronfeldner, Maria.....	77	Magana, Linda.....	35
Kronz, Fred.....	28, 73	Magnum, P.D.....	62
Küçük, B. Harun.....	41	Magoulas, Michael.....	28, 73
Kuipers, Theo	64	Maienschein, Jane	5, 21, 68
Kukla, Rebecca	59	Mak, Geertje	30
Kursell, Julia	44, 86	Malinsky, Daniel	64
Laemmler, Whitney	39	Malone, Mason.....	2
Lam, Vincent.....	79	Malone, Robert Jay.....	3, 4, 5, 56, 57, 58
Lamb, Maurice.....	66	Manchak, John	71
Landry, Elaine.....	92	Mansfield, Julia.....	17
Lange, Marc.....	81	Marcattilio-McCracker, Ry	31
Lassman, Thomas.....	50	Marcellesi, Alexandre	78
Laubichler, Manfred.....	32, 36	Marcoci, Alexandru	74
Lavine, Matthew	23	Margocsy, Daniel	49
Le Bihan, Soazig	64	Markovich, Anne	25, 72
Lean, Eugenia.....	20	Marroquin, Jaime	29, 30
Leddington, Jason.....	64	Martin, Craig.....	53
Lee, Carole J.	79, 84	Martin, Joseph D.	42
Lehmann, Philipp	26	Martini, Carlo	85
Lehner, Christoph	19, 67	Massimi, Michela	59, 70
Lehtinene, Aki.....	64	Mathew, John	33
Leitch, Stephanie	41	Matthews, Lucas John.....	62
Lemoine, Maël.....	91	Mauck, Aaron.....	50
Leonelli, Sabina	25, 77	Mauskopf, Seymour	33
Leong, Elaine	41	Mayo, Deborah G.....	83
Levine, Alexander.....	54	Mayo-Wilson, Conor.....	66
Levy, Arnon.....	84	Mazzotti, Massimo	53
Lewens, Tim.....	26, 72	McBride, Dwight	3
Lewenstein, Bruce	42, 44, 87	McCaffrey, Joseph B.	75
Lewis, Albert	15	McClimans, Leah	69
Li, Bihui.....	66	McCray, W. Patrick	43
Li, Shenglan	51	McDougall-Waters, Julie.....	44, 87
Lightman, Bernard V.	5	McKaughan, Dan	22, 68
Lin, Hanti.....	64	McKay, Francis	24
Link, Adrianna	33	McKenzie, Kerry	83
Linguist, Stefan	62	McKenzie, Matthew	30

McLaughlin, Peter	46, 87	Nieto-Galan, Agusti	32
Meketa, Irina	20	Nissan-Rozen, Ittay	74
Merlin, Francesca.....	62	Nobles, Gregory	50
Midena, Daniel.....	49	Nordmann, Alfred.....	27, 72
Mihailescu, Ion.....	40	North, Jill.....	65
Mikhalevich, Irina.....	65	Northcott, Robert.....	78
Millar, Kendall.....	29	Norton, John.....	19, 21, 66, 68, 83
Miller, Boaz.....	74, 86	Norton, Joshua.....	63
Miller, David Marshall	91	Norton, Marcy.....	18
Miller, Emelin.....	45	Numbers, Ron.....	5
Miller, Michael.....	54, 66, 93	Nyhart, Lynn K.....	4
Millstein, Roberta L.....	81	Nyrup, Rune.....	77
Mishuris, Katya	15	O'Connor, Cailin	84
Misiewicz, Zoë.....	40	O'Malley, Maureen A.	71
Mitchell, Robert.....	23	O'Neil, Erica.....	17, 21, 68
Mitchell, Sandra D.....	5, 21, 57, 68, 70, 79	O'Neill, Elizabeth.....	75
Mitman, Gregg.....	15	O'Reagan, Douglas.....	46, 87
Mitteroecker, Philipp	85	O'Reilly, Jessica.....	33
Miyake, Teru.....	77	O'Reilly, Kelly.....	20
Mizuno, Hiromi.....	45	O'Rourke, Michael	22, 68, 86
Mohammadian, Mousa	2	Odenbaugh, Jay.....	84
Monaldi, Daniela.....	54, 93	Ogilvie, Brian	5, 27
Montoya, Inigo.....	6	Okasha, Samir	82
Moon, Manyong	40	Oldenburger, Jesper	16, 17
Mooney, Graham.....	35	Omodeo, Pietro Daniel	18, 67
Moore, Kirsten.....	17	Onabe, Tomoko	34
