# TABLE OF CONTENTS

HSS Acknowledgements ............................................................... 2  
Tips on Tipping ........................................................................ 4  
HSS Officers and Program Chairs .............................................. 5  
Thank You to Volunteers ........................................................... 6  
Sheraton San Diego Hotel and Marina Layout ......................... 7  
Book Exhibit Layout ............................................................... 8  
San Diego Local Guide ............................................................ 10  
HSS Program ............................................................................ 16  
HSS Business Meeting Agenda ................................................. 45  
PSA Acknowledgements .......................................................... 46  
PSA Governing Board and Program Committee ....................... 47  
PSA Program ............................................................................ 48  
2012 Hempel Award ................................................................. 68  
Advertising ............................................................................... 69  
Index ......................................................................................... 83
ACKNOWLEDGMENTS

Welcome to San Diego and the 2012 HSS conference (a joint meeting with PSA)! We have the good fortune to meet with our colleagues in the philosophy of science in even-numbered years and that means that we expect over 1100 delegates who share our passion for understanding how science works. Because the annual meeting of the HSS and the biennial meeting of PSA feature so many moving parts, there are many people whom I wish to thank.

According to our post-meeting surveys, the program plays a major role in whether or not someone chooses to attend and I would like to begin by thanking those who pulled the program together. Our programs co-chairs, Janet Browne (Harvard University) and David Kaiser (MIT), proved every bit as fun to work with as I imagined. Good humored and smart is a grand combination and Janet and Dave sport a large measure of each. Their careful reasoning and judgment created a special program. And we were doubly fortunate in that PSA’s program chair, Andrea Woody (University of Washington), and PSA’s Secretary/Treasurer, Gary Hardcastle, (Bloomsburg University of Pennsylvania) also brim with wit and whimsy themselves, and together, these four created a special collegiality that gave rise to deep cooperation that is evident in the PSA and HSS programs, from the joint plenary on Kuhn’s *Structure*, to co-sponsored sessions, to joint receptions. And when the hotel said we could not run our meetings to 6:00 pm (as we had done last year for HSS), the program chairs immediately found a compromise that allowed us to end sessions at 5:45, thus ensuring that all presenters (in theory) would have equal time (turning “theory” into “practice” rests on the broad shoulders of the session chairs). Because of the effort spent on coordinating the PSA and HSS sessions, I hope that all historians visit a philosophy session and that all philosophers visit a historical presentation; I believe that our respective fields will be stronger from such interchanges.

A large measure for a meeting’s success depends on support from our local arrangements folks. We were fortunate that our Local Arrangements Committee -- Craig Callender, chair; Jonathan Cohen; Cathy Gere; Rick Grush; and Joyce Havstad -- cheerfully accepted multiple tasks: from visiting hotels to digging for flowers to creating the helpful restaurant guide that appears in the program. My deep thanks to them.

Our Committee on Meetings and Programs (CoMP), chaired by Rachel Ankeny, continued to work behind the scenes, helping me sort through innumerable challenges. As chair, Rachel provided unswerving 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 -- all pro bono -- and he has his father’s deep appreciation. All of these volunteers make the conference possible and if you see them, please tell them, “Thank you!”

The annual meeting works because of the ongoing efforts of the HSS office staff, efforts that begin years before the actual conference: Greg Macklem, our Society
Coordinator, manned all the strategic points – simultaneously it seems – thus reinforcing my belief in the Macklem Uncertainty Principle, a little-known aspect of quantum meeting mechanics. Our Notre Dame students, Manuela Fernández Pinto and Mousa Mohammadian, assisted with everything from organizing workers, to proofreading the program, to scrutinizing travel grants, to setting up the book exhibit. They also have my deep thanks, as does the University of Notre Dame for its generous support of the HSS Executive Office.

It is a poorly kept secret that conference expenses continue to rise, in some cases dramatically. Without the support of the University of Notre Dame, the University of Chicago Press (the Journals and the Books divisions); the University of California, San Diego’s Science Studies Program and its Division of Arts and Humanities; the Science and Technology Studies Graduate Program at the University of British Columbia; an anonymous donation made in memory of Sally Ride, who made history; Science History Publications and Neale Watson; Brent Dibner, Dibner Institute; Miles Davis; the Pfizer Company; The Legacy of R.L. Moore Project; Albert Lewis; and the National Science Foundation (for its support of travel grants for graduate students, independent scholars, and recent PhDs), we would either have to raise registration prices significantly or cut back on conference essentials, such as coffee and tea. I appreciate, beyond words, their help. The HSS Executive Committee provided support, understanding, and wisdom on all aspects of the meeting—they too, have my profound thanks. And I cannot forget you, the participants, 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.

Finally, this will be the last meeting that PSA’s Secretary/Treasurer, Gary Hardcastle, will organize. Gary has been a wonderful colleague. From the time he came to visit me at the University of Florida shortly after assuming his PSA duties some 5 years ago (where I was able to show him alligators and spiders bigger than a bagel, perhaps a hint of things to come), he has been an enduring source of camaraderie, of good cheer, and of quick insights. I will miss him tremendously and hope that he enjoys the new-found time he so richly deserves.

Jay Malone
HSS Executive Director
21 October 2012
Tips on tipping:
Although we complain about 23% service charges on hotel food and beverages for our conferences, it is important to remember that this amount represents additional pay for the hotel servers, many of whom make minimum wage. Because even seasoned travelers have difficulty know who to tip and how much, we offer the following guidelines.

The following advice is adapted from Trip Advisor for tipping in the United States.

EATING OUT
When eating in a restaurant in the U.S., it is good to remember that, in general, many of the staff are paid below federal minimum wage (currently $7.25/hour) but the amount may vary state by state. In California, all restaurant workers are supposed to receive the state’s minimum wage of $8.00/hour. Tips are how these workers supplement their income.

A good rule of thumb when calculating a table service restaurant tip is to ignore sales tax, and, for good service, calculate 15% of the entire food, beverage, and wine bill. (This is the amount listed before the sales tax line.) Add 18-20% if the service was outstanding, especially prompt or friendly, or the server fulfilled many special requests. Note: in most larger restaurants in the USA, the server has to pay back a portion of their tips to the bartender, busser, hostess, and food runners. At higher end restaurants, there may also be a sommelier or wine steward. You should tip the sommelier separately, at your discretion. However, in some restaurants, the server tips the sommelier based on their individual wine sales, so it is advisable to ask your server first. Individual drinks you are served at a restaurant bar should always earn a $1-2 tip each.

For bad or unacceptable service it is customary to tip as low as 10%. If service is bad enough to deserve only 10%, it is a good idea to let the manager know. Also, placing 2 pennies side by side on top of bills neatly placed on the table lets the server know that it is intentionally low because of bad service. If the server in some way offended you so that you do not wish to leave any tip at all, still leave the 2 pennies, so that they understand that you did not just forget to tip.

Counter service/fast food restaurants often have tip jars out, but you are not required to tip. If the service is exemplary or unusual requests are made, then tips are appropriate.

Bartenders: $1-$2 per drink, or 15-20% of the total bill. If you tip well and consistently at bars and pubs, you are likely to receive a drink on the house, known sometimes as a "buy back." This typically occurs after the 3rd drink you buy. Some bartenders will still use the "old school" signal of leaving an upside-down shot glass near your spot at the bar, especially if you are engaged in conversation or if the place is very noisy, but it's not that common anymore. Turn the shot glass over when you want the free drink. Even though the drink is free, the labor isn't. Don't forget to tip on the "buy back."

Other optional tipping situations common to travelers include:

- **Hotel housekeeping/maid service**: $2-3 per night up to $5, more in high-end hotels. Also more if there are more than 3 people in a room or suite. Leave the tip on your pillow or in a similar obvious place with a note that says thank you. Leave the tip each day when you leave the room, rather than at the end of your stay, because your room might be cleaned by different people each day, depending on staff schedules. If you have additional items delivered to your room, such as extra pillows, hangers, luggage racks, tip the person who brings them $2 or $3. Remember that Sheraton Hotels have a "Make a Green Choice" option, where if you put up the "Green Choice" hangtag on your door, declining housekeeping service for that day, you will receive a $5 credit in the hotel (see the card for details).

- **Concierge**: Tipping is never expected, but always appreciated. The more difficult the request, the higher the tip. $5.00 and up per request is good.

- **In-suite dining waiter**: Always read the bill, if there is a tip included, it will be on the bill breakdown. Ask the server. The policy of having the gratuity included in the bill is not the norm anymore. A service charge or convenience fee goes to the hotel, not the server. If there is no gratuity added, tip the server 15%-20%.

- **Bellman/Porter**: $1-2 per bag. More if the bags are very heavy.

- **Taxi Driver**: 10-15% of fare, based on service.

- **Hotel limo driver**: For a free ride from the airport, $10 - $20

- **Drink Server in a casino or bar**: $1-$2 per drink. Some tip $5 for the first drink to make sure the waitress "remembers" them and returns often...

- **Valet Parking Attendants**: $2 - $5 (when picking up car).
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I wish to thank our volunteers whose terms will end in 2012. 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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Diagram not to scale
### By Table Number

1. University of Alabama Press  
2. Brill  
3. Jeff Weber Rare Books  
4. B&L Rootenberg Rare Books  
5. Palgrave Macmillan  
6. Collective Book Exhibit  
7. University of Pittsburgh Press  
8. Johns Hopkins University Press  
9. Wiley-Blackwell  
10. Springer  
11. Green Lion Press  
12. University of Toronto Press  
14. Ashgate  
15. Pickering & Chatto  
16. MIT Press  
17. Harvard University Press  
18. Scholar’s Choice  
19. Chemical Heritage Foundation  
20. Oxford University Press  

### By Exhibitor Name

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The conferences this year are November 15–18, 2012 in beautiful San Diego. Known for its beaches, fantastic weather, bustling downtown, proximity to Mexico, and beer and fish tacos, San Diego is the eighth largest city in the US. Because of its size, we make no attempt to describe it in general here. Plenty of online guides can do that, e.g., www.visitsandiego.com and www.discoversd.com. Here we aspire only to give some brief notes containing event-specific information and a few dining recommendations.

The conference venue is at the Sheraton San Diego Hotel and Marina located at 1380 Harbor Island Drive. Harbor Island is across from downtown San Diego, and “Island” is here a name, not a description. The Island is a small man-made peninsula jutting into gorgeous San Diego Bay. From the hotel there are spectacular views of downtown and also the Bay.

The Sheraton offers many green initiatives, such as their “choose green” program where you can opt not to have your room cleaned for a night and receive a $5 credit for use in the hotel. The Sheraton boasts five restaurants (including a large Starbucks), two swimming pools, tennis courts, a spa and jogging trails. There is also free internet in the lobby with the Sheraton Link program. And since HSS and PSA will be using Starwood properties for future meetings, sign up for the Starwood Preferred program and receive special benefits: http://www.starwoodhotels.com/preferredguest/index.html.

Getting From the Airport to Hotel
Due to the proximity of the hotel to the airport, one may be tempted to simply walk from the airport to the Sheraton. We don’t advise this. It is certainly possible. However, with major construction at Terminal 2, parking lots and runways to walk around, and a few large roads to cross, we predict that the walk would be longer and more confusing than you would expect. The Sheraton operates a free 15-passenger van that picks up people outside the two terminals (more or less directly out front the main exits). We recommend waiting for this shuttle. There is no need to call and the wait should not exceed 20-25 minutes (if you are arriving into the commuter terminal or between 12-5 AM, call the hotel from the airport to request a shuttle).

Eating on Harbor Island
Harbor Island contains two hotels, the Sheraton, where we’re staying, and the Hilton. Dining options are therefore restricted to one of the (many) hotel eateries or one of the three other restaurants on the Island:

- **Island Prime/C Level**, 880 Harbor Island Dr San Diego, CA 92101, (619) 298-6802, www.islandprime.com
- **The Boathouse**, 2040 Harbor Island Dr San Diego, CA 92101, (619) 291-8011, www.boathouserestaurant.com
- **Tomham’s Lighthouse**, 2150 Harbor Island Dr San Diego, CA 92101, (619) 291-9110, www.tomhamslighthouse.com

All three restaurants have amazing views, nice sea breezes, lights from downtown and the marinas, but some, e.g., Island Prime, are over-priced. But given the proximity to the conference, be advised to make reservations when possible. On the western end of the island there are also some delis and often foodtrucks, including:

- **Island Deli**, 955 Harbor Island Dr Ste 200 San Diego, CA 92101
- **Papanani’s Deli**, 1450 Harbor Island Dr #104 San Diego, CA 92101

Escape from Harbor Island
Given the limited options on Harbor Island, many will wish to leave the area for dining or other things to do. There will be many temptations to lure attendees from the hotel, such as the San Diego Bay Wine and Food Festival. San Diego also boasts many diverse and interesting neighborhoods,
ranging from Little Italy, the Spanish-style Old Town, the downtown Gaslamp Quarter, to the more hip Pacific Beach, Hillcrest, University Heights and North Park areas, among many others. For full descriptions of these and other areas please see an online guide, such as http://www.sandiego.org/. All of these areas are worth seeing, and many have good or even excellent places to eat.

To get to these spots, you have essentially five options:

• Shuttle. The Sheraton will run two 49-seat shuttles on a loop to a different destination each night of the conference.
• Taxi. The three shuttle destinations, and most of the others considered here, are only a 3-5 mile trip; therefore not too expensive.
• Water Taxi. Some companies run water taxis back and forth from Harbor Island to various points on San Diego Bay. One can take a boat from the Sheraton’s pier to downtown or Coronado Island, for instance, at a rate of about $7 each way. See, e.g., http://www.sdro.com/sdhe/taxi.htm
• Rental Car. Given the proximity to the airport, one is extremely close to all the rental car agencies. Many are right there at the entrance to Harbor Island. If one is comfortable driving in the city, renting a car is an option worth considering.
• Walk. The walk to the closest areas of interest, e.g, Little Italy, Seaport Village, is a couple of miles. This is probably not the greatest option for most people.

Once downtown, then others options become available, e.g., local buses, the San Diego Trolley, the local train the Coaster, and Amtrak. At the time of writing, the hotel plans to operate two shuttle buses on routes to Little Italy, Old Town and the Gaslamp Quarter. Hence our guide will focus especially on these areas.

Eating in the Gaslamp/Downtown Area

While the Gaslamp is equipped with more choices than Harbor Island, it is the canonical tourist locale, with the predictably lower odds of culinary success that that entails. Nonetheless, there are some good places.

Quicker/lighter

• The Cheese Shop, 627 4th Ave. San Diego, CA 92101 (619) 232-2303. Good deli/sandwiches, especially the grilled cheese sandwich selections.
• The Kebab Shop, 630 9th Avenue (at Market) San Diego, CA 92101 (619) 525-0055. Excellent, and a very good falafel too.
• Salad Style, 807 F Street San Diego, CA 92101 (619) 255-6731

Full service

• BICE Ristorante, 425 Island Avenue, San Diego (619) 239 2423 bicesandiego.com. Traditional and contemporary ingredient-centric Italian.
• Currant Restaurant, 140 W. Broadway, San Diego (619) 702-6309. A restaurant that is about being a classic brasserie (as opposed to a restaurant that just is a classic brasserie). If you want checkered tiles, absinthe cocktails, and steak frites, this is your place. currantrestaurant.com.
• Blue Point Coastal Cuisine, 565 Fifth Avenue, San Diego (619) 233-6623 www.cohnrestaurants.com/menu-restaurants/blue-point/
• Blue Water Seafood Market and Grill, 3667 India St., San Diego, CA 92103 (619) 497-0914 http://www.bluewater.sandiegan.com/ Not especially innovative, but solid performer for extremely fresh seafood.
• Mint Downtown Thai, 732 4th Avenue, San Diego (619) 546-8424, mintsdthai.com
• Rama Thai, 327 4th Avenue San Diego, CA 92101 (619) 501-8424, ramarestaurant.com
• Celadon Thai Kitchen, 3671 5th Avenue San Diego, CA 92103 (619) 297-8424, celadonrestaurant.com
• Taka 555 5th Ave (between Island Ave & Market St) San Diego, CA 92101 (619) 338-0555 www.takasushi.com Excellent sushi, but waits can be long; reservations recommended.
• Cafe 21, two locations. 750 5th Avenue San Diego (619) 795-0721 and 2736 Adams Avenue San Diego (619) 640-2121. Really interesting menu; Azerbaijani roots; great brunch
• Cafe Chloe 721 Ninth Ave #1, San Diego CA 92101 (619) 232-3242 www.cafechloe.com. Great little cafe; excellent coffee, lavender lemonade, happy hour, brunch; classic bistro preparations; can be somewhat precious, but generally delicious and arguably one of the best.

Eating in Old Town
A state historic park, Old Town is a collection of adobe buildings, streets and a park that dates back to 1820. Today it features many historically preserved buildings as well as many recreations of such buildings. The park and surrounding streets are a mostly pedestrian-friendly area stuffed (in the park and out) with Mexican restaurants. There are too many Mexican restaurants here to contemplate reviewing. Some are very good cheap eats – handmade tortillas with every imaginable filling – some are fine dining, and some are tourist traps. You can try to sort the wheat from the chaff by going to urbanspoon, yelp or any of the standard internet sources. Because it features a Tequila Museum and a staggering selection of tequilas, we’ll only highlight

Eating in Little Italy
Originally a mostly Italian fishing neighborhood, Little Italy is a northwest section of downtown a few blocks away from the Embarcadero. It is now stuffed with Italian restaurants, design stores and galleries. You can find an extremely satisfying lunch here, as well as many good options for dinner. Because there are so many Italian options and the LOC have gone to such a small sample, we’ll leave it to you to pick the best. We’ll simply note that
• Davanti Enoteca 1655 India Street San Diego, CA 92101 (619) 237-9606
• Indigo Grill, 1536 India St, (619) 234-6802, huge portions
• Bencotto, 750 W. First St, (619) 450-4786
• Buon Appetito, 1609 India Street San Diego, CA 92101 (619) 238-9880; especially good among others, get good reviews, and that
• Filippi’s Pizza Grotto, 1747 India Street San Diego, CA 92101 (619) 232-5094
has a somewhat legendary status. One place the LOC can enthusiastically and justifiably recommend is
• Extraordinary Desserts 1430 Union Street San Diego, 92101 (619) 294-7001 and 2929 Fifth Avenue San Diego, 92103 (619) 294-2132, www.extraordinarydesserts.com. If you have a sweet tooth, check out the fabulous creations of this French-trained, San-Diego-born pastry cook. The location near Balboa Park often has a long line that can be intimidating; but it tends to move at a decent clip. It typically has at least 30 dessert selections on any given day, most of which are amazing.

Eating in the North Park Vicinity
If you’re willing to get a taxi, you will have the option of going to Hillcrest, North Park and University Heights. While Hillcrest used to be the best area for dining, North Park and University Heights have lately emerged as better from a culinary standpoint. Here we can recommend:
• Kensington Grill 4055 Adams Avenue, www.kensingtongrill.com. Decor is a bit corporate, but the food is really good.
• The Linkery 3794 30th St (at North Park Way) San Diego CA (619) 255-8778,
www.thelinkery.com. Arguably one of the best farm-to-table places in the city (and many other cities); unusually strong beer list, grass-fed everything.

- El Take it Easy, 3926 30th St (at University Ave) San Diego CA (619) 291-1859, eltakeiteasy.com. New place from same folks who brought you The Linkery; concentrating on local ingredients, where local includes a healthy dose of Baja California.
- Farmhouse Cafe, 2121 Adams Avenue San Diego, CA 92116 (619) 269-9662. One of our all time favorite San Diego restaurants. Solid, unpretentious, ingredient-driven cooking.
- Urban Solace 3823 30th Street San Diego, CA 92104 (619) 295-6464, www.urbansolace.net/
- Saffron Thai Chicken 3731-B India St San Diego, CA 92103 (619) 574-7737, www.saffronsandiego.com/
- Blind Lady Ale House 3416 Adams Ave, San Diego, CA (619) 255-2491, blindlady.blogspot.com, A legendary selection of craft beers, also serves some excellent pizzas.
- Bleu Boheme, 4090 Adams Avenue San Diego, CA 92116 (619) 255-4167, bleuboheme.com, excellent selection of mussels
- Ritual Tavern, 4095 30th Street, San Diego, CA 92104 (619) 283-1720, www.ritualtavern.com, Contemporary gastropub cuisine; they make their own condiments and have a great drink selection.
- Cucina Urbana, good Italian, requires reservation
- Il Postina, 3959 30th Street, (619) 325-0809
- Burger Lounge, many locations, 1608 India Street San Diego, 4116 Adams Avenue, and 528 5th Avenue
- Alchemy, 1503 30th Street, tapas and lots of veggy
- Smoking Goat, 3408 30th Street, (619) 955-5295
- Sea Rocket, 3382 30th Street San Diego, (619) 255-7049, sustainable seafood
- Rancho’s, good for cheap lunch
- Sipz, good for cheap lunch

San Diego Beer and Bars
There are of course many good bars downtown. Since people’s tastes differ so widely, we’ll refrain from making any specific recommendations. Here we just wish to draw your attention to the many delicious beers made here. Over the past decade or so, there has been a kind of arms race of craft breweries developing and competing. The result is heaven for beer lovers.

King of all the breweries is Stone Brewing Co, whose main brewery in Escondido is a mecca worth the 40-minute pilgrimage. Ballast Point (especially its Sculpin, a must-have for IPA lovers), Iron Fist, Mission, Hess, Lightning, Green Flash, Lost Abbey, Alesmith, and Port Brewing are all noteworthy as well.

The recent article, http://www.nytimes.com/2012/05/27/travel/san-diegos-thriving-craft-beer-scene.html, describes many of the places you can sample these drinks. Some of these breweries are located downtown and have tasting bars, e.g., Mission on the corner of 14th and L.

Here are some bars where you might sample these beers or other drinks:
- Blind Lady Ale House 3416 Adams Ave, San Diego, CA (619) 255-2491, blindlady.blogspot.com, A legendary selection of craft beers, also serves some excellent pizzas, one of the best
- Tiger! Tiger! 3025 El Cajon Boulevard San Diego, CA 92104 (619) 487-0401,
tigertigertavern.com, great tavern
• URBN Coal Fired Pizza, 3085 University Ave, urbnnorthpark.com, craft pizza, craft beer
• Hamilton’s Tavern. 1521 30th St. - San Diego, CA 92102, (619)-238-5460, one of the best in SD
• Toronado, 4026 30th St, San Diego CA 92104, www.toronadosd.com, ditto
• El Dorado, 030 Broadway San Diego, right downtown
• Princess, 1665 India Street, British style pub
• Shakespeare, 3701 India Street, British style pub
• Aero Club, 3365 India Street, good whiskey menu
• Starlight Lounge, 3175 India St, trendy
• Small Bar, 4628 Park Boulevard, hip
• Seven Grand, 3054 University Ave, speakeasy attitude, mounted animal heads, and over-priced cocktails
• Lancer’s, Alibi, and Nunu’s, good cheap dive bars
• Noble Experiment, 777 G St (between 7th Ave & California St), secret door inside a bar (Neighborhood) in Little Italy, speakeasy atmosphere

The Fish Taco
Imagine fish and chips wrapped in a soft Mexican tortilla and then filled with a variety of veggies in a salsa or other Mexican sauce. Sound disgusting? Not to a San Diegan. While in San Diego, you will find fish tacos offered in fast food restaurants and on menus when fine dining. Whole fast food chains are devoted to the fish taco – Rubio’s and Wahoo’s are especially good. The fish tacos will range in price from $0.99 to $18.00, from gourmet to fast food, from healthy to unhealthy (the deep fried variety), and from cod to mahi-mahi or even abalone filled. If you’ve never had one before, we recommend trying one (or more).

Where is the 99 cent fish taco? It’s a great taco, and it’s here:
• El Zarape, two locations, 4642 Park Boulevard San Diego (original hole in the wall, still good) and 3201 Adams Avenue San Diego (fancier version), elzarape.menutoeat.com, open until 2am.

12 Things to Do
If you have an extra day or half day, San Diego offers many excellent possibilities for fun.
• Balboa Park. Balboa Park is the cultural center of San Diego. Built largely for the 1915 World Expo, it is a downtown city park featuring sixteen museums, more than a dozen gardens, a few theaters, a miniature railroad, international cottages, a massive outdoor organ, and the world famous San Diego Zoo. Go to http://www.balboapark.org/ for more. For fine dining, the Park has The Prado (619-557-9441), set in the gardens of Balboa Park in the House of Hospitality.
• San Diego Zoo. With over 880 species of animal in mostly new and modern settings, the zoo is arguably the best one in North America. It is only 3 miles away from the conference hotel, so it is only a short cab ride away. Do not confuse with the San Diego Wild Animal Park, which is also worthwhile, but much further away in Escondido (about a 45 minute drive).
• Coronado Island. A pleasant way to spend the day is to take the ferry from downtown to Coronado Island. The ferry ride is cheap, pretty and short (15 minutes). It is caught at Broadway Pier, just south of the historic ship Star of India. Once on the Island, rent a bike and tour the downtown, beaches, and so on, possibly stopping for a drink at the famous Hotel del Coronado.
• Old Town. Mentioned above, this historic plaza has, in addition to many Mexican restaurants, stores with cool trinkets, garden items, small museums, historical tours, and even theater. The Trolley and Coaster stop here too, so it’s easy to get to from downtown.
• Maritime Museum, www.sdmaritime.org. Located within sight of Harbor Island, the museum is a collection of historic boats to board and tour, ranging from the massive steam
ferry Berkeley to the 1863 sailing ship Star of India.

- Outdoor activities. Assuming the weather is nice, San Diego makes it very easy to enjoy the outdoors. Beaches are everywhere, and one can easily rent stand up paddle boards, kayaks, and surfboards almost anywhere near the beach. Probably the closest fun beaches are Ocean Beach, Mission Beach, Coronado, and Pacific Beach. Slightly north, Mission Bay provides a calm introduction to many watery sports. Much further to the north, La Jolla Cove is exceptionally good for kayaking, snorkling and seeing seals, dolphins, and more; Encinitas and Swami’s stand out for surfing. Hiking is also great here, from the coastal trails in lagoons to major desert hikes. Anza Borrega Desert, for instance, is approximately 1.5 hrs drive from downtown.

- As luck would have it, the conference coincides with the San Diego Wine and Food on the Bay Festival, 14-18 Nov (http://sandiegowineclassic.com/). Buses will run from the Sheraton to the Gaslamp District and Little Italy, where many of the activities will be held.

- For Kids. All of the above, but also:
  - Seaworld, just a few miles north of the Hotel
  - Legoland, Carlsbad, about a half hour drive from the Hotel
  - Wild Animal Park, Escondido. Especially nice in Nov, this is a (mostly pretty) 40-50 minute drive. It features animals in a more “safari-park” type of setting than the Zoo.
  - The New Children’s Museum, located right downtown
  - Birch Aquarium at Scripps, La Jolla

Local Arrangements Committee
Craig Callender, Chair
Jonathan Cohen
Cathy Gere
Rick Grush
Joyce Havstad
**HISTORY OF SCIENCE SOCIETY PROGRAM**

**SAN DIEGO, CALIFORNIA**

All sessions will be held in the Marina (East) Tower at the Sheraton San Diego Hotel & Marina. The Nautilus rooms are on the lower level; all other meeting rooms are on the lobby level.

Room 518 in the Marina Tower has been donated by the hotel for the exclusive use of nursing mothers and mothers wishing to pump milk. We thank the Sheraton for making this room available.

Updates and other information during the meeting will be announced on the HSS twitter feed (@hssonline.org), using hashtag #hsspsa12.

* denotes session organizer

<table>
<thead>
<tr>
<th>Registration Desk</th>
<th>Book Exhibit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, 12:00 P.M. – 7:00 P.M. Maritime Board Room</td>
<td>Thursday, 6:30 P.M. – 8:30 P.M. Grande Ballroom A</td>
</tr>
<tr>
<td>Friday, 8:00 A.M. – 5:00 P.M. Grande Ballroom Foyer</td>
<td>Friday, 8:00 A.M. – 5:00 P.M. Grande Ballroom A</td>
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<tr>
<td>Saturday, 8:00 A.M. – 5:00 P.M. Grande Ballroom Foyer</td>
<td>Saturday, 8:00 A.M. – 5:00 P.M. Grande Ballroom A</td>
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<tr>
<td>Sunday, 8:00 A.M. – 11:00 A.M. Grande Ballroom Foyer</td>
<td>Sunday 8:00 A.M. – 11:00 A.M. Grande Ballroom A</td>
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**Thursday, 15 November**

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| 12:00 – 4:30 P.M. | **The Blue Marble: History of Oceanography Public Project**

*Scripps Seaside Forum*

Joint outreach initiative between the History of Science Society and the Scripps Institution of Oceanography. All events will be held at the Scripps Seaside Forum in La Jolla, CA. Buses will be running between the meeting hotel and the Scripps Seaside Forum.

12:00 – 1:00
Lunch
1:00 – 1:15
Introduction |
| 1:15 – 1:45 | “Discovering the Oceans’ Role in Climate: Oceanography meets Remote Sensing,” Erik Conway (Jet Propulsion Laboratory, NASA) |
| 1:50 – 2:35 | Panel Discussion: Marine Science and Statecraft |
| 2:40 – 3:25 | Panel Discussion: Oceanography as Global History |
| 3:30 – 4:00 | “Oceans and People: Why the Humanities? Why History? Why History of Science?,” Helen Rozwadowski (University of Connecticut, Avery Point) |
1:00 – 5:00 P.M.

**HSS Council Meeting**
*Executive Center 1*

2:00 – 3:30 P.M.

**Contributed Papers: Historical Insights for Contemporary Issues**
*Spinnaker 2*

Sponsored by the Philosophy of Science Association
Chair: Rose-Mary Sargent (Merrimack College)


“William Harvey's Bloody Motion: Creativity in Science,” Laszlo Kosolosky (Ghent University) and Dagmar Provijn (Ghent University)

“Shattering the Myth of Semmelweis,” Dana Tulodziecki (University of Missouri-Kansas City)

6:00 – 7:30 P.M.

**Plenary Session: History and Philosophy of Science: 50 Years of Thomas Kuhn's The Structure of Scientific Revolutions**
*Grande Ballroom C*

This session is jointly sponsored by the History of Science Society, the Philosophy of Science Association, and the Joint Commission of the Division of the History of Science and Technology and the Division of Logic, Methodology and Philosophy of Science
Chair: Angela Creager, Princeton University

“On Making History into Philosophy: The Importance of Kuhn’s Harvard Years,” Joel Isaac (University of Cambridge)

“Of Troubled Marriage and Uneasy Colocation: Thomas Kuhn, Epistemological Revolutions, Romantic Narratives, and HPS,” Alan Richardson (University of British Columbia)

“On Tradition and Innovation Before and After Kuhn,” Mary Jo Nye (Oregon State University)

“What is Uncontroversial about Kuhn?” Paul Hoyningen-Huene (Leibniz University of Hannover)

7:30 – 8:30 P.M.

**Joint HSS/PSA Opening Reception**
*Grande Ballroom Foyer and Grande Ballrooms A and B*

Sponsored in part by the University of Chicago Press on the occasion of the 50th anniversary of Thomas Kuhn’s *The Structure of Scientific Revolutions*

Cash bar and light hors d’oeuvres. Please be sure to visit the book exhibit area in Grande Ballroom A.

**Graduate and Early Career Caucus Mentor/Mentee Welcoming Reception**
*Grande Ballroom B*

The mentor/mentee reception will be held towards the back of the ballroom for a more quiet setting.
Friday, 16 November

**7:30 – 8:45 A.M.**

HSS Women’s Caucus Breakfast  
*Grande Ballroom B*

Sponsored in part by the Science and Technology Studies Graduate Program at the University of British Columbia

**HSS Committee on Honors and Prizes**  
*Harbor’s Edge Private Dining Room*

**9:00 – 11:45 A.M.**

Coffee Break 10:00 – 10:15 in Grande Ballroom Foyer and Executive Foyer

**The End(s) of the World as We Know it? Ancient and Early Modern Uses of Teleology**  
*Marina 3*

Chair: Peter Distelzweig (University of Pittsburgh)

Commentator: Devin Henry (University of Western Ontario)

“Three Peripatetics on Methodological Pan-Adaptationism,” Mariska Leunissen (University of North Carolina)

“Experiencing the Ends of Nature: William Harvey’s Teleological Method,” *Benjamin Goldberg (University of Pittsburgh)*

“Descartes' Use of Usus: Grounding Cartesian Teleological Explanation,” Peter Distelzweig (University of Pittsburgh)

“Leibniz's Heuristic Teleology,” Justin Smith (Concordia University)

**When Feeling is Believing: Personal Experience, Perception, and the Struggle to Standardize the Senses**  
*Executive Center 3A*

Chair: Nadia Berenstein (University of Pennsylvania)

Commentator: Emily Thompson (Princeton University)


“Ethereal Noise of the Theremin: Transcending Sensation at the Frontiers of Engineering and Art in 1930s America,” *Joy Wattawa (University of Chicago)*

“Smelling Newtown Creek: Germs, Miasmas, and Lay Ways of Understanding Environmental Health Hazards in Brooklyn, 1890-1895,” Molly Laas (University of Wisconsin, Madison)

“Making Vision Visible: Representing Remarkable Experiences in the Early Nineteenth Century,” Carmine Grimaldi (University of Chicago)

**Locality, Embodiment, and Vernacularization in Late Colonial Technoscience: European Knowledge Cultures in the Twentieth-Century Middle East**  
*Nautilus 5*

Chair and Commentator: Michael Osborne (Oregon State University)

“Scientific Education and Medical Practice in Colonial Algeria: The Case of Native Medical Auxiliaries,”
Hannah-Louise Clark (Princeton University)  
“A Flood of Disease: The New Human Geography of the Agricultural Environment in 20th Century Egypt,” Jennifer Derr (University of California, Santa Cruz)  
“Whose ‘bilad al-‘ajaib’ [Wonderland]? Aviation in Lebanon under the French Mandate, 1923-1943,” Daniela Helbig (University of Sydney)  

Animal Models beyond Genetics  
Grande Ballroom C  
Co-Sponsored by the Philosophy of Science Association  
Chair and Commentator: Alan Love (University of Minnesota)  
“Modeling humans, standardizing the environment: Making organisms model humans in research on alcohol addiction,” Sabina Leonelli (University of Exeter), Rachel Ankeny (University of Adelaide), Nicole Nelson (McGill University), Edmund Ramsden (University of Manchester)  
“Modeling failure: Empiricism, evidence, and rhetoric in the development of the early twentieth-century hip fracture treatments,” Christopher Degeling (University of Sydney)  
“Of mad dogs and men: Creating standards of validity for animal models of human psychopathology,” Edmund Ramsden (University of Exeter)  
“Humanising animals: The search for an ideal transgenic mouse model of Alzheimer’s disease in the 1990s,” Lara Keuck (Johannes Gutenberg University) and Lara Huber (Technische Universität, Braunschweig)  

Disciplining and Popularization in Evolutionary Biology after the Modern Synthesis  
Nautilus 2  
Chair and Commentator: Vassiliki Betty Smocovitis (University of Florida)  
“Claiming Darwin: contests over orthodoxy and public perception,” Myrna Perez (Harvard University)  
“Paleontology at the “High Table”? Popularization and Disciplinary Status Debates in Recent Paleontology,” David Sepkoski (University of North Carolina)  
“Making Natural Theology a ‘Science’,” Adam Shapiro (University of Wisconsin, Madison)  
“Making Orthogenesis Appealing,” Mark Ulett (Arizona State University)  