Morar, Nicolae.....	92	Onaga, Lisa.....	38, 39
Morgan, Mary S.	15, 47, 84	Ontemann, Kristen.....	86
Moriarty, James	93	Oreskes, Naomi	22, 28, 33, 68, 73
Morrison, Robert.....	46, 87	Orland, Barbara.....	16
Moynahan, Gregory	25	Ortiz, Alberto.....	30
Muka, Samantha	17, 20	Osseo-Asare, Abena.....	33
Mukharji, Projit.....	35	Overgaard, Nicholas.....	49
Muller, F.A.....	63	Overton, James Alexander	77
Muntean, Ioan.....	64	Owens, Trevor	32
Munz, Tania.....	2, 4, 5, 10, 43, 57	Pacchetti, Marina Baldissera.....	53
Myelnikov, Dmitriy	20	Pal, Carol.....	49
Naddeo, Barbara.....	27	Park, Ilho	76
Nakao, Maika	38	Park, Swon Soo.....	34
Nanni, Federico	48	Parke, Emily	81
Nappi, Carla	4, 5, 21, 28, 68, 73	Parker, Wendy S.....	59, 83
Narens, Louis	85	Parshall, Karen	16
Nathan, Marco J.	62, 65	Parsons, Christopher.....	18
Nelson, Amy	24	Pashby, Thomas.....	79
Nelson, Nicole	36	Patton, Lydia	59
Nersessian, Nancy J.....	93	Paul, Diane	40
Neswald, Elizabeth.....	32	Pawley, Emily.....	18
Newman, William.....	31	Pearce, Trevor.....	16, 63
Ney, Alyssa	59, 79	Pearl, Sharrona.....	31
Nguyen, James	77	Peirson, Erick.....	32
Nickelsen, Kärin	42	Pemberton, Neil.....	49
Nickerson, Sylvia	44, 87	Pence, Charles H.	75
Nicoglou, Antonine.....	25	Periton, Cheryl.....	48
Nielsen, Kristian Hvidtfeldt.....	25, 72	Perry, Zee R.....	65

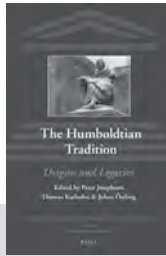
Peterson, Erik L.....	25	Richardson, Robert.....	85
Petrou, Marissa	24	Richardson, Sarah.....	84
Pettigrew, Richard	74	Richmond, Marsha L.....	4, 29
Pfeifer, Jessica	3, 58, 59, 88	Rieppel, Lukas	15, 28, 73
Phillips, Christopher.....	53	Rinard, Susanna.....	64
Piccinini, Gualtiero.....	82	Ripley, Ellen	426
Pietsch, Wolfgang.....	76	Risi, Stephan	35
Pincock, Chris	61	Risjord, Mark.....	92
Pitt, Joseph	77	Robbins, John.....	49
Pitts, James Brian.....	75	Roberts, Bryan.....	83
Plaisance, Kathryn S.....	92	Roberts, Lissa.....	4, 18
Popper, Nicholas	27	Robins, Sarah.....	84
Porter, Ted.....	23	Robinson, Ann.....	44
Portuondo, Maria	27	Robinson, David.....	45
Potochnik, Angela	84	Robinson, Hilary.....	39
Povich, Mark	74	Robinson, Samuel.....	50
Powers, John	5	Robus, Olin Matthew.....	75
Pradeu, Thomas.....	71	Roby, Courtney.....	40
Priest, Greg.....	16, 63	Rocke, Alan	5
Principe, Lawrence M.....	35	Rohwer, Yasha	75
Pronskikh, Vitaly	83	Rolin, Kristina	59
Pugliesi, Alicia.....	19	Romeijn, Jan-Willem.....	69
Pyenson, Lewis	51	Romero, Felipe.....	84
Queller, David C.....	82	Rosaler, Joshua.....	78
Quinlan, Sean.....	34	Rosales, Alirio	47, 84
Quinn, Aleta	16, 63	Rosenberg, Jonathan	61
Qureshi, Sadiah.....	26	Ross, Lauren.....	35
Raby, Megan.....	24	Rossiter, Margaret.....	16
Rader, Karen	5	Roth, Paul A.....	59, 70, 92
Ragland, Evan R.....	41	Rothschild, Rachel.....	43
Raj, Kapil	54	Roush, Sherrilyn.....	81
Ramos, Christina.....	39	Rowland, Ingrid	44, 86
Rampling, Jennifer.....	35, 52	Roy, Olivier	69
Ramsden, Edmund.....	45	Rozenblatt, Daphne	24