Symposium: Poincaré Reconsidered: One Hundred Years Afterwards  
Seabreeze 2  
Sponsored by the Philosophy of Science Association  
Chair: Sahotra Sarkar (University of Texas, Austin)  
“Poincaré’s Impact on 20th Century Philosophy of Science,” Yemima Ben-Menahem (Hebrew University of Jerusalem)  
“The Geometry Behind Poincaré’s Conventionalism,” Jeremy Heis (University of California, Irvine)  
“The Relationship of Geometry to Arithmetic in Poincaré’s Science and Hypothesis,” Katherine Dunlop (University of Texas, Austin)  
“Poincaré and the Origins of Special Relativity,” John Stachel (Boston University)
Siting Science: The Role of Locality in the History of Science

**Seabreeze 1**

Chair: Kathleen C. Oberlin (Indiana University)

Commentator: Thomas Gieryn (Indiana University)

“‘Leaving the fountain head to dry up’: The Reorganization of Biology at Harvard University, 1900-1930,” Jenna Tonn (Harvard University)

“Placing Mathematics: New York University's Courant Institute of Mathematical Sciences,” Brittany Shields (University of Pennsylvania)

“A Glamorous Example from the Mecca of Glamour Itself: Operations Research and the Business of Mass Leisure in America after World War II,” James D. Skee (University of California, Berkeley)

“Anthropometry and the Standardization of Disability Access,” Aimi Hamraie (Emory University)

**Practicing Gender and Gendering Practice in the Field and Lab**

**Nautilus 4**

Chair and Commentator: Robert Nye, Oregon State University

“Mountaineering and the Body Aesthetic in Victorian Britain,” Michael Reidy (Montana State University)

“My Dear Dr.’: Women Plant Collectors and the Harvard Botanists, 1860-1900,” Tina Gianquitto (Colorado School of Mines)

“Simply in their trousers’: Men, Women, and Horticulture at Kew, 1895-1910,” Donald Opitz (De Paul University)

“What’s Gender Got To Do With It?: Women and Scientific Practice Within the New Experimental Institutes of Genetics, 1900-1940,” Marsha Richmond (Wayne State University)

The History of Science in the Pacific World

**Executive Center 2A**

Chair and Commentator: Jacob Hamblin (Oregon State University)

“Sustaining an Empire: Russian Science in the Pacific World during the First Half of the Nineteenth Century,” Al Miller (University of Washington)


“SCAP and Scientific Racism in Japanese Fisheries Science,” Carmel Finley (Oregon State University)

Between Empires: Colonial Technology and Postcolonial Development in Asia

**Marina 1**

Chair: Hiromi Mizuno (University of Minnesota)

Commentators: Bradley Simpson (Princeton University) and Suzanne Moon (University of Oklahoma)

“Problematizing Technological Cooperation: Japan in Asia,” Hiromi Mizuno (University of Minnesota)

“Treasure Island’: Sumatran Oil Development in Japanese-Indonesian Relations,” Eric Dinmore (Hampden-Sydney College)

“A View from the Third Goose: Indonesian Discourses on Japanese Models of Industrialization, and Scientific/Technological Cooperation,” Suzanne Moon (University of Oklahoma)

Modern Instrumentation: Materiality and Metaphor

*Nautilus 3*
Chair: Dana A. Freiburger (University of Wisconsin, Madison)
“Millikan’s Cauldrons,” Martin Panusch (University of Flensburg)
“Beyond the Geiger-Müller counter,” Sebastian Korff (University of Flensburg)
“Hugo Benioff and the fine-tuning of seismometers and musical instruments at Caltech,” Matthias Dorries (University of Strasbourg)
“Interpreting the electron microscope images of single atoms in the 1970s,” Mari Yamaguchi (University of Tokyo)
“Aitionome or autonome? The ‘biological clocks problem’ in twentieth-century biology,” Jole Shackelford (University of Minnesota)

Interventions in the Exact Sciences

*Marina 5*
Chair: Massimo Mazzotti (University of California, Berkeley)
“Leibniz’s 1691 demonstration of the conservation of ‘vis viva’ and refutation of the conservation of ‘quantitas motus’,” Elay Shech (University of Pittsburgh)
“L’uniformité, c’est la mort,” Madeline Muntersbjorn (University of Toledo)
“The role of the Royal Society of London on the historical recognition of Arthur Cayley,” Kleyton Godoy and Adriana Cesar de Mattos (Universidade Estadual Paulista, Rio Claro)
“The late metastasis in Brazil of the university system: A preliminary survey on mathematics in the context of the creation of the University of Sao Paulo,” Adriana Cesar de Mattos (Universidade Estadual Paulista, Rio Claro) and Oscar Joao Abdounur (University of Sao Paulo)
“John von Neumann: Beyond the *Theory of Games*,” Manuela Fernández Pinto (University of Notre Dame)

Science, Development, and Nation-Building

*Nautilus 1*
Chair: Neeraja Sankaran (Yonsei University, Seoul)
“The co-production of national and technological orders: The birth of Israel’s military research organization,” Ari Barell (Ben-Gurion University)
“Jackasses aboard the Plane: A History of the United States’ Technical Assistance to Iran, 1950-1965,” Mahdieh Tavakol (Oregon State University)
“The biggest telescope: Europe vs. America,” David Baneke (VU University Amsterdam)
“The Burnetization of Oz? The development of WEHI as a Latourian center of calculation for immunology in Australia,” Neeraja Sankaran (Yonsei University, Seoul)

12:00 – 1:15 P.M.
Committee on Meetings and Programs
*Meeting*
*Executive Boardroom*
Forum for the History of Science in America Business Meeting and Distinguished Lecture
Spinnaker
Lecturer: James Fleming (Colby College), "At the Cutting Edge: Harry Wexler and the Emergence of Atmospheric Science"

Forum for the History of Science in Asia Business Meeting
Marina 1

Physical Science Forum Meeting
Marina 6

Forum for the History of the Mathematical Sciences Luncheon
Harbor’s Edge Private Dining Room
Please note that the lunch is by advanced registration only. Any historians of mathematics who would like to be added to the Forum’s mailing list should contact Karen Parshall at khp3k@virginia.edu.

Nominating Committee Meeting
Maritime Board Room

1:30 – 3:30 P.M.

Spiritual Geographies
Executive Center 3A
Chair and Commentator: Tracy Leavelle (Creighton University)
“A Place Where No Men Dwell, Nor Souls Pass Away: Defining Spiritual Landscapes in Giambattista Riccioli’s Selenography,” *Meridith Beck Sayre and Nicolas Jacobson (University of Wisconsin, Madison)
“The World Not Be Round: God, Science, and Empire in Christopher Columbus's Account of Earthly Paradise (1498),” Nicolas Wey-Gomez, (California Institute of Technology)
“Squirrels, Scopes, and the Pope: Defining the Sacred at Mt. Graham International Observatory,” Leandra Swanner (Harvard University)

Science Mediated: Textual Practices and the Circulation of Knowledge in Medieval Europe and the Middle East
Nautilus 5

Chair: Joan Cadden (University of California, Davis)
“Translating Illness: Tongues, Bones, and Bodies in Medieval China” Carla Nappi (University of British Columbia)
“So we may learn from our predecessors’: Medical biographies and the arrangement of the medical community in the Medieval Middle East,” Ahmed Ragab (Harvard University)
“Romance and Remedy in Late Medieval England,” Julie Orlemanski (Boston College)

Historicizing Rachel Carson: New Contexts for Understanding Silent Spring
Grande Ballroom C

Chair and Commentator: Pnina Abir-Am (WSRC – Brandeis University)
Co-Sponsored by the HSS Women’s Caucus, the Earth and Environment Forum, and the Forum for the History of the Chemical Sciences
“Pulp Science; or, Placing Silent Spring into a Literary Genre,” Melinda Gormley (University of Notre Dame)
“Silent Spring and the Chemical Century,” Frederick R. Davis (Florida State University)
“Carson and the Chemists: Debating Science After Silent Spring,” David Hecht (Bowdoin College)

Modern China and Transnational Science

Marina 1
Chair: Zuoyue Wang, California State Polytechnic University, Pomona
“Transnational Science and Knowledge in Transit: The Movement of Agricultural Knowledge within and between China and the U.S., 1940s-1980s,” Sigrid Schmalzer (University of Massachusetts, Amherst)
“Science in Motion: How Agricultural Research Not Only Survived but Flourished at Tsinghua University, 1934-1947,” *Xuan Geng (University of Minnesota)
“Religion, Science, and Nationalism: Public Health Education in China, 1911-1927,” Shawn Foster (University of Minnesota)

Understanding Noise in Twentieth-Century Physics and Engineering

Part 1
Seabreeze 1
Co-Sponsored by the Philosophy of Science Association
Chair: Jed Buchwald (California Institute of Technology)
Commentator: Shaul Katzir (Tel Aviv University)
Organizer: Chen-Pang Yeang (University of Toronto)
“Modems, Missiles, and Air Defence Systems: Noise as a Data Communication Problem,” Shawn Bullock (Simon Fraser University)
“Concepts and Significance of Noise in Acoustics: Before and After the Great War,” Roland Wittje (University of Regensburg)
“As Forgetting’ Physics: The Physicalization of History and Memory,” Aaron Sidney Wright (University of Toronto)

Experts, Collectors, and Credit

Executive Center 2A
Chair: Pamela M. Henson, Smithsonian Institution
“Under the microscope: Mary Ward, Matilda Knowles and Sydney Mary Thompson Christen: Three Irish ladies of the laboratory,” Dawn Digrius (Stevens Institute of Technology)
“The evolution of the local expert: Frank Stephens, a case study,” Matthew Laubacher (Ashford University)
“Understanding Sociality before Sociobiology: Leo Pardi’s Studies on Social Dominance in Italian Paper Wasps (1939-1952),” Guido Caniglia (Arizona State University)
“From dragon bones to human ancestors: The ownership, value, and exchange of paleoanthropological objects across a colonial world,” Adrian Young (Princeton University)

Science and Statecraft in Latin America

Executive Center 1
Chair: Matthew Crawford, Kent State University
“Genes and atoms in Mexico during the Cold War: Tensions and synergies between modernity and nationalism,” Edna Suárez (Universidad Nacional
Autónoma de México) and Gisela Mateos (Universidad Nacional Autónoma de México)
“The influence of Rockefeller Foundation in the education of Mexican Agronomists (1941-1963),” Francisco Serrano and Eva Rivas (Tecnológico de Monterrey)
“The grand amigo: Alexander Wetmore, US international relations, and the Smithsonian Institution in Latin America,” Camilo Quintero (Universidad de los Andes)
“The Brazilian Center for Health Studies and health reform movement: History, politics, and public health (Rio de Janeiro, 1970-1980),” Daniela Sophia (Museu de Astronomia, Brazil)

Science, Politics, and Secrecy

Nautilus 1
Chair: Marc Rothenberg, National Science Foundation
“Reluctant demobilization: Ernest Solvay’s scientific patronage of the International Institutes for Physics and Chemistry and the legacy of World War I,” Kenneth Bertrams (Free University of Brussels)
“We’re not going to learn this stuff from Mata Hari: Vannevar Bush and the troubled history of the CIA Scientific Branch, 1947-1948,” Matthew Penney (The Center for the Study of Intelligence)
“Dutch ultracentrifuge technology made secret (1954-1969),” Abel Streefland (Leiden University)
“Behind a Veil of Smoke: The Rise of the Department of Research and Development at Philip Morris, 1940-1960,” Brianna Rego (University of California, San Francisco)

Genetics In and Out of the Lab

Nautilus 2
Chair: Sander Gliboff, Indiana University
“Connecting genetics, evolutionary theory and practical animal breeding: Arend Hagedoorn (1885-1953),” Bert Theunissen (Utrecht University)
“Modeling gene action, Richard Goldschmidt, and a historical mystery,” Ehud Lamm (Tel Aviv University)
“Human manufacture or product of nature? The first life patent in Canada, 1976-1982,” Rebecca Moore (University of Toronto)
“Gene-environment interaction in the 21st century: Its rise, its fall, its rise?” James Tabery (University of Utah)

Peering Into the Mind in the 19th and 20th Centuries

Nautilus 3
Co-Sponsored by the Philosophy of Science Association
Chair: Jamie Cohen-Cole, George Washington University
“The power of the imagination or a vital magnetic fluid at work? Mesmerism and the introduction of inhalation anesthesia,” Ernest B. Hook (University of California, Berkeley)
“Brain Injuries and the Photography of Dreams: A Case Study of Psychiatry and Psychology in WWI,” Scott Phelps (Harvard University)
“The early history of fMRI experimental designs,” Hawon Chang (Seoul National University)

Science in Early America

Marina 5
Chair: Gregory Good, American Institute of Physics
“The evolution of observational astronomy in colonial America,” Tofigh Heidarzadeh (Huntington Library)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Chair</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30 – 3:45 P.M.</td>
<td>Coffee Break</td>
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<td>Grande Ballroom Foyer and Executive Foyer</td>
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<td>Sponsored in part by the University of Chicago Press Journals Division</td>
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| 3:45 – 5:45 P.M. | Nature's Circuits in the Early Modern Atlantic | Chair: Daniela Bleichmar (University of Southern California) | “'Sweating Together': Transatlantic medicinal exchanges, 1516-1643,” Krista Turner, University of North Carolina  
“Jamaica Transplanted: Sir Arthur Rawdon’s Irish Garden,” Kate Mulry (New York University)  
“'An Object Worthy of Interest, Curiosity and Attention:' The Atlantic Circulations of Cinchona Bark in the Early Eighteenth Century,” Matthew Crawford (Kent State University)  
“How to Be a Biopirate: A British Naturalist “Bioprospecting” in Spanish America,” *Kathleen Murphy (California Polytechnic State University) |
|              | Reappraising Scientific Institutions:              | Chair and Commentator: Tara Nummedal (Brown University) | The Role of Alchemy and Early Chemistry  
Nautilus 3 |
|              | The Role of Alchemy and Early Chemistry            |                                | Reappraising Scientific Institutions: The Role of Alchemy and Early Chemistry  
Nautilus 3 |
|              | Reappraising Scientific Institutions: The Role of Alchemy and Early Chemistry | Chair and Commentator: Tara Nummedal (Brown University) | Reappraising Scientific Institutions: The Role of Alchemy and Early Chemistry  
Nautilus 3 |

**Representation and Visualization in Modern Science**

*Nautilus 4*

Co-Sponsored by the Philosophy of Science Association

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


“Of Sausages and Skeletons: Kekulé and Crum Brown’s Chemical Diagrams and the Desiderata of Visual Representations,” Ari Gross (University of Toronto)

“'Without a Single Flap': Louis-Pierre Mouillard’s Observations of Soaring Birds and the Idea of fixed-wing Flight, 1881-1897,” Marie Elizabeth Burks (Massachusetts Institute of Technology)

“Anatomy in 2.5D: From the Edinburgh Stereoscopic Atlas to eHuman,” Devin Gouvêa (University of Chicago)
Curiosi,” *Margaret Garber (California State University, Fullerton)


“An Unlikely Center of Science: The Swedish Bureau of Mines in the Eighteenth Century,” Hjalmar Fors (Uppsala University)

**Experience as a Mechanism of Appropriation and Transformation of Ancient Science**

*Executive Center 2A*

Chair: Peter McLaughlin (Ruprecht-Karls-Universität Heidelberg)

“Diagrams and Transformations of Mechanical Knowledge,” Joyce van Leeuwen (University of Pittsburgh)

“Re-experiencing geometry in Roman surveyors’ texts,” Courtney Ann Roby (Cornell University)

“Transformation of Euclid’s Optics in Late Antiquity,” Harald Siebert (Max Planck Institute for the History of Science)

“Ancient Pneumatics Transformed During the Early Modern Period,” *Matteo Valleriani (Max Planck Institute for the History of Science)

**Beyond the Public Sphere: Material Practices and Enlightenment Science**

*Marina 1*

Chair: *Paola Bertucci (Yale University)

“Visualizing the Vulgar in the early-modern laboratory,” Larry Stewart (University of Saskatchewan)

“Le Mecaniste Philosophe: artisanal epistemologies and experimental practices in 18th-century France,” Paola Bertucci (Yale University)

“Illustrated Naval Reform: Juan José Navarro and nautical science in the early Spanish Enlightenment,” Marcelo Aranda (Stanford University)

“Sowing the Seeds of Enlightenment Productivity,” Lissa Roberts (University of Twente)

**The Biopolitics of Food: Potatoes, Bodies, and the 18th-Century State**

*Nautilus 1*

Chair and Commentator: Dana Simmons (University of California, Riverside)

“The Potato in Early Modern Europe,” Rebecca Earle (University of Warwick)

“The Potato and Its Advocates in 1790s France,” Emma Spary (University of Cambridge)

“Potatoes and Biopower in Eighteenth-Century Bavaria,” *Claudia Stein (University of Warwick)

**From Working Mothers to Alpha Males: Gendered Lessons from the Animal Kingdom, 1871-1971**

*Grande Ballroom C*

Chair and Commentator: Georgina Montgomery (Michigan State University)

“Matriarchal spiders, Affectionate Songbirds and Murderous Rabbits: The animal kingdom and debates about gender in Britain, 1859 - 1913,” Philippa Hardman (University of Cambridge)

“To Teach the Truth in Nature’: Antoinette Brown Blackwell’s Evolutionary Arguments on Behalf of Working Mothers,” *Kimberly Hamlin (Miami University)

“Alpha Males: Men of Science and other Primates in the 1960s,” Erika Milam (Princeton University)
The Science and Technology of Finance in Twentieth-Century U.S.