Ramsey, Grant.....	75, 84	Rozwadowski, Helen.....	43
Rankin, Alisha	41, 49	Rubin, Hannah.....	57, 58, 76
Rathkopf, Charles.....	89, 96	Ruetsche, Laura.....	81
Ratner, Mark.....	3	Ruis, Andrew	49
Raz, Carmel	53	Runhardt, Rosa Willemijn	78
Record, Isaac.....	48	Ruphy, Stephanie.....	78
Rédei, Miklos.....	74	Rusanen, Anna-Mari	81
Redman, Emily.....	53	Russo, Federica	47, 86
Regier, Jonathan.....	18, 67	Ruthenberg, Klaus.....	92
Reidy, Michael.....	30	Safir, Neil	17
Reinholdt, Marie.....	45	Sample, Matthew S.....	61
Reiss, Julian.....	91	Sargent, Matthew	46, 87
Renn, Jürgen.....	18, 19, 66, 67	Sarkar, Jay	46, 87
Rensing, Susan	20	Sarkar, Sahotra	80
Reutlinger, Alexander.....	81	Sauer, Tilman.....	39
Reynolds, Sarah.....	31	Savitt, Steven F.....	65
Rice, Collin.....	81	Sayward, Amy.....	43
Richard, Jean-Olivier.....	53	Schäfer, Dagmar	32, 44, 86
Richards, Robert J.....	2, 4, 10, 57	Scheffler, Robin.....	20
Richardson, Alan	59	Schell, Patience.....	51

Schickore, Jutta	25, 91	Spencer, Quayshawn	85
Schiefsky, Mark	36	Spiegel, Richard	53
Schilt, Cornelis J.	36	Sponsel, Alistair	5, 26, 27
Schimkat, Peter	48	Sprondel, Johanna	44, 86
Schindler, Samuel	70	Staley, Kent	83
Schliesser, Eric	26, 72	Stanford, P. Kyle	61
Schloegel, Judy Johns	29	Stanley, Matthew	2, 4, 57
Schoefert, Kathryn	20	Stapleford, Thomas	41
Schott, Heinz	46	Stark, Laura	28, 73
Schurz, Gerhard	82	Statham, Georgie	91
Sebens, Charles Thorne	79	Steel, Daniel	86
Secord, Jim	51	Steele, Katie	83
Segerstrale, Ullica	81	Stegenga, Jacob	35, 70
Seim, David L.	53	Stein, Claudia	41
Senier, Laura	50	Stein, Howard	78
Seo, Minwoo	27, 72	Sterner, Beckett	25
Sepkoski, David	27	Stevens, Syman	76
Seth, Suman	24, 37	Stinson, Catherine	75
Shackelford, Jole	17	Stoeltzner, Michael	66
Shank, JB	40	Stolzenberg, Daniel	5
Shapiro, Lawrence	81	Strack, Greg	57
Shapiro, Ryan	45	Strang, Cameron	18
Shavit, Ayelet	20, 65	Streefland, Abel	46, 87
Shech, Elay	76	Strevens, Michael	84
Shen, Grace	34	Suay, Juan M.	19
Shen, Jian	74	Sullivan, Jacqueline	82
Sheredos, Benjamin	65	Summers, William	42
Shields, Brittany	16	Swan, Claudia	41
Shindell, Matthew	33	Swenson, Sarah	48
Shinn, Terry	25, 72	Sylla, Edith	34
Shirilan, Stephanie	29	Sysling, Fenneke	15
Shotwell, Allen	40	Szabo, Laszlo E.	66
Shrader-Frechette, Kristin	22, 68	Tabb, Kathryn	77
Siebert, Martina	32	Tait, W.W.	92
Skee, James D.	54	Tal, Eran	69
Skillings, Derek John	62	Tan, Yingjia	20
Slack, Nancy	19	Teira, David	19, 90, 91
Slater, Matthew H.	75	Tekin, Serife	65
Slipp, Naomi	51	Teller, Paul	70
Sloan, Phillip	41, 42	Terrall, Mary	49
Slowik, Edward	76	Thalos, Mariam	90
Smead, Rory	81	Thébault, Karim	85
Smeenck, Chris	3, 57, 58, 59, 88	Theunissen, Bert	16
Smith, George E.	78	Theurer, Kari L.	77
Smith, Jason	30	Thomas, Erin	37, 80
Smith, Joshua	33	Thomas, Rebecca	22, 68
Smith, Julie A.	23	Thompson, Courtney	39
Sober, Elliott	70, 79, 89, 95, 96	Thompson, Erica	83