Nautilus 4

Chair: Jonathan Levy (Princeton University)

Commentator: Theodore Porter (University of California, Los Angeles)

“Quants on Trial: Actuaries’ Market Mathematics in the 1905 New York State Life Insurance Investigation,” *Dan Bouk (Colgate University/Max Planck Institute for the History of Science)


“The "Push Button Monster": The Rise of Computerized Credit Reporting in the United States,” Josh Lauer (University of New Hampshire)

U.S. Scientific Ambitions and Public Good in the 20th Century

Marina 5

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

“Without Water There is No Life: John Reber and the San Francisco Bay Model (1907 - 1963),” Michael Weisberg (University of Pennsylvania)

“Shifting the Burden of Proof: Moving Economic Policy Research into the Laboratory,” Harro Maas (University of Amsterdam)


“Merton, Mass Persuasion, and War-Time Propaganda,” Mary S. Morgan (London School of Economics)

The Entanglement of Biology and Medicine: Making Knowledge in the Modern Biomedical Sciences

Nautilus 2

Co-Sponsored by the Philosophy of Science Association

Chair: Nathaniel Comfort (Johns Hopkins University)


“Converging on the Gene: The Somatic Mutation Theory of Carcinogenesis,” Angela Creager (Princeton University)

“From Polio to p53: The Life of Simian Virus 40,” *Robin Scheffler (Yale University)

“Chromosomes in the Clinic: Cytogenetic Analysis and ‘Epigenetic’ Thinking in 1980s Medical Genetics,” Andrew Hogan (University of Pennsylvania)

Writing the History of Science through Maps, Film, and Web

Executive Center 3B

Co-chairs: William Rankin, Hanna Rose Shell, and Alex Wellerstein

Co-commentators: William Rankin, Hanna Rose Shell, and Alex Wellerstein

“Mapping and the Spatial History of Science,” William Rankin (Yale University)

“Cinehistory and Experiments on Film,” Hanna Shell (Massachusetts Institute of Technology)

“Networked history: Thinking through the Web,” Alex Wellerstein (American Institute of Physics)
### Understanding Noise in Twentieth-Century Physics and Engineering

**Part 2**

**Seabreeze 1**

- **Co-Sponsored by the Philosophy of Science Association**
- **Chair:** Jed Buchwald (California Institute of Technology)
- **Commentator:** Joan Lisa Bromberg (Johns Hopkins University)

#### Talks:
- "The Rise and Triumph of the Sigmas," Allan Franklin (Cornell University)
- "Noise as a Limit to Physical Measuring Processes: Models and Justifications in the 1920s," Martin Niss (Roskilde University)
- "Two Mathematical Approaches to Random Fluctuations," *Chen-Pang Yeang (University of Toronto)

### Contributed Papers: Methodological Issues in Biology

**Marina 4**

- **Sponsored by the Philosophy of Science Association**
- **Chair:** Monika Piotrowska (Florida International University)

#### Talks:
- "Defusing Ideological Defenses in Biology," Angela Potochnik (University of Cincinnati)
- "Population Genomics and Empirical Insufficiency," Francis Cartieri (University of Cincinnati)
- "The Nature of Exploratory Experimentation and Its Relation to Theory in the Life Sciences," Stephan Guettinger (London School of Economics)
- "Why Do Biologists Use So Many Diagrams?" Benjamin Sheredos, Daniel C. Burnston, Adele Abrahamsen, and William Bechtel (University of California, San Diego)

### Politics and Metaphor in Ecology, 1870-1970

**Nautilus 5**

- **Chair:** David Spanagel (Worcester Polytechnic Institute)

#### Talks:
- "Adapting academic morphology to state and nature: The 'realist' biology of Dutch station directors Paulus Hoek and Melchior Treub, 1870-1910," Robert-Jan Wille (Max Planck Institute for the History of Science)
- "The Asiatic racial form in environmental and public health history: The menace of Japanese plant and human immigrants," Jeannie Shinozuka (University of California, Los Angeles)
- "Weeping cactus, sighing trees: American ecologists and the tools of physiological fieldwork," Emily Brock (University of South Carolina)
- "Anthony David Bradshaw: The Origins of Adaptive Phenotypic Plasticity," Erick Peirson (Arizona State University)
6:00 – 7:15 P.M.

Distinguished Lecture
Grande Ballroom C
Hans-Jörg Rheinberger
Max Planck Institute for the History of Science
“Cultures of Experimentation”

7:30 – 8:30 P.M.

Data Management and the Historian: A Workshop on New Federal Guidelines
Marina 1
Chair: Audra Wolfe (The Outside Reader)
Participants:
Jon Stiles (University of California, Berkeley)
Dominique Tobbell (University of Minnesota)
Alex Wellerstein (Center for History of Physics)

8:00 – 10:00 P.M.

*Isis* Editorial Board Dinner
*Harbor’s Edge Private Dining Room*

**HSS Graduate and Early Career Caucus Mixer**
*The Tipsy Crow (Gaslamp Quarter)*

The mixer will be at The Tipsy Crow on the corner of 5th Ave. and F St. in the Gaslamp Quarter of San Diego. The conference shuttle will be circulating between Gaslamp and the Sheraton. Email Nathan Crowe (nathan.crowe@asu.edu) before 5:00 pm or arrive before 9:00 to avoid a cover charge.
Saturday, 17 November

7:30 – 8:45 A.M.

Forum for the History of the Chemical Sciences Meeting

Marina 1
Chair: Seymour Mauskopf (Duke University)
Breakfast may be ordered at the restaurant, or you may bring your own.

Osiris Editorial Board Meeting

Harbor’s Edge Restaurant

9:00 – 11:45 A.M.

Coffee Break 10:00 – 10:15 in Grande Ballroom Foyer and Executive Foyer

Natural History in Central Europe, from Cameralism to Genetics

Nautilus 1
Chair: Lynn K. Nyhart (University of Wisconsin, Madison)
“Natural Historical Knowledge and Agricultural Experimentation: Theory and Practice in the German Enlightenment,” Denise Phillips (University of Tennessee)
“The First German Darwinist,” *Gabriel Finkelstein (University of Colorado Denver)
“Alternation of Generations as a Model for Evolution,” Lynn K. Nyhart (University of Wisconsin, Madison)
“Zooming-In: Amateurs, Professionals and the Mapping of German Landscapes in the Late 19th Century,” Nils Güttler (Max Planck Institute for the History of Science)
“Theory and Practice in the Works of Gregor Mendel and Erich Tschermak,” Sander Gliboff (Indiana University)

Unruly Experiments: Developing Scientific Practices around Live Specimens in 20th century Biological Sciences

Nautilus 2
Co-Sponsored by the Philosophy of Science Association
Chair and Commentator: Karen Rader (Virginia Commonwealth University)
“‘These animals are so perishable’: The desires and difficulties of studying the physiology of medusae in the laboratory, 1850-1930,” *Samantha Muka (University of Pennsylvania)
“Studying Speciation: Ensatina eschscholtzii and the Ring Species Concept,” Mary Sunderland (University of California, Berkeley)
“A Bird in Hand: Bird-Banding and Environmental Ethics in Wildlife Biology,” Kristoffer Whitney (University of Wisconsin, Madison)
“The making of a territorial antelope,” Etienne Benson (Max Planck Institute for the History of Science)

American Motherhood at the Intersection of Nature and Science, 1945-1975

Seabreeze 1
Chair and Commentator: Rebecca Plant (University of California, San Diego)
“Konrad Lorenz and the Science of Emotion,” Nadine Weidman (Harvard University)
“The Feminization of Empathy in Post War America,” Susan Lanzoni (Independent Scholar)

“The Science of Breastfeeding and the Nature of Maternal Authority,” *Jessica Martucci (Mississippi State University)

“The Bowland Bust and the Criminalization of Traditional Midwifery in California,” Wendy Kline (University of Cincinnati)

_Sites of Experimentation in Human Biology: The Harvard Fatigue Laboratory_  
*Nautilus 4*

Chair and Commentator: Joanna Radin (Yale University)

“The Physiological Extremes – Ancel Keys and the International High Altitude Expedition to Chile,” Sarah Tracy (University of Oklahoma)

“90 Minutes: Elton Mayo, Lawrence J. Henderson, and the making of the 90-minute interview,” Mateo Munoz (Harvard University)

“Labor, Organization, and Human Biology: The Committee on Industrial Physiology 1928-1938,” *Jason Oakes (University of Pennsylvania)

_Living with the Bomb_  
*Grande Ballroom B*

Chair: David Cassidy (Hofstra University)  
Commentator: David Holloway (Stanford University)

“I Admit It, I Was Crazy’: From Carl-Friedrich von Weizsäcker’s Weapons for Hitler, to Denial of Responsibility, and Finally to ‘Living with the Bomb’,” *Mark Walker (Union College)

“Reconsidering the Interpretively Elusive J. Robert Oppenheimer,” Barton Bernstein (Stanford University)

“The Atomic Spy: Klaus Fuchs (1911-1988),” Dieter Hoffmann (Max Planck Institute for the History of Science/Humboldt University)

_Theorizing and Exploring Asia through the Natural Sciences_  
*Marina 3*

Chair and Commentator: Yoshiyuki Kikuchi (Harvard University)

“The Place that Offers the Greatest Interest:’ Northeast Asia in the Age of Darwinian Revolution,” *Kuang-chi Hung (Harvard University)

“South in East Asia and the Collection of Natural History,” John Mathew (Harvard University)

“When life gives you lemons: Frank Meyer’s agro-utilitarian vision of the Far East (1908-1918),” Xan Sarah Chacko (University of California, Davis)

“Evolutionary Asiacentrism, Peking Man, and the Origin of Sinocentric Ethnonationalism,” Hsiao-pei Yen (Harvard University)

_Historicizing the World: Practices for Reconstructing the Past_  
*Grande Ballroom C*

Chair and Commentator: Robert Richards (University of Chicago)

“Antiquarian Research, Problems of Reproduction, and the Scientific Reconstruction of the Past,” *Kasper Risbjerg Eskildsen (Roskilde University)

“Historicizing the Nebulae in the Nineteenth Century,” Omar W. Nasim (Eidgenössische Technische Hochschule Zürich)

“Comparison as History: Comparative Philology and the Historical Studies of Languages in the Nineteenth Century,” Kevin Chang (Harvard University)
“Flattened Objects: Ethnographic Visual Techniques for Historicizing Humankind in the Kaiserreich,” Marissa Petrou (University of California, Los Angeles)

**Neuroscience and Pathology between Lab and Clinic**  
*Marina 5*

Co-Sponsored by the Philosophy of Science Association  
Chair: David Teira (Universidad Nacional de Educación a Distancia, Spain)

- “From the technologies of brain research to the brain as technology: On the construction of neurological selfhood in nineteenth-century neuroscience,” Nima Bassiri (Duke University)
- “The investigative role of prefrontal lobotomy,” Joseph McCaffrey (University of Pittsburgh)
- “Before ‘cortin’ became cortisone: Dwight J. Ingle, the Mayo Foundation, and the physiology of the adrenal cortex,” Tulley Long (University of Minnesota)
- “Pathological anatomy slides from research to cancer treatment to film in interwar France,” Tricia Close-Koenig (Université de Strasbourg)
- “The impartiality of clinical trials historically reexamined,” David Teira (Universidad Nacional de Educación a Distancia, Spain)

**Making and Remaking the Modern Physical Sciences**  
*Executive Center 3A*

Chair: Joseph Martin (University of Minnesota)

- “Scientific practice in the contexts of peripheral science: C. V. Raman and his construction of a mechanical violin-player,” Deepanwita Dasgupta (University of South Carolina)
- “Blas Cabrera as a philosopher of science: General relativity and French conventionalism in early 20th century Spain,” Pablo Ruiz de Olano (University of Notre Dame)
- “‘Mathematics is inhuman like every diabolic machine’: Paul Ehrenfest as a critic of modern science and culture,” Frans van Lunteren (VU University of Amsterdam)
- “Weisskopf and the physical significance of divergences in QED,” Matthew Gorski (University of Notre Dame) and Alexander Blum (Max Planck Institute for the History of Science)
- “Against the impossible picture: Feynman’s heuristics in his search for a divergence-free quantum electrodynamics,” Adrian Wuthrich (University of Bern)

**Expanding Worlds of Evolution**  
*Nautilus 5*

Chair: Stephen Dilley (St. Edward’s University)

- “Nineteenth-century botany and the roots of scientific philology,” Kelly Kistner (University of Washington)
- “Embryology and the American eugenics movement,” Jill Briggs, University of California, Santa Barbara
- “C. H. Waddington’s approach to science: Cases from embryology and evolution,” Elizabeth O’Neill (University of Pittsburgh)
- “Defending God’s honor: Dobzhansky on the divine in evolutionary history,” Stephen Dilley (St. Edward’s University)

**Going to Press: Publication Strategies**  
*Executive Center 2A*

Chair: JB Shank, University of Minnesota  
Commentator: Florence Hsia (University of Wisconsin, Madison)
“Le Clerc v. Mallemant de Messange: Proof, Priority and Exact Data in Artisanal Scientific Writing,” *Oded Rabinovitch (Tel-Aviv University)

“‘Dans un très-bel ordre’: Reframing Early Modern Mathematical Manuscripts in Print,” Robin Rider (University of Wisconsin, Madison)

“‘Printing for Private Circulation’: The Emergence of the Offprint,’ Alex Csiszar (Harvard University)

**Sense, Body, and Knowledge in the Early Modern World**

_Nautlius 3_

Chair: Alain Touwaide, Institute for the Preservation of Medical Traditions and Smithsonian Institution

“Teaching materia medica in a botanical garden? Between natural history, botany and the foundations of medicine at Leyden University,” Saskia Klerk (Utrecht University, Netherlands)

“Humanist medicine and the rise of empiricism: The diaries and letters of Georg Handsch (1529-1578),” Michael Stolberg (University of Würzburg, Germany)

“‘Being the World Eternal…’ The age of the earth in Renaissance Italy,” Ivano Dal Prete (University of Minnesota)

“Magnification: How to turn a spyglass into an astronomical telescope,” Yaakov Zik (University of Haifa, Israel) and Giora Hon (University of Haifa, Israel)

“John Locke, morality, and sensations in the Essay Concerning Human Understanding,” Louis Caron (University of Cambridge)

**11:00 A.M. – 12:00 P.M.**

**Committee on Research and the Profession Meeting**

_Harbor’s Edge Restaurant_

**12:00 – 1:15 P.M.**

**Forum for the History of Human Science Business Meeting and Distinguished Lecture**

*Marina 4*

Lecturer: Theodore Porter (University of California, Los Angeles), “Funny Numbers”

**HSS Graduate and Early Career Caucus Member Luncheon**

*Marina 2*

Come meet your GECC officers and enjoy drinks and desserts while we discuss what future events GECC might hold. Please bring a lunch.

**Society for Socially Engaged History and Philosophy of Science Meeting**

*Marina 3*

The inaugural and organizational meeting for a new sub-association focused on the social engagement of our professions.


*Spinnaker*

Chair: Karen Reeds (Princeton Research Forum)

Participants:

- Marilyn B. Ogilvie (University of Oklahoma)
- Ann B. (Rusty) Shteir (York University)
- Ann Hibner Koblitz (Arizona State University)
- Nancy G. Slack (Russell Sage College)
- Sally Gregory Kohlstedt (University of Minnesota)
- Joy Harvey (Independent Scholar)
‘Baroque Science’: Roundtable Discussion
Marina 6
Chair: Raz Chen-Morris (Bar-Ilan University)
Commentator: *Ofer Gal (University of Sydney)
“Baroque Science?” J.B. Shank (University of Minnesota)
“Radical Instrumentalism,” Joanna Picciotto (University of California, Berkeley)
“Mathematics and the Dissipation of Order,” Matthew Jones (Columbia University)
“Passions, Imagination and the Persona of the New Savant,” Anthony Grafton (Princeton University)

Finance Committee Meeting
Maritime Board Room

12:00 – 3:00 P.M.
Committee on Publications Meeting
Marina 1

1:30 – 5:00 P.M.
Poster Session
Grande Ballroom Foyer

“Water Flowing Uphill is one of the Commonest Facts of Nature’: The Emergence of a Visual Language for Ground Water Geology,” Greg Brick (University of Minnesota)
“Cybernetic Systems and Ecosystems, circa 1946,” Cristine Webb (University of Pennsylvania)

1:30 – 3:30 P.M.
Peripheral Bodies, Visualizing Technologies, (Un)Development and Political Theories in Late 19th - 20th Centuries, Part 1
Nautilus 2
Chair and Commentator: García Deister, Universidad Nacional Autónoma de México
“The Mexican Mestizo, A Life in Science,” Carlos López Beltrán (Universidad Nacional Autónoma de México)
“Architectonics of Waves: EEGs and Technological Transference in Mexico 1940-1960,” *Nuria Valverde Pérez (Universidad Autónoma Metropolitana, Cuajimalpa)
“The material life of medical practices: production and circulation of instruments in 19th-century Mexico,” Laura Cházaro (Cinvestav, Mexico)
“Men's Bodies as Industrial Measurement Gauges: The Case of the Petroleum Industry in Mexico during the 1930's,” Luis Sánchez Graillot (Universidad Nacional Autónoma de México)

Cold War Social Science: A Roundtable Assessment
Nautilus 1
Chair: Hamilton Cravens (Iowa State University)
“How to think about Cold War Social Science,” *Mark Solovey (University of Toronto)

“Histories of Social Science, Around and About the Cold War,” Sarah Igo (Vanderbilt University)

“The Social and Natural Sciences in Cold War America: Separate Stories or One?” Jessica Wang (University of British Columbia)

“Cold War Social Science: Imagining the Past, Projecting the Future,” Rebecca Lemov (Harvard University)

Margaret Rossiter’s Third Volume: A New World for Women in Science? Spinnaker

Co-Sponsored by the Philosophy of Science Association

Chair: Sally Kohlstedt (University of Minnesota)

Commentator: Margaret Rossiter (Cornell University)

“Plunging into Archives and Coming Up for Air: Margaret Rossiter’s Exploration of Women Scientists,” Joy Harvey (Independent Scholar)

“The Cutting Edge of Change for Women Scientists; After 40 More Years of Change, What Barriers Remain?” *Nancy Slack (The Sage Colleges)

“Creating New Paths; What Constitutes Science?” Gwen Kay (State University of New York, Oswego)

Aristotle’s Chemistry between Theory and Practice Marina 6

Sponsored by the International Society for the History of Philosophy of Science

Chair and Commentator: Andrea Falcon (Concordia University)

“Aristotle on the Emergence of Material Complexity,” James Lennox (University of Pittsburgh)

“Scientific Method in Meteorology IV,” *Tiberiu Popa (Butler University)

“The Limits of Teleology in Meteorology IV.12,” Mary Louise Gill (Brown University)

Scientific Expeditions in the 20th Century

Executive Center 2A

Chair: Ilja Nieuwland (University of Amsterdam)

“Following expeditions: The mobility and politics of knowledge after the Canadian Arctic Expedition of 1913-18,” Andrew Stuhl (University of Wisconsin)

“Nature without borders: European naturalists and the internationalization of conservation, 1900-1930,” Raf de Bont (KU Leuven)

“The Stanford Expedition to Brazil, 1911: Science and history,” Almir Leal de Oliveira (Universidade Federal do Ceará)

“More than a mere vision: On the origins of the Organization for Tropical Studies,” Jonathan Hagood (Hope College)

Physics between Engineering and Philosophy Grande Ballroom B

Chair: Peter Schimkat, Independent Scholar

“Physics, engineering, and philosophy: Intellectual and institutional scuffle at German universities, 1870-1930,” Adelheid Voskuhl (Harvard University)

“Philanthropy’s ‘Sonderweg’: The Americanization of the German physical sciences in the Imperial and
"Weimar period,” Juan Andrés León
(Harvard University)
“Making Waves: Hans Reichenbach, Radio Philosopher,” Alan Richardson
(University of British Columbia)
“Beyond American hegemony: Dutch radio astronomy in the heyday of the Cold War,” Astrid Elbers (Leiden University)

**Up in the Sky: Aviation and Space History**
*Executive Center 1*
Chair: Matthew Shindell (University of California, San Diego)
“Aeronaut history: How much has the view widened?” Layne Karafantis
(Johns Hopkins University)
“Separating the wheat from the chaff: Midcourse discrimination and the Strategic Defense Initiative,” Peter Westwick (University of Southern California)
“Dreaming of Mars sample return, from Viking to the Mars Science Laboratory,” Erik Conway (Jet Propulsion Laboratory, NASA)

**Medical Models on Display**
*Nautilus 3*
Chair: Anita Guerrini (Oregon State University)
“Of Specimens and Scalpels: Making Medicine and History in Medical Museums,” Amanda Bevers (University of California, San Diego)
“P. T. Barnum and ‘Body Works,'” Ruthann Dyer (York University)
“From type specimen to iconic object: Smilodon Floridanus at the Wagner Free Institute of Science of Philadelphia,” Matthew White (University of Florida)
“…but some are more made than others: Preparations, models, and how they differ,” Hieke Huistra (Leiden University)

**Late-Modern Fabrications**
*Nautilus 4*
Chair: Melinda Baldwin (York University)
“‘On a scale beyond all previous conceptions’: Plastic and the preservation of modernity,” Bradford Harris (Stanford University)
“Exponential optimism: The politics of futurism,” Jason Miller (University of California, Los Angeles)
“‘Artificial and ugly’: IUPAC’s systematic nomenclature for the heavy elements,” Ann Robinson (University of Massachusetts, Amherst)
“A journal really needs to have an opinion’: Scientific controversies in Nature and the role of the scientific journal, 1966-1990,” Melinda Baldwin (York University)

**Defining People in the 20th century**
*Executive Center 2B*
Chair: Colin Fisher (University of San Diego)
“‘Good marriages are made in the nursery’: Psychologizing married life in Britain’s post-WWII welfare state,” Teri Chettiar (Northwestern University)
“Curative action: Joseph J. Kinyoun and the diphtheria antitoxin,” Eva Åhrén (Yale University)
“Dr. Wilberforce Williams, African-American health, and the periodization of medicine in environmental history,” Colin Fisher (University of San Diego)
Authority, Expertise, and the Academy  
*Executive Center 3A*

Chair: Sophie Brockmann (University of Cambridge)

“Midwives, models and maternity: Mediating childbirth in 18th century Italy,” Lucia Dacome (University of Toronto)

“Sexual science / sexual politics: Recasting the emergence of sexology in Europe at the turn of the twentieth century,” Kirsten Leng (Northwestern University)

“(En)gendering American mathematics: Mathematics education at male colleges and female seminaries, 1819-1840,” Andrew Fiss (Vassar College)

“Communicating scientific knowledge in colonial Central America, c. 1790-1810,” Sophie Brockmann (University of Cambridge)

Climate, Environment, and Activism  
*Executive Center 3B*

Chair: Conevery Valencius (University of Massachusetts, Boston)

“Dutch skies, universal laws: The emergence of meteorology as a scientific discipline,” Azadeh Achbari (Free University Amsterdam)

“A dangerous precedent”: Astronomers, environmental politics, and protest against Project West Ford, 1958-1964,” L. Ruth Rand (University of Pennsylvania)

“Win, Lose, or Draw?: Emissions trading and the roots of environmental injustice, 1963-1997,” Krystal Tribbett (University of California, San Diego)

“Scientific uncertainty and US acid rain politics in the 1980s,” Milena Wazeck (New York University)

1:30 – 4:00 P.M.

Symposium: Causes and Comparability in Cases: the Human and Social Sciences  
*Marina 2*

Sponsored by the Philosophy of Science Association

Chair: Stephen Turner (University of South Florida)

“Easy to Manipulate? How Medical Case Studies Help to Reveal Causes,” Rachel A. Ankeny (University of Adelaide)

“Cases, Statistics and the Search for Causes of Mental Illness,” Theodore M. Porter (University of California, Los Angeles)

“Breaking the Code: The Role of Case Studies in Mixed Method Research,” Sharon Crasnow (Norco College)

“Causal Evidence from Case Studies: Why It Is Helpful for Effective Policy Making,” Attilia Ruzzene (Erasmus University)

“Re-Situating the Situated Knowledge of Case Studies,” Mary S. Morgan (London School of Economics and University of Amsterdam)

3:30 – 3:45 P.M.

Coffee Break  
*Grande Ballroom Foyer and Executive Foyer*

Sponsored in part by Science History Publications
3:45 – 5:45 P.M.

**Occult in Thought and Deed: Intellectual Discipline in Medieval and Early Modern Occult Philosophy**

*Executive Center 1*

Chair: Allison Kavey (CUNY John Jay College)

“Making Visible the Invisibilia dei: Astronomy between Magic and Contemplation,” Richard Oosterhoff (University of Notre Dame)

“‘A strong and exalted imagination’: the disciplined mind in Agrippa’s magical theology,” *Allison Kavey, (CUNY John Jay College)*

“Medicine in Defense of Astrology,” Sheila Rabin (St. Peter's College)

“Matthias Corvinus and Princely Uses for Natural Philosophy,” Darin Hayton (Haverford College)

**Borders, Books, and the Circulation of Knowledge in the 17th and 18th Centuries**

*Nautilus 1*

Chair and Commentator: Adrian Johns (University of Chicago)

“Galileo’s Border-Crossings: the Mutable, Mobile *Sidereus Nuncius*,” Nick Wilding (Georgia State University)

“A Protestant Bookseller in Counter-Reformation Rome: Science, Censorship, and Commerce,” *Daniel Stolzenberg (University of California, Davis)*

“Border-Crossers at the Blind Man’s Arch: The Literary Itineraries of Frei José Mariano da Conceição Veloso’s Arco do Cego,” Neil Safier (University of British Columbia)

**Beyond the Garden Gate: New Perspectives on the Role of Mobility and Exchange in 18th, 19th, and 20th century Botanical Gardens**

*Executive Center 2A*

Chair and Commentator: Mark Hineline (University of California, San Diego)


“A Scientist's Eden’: Disciplining Tropical Biology at Barro Colorado Island,” Megan Raby (University of Wisconsin, Madison)

“The Marianne North Gallery at Kew: Mobilizing Botanical Knowledge,” Katie Zimmerman (University of Cambridge)

**The Science of Emotion: Childhood, Motherhood, Autism**

*Nautilus 3*

Sponsored by the HSS Forum for the History of Human Science

Chair and Commentator: Valerie Hartouni (University of California, San Diego)

“Constructing the Womb as Social Environment: Social Justice Movements, Maternal-Fetal Biology, and the Intergenerational Inheritance of Trauma,” Sarah Richardson (Harvard University)

“Niko Tinbergen’s Work On Autism: Interpreting Gestures From Gulls to Children,” Marga Vicedo (University of Toronto)

“Autism: From Emotional Risks to Rights,” Ellen Herman (University of Oregon)
Myth-Making, Discipline Consolidation, and Science Studies

Chair: Mary Jo Nye, Oregon State University
Commentator: John Krige, Georgia Tech
“From Umwälzung to Revolution and Beyond: On Telling a Continuous History of Mechanics and Politics,” Richard Staley (University of Wisconsin, Madison)
“Computing and the Sands of Time: from al-Khwarazm to Los Alamos,” *Ksenia Tatarchenko (Princeton University)
“UNESCO, the Congress for Cultural Freedom, and the Politics of History of Science / Science Studies in the Cold War,” Elena Aronova (University of California, San Diego)

Waters and Environments: Knowledge Making and Scientific Expertise in Imperial Contexts

Chair: Deborah Coen (Barnard College-Columbia University)
“Climatography as Imperial Genre,” Deborah Coen, (Barnard College-Columbia University)
“Science and Sentiment: Controversy over Potable Water in British Colonial Cairo,” *Shehab Ismail (Columbia University)
“Fishing, Fisheries Science, and Climate Change on the Soviet Caspian Sea,” Gregory Ferguson-Cradler (Princeton University)
“International claims to environmental knowledge: a post-war language of best practices for large-scale agriculture,” Abigail Schade (Davidson College)

Comedy, Seriously

Chair: *James Fleming, Colby College
Commentator: Roger Launius, Smithsonian Institution
“Tragedy Plus Time Equals History,” Alice Dreger (Northwestern University)
“Funny Car Society, Theodoric of York, and Elephantoplasty: Using Comedy to Illustrate Themes and Problems in the History of Science,” Kevin Kern (University of Akron)
“Revenge of the Nerds: Scientists in ‘The Big Bang Theory’, ” Margaret A. Weitekamp (National Air and Space Museum)

Law, Property, and the Life Sciences in the Long 20th Century

Chair: Daniel Kevles (Yale University)
“Properties of the Public Good: Innovation and Ownership in California’s Stem Cell Initiative,” Ben Hurlbut (Arizona State University)
“EPO and the IP Bloodbath: Patent Case Law as Surrogate Science Policy for Biotech in the USA,” *Nicolas Rasmussen (University of New South Wales)
“Like Money in the Bank: Courts, Regulation and Body Products in the mid-20th Century USA,” Kara Swanson (Northeastern University)
Agricultural Sciences in Modern East Asia

Executive Center 3A
Chair: Peter Lavelle (Centre College)
Commentator: Mitch Aso (State University of New York, Albany)

“Experiments, Models, and the Promotion of Cropping Techniques in Nineteenth-Century China,” Peter Lavelle (Centre College)

“The Genetic Ideal of Producing New Insects and New People in Taisho Japan,” Lisa Onaga (Nanyang Technological University, Singapore)

“The Central Agricultural Experimental Institute and Rice Expert Training Program in Republican China, 1927–1937,” Seung-joon Lee (National University of Singapore)

Chemistry and the Public Sphere: Moments of Transition

Marina 6
Chair: Jennifer Rampling (University of Cambridge)
Commentator: Bernadette Bensaude-Vincent (Université Paris I, Panthéon-Sorbonne)

Sponsored by the Forum for the History of the Chemical Sciences (FoHCS)


“Beyond Genius, Before Theory: Recovering the Lost World of Practice in Nineteenth-Century Chemistry,” Catherine M. Jackson (University of Notre Dame)


Peripheral Bodies, Visualizing Technologies, (Un)Development and Political Theories in Late 19th-20th Centuries, Part 2

Nautilus 2
Organizer: Nuria Valverde Pérez (Universidad Autónoma Metropolitana, Cuajimalpa)

Chair and Commentator: Carlos López Beltrán, Universidad Nacional Autónoma de México

“The role of the IQ Tests on the implementation of eugenical policies,” Yuri Pascacio Montijo (Universität Bielefeld)

“Health care delivery in the middle of the nineteenth century in Mexico and the use of instruments,” Esmeralda S. Covarrubias López (Instituto Politécnico Nacional, Mexico)

“Biomedical Sciences and Homosexuality in Mexico along the 20th Century,” Fabrizzio Guerrero McManus, (Universidad Nacional Autónoma de México)

Historical Studies in the Natural Sciences Editorial Board Meeting

Marina 1

5:50 – 6:10 P.M.

HSS Earth and Environment Forum Meeting

Marina 2

6:15 – 7:00 P.M.

Prize Ceremony

Grande Ballroom B
7:15 – 9:00 P.M.

HSS/PSA Joint Reception
Bayview Lawn
Sponsored in part by the Science Studies Program and the Division of Arts and Humanities at the University of California, San Diego.
Please join your colleagues from the HSS and PSA on the Bayview Lawn for heavy hors d’oeuvres and a cash bar. Please note that this is a ticketed event.

8:00 – 9:00 P.M.

Caltech’s Bacon Prize Reception in Honor of Lisa Jardine.
Marina 6

Sunday, 18 November

8:00 – 9:00 A.M.

HSS Business Meeting
Executive Center 3A/3B
All members are welcome. Light breakfast will be served. See p. in the program for the agenda.

9:00 – 11:00 A.M.

Executive Center 2A
Chair: Fredrik Jonsson (University of Chicago)
“Natural Knowledge as a Tool of Impersonal Rule,” Chandra Mukerji (University of California, San Diego)
“Cattle Plagues and Public Health Environments in Eighteenth-Century Italy,” Karl Appuhn (New York University)

“Surveying the State: Francis Buchanan’s A Journey from Madras through the countries of Mysore, Canara, and Malabar (1807),” *Minakshi Menon (University of California, San Diego)

Machine Geographies
Marina 4
Chair and Commentator: Peter Dear (Cornell University)
“Re-inventing the (calculating) wheel: Imitation, Emulation and Nescience in the Enlightenment,” Matthew Jones (Columbia University)
“Balloon Travels: A Liminal Geography of Mass Enlightenment,” *Mi Gyung Kim (North Carolina State University)
“The Tocqueville of Techniques: Michel Chevalier and the Cosmic Geography of the USA,” John Tresch (University of Pennsylvania)

Neurohistory as a Moment in Science and History
Seabreeze 2
Chair and Commentator: Steve Fuller, University of Warwick
“An Integrative Legacy: History & Neuroscience,” *Stephen Casper* (Clarkson University)

“What Makes ‘Neuro’ Such a Compelling Meme” *Roger Cooter* (University College London)

“If Neurohistory Is Bunk, Why Does It Look So Much Like Science Studies?” *Max Stadler* (Eidgenössische Technische Hochschule Zürich)

Before Technocracy: Scientific and Technological Expertise in Early Modern Europe

*Marina 1*

Chair and Commentator: *Eric Ash* (Wayne State University)


“Finding Time to Build Roads in Early Modern France: Charles Thevenon (d. 1736) and early public works in Brittany,” *Katherine McDonough* (Stanford University)

“Soldier, Scholar, Courtier: Raimondo Montecuccoli (1609-80) and the Use of Science in the Seventeenth Century,” *Suzanne Sutherland Duchacek* (Stanford University)

Science and the Rise of Human Rights since World War II

*Marina 6*

Chair: *Benjamin Greene* (U.S. Military Academy, West Point)

Commentator: *Alexei Kojevnikov* (University of British Columbia)

“Making Medicine for Bomb Survivors: Japanese Doctors, American Patients,” *Naoko Wake* (Michigan State University)

“Kurt Vonnegut’s Dystopia: Science Fiction and the Use of Science in Soviet Society,” *Yana Skorobogatov* (University of California, Berkeley)


Collections, Exhibits, and Museums as Educational Tools for the History of Science

*Spinnaker 2*

Chair and Commentator: *James C. Evans* (University of Puget Sound)

Sponsored by the HSS Committee on Education

“SICU -- A Local Resource for Historians of Science and Technology,” *Richard L. Kremer* (Dartmouth College)

“Participation as a Useful Pedagogical Tool for Presenting Historical Content in Museums,” *Emily Margolis* (University of Oklahoma)

“Doing History of Science Outside the Academy,” *Marvin Bolt* (Adler Planetarium)

Conflict or Compromise: Establishing Authority over Radiation

*Executive Center 2B*

Chair and Commentator: *David Cantor* (National Institutes of Health)

“X-Ray Safety,” *Vivien Hamilton* (Harvey Mudd College)

“Physics and American Radium Therapy,” *Aimee Slaughter* (University of Minnesota)

“The ABC’s of the AEC’s Biomedical Program,” *Katherine Zwicker* (University of Saskatchewan)
Science and Historical Cataclysm: Russian Scientists’ Interpretations of and Responses to War and Revolution

Marina 5

Chair and Commentator: Michael Gordin (Princeton University)

“A Scientific Critique of Experimental Socialism: Winogradsky’s Pseudonymous Essays on the Bolshevik Revolution, 1910-1920,” Lloyd Ackert (Drexel University)