Solomon, Miriam	23, 59, 70, 90	Tidwell, Christy	48
Sommerlatte, Curtis	45	Tilley, Hellen	3
Sørensen, Henrik Kragh	25, 45, 72, 86	Treitel, Corinna	32
Soto Laveaga, Gabriela	55	Tresch, John	24
Sparling, Andrew	17	Trigg, Scott	46, 87
Spencer, Emily	22, 68	Tsou, Jonathan	78

Tulodziecki, Dana.....	74	Weiskopf, Daniel	82
Turner, Roger.....	5, 54	Wellerstein, Alex	32
Turner, Stephen	92	Wellmann, Janina.....	53
Turri, John	86	Werndl, Charlotte	59, 66, 83
Tyrrell, Brian	25	Werrett, Simon.....	53
Unguru, Sabetai.....	16, 63	Westfall, Catherine	43, 44
Valencius, Conevery.....	4	Wheatley, Steven.....	28, 73
Valles, Sean.....	22, 68, 92	White, Paul	45
Vallor, Shannon	93	Whitney, Kaitlin Stack	48
Van De Wiel, Marco	81	Wiegman, Isaac	75, 84
Van den Heuvel, Charles.....	36	Williams, Elizabeth.....	34
Van der Laan, Steven	16, 17	Williamson, Jon.....	82
Van Dongen, Jeroen	19, 66	Winsberg, Eric.....	59, 66, 83, 85
Van Driel, Joppe.....	18	Wintergrün, Dirk	36
Van Lunteren, Frans	54, 93	Winters, Andrew M.....	61
Van Tiggelen, Brigitte	27	Wise, M. Norton.....	5, 84
Vanni, Leonardo.....	63	Wolfe, Audra.....	43
Varma, Charissa S.....	85	Wolfson, Elizabeth.....	15
Vassend, Olav Benjamin	76	Wolfson, Paul.....	34
Vaught, Jeannette.....	23, 24	Won, Jung H.....	51
Vecsernyés, Péter.....	63	Woodcock, Brian.....	65
Vergara Fernandez, Melissa	90	Woodward, James.....	59, 77
Victor, Elizabeth.....	85	Woody, Andrea I.....	41, 57, 58, 67, 77
Vieland, Veronica J.....	85	Worrall, John.....	65
Vila, Anne.....	34	Woytonik, K.A.....	39
Villa, Paola.....	29	Wray, K. Brad.....	74
Vineberg, Susan.....	64	Wright, Jake.....	62
Vistarini, Tiziana.....	76	Wu, Shellen.....	20
Voelkel, James.....	31	Wüthrich, Adrian.....	76
Volmar, Axel.....	26	Wüthrich, Christian	59, 75
Vorms, Marion.....	64	Wykle, Stacy.....	44, 87
Votsis, Ioannis.....	70	Wylie, Caitlin	35
Waddell, Mark.....	53	Xynogala, Lydia.....	54
Wagenknecht, Susann	63, 64	Yale, Elizabeth	27
Wagner, Günter P.....	85	Yang, Haiyan	51
Wailoo, Keith.....	36, 79	Yap, Audrey.....	92
Wakefield, Andre.....	30	Yeang, Chen-Pang.....	37
Wald, Robert	85	Yin, Ming	90
Wallace, Matthew.....	19	Young, Adrian.....	31
Walsh, Elena.....	62	Yu, Sun Kyeong.....	75
Walsh, Kristen.....	66	Zammito, John.....	28, 73
Wang, Zuoyue.....	4, 5, 51	Zamora-Bonilla, Jesus	90
Warner, John Harley	4	Zangwill, Andrew	40
Waters, C. Kenneth.....	59, 89	Zautra, Nicholas Gaddis.....	77
Watts, Iain.....	25	Zednik, Carlos.....	74
Wayne, Andrew.....	76	Zhang, Jiji.....	64
Wazeck, Milena.....	33	Zhang, Kun	64
Weatherall, James O.....	59, 79, 80	Zhang, Qiong.....	34
Weber, Marcel	82	Zheng, Robin	85
Webster, Colin	21, 67	Zilberstein, Anya.....	18
Weil, Vivian	90	Zollman, Kevin J.S.....	76
Weinberger, Naftali.....	89, 96	Zorach, Rebecca.....	41
Weinstein, Debbie.....	31	Zwanziger, Lee.....	21, 68
Weisberg, Michael	59, 82, 91	Zwier, Karen R.....	91

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