“Space-Time, Death-Resurrection, and the Russian Revolution,” Alexei Kojevnikov (University of British Columbia)

“Illuminating the Past to Create a Brighter Future: Aleksandr Chizhevskii, the Sun, and His Search for Historical Laws,” *Margaret Hofius (University of Minnesota)

Future-Visions: The Cultural Landscape of Prediction and Prophecy in Post-WWII American Science

Marina 2

Chair: *Gabriel Henderson, Michigan State University

“The Revelation of Carl: Nuclear Winter as Apocalypse from the Scientific Prophet,” Matthew Stanley (New York University)

“Prophets of Doom on a Global Stage: Commoner, Ehrlich, and the Politics of Climate Catastrophe,” Roger Eardley-Pryor (University of California, Santa Barbara)

“Helmut Landsberg and the Public Culture of Climate Science,” Gabriel Henderson (Michigan State University)

Going to Press: Visualization Strategies

Spinnaker 1

Chair: Carin Berkowitz (Beckman Center for the History of Chemistry, Chemical Heritage Foundation)

Organizer: Florence Hsia (University of Wisconsin, Madison)

“Finding “the Best and the Truest” in a Multiplicity of Images: Visualization Strategies in Willughby’s Ornithology,” Meghan Doherty (Berea College)

“Authorship, Expertise, and a Place in the Historical Canon: Illustration in Anatomy Books of Enlightenment Britain,” Carin Berkowitz (Chemical Heritage Foundation)

“Beneath the Skin of Flora: Dissecting the ‘Beauties of the Vegetable Race’ in Robert John Thornton’s New Illustration (1797-1812),” Miranda Mollendorf (Harvard University)

Redefining Life in the 19th and 20th Centuries

Seabreeze 1

Co-Sponsored by the Philosophy of Science Association

Chair: Veli-Pekka Parkkinen (University of Oslo)

“Conflict of the faculties? The philosophical and medical contexts of the study of life, ca. 1800,” Jacob Habinek (University of California, Berkeley)

“Key-term: Laboratory animal,” Shira Shmu’ely, (Massachusetts Institute of Technology)

“The uterus is outside the body’: A gendered history of synthetic biology,”
Luis Campos (University of New Mexico)
“Systems biology: an old and new approach,” Sara Green (Aarhus University) and Olaf Wolkenhauer (Rostock University)

Knowledge, Trust, and Doubt from Ancient to Early Modern Times
Marina 3
Chair: Robert Hatch, University of Florida
“Equality and similarity in Apollonius’ Conica,” Sabetai Unguru (Cohn Institute)

“Tested formulas and literati medicine: Resolving the crisis of doubt in 11th century Chinese Medicine,” Stephen Boyanton (Cohn Institute)
“The role of trust in empiricist medical methodology,” Marquis Berrey (University of Iowa)
“A new Venetian shipbuilding manuscript from the eighteenth century: Light galleys of traditional design versus light galleys of new design,” Lilia Campana (Texas A&M University)

Join the HSS in Boston in 2013 (21-24 November) for the HSS Annual Meeting and a celebration of the 100th anniversary of Isis!

Mark your calendars for the PSA and HSS joint conference in Chicago in 2014 (6-9 November)
HSS 2012 Business Meeting Agenda
Sunday, 18 November, 8:00 – 9:00 a.m.
Executive Center 3A/3B

All HSS members are welcome. Refreshments will be served.

President's Welcome
Lynn K. Nyhart

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

Executive Director’s Report
Jay Malone

Editor’s Report
Bernie Lightman

Treasurer’s Report
Adam Apt

Committee Reports
Synopsis by Jay Malone

New Business

Electronic copies of the reports are available. Please visit www.hssonline.org/Meeting/ and look for the Business Meeting link.
Acknowledgements from the PSA Executive Secretary (PSA2012)

Gazing at the Pacific behind palm trees between talks at PSA2012, one could forget that this meeting is the product of months, if not years, of focused and occasionally frenetic planning. In fact, every joint meeting of the Philosophy of Science Association and the History of Science Society is a thoroughly collective venture, dependent upon the dedication, vision, and hard work of many people of diverse intellectual background and interests. The end product (aside from several thousand emails) is a view of palm trees and the Pacific enjoyed between some of the very best scholarly papers in the philosophy of science. I am proud to have helped to plan PSA2012, the PSA’s twenty-third biennial meeting, and delighted to acknowledge my collaborators.

As debts of gratitude go, the largest is owed to the PSA2012 Program Committee, chaired by Andrea Woody of the University of Washington. Andrea not only assembled the committee and guided it through the assembly of an excellent program, but did so while she and her committee navigated new policy limiting appearances on the program; deployed a PSA chair selection system that opened chairing opportunities to all PSA members; and worked with the HSS Program Chairs, Janet Browne and David Kaiser, to achieve unprecedented PSA/HSS program coordination. The PSA2012 Program Committee is listed in this program; I encourage you take a moment and thank them, in person, for their work.

I am again happy to happily thank Jay Malone, Executive Director of the History of Science Society, and his staff at the HSS, especially Greg Macklem. Per agreement with the HSS, much of the planning for the PSA’s meetings is undertaken by the HSS. Consequently, the PSA has benefitted daily and directly from Jay’s considerable skills, which include not just an expert understanding of academic conferences, but the enviable capacity to write coherent email to one person while simultaneously on the phone with another.

I thank the PSA Governing Board, and especially President Jim Woodward and Vice-President Helen Longino, for their support, insights, suggestions, and patience. Greg McWhirter of the University of California—Irvine, the PSA’s webmaster, kept the PSA2012 webpage frightfully current, and the PSA2012 Local Arrangements Committee, chaired by Craig Callender of UC-San Diego, has ensured that San Diego’s many attractions, including some excellent brewpubs, did not go unnoticed.

Among all these collaborators, though, the only contingent truly essential to a PSA meeting is you, its members. It is the PSA’s members, not its planners, whose insights, discussion, and debate about science make a PSA meeting, and can render the palm trees and the Pacific even more pleasant. My deepest thanks goes to you. Enjoy!

Gary Hardcastle
Executive Secretary and Treasurer
Philosophy of Science Association
**PSA2012 Program Chair’s Acknowledgments**

It has been an honor to serve as the program chair for PSA 2012, and I thank Jim Woodward, the current PSA President, for giving me this opportunity. In ways I never appreciated before, PSA meetings are a collaborative enterprise and I want to acknowledge those who have worked with me to make this program possible. First, and most importantly, I extend my considerable gratitude to the Program Committee. These folks not only reviewed an enormous number of papers and proposals in a short period of time but they also persisted through long discussions via email, gave advice on issues of policy and procedure when needed, and never grumbled (at least not directly to me). I could not have wished for a better team and cannot thank them enough. Jeff Barrett and Jim Weatherall facilitated my use of Editorial Manager in the online system for the journal *Philosophy of Science*. Such a system is essential to managing the review process, and Jim in particular worked long hours to keep everything moving forward in a timely fashion. At the University of Washington, through funds provided by the PSA, Jonathan Rosenberg assisted me at every stage and helped implement the new volunteer process for session chairs. Miriam Solomon, Alan Richardson, and Steve Downes shared their collective wisdom as past PSA program chairs, and the PSA Governing Board supported my efforts for small changes. Jay Malone, executive director of HSS, secured the space to accommodate the expanded number of papers we have included on this program. David Kaiser and Janet Browne, co-chairs for the HSS program, collaborated with me on the plenary session devoted to Kuhn. And no set of acknowledgments would be complete without mention of Gary Hardcastle, who, acting as both guide and cheerleader, tried to make my job as straightforward and easy as possible. I am indebted to you all and offer my gratitude. Finally, I wish to thank all the individuals who submitted papers and symposia to the conference. Your contributions are the ultimate source of the vitality of our organization and of the many virtues of this program, which I hope will intellectually challenge and inspire us all.

Andrea Woody, PSA2012 Program Chair

**PSA Officers**

**President:** James Woodward (University of Pittsburgh)

**Vice-President:** Helen Longino (Stanford University)

**Past President:** Nancy Cartwright (University of California, San Diego and University of Durham)

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**Executive Secretary/Treasurer**

Gary Hardcastle (Bloomsburg University of Pennsylvania)
### PHILOSOPHY OF SCIENCE ASSOCIATION PROGRAM

**SAN DIEGO, CALIFORNIA**

All sessions will be held in the Marina (East) Tower at the Sheraton San Diego Hotel & Marina. The Nautilus rooms are on the lower level; all other meeting rooms are on the lobby level.

Room 518 in the Marina Tower has been donated by the hotel for the exclusive use of nursing mothers and mothers wishing to pump milk. We thank the Sheraton for making this room available.

Updates and other information during the meeting will be announced on the HSS twitter feed (@hssonline.org), using hashtag #hsspsa12.

<table>
<thead>
<tr>
<th>Registration Desk</th>
<th>Book Exhibit</th>
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<tr>
<td>Thursday, 12:00 P.M. – 7:00 P.M.</td>
<td>Thursday, 6:30 P.M. – 8:30 P.M.</td>
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<tr>
<td>Maritime Board Room</td>
<td>Grande Ballroom A</td>
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**Thursday, 15 November**

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<th>9:00 A.M. – 2:00 P.M.</th>
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<tr>
<td><strong>Meeting of the PSA Governing Board</strong></td>
<td>Inkeri Koskinen (University of Helsinki), “Critical Subjects: Participatory Research Needs to Make Room for Debate”</td>
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<td>Marina 1</td>
<td>Chair: Roger Stanev (University of South Florida)</td>
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**Session 1 (2:00 - 3:30 P.M.)**

**Contributed Papers: Issues for Practice in Medicine and Anthropology**

*Spinnaker 1*

- James Krueger (University of Redlands), “Theoretical Health and Medical Practice”
- Cecilia Nardini (University of Milan), “Bias and Conditioning in Sequential Medical Trials”

**Contributed Papers: Values in Science and Inductive Risk**

*Marina 6*

- Heather E. Douglas (University of Waterloo), “The Value of Cognitive Values”
- Matthew J. Brown (The University of Texas at Dallas), “Values in Science Beyond Underdetermination and Inductive Risk”
Daniel Steel (Michigan State University), “Acceptance, Values, and Inductive Risk”
Chair: Daniel Hicks (University of Notre Dame)

**Contributed Papers: The Concept of Race: Biological, Cognitive, and Social Perspectives**
*Marina 2*
Ludovica Lorusso (University of Sassari) and Fabio Bacchini (University of Sassari), “The Concept of Race in the Post-Genomics Era”
Alexandre Marcellesi (University of California, San Diego), “Is Race a Cause?”
Adam Hochman (University of Sydney), “Do We Need a Device to Acquire Ethnic Concepts?”
Chair: Sean Valles (Michigan State University)

**Contributed Papers: Kuhn, Incommensurability and the Contingency of Science**
*Seabreeze 2*
Jonathan Y. Tsou (Iowa State University), “Reconsidering the Carnap-Kuhn Connection”
Katherina Pia Kinzel (University of Vienna), “Contingency, Incommensurability and the Success of Science”
Joseph D. Martin (University of Minnesota, Twin Cities), “Is the Contingentist/Inevitabilist Debate a Matter of Degrees?”
Chair: Jonathan Rosenberg (University of Washington)

**Contributed Papers: Inference to the Best Explanation**
*Marina 5*
Gerald Doppelt (University of California, San Diego), “Does Structural Realism Provide the Best Explanation of the Predictive Success of Science?”
David Harker (East Tennessee State University), “Inference to the Best Explanation and the Importance of Peculiarly Explanatory Virtues”
Robert William Fischer (Texas State University), “TRUE Is False and Why It Matters”
Chair: Olin Robus (University of Washington)

**Contributed Papers: Causation, Motivation, and Human Nature in Neuroscience**
*Marina 3*
Markus Ilkka Eronen (Ruhr University Bochum), “No Levels, No Problems: Downward Causation in Neuroscience”
Daniel F. Hartner (Rose-Hulman Institute of Technology), “From Desire to Subjective Value: On the Neural Mechanisms of Moral Motivation”
Grant Ramsey (University of Notre Dame), “Human Nature in a Post-Essentialist World”
Chair: Gonzalo Munevar (Lawrence Technological University)

**Contributed Papers: Quantum Mechanics and Effective Field Theory**
*Marina 4*
Matthias Egg (University of Lausanne), “Delayed-Choice Experiments and the Metaphysics of Entanglement”
Michael E. Cuffaro (University of Western Ontario), “On the Debate Concerning the Proper
Characterization of Quantum Dynamical Evolution
Jonathan Bain (Polytechnic Institute of New York University), “Emergence in Effective Field Theories”
Chair: Armond Duwell (University of Montana)

Contributed Papers: Historical Insights for Contemporary Issues
Spinaker 2
Session Co-Sponsored by the History of Science Society
Laszlo Kosolosky (Ghent University) and Dagmar Provijn (Ghent University), “William Harvey's Bloody Motion: Creativity in Science”
Dana Tulodziecki (University of Missouri-Kansas City), “Shattering the Myth of Semmelweis”
Chair: Rose-Mary Sargent (Merrimack College)

Contributed Papers: Ontological Issues in the Life Sciences
Seabreeze 1
Joshua Filler (Ripon College), “Carnapian Conventionalism, Ontology, and the Philosophy of Biology”
Charles H. Pence (University of Notre Dame), “It's Okay to Call Genetic Drift a ‘Force’”
Melinda Bonnie Fagan (Rice University), “The Stem Cell Uncertainty Principle”
Chair: Sun Kyeong Yu (Minnesota State University Mankato)

Session 2 (3:45 - 5:45 P.M.)
Symposium: Innovative Strategies for Teaching the Philosophy of Science
Marina 2
Gary Hardcastle (Bloomsburg University) and Matthew Slater (Bucknell University), “What’s in the Box? Project-Based Learning in Philosophy of Science”
Hasok Chang (University of Cambridge), “Teaching Theory-Choice Through Immersion”
Chris Haufe (Case Western Reserve University), “Putting Philosophy of Science to the Test”
Chair: Saul Fisher (Mercy College)

Contributed Papers: Relativity Theory and Cosmology
Spinaker 1
Chris Smeenk (University of Western Ontario), “Confirming Inflation”
Dylan Gordon Gault (University of Western Ontario) and William Harper (University of Western Ontario), “Newton's Methodology in Cosmology Today”
Michael Tamir (University of Pittsburgh), “Geodesic Universality in General Relativity”
Dennis Lehmkuhl (University of Wuppertal, IZWT), “The Development of Mach's Principle in Einstein's work”
Chair: Yann Benétreau-Dupin (University of Western Ontario)

Contributed Papers: Conceptual Issues in the Physical Sciences
Seabreeze 1
John D. Norton (University of Pittsburgh), “The End of the Thermodynamics of Computation: A No Go Result”
Elay Shech (University of Pittsburgh),
“What is the ‘Paradox of Phase Transitions’?”
William Goodwin (University of South Florida), “Quantum Chemistry and Organic Theory”
Chair: Samuel C. Fletcher (University of California, Irvine)

Contributed Papers: Underdetermination and Realism
Marina 3
Moti Mizrahi (St. John's University), “Reconsidering the Argument from Underconsideration”
Kevin Coffey (Virginia Polytechnic Institute), “What is the Problem of Theoretical Equivalence?”
P. Kyle Stanford (University of California, Irvine), “Getting What We Pay For: Unconceived Alternatives and Historical Changes in Scientific Inquiry”
Ioannis Votsis (University of Düsseldorf), “Universal Empiricism”
Chair: Elaine Landry (University of California, Davis)

Contributed Papers: Disciplinary Perspectives on Explanation
Spinnaker 2
Julia Bursten (University of Pittsburgh), “Reconsidering Explanation: Lessons from Nanosynthesis”
Michael David Silberstein (Elizabethtown College) and Anthony Chemero (University of Cincinnati), “Constraints on Localization and Decomposition as Explanatory Strategies in the Biological Sciences”
Bradford Skow (Massachusetts Institute of Technology), “Are there Genuine Physical Explanations of Mathematical Phenomena?”
Chair: Todd Grantham (College of Charleston)

Contributed Papers: Metaphysics
Marina 5
Peter Bokulich (Boston University), “Modal Structure and Effective Degrees of Freedom”
Michael Hayden Thornburg (University of Cincinnati), “New Work for a Theory of Emergence”
Ken Aizawa (Centenary College of Louisiana), “Multiple Realizability by Compensatory Differences”
Johanna Wolff (Hong Kong University), “Are Conservation Laws Metaphysically Necessary?”
Chair: Wesley Van Camp (Virginia Polytechnic Institute)

Contributed Papers: Decision Theory and Philosophy of Economics
Marina 6
Simon Huttegger (University of California, Irvine), “Probe and Adjust”
Elliott Wagner (University of Amsterdam), “The Explanatory Relevance of Nash Equilibrium: One-Dimensional Chaos in Boundedly Rational Learning”
C. Tyler DesRoches (University of British Columbia) and Margaret Schabas (University of British Columbia), “The Interest Rate as a Stable Kind”
Alessandra Basso (University of Helsinki), “The Measurement-Theoretic Conditions of Empirically Accurate Time Discounting”
Chair: David Etlin (University of Groningen)
Contributed Papers: Confirmation and Evidence

Seabreeze 2

Aki Lehtinen (University of Helsinki), “On the Impossibility of Amalgamating Evidence”

Casey Helgeson (University of Wisconsin, Madison), “The Confirmational Significance of Agreeing Measurements”

Jacob Stegenga (University of Toronto), “Pseudorobustness”

Jan Sprenger (Tilburg University), “Testing a Precise Null Hypothesis: The Case of Lindley’s Paradox”

Chair: Shawn A. Miller (University of California, Davis)

Contributed Papers: Modeling, Mechanisms, and Modularity

Marina 4


Justin Garson (Hunter College - CUNY), “Broken Mechanisms: Function, Pathology, and Natural Selection”

Jaakko Kuorikoski (University of Helsinki) and Samuli Pöyhönen (University of Helsinki), “Understanding Non-Modular Functionality—Lessons from Genetic Algorithms”

Tarja Tellervo Knuuttila (University of Helsinki) and Andrea Loettgers (California Institute of Technology), “Synthetic Modeling and Mechanistic Account: Material Recombination and Beyond”

Chair: Sarah Roe (University of California, Davis)

Plenary Session with History of Science Society (6:00 – 7:30 P.M.)

History and Philosophy of Science: 50 Years of Thomas Kuhn’s The Structure of Scientific Revolutions

Grande Ballroom C

This session is jointly sponsored by the History of Science Society, the Philosophy of Science Association, and the Joint Commission of the Division of the History of Science and Technology and the Division of Logic, Methodology and Philosophy of Science

Joel Isaac (University of Cambridge), "On Making History into Philosophy: The Importance of Kuhn's Harvard Years"

Alan Richardson (University of British Columbia), "Of Troubled Marriage and Uneasy Colocation: Thomas Kuhn, Epistemological Revolutions, Romantic Narratives, and HPS"

Mary Jo Nye (Oregon State University), "On Tradition and Innovation Before and After Kuhn"

Paul Hoyningen-Huene (Leibniz University of Hannover), "What is Uncontroversial about Kuhn?"

Chair: Angela Creager (Princeton University)

7:30 – 8:30 P.M.

Joint PSA/HSS Opening Reception

Grande Ballroom Foyer and Grande Ballroom A

Sponsored in part by the University of Chicago Press on the occasion of the 50th anniversary of Thomas Kuhn’s The Structure of Scientific Revolutions.
Cash bar and light hors d’oeuvres. Please be sure to visit the book exhibit area in Grande Ballroom A.

Friday, 16 November

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| **Philosophy of Science Editorial Board Meeting**  
*Marina 1* |

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<th>Session 3 (9:00 – 11:45 A.M.)</th>
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<td><strong>Coffee Break 10:00 – 10:15 in Grande Ballroom Foyer and Executive Foyer</strong></td>
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**Symposium: New Horizons for Singularities in Classical Spacetime Theories**  
*Executive Center 1*

John Manchak (University of Washington), “On the Relationship Between Spacetime Singularities, Holes, and Extensions”  
Erik Curiel (University of Western Ontario), “On Classifying Singularities in General Relativity”  
James Weatherall (University of California, Irvine), “What is a Singularity in Geometrized Newtonian Gravitation?”  
Chair: Jeremy Butterfield (University of Cambridge)

**Animal Models beyond Genetics**  
*Grande Ballroom C*

Session Sponsored by the History of Science Society  
Chair and Commentator: Alan Love (University of Minnesota)

Sabina Leonelli (University of Exeter),  
*Rachel Ankeny (University of Adelaide), Nicole Nelson (McGill University), Edmund Ramsden (University of Manchester), “Modeling humans, standardizing the environment: Making organisms model humans in research on alcohol addiction”*

Christopher Degeling (University of Sydney), “Modeling failure: Empiricism, evidence, and rhetoric in the development of the early twentieth-century hip fracture treatments”  
Edmund Ramsden (University of Exeter), “Of mad dogs and men: Creating standards of validity for animal models of human psychopathology”  
Lara Keuck (Johannes Gutenberg University) and Lara Huber (Technische Universität, Braunschweig), “Humanising animals: The search for an ideal transgenic mouse model of Alzheimer’s disease in the 1990s”
**Symposium: Introspective Evidence in the Scientific Study of Perception**
*Executive Center 3B*

Mazviita Chirimuuta (University of Pittsburgh), “Psychophysical Methods and the Evasion of Introspection”

Uljana Feest (Technical University of Berlin), “Phenomenological Introspection and the Artificiality of Experimental Data”

Gary Hatfield (University of Pennsylvania), “Psychological Experiments and Phenomenal Experience in Shape Constancy”

Anthony I. Jack (Case Western Reserve University), “What Introspection Teaches: The Brain Reveals Two Ways to Understand the Mind”

Eric Schwitzgebel (University of California, Riverside), “The Problem of Known Illusion and the Resemblance of Experience to Reality”

Chair: Alistair Isaac (University of Pennsylvania)

**Symposium: Evidence and Causality in Medicine and Epidemiology**
*Marina 6*

Alex Broadbent (University of Johannesburg), “Using Causal Knowledge to Predict”

Sander Greenland (University of California, Los Angeles), “Overthrowing the Tyranny of Null Hypotheses in Health and Medical Sciences”

Jeremy Howick (University of Oxford) and John Worrall (London School of Economics), “Active, Controlled Clinical Trials Are, Contrary to Current Medical Orthodoxy, Methodologically More Telling than Placebo Controlled Trials”

Richard Scheines (Carnegie Mellon University), “Constructing Variables for Causal as Opposed to Predictive Inference”

Chair: Christopher Hitchcock (California Institute of Technology)

**Symposium: Complex Systems: Explanation and Testing**
*Marina 2*

Mark Bedau (Reed College), “Empirically Testing Simple Generative Models of the Evolution of Technology”

Paul Humphreys (University of Virginia), “Testing Models of Complex Systems”

Meinard Kuhlmann (Bielefeld University), “Explaining Financial Markets in Terms of Complex Systems”

Margaret Morrison (University of Toronto), “Renormalization Group Explanations and Dynamical Systems Theory”

Chair: Robert Batterman (University of Pittsburgh)

**Symposium: Signals, Signaling Games, and Biological Behavior**
*Spinnaker*

Jeffrey Barrett (University of California, Irvine), “The Evolution of Rule Following in Nature”

Cailin O’Connor (University of California, Irvine), “Evolving to Categorize”

Kevin Zollman (Carnegie Mellon University), “Cheaper-than-Costly Signaling”

Carl Bergstrom (University of Washington), “Signaling, Bluffing, and Deception Without Semantics”

Stephen Nowicki (Duke University), “Birdsong and the Problem of Honest Signaling”

Chair: Justin Bruner (University of California, Irvine)
Symposium: Can Experimental Modeling Play the Role of Theorizing in Evolutionary Biology?

Marina 4

C. Kenneth Waters (University of Minnesota), “Experimental Modeling as a Form of Theoretical Modeling”

Michael Travisano (University of Minnesota), “Experimental Evolution of Biological Complexity”

Kristina Hillessland (University of Washington, Bothell), “Modeling the Evolution of Mutualism in the Real World”


Chair: Barton Moffatt (Mississippi State University)

Symposium: Poincaré Reconsidered: One Hundred Years Afterwards

Seabreeze 2

Session Co-Sponsored by the History of Science Society

Yemima Ben-Menahem (Hebrew University of Jerusalem), “Poincaré's Impact on 20th Century Philosophy of Science”


Katherine Dunlop (University of Texas, Austin), “The Relationship of Geometry to Arithmetic in Poincaré's Science and Hypothesis”

John Stachel (Boston University), “Poincaré and the Origins of Special Relativity”

Chair: Sahotra Sarkar (University of Texas, Austin)

Symposium: The State of Race in Population Genetics

Executive Center 2B

Michael Hardimon (University of California, San Diego), “Population Genetics and the Reality of Race”

Matthew Kopec (University of Colorado, Boulder), “Clines v. Clades in the Race Debate”

Quayshawn Spencer (University of San Francisco), “How to Be a Biological Racial Realist”

Jonathan Kaplan (Oregon State University) and Rasmus Winther (University of California, Santa Cruz), “Genetic Diversity, Differentiation, Heterozygosity, and the Very Concept of Race”

Chair: Michael Hunter (University of California, Davis)

Session 4 (1:30 - 3:30 P.M.)

Contributed Papers: Issues in Evolutionary Theory

Marina 4

Pierrick Bourrat (University of Sydney), “Time and Fitness in Evolutionary Transitions in Individuality”

Armin W. Schulz (London School of Economics), “Exaptation, Adaptation, and Evolutionary Psychology”

Michael Trestman (University of California, Davis), “Which Comes First in Major Transitions: The Evolutionary Egg or the Behavioral Chicken?”

Matthew J. Barker (Concordia University) and Joel D. Velasco (California Institute of Technology), “Deep Conventionalism about Evolutionary Groups”

Chair: Marshall Abrams (University of Alabama, Birmingham)
Contributed Papers: Metaphysics in Modern Physical Theories: Possibility, Symmetry, Unity, and Indeterminism
Executive Center 3B
Katherine Brading (University of Notre Dame), “Presentism as an Empirical Hypothesis”
Carolyn Brighouse (Occidental College), “Geometric Possibility: An Argument From Dimension”
Daniel Peterson (University of Michigan), “Physical Symmetries, Overarching Symmetries, and Consistency”
Thomas Müller (Utrecht University), “A Generalized Manifold Topology for Branching Space-Times”
Chair: Edward MacKinnon (California State University East Bay)

Contributed Papers: Psychology and Cognitive Science: Issues in Research
Executive Center 2B
Michael Roche (University of Wisconsin, Madison), “A Difficulty for Testing the Inner Sense Theory of Introspection”
Andrea Scarantino (Georgia State University), “Rethinking Functional Reference”
Marta Halina (University of California, San Diego), “Animal Mindreading: Can Experiments Solve the Logical Problem?”
Chair: J. D. Trout (Loyola University Chicago)

Contributed Papers: Critical Assessment of New Accounts of Explanation
Marina 3
Cyrille Thomas Imbert (Archives Poincaré, CNRS, Université de Lorraine), “Relevance, Not Invariance, Explanatoriness, not Manipulability: Discussion of Woodward on Explanatory Relevance”
Juha Saatsi (University of Leeds) and Mark Pexton (University of Leeds), “Reassessing Woodward's Account of Explanation: Regularities, Counterfactuals, and Non-Causal Explanations”
Andrew Wayne (University of Guelph), “Causal Relations and Explanatory Strategies in Physics”
Chair: Soazig Lebihan (University of Montana)

Contributed Papers: Modeling Practices
Spinnaker
Wybo Houkes (Eindhoven University of Technology) and Sjoerd D. Zwart (Delft University of Technology/Eindhoven University of Technology), “Transfer and Templates in Scientific Modeling”
Roman Peter Frigg (London School of Economics) and Leonard Smith (London School of Economics), “The Myopia of Imperfect Climate Models”
Chair: Alisa Bokulich (Boston University)

Peering Into the Mind in the 19th and 20th Centuries

**Nautilus 3**

Session Sponsored by the History of Science Society

Ernest B. Hook (University of California, Berkeley), “The power of the imagination or a vital magnetic fluid at work? Mesmerism and the introduction of inhalation anesthesia”

Scott Phelps (Harvard University), “Brain Injuries and the Photography of Dreams: A Case Study of Psychiatry and Psychology in WWI”

Hawon Chang (Seoul National University), “The early history of fMRI experimental designs”

Chair: Jamie Cohen-Cole, George Washington University

**Contributed Papers: Issues for Formal Epistemology and Decision Theory**

**Marina 6**

Brad Armendt (Arizona State University), “Pragmatic Interests and Imprecise Belief”

P. D. Magnus (University at Albany SUNY), “What Scientists Know is Not a Function of What Scientists Know”

Gil Hertshten (University of California, San Diego), “Embracing Fallibility in Theory Choice”

J. McKenzie Alexander (London School of Economics), “Preferential Attachment and the Search for Successful Theories”

Chair: Susan Vineberg (Wayne State University)

Representation and Visualization in Modern Science

**Nautilus 4**

Session Sponsored by the History of Science Society


Marie Elizabeth Burks (Massachusetts Institute of Technology), “‘Without a Single Flap’: Louis-Pierre Mouillard’s Observations of Soaring Birds and the Idea of fixed-wing Flight, 1881-1897”

Devin Gouvêa (University of Chicago), “Anatomy in 2.5D: From the Edinburgh Stereoscopic Atlas to eHuman”

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

**Contributed Papers: Epistemology of Experiment: Design, Measurement, and Instrument**

**Seabreeze 2**

David Teira (National Distance Education University), Maria Jimenez-Buedo (National Distance Education University), and Jesus Zamora-Bonilla (National Distance Education University), “A Contractarian Solution to the Experimenter's Regress”

Teru Miyake (Nanyang Technological University), “Underdetermination, Black Boxes, and Measurement”

Catherine Allamel-Raffin (University of Strasbourg), “From Intersubjectivity to
Interinstrumentality: The Example of Surface Science
Johannes Persson (Lund University) and Annika Wallin (Lund University), “Why Internal Validity is Not Prior to External Validity”
Chair: David Stump (University of San Francisco)

Understanding Noise in Twentieth-Century Physics and Engineering
Part 1
Seabreeze 1
Session Sponsored by the History of Science Society
Shawn Bullock (Simon Fraser University), “Modems, Missiles, and Air Defence Systems: Noise as a Data Communication Problem”
Roland Wittje (University of Regensburg), “Concepts and Significance of Noise in Acoustics: Before and After the Great War”
Aaron Sidney Wright (University of Toronto), “‘Forgetting’ Physics: The Physicalization of History and Memory”
Commentator: Shaul Katzir (Tel-Aviv University)
Chair: Jed Buchwald (California Institute of Technology)
Organizer: Chen-Pang Yeang (University of Toronto)

Contributed Papers: Values, Interests, and Motivations
Marina 2
Inmaculada de Melo-Martin (Weill Cornell Medical College) and Kristen Intemann (Montana State University), “Commercial Interests and Profit-driven Research: Can Feminist Philosophy of Science Help?”
Boaz Miller (University of Haifa), “Defending Pragmatic Encroachment on Knowledge: A Deontological Argument from Motivated Reasoning and the Value Ladenness of Science”
Kevin Elliott (University of South Carolina) and David Willmes (Bielefeld University), “Propositional Attitudes and Values in Science”
Manjari Chakrabarty (Visva Bharati University), “Popper's Contribution to the Philosophical Study Of Artifacts”
Chair: Thomas Cunningham (University of Pittsburgh)

3:30 – 3:45 P.M.
Coffee Break
Grande Ballroom Foyer, Executive Foyer
Sponsored in part by the University of Chicago Press Journals Division

Session 5 (3:45 – 5:45 P.M.)
Symposium: Individual Based Models in Ecology
Executive Center 1
Joan Roughgarden (Stanford University), “Individual-Based Models in Ecology: An Evaluation”
Michael Weisberg (University of Pennsylvania), “Understanding Population Behavior in Individual-Based Ecological Models”
James Justus (Florida State University), “The Methodological Individualism of Individual-Based Modeling in Ecology”
Chair: Emily Parke (University of Pennsylvania)

Special note: this session will run until 6:15 PM
Contributed Papers: Space and Time in Physical Theory

Marina 3
Kyle Sereda (University of California, San Diego), “Was Leibniz the First Spacetime Structuralist?”
Eleanor Knox (King’s College London), “Newtonian Spacetime Structure in Light of the Equivalence Principle”
Bryan W. Roberts (University of Southern California), “When We Do (And Do Not) Have a Classical Arrow of Time”
Chair: Syman Stevens (University of Oxford)

Contributed Papers: The Metaphysics of Quantum Theory

Executive Center 2B
Holger Lyre (University of Magdeburg), “Quantum Phases and Realism About Structure”
Thomas Pashby (University of Pittsburgh), “Do Quantum Objects Have Temporal Parts?”
Wayne Myrvold (University of Western Ontario), “What Is A Wavefunction?”
Meir Hemmo (University of Haifa) and Orly Shenker (The Hebrew University of Jerusalem), “Probability Zero in Bohm’s Theory”
Chair: David Glick (University of Arizona)

The Entanglement of Biology and Medicine: Making Knowledge in the Modern Biomedical Sciences

Nautilus 2
Session Sponsored by the History of Science Society
Robin Scheffler (Yale University), “From Polio to p53: The Life of Simian Virus 40”
Andrew Hogan (University of Pennsylvania), “Chromosomes in the Clinic: Cytogenetic Analysis and ‘Epigenetic’ Thinking in 1980s Medical Genetics”
Chair: Nathaniel Comfort (Johns Hopkins University)

Contributed Papers: Reduction, Explanation, and Mechanism

Marina 2
Abraham Graber (University of Iowa) and Ian O’Loughlin (University of Iowa), “Scientific Realism is Incompatible with Reductionism: Combinatorial Explosion and the Intransitivity of Explanation”
Beckett Sterner (University of Chicago), “Pragmatics of Prediction and Explanation”
Adrian Currie (Australian National University), “Narratives & Mechanisms”
**Contributed Papers: Causation: Analysis and Inference**  
*Seabreeze 2*

Holly K. Andersen (Simon Fraser University), “When To Expect Violations of Causal Faithfulness and Why It Matters”
Karen Rae Zwier (University of Pittsburgh), “An Epistemology of Causal Inference from Experiment”
Frederick Eberhardt (Carnegie Mellon University), “Experimental Indistinguishability and Interventionism”

Chair: Janet D. Stemwedel (San Jose State University)

**Contributed Papers: Issues of Representation: Models and Theories**  
*Spinaker*

Adam Toon (Bielefeld University), “Models, Sherlock Holmes and the Emperor Claudius”
Francesca Pero (University of Florence), “Presenting and Representing: Problems for the Model-Theoretic Account”
Alkistis Tania Elliott-Graves (University of Pennsylvania), “Abstract and Complete”
Till Grüne-Yanoff (Royal Institute of Technology, Stockholm), “Appraising Non-Representational Models”

Chair: Martin Thomson-Jones (Oberlin College)

**Understanding Noise in Twentieth-Century Physics and Engineering**  
*Part 2*  
*Seabreeze 1*

Session Sponsored by the History of Science Society

Allan Franklin (Cornell University), “The Rise and Triumph of the Sigmas”
Martin Niss (Roskilde University), “Noise as a Limit to Physical Measuring Processes: Models and Justifications in the 1920s”
Chen-Pang Yeang (University of Toronto), “Two Mathematical Approaches to Random Fluctuations”
Commentator: Joan Lisa Bromberg (Johns Hopkins University)

Chair: Jed Buchwald (California Institute of Technology)

**Contributed Papers: Probability Theory and Formal Epistemology**  
*Marina 6*

Benjamin Jantzen (Virginia Polytechnic Institute), “Piecewise Versus Total Support: How to Deal with Background Information in Likelihood Arguments”
Stephan Hartmann (Ludwig-Maximilians-University Munich) and Soroush Rafiee Rad (Tilburg University), “Updating on Conditionals = Kullback-Leibler + Causal Structure”
Samir Okasha (University of Bristol), “The Evolution of Bayesian Updating”

Chair: Carl G. Wagner (University of Tennessee)
**Contributed Papers: Methodological Issues in Biology**  
*Mariana 4*

Session Co-Sponsored by the History of Science Society

Angela Potochnik (University of Cincinnati), “Defusing Ideological Defenses in Biology”

Francis Cartieri (University of Cincinnati), “Population Genomics and Empirical Insufficiency”

Stephan Guettinger (London School of Economics), “The Nature of Exploratory Experimentation and Its Relation to Theory in the Life Sciences”

Benjamin Sheredos (University of California, San Diego), Daniel C. Burnston (University of California, San Diego), Adele Abrahamsen (University of California, San Diego), and William Bechtel (University of California, San Diego), “Why Do Biologists Use So Many Diagrams?”

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**Chair:** Monika Piotrowska (Florida International University)

**5:45 PM-6:45 PM**

**Reception Celebrating the Publication of The Cambridge Encyclopedia of Darwin and Evolutionary Thought and the series Cambridge Introductions to Philosophy of Biology, both edited by Michael Ruse, Director of the Program in the History and Philosophy of Science at Florida State University**

For contributors and their guests.

*Shoreline (Lanai Area)*

**6:45 PM-7:45 PM**

**PSA Reception**

*Shoreline (Lanai Area)*

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**Saturday, 17 November**

**(7:30 – 8:50 A.M.)**

**PSA Womens’ Caucus Breakfast Meeting**  
*Harbor Ballroom 3*

Sponsored by the Science and Technology Studies Graduate Program at the University of British Columbia

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**Session 6 (9:00 – 11:45 A.M.)**

**Coffee Break 10:00 – 10:15 in Grande Ballroom Foyer and Executive Foyer**

**Symposium: Teleosemantics 2.0: New Directions in Evolutionary Explanations of the Mind**  
*Mariana 6*

Paul Griffiths (University of Sydney and University of Exeter), “Teleosemantics without History”

Karen Neander (Duke University), “Referential Concepts”
Dan Ryder (University of British Columbia, Okanagan), “Teleosemantics as a Theory External Constraint on Reference”
David Papineau (King’s College, London), “The Variety of Teleosemantic Systems”
Bence Nanay (University of Antwerp and University of Cambridge), “Teleosemantics Without Etiology”
Chair: Andrea Scarantino (Georgia State University)

**Symposium: Laws and Complex Systems**
*Marina 2*

James Ladyman (University of Bristol) and Karoline Wiesner (University of Bristol), “The Nature of Complex Systems: Order, Causation and Law”
Alexander Reutlinger (University of Cologne), “Why Are There Any Robust Laws of Complex Systems?”
Michael Strevens (New York University), “Simplicity, Dependence, and the Sciences of Complexity”
Jessica Wilson (University of Toronto), “Metaphysical Emergence in Complex Systems”
Chair: Paul Humphreys (University of Virginia)

**Unruly Experiments: Developing Scientific Practices around Live Specimens in 20th century Biological Sciences**
*Nautilus 2*

Samantha Muka (University of Pennsylvania), “‘These animals are so perishable’: The desires and difficulties of studying the physiology of medusae in the laboratory, 1850-1930”
Mary Sunderland (University of California, Berkeley), “Studying Speciation: Ensatina eschscholtzii and the Ring Species Concept”
Etienne Benson (Max Planck Institute for the History of Science), “The making of a territorial antelope”
Chair and Commentator: Karen Rader (Virginia Commonwealth University)

**Symposium: Mental Disorders and Psychiatric Taxonomy**
*Seabreeze 2*

Peter Zachar (Auburn University, Montgomery), “Psychiatric Disorders and the Imperfect Community: A Nominalist Harmful Dysfunction Analysis”
Dominic Murphy (University of Sydney), “On the Tendency of Mental Disorders to Form Varieties”
Jeffrey Poland (Brown University and Rhode Island School of Design), “Deeply Rooted Sources of Error and Bias in Psychiatric Classification”
Kenneth F. Schaffner (University of Pittsburgh), “Rosch-like Prototype Model for Psychiatric Disorders”
Şerife Tekin (University of Pittsburgh), “The Missing Self in Psychiatric Taxonomy”
Chair: Brian Keeley (Pitzer College)
Symposium: Risk and Cancer: Decision Making Under Uncertainty  
Executive Center 1
Peter Schwartz (Indiana University), “Small Tumors as Risk Factors rather than Pathology”
Rebecca Kukla (Georgetown University), “Imagining the Risk of Iatrogenic Infertility in Young Cancer Patients”
Anya Plutynski (University of Utah), “A Risk of Cancer Screening? Overdiagnosis”
Miriam Solomon (Temple University), commentary
Chair: Marta Bertolaso (University Campus Bio-Medico of Rome)

Symposium: Development: Knowing What Works, Evidence, Evaluation, and Experiment  
Spinnaker
Joseph Burke (Department of Foreign Affairs of Ireland), “Explaining the Narrowing Field in Development Evaluation”
Nancy Cartwright (University of Durham & University of California, San Diego) and Hakan Seckinelgin (London School of Economics), “Peoples’ Experiences and RCTs—Is There Such a Thing as Too Much Knowledge?”
Deborah Mayo (Virginia Polytechnic Institute), “Learning From Error in RCT4D”
Chair: Kathleen Okruhlik (University of Western Ontario)

Neuroscience and Pathology between Lab and Clinic  
Marina 5
Session Sponsored by the History of Science Society
Nima Bassiri (Duke University), “From the technologies of brain research to the brain as technology: On the construction of neurological selfhood in nineteenth-century neuroscience”
Joseph McCaffrey (University of Pittsburgh), “The investigative role of prefrontal lobotomy”
Tulley Long (University of Minnesota), “Before ‘cortin’ became cortisone: Dwight J. Ingle, the Mayo Foundation, and the physiology of the adrenal cortex”
Tricia Close-Koenig (Université de Strasbourg), “Pathological anatomy slides from research to cancer treatment to film in interwar France”
David Teira (Universidad Nacional de Educación a Distancia, Spain), “The impartiality of clinical trials historically reexamined”
Chair: David Teira (Universidad Nacional de Educación a Distancia, Spain)

Symposium: Philosophy of Cognitive Neuroscience: Evidence and Inference in Neuroimaging  
Executive Center 3B
Emrah Aktunc (Independent Scholar), “Severe Tests in Neuroimaging: What We Can Learn and How We Can Learn It”
Matt Bateman (Franklin and Marshall College), “Neuroimaging and Revisionary Cognitive Ontology”
Carrie Figdor (University of Iowa), “Neuroimaging and Inferences to Mental Content”

Edouard Machery (University of Pittsburgh), “Neuroscientific Validation”

Chair: Carl Craver (Washington University, St. Louis)

**Symposium: Concepts of Populations: Ontology Matters**
**Marina 4**

Roberta L. Millstein (University of California, Davis), “Populations in Homogeneous and Heterogeneous Environments”

Lisa Gannett (Saint Mary’s University), “Are Populations Ontological Individuals? Historical Reflections”

Frédéric Bouchard (University of Montreal), “Evolution is about Variation, Not Populations”

Mathieu Charbonneau (University of Montreal), “Populations Without Reproduction”

Chair: Lindley Darden (University of Maryland, College Park)

**Symposium: Phase Transitions and Renormalization: Conceptual Aspects**
**Executive Center 2B**

Leo Kadanoff (University of Chicago), “A Perspective on Renormalization”

Craig Callender (University of California, San Diego) and Tarun Menon (University of California, San Diego), “Are Phase Transitions Emergent?”

Daniel Arovas (University of California, San Diego), “Quantum Phase Transitions, Dissipation, and Topology”

Nazim Bouatta (University of Cambridge) and Jeremy Butterfield (University of Cambridge), “Phase Transitions in Quantum Field Theory”

Chair: Laura Ruetsche (University of Michigan)

**12:00 - 1:15 P.M.**

**Society for Socially Engaged History and Philosophy of Science Meeting**
**Marina 3**

The inaugural and organizational meeting for a new sub-association affiliated with HSS and PSA, and focused on social engagement of our professions.

**Session 7 (1:30 - 4:00 P.M.)**

**Symposium: Philosophical Issues Regarding the Mathematical Representation of Continuous Phenomena**
**Seabreeze 1**

Philip Ehrlich (Ohio University), “A Re-examination of Zeno’s Paradox of Extension”

Jean-Pierre Marquis (University of Montreal), “Space: the Final Frontier”

Geoffrey Hellman (University of Minnesota) and Stewart Shapiro (Ohio State University), “Classical Continua Without Points”

Alan Hájek (Australian National University), “Staying Regular?”

Chair: Gordon Belot (University of Michigan)

**Symposium: Signaling within the Organism**
**Marina 3**

Peter Godfrey-Smith (City University of New York), “Sender-Receiver Systems Within and Between Organisms”
Nicholas Shea (Kings College London), “Neural Signaling of Probabilistic Vectors”
Rosa Cao (New York University), “Neuronal and Non-Neuronal Signaling in the Brain”
Brett Calcott (Australian National University), “Gene Regulation as Signaling: the ‘Publish-Subscribe’ Model”
Rory Smead (Northeastern University), “Deception and the Evolution of Plasticity”
Chair: David Frank (New York University)

Symposium: Semantic and Syntactic Approaches to Science: A Reconsideration
Marina 4
Sebastian Lutz (Ludwig-Maximilians-University Munich), “Empirical Adequacy in the Received View”
Otávio Bueno (University of Miami), “Diagrams and Styles of Reasoning: Toward a Reconciliation of the Received and the Semantic Views”
Holger Andreas (Ludwig-Maximilians-University Munich), “Scientific Reasoning Without Syntax?”
Hans Halvorson (Princeton University), “What is a Scientific Theory?”
Chair: Michael Dickson (University of South Carolina)

Margaret Rossiter’s Third Volume: A New World for Women in Science?
Spinnaker
Session Sponsored by the History of Science Society
Joy Harvey (Independent Scholar), “Plunging into Archives and Coming Up for Air: Margaret Rossiter’s Exploration of Women Scientists”
Nancy Slack (The Sage Colleges), “The Cutting Edge of Change for Women Scientists; After 40 More Years of Change, What Barriers Remain?”
Gwen Kay (State University of New York, Oswego), “Creating New Paths; What Constitutes Science?”
Commentator: Margaret Rossiter (Cornell University)
Chair: Sally Kohlstedt (University of Minnesota)
Special note: this session will run until 3:30 p.m.

Symposium: Causes and Comparability in Cases: the Human and Social Sciences
Marina 2
Session Co-Sponsored by the History of Science Society
Rachel A. Ankeny (University of Adelaide), “Easy to Manipulate? How Medical Case Studies Help to Reveal Causes”
Theodore M. Porter (University of California, Los Angeles), “Cases, Statistics and the Search for Causes of Mental Illness”
Attilia Ruzzene (Erasmus University), “Causal Evidence from Case Studies: Why It Is Helpful for Effective Policy Making”
Mary S. Morgan (London School of Economics and University of Amsterdam), “Re-Situating the Situated Knowledge of Case Studies”
Chair: Stephen Turner (University of South Florida)
Symposium: Symmetries, Objecthood, and Fundamentality: Cross-sectioning Fundamental Physics

Seabreeze 2

Antigone M. Nounou (University of Athens), “Irreducible Representations and Constitution of Elementary Objects”

Kerry McKenzie (Descartes Centre, Utrecht University), “Are Symmetries More Ontologically Fundamental than Elementary Particles?”

Elena Castellani (University of Florence), “Duality Symmetries and Ontological Democracy”

Christian Wüthrich (University of California, San Diego), “What, If Anything, is Spacetime, Fundamentally?”

Chair: Oliver Pooley (University of Oxford)

Symposium: Molecules, Organisms, Systems: Developing a Multi-level Integrated Insights Into Biological Processes

Grande Ballroom C

Maureen A. O’Malley (University of Sydney), “Biological Systems from Molecular, Ecological and Microbiological Points of View”

Forest Rohwer (San Diego State University), “Viruses as Informational Manipulators of Biological Systems”


Rob Knight (University of Colorado, Boulder), “From Molecules to Dynamic Biological Communities”

Jack A. Gilbert (University of Chicago), “Beyond the Genome: Creating Predictive Models of Microbial Communities”

Sandra D. Mitchell (University of Pittsburgh), “Integrative Strategies in Explanations of Protein Folding”

Alan C. Love (University of Minnesota), “From Microbial Methods to Metazoan Ontogeny: Multi-Level Modeling of Biological Phenomena”


Chair: Carol Cleland (University of Colorado, Boulder)

Symposium: Historical Contingency and Explanation in Biology

Marina 5

John Beatty (University of British Columbia), “Narrativity and Historicity”

Derek Turner (Connecticut College), “Contingency and the Explanation of Historical Trends”

Marc Ereshefsky (University of Calgary), “Species and Historicity”

Eric Desjardins (University of Western Ontario), “Path Dependence, Ecology and Restoration”

Chair: Lindsay Craig (University of Idaho)
4:30 - 6:30 PM

PSA Awards and PSA Presidential Address

Grande Ballroom C

James Woodward
(University of Pittsburgh)

“A functional account of causation, or, A defense of the legitimacy of causal thinking by reference to the only standard that matters—usefulness (as opposed to metaphysics or agreement with intuitive judgment)”

7:15 - 9:00 PM

PSA/HSS Reception

Bayview Lawn

Sponsored by the Science Studies Program and the Division of Arts and Humanities at the University of California, San Diego.

Please join your colleagues from the HSS and PSA on the Bayview Lawn for hors d’oeuvres and a cash bar. Please note that this is a ticketed event.

Sunday, 18 November

9:00 - 11:00 AM

Redefining Life in the 19th and 20th Centuries

Seabreeze 1

Session Sponsored by the History of Science Society

Jacob Habinek (University of California, Berkeley), “Conflict of the faculties? The philosophical and medical contexts of the study of life, ca. 1800”

Shira Shmu’ely, (Massachusetts Institute of Technology), “Key-term: Laboratory animal”

Luis Campos (University of New Mexico), “The uterus is outside the body’: A gendered history of synthetic biology”

Sara Green (Aarhus University) and Olaf Wolkenhauer (Rostock University), “Systems biology: an old and new approach”

Chair: Veli-Pekka Parkkinen (University of Oslo)

Mark your calendars for the PSA and HSS joint conference in Chicago in 2014 (6-9 November)
2012 Hempel Award

The Governing Board of the Philosophy of Science Association is pleased to announce that **Bas C. van Fraassen** is the recipient of the inaugural 2012 Hempel Award, recognizing lifetime scholarly achievement in the philosophy of science.

Bas van Fraassen, the McCosh Professor of Philosophy Emeritus at Princeton University and Distinguished Professor of Philosophy at San Francisco State University, is the chief architect of modern empiricism in the late twentieth and early twenty-first centuries. In four volumes—*The Scientific Image* (1980) (co-recipient of the 1986 Lakatos Award), *Laws and Symmetry* (1989), *The Empirical Stance* (2002), *Scientific Representation* (2008)—and dozens of articles, van Fraassen has produced a systematic account of science, constructive empiricism, which advocates a semantic approach to scientific theories and, on that basis, urges skepticism regarding laws of nature, anti-realism regarding unobservables, and pragmatism regarding explanation. In the three decades since its introduction, constructive empiricism has emerged both as a locus of outstanding scholarship in the philosophy of science and as an intellectual monument to Professor van Fraassen’s exceptional philosophical insight, clarity and creativity.

Professor van Fraassen has also made foundational contributions to subfields within the philosophy of science, in many cases not merely shaping these areas of research but helping to form them. This will be most evident to contemporary philosophers of physics, many of whom were introduced to the field by van Fraassen’s *An Introduction to the Philosophy of Time and Space* (1970), and who almost certainly have his *Quantum Mechanics: An Empiricist View* (1991) on the shelf as well. But something similar is true for several other fields, notably the philosophy of probability and the philosophy of logic. Where van Fraassen has focused his attention, the invariable result has been a clearer and deeper understanding of the issues for all.

Professor van Fraassen is a Fellow of the American Academy of Arts and Sciences, and has served as President of the Philosophy of Science Association, editor of the *Journal of Philosophical Logic*, and co-editor of the *Journal of Symbolic Logic*.

In recognition of Professor van Fraassen’s record of scholarly achievement and service in the philosophy of science, and in light of the great intellectual energy, generosity, egalitarianism and kindness that he brought to the philosophy of science (including, especially, his mentoring of graduate students and junior scholars in philosophy of science) the Governing Board of the PSA congratulates Professor van Fraassen on the occasion of the inaugural Hempel Award.

The Hempel Award will be given every two years by the Governing Board of the Philosophy of Science Association, and presented at the PSA Biennial Meeting. At the invitation of the Governing Board, Carl Hempel’s children, Miranda and Peter Hempel, will announce and present this inaugural Hempel award prior to the PSA Presidential Address at PSA2012 in San Diego, California, November 15-17, 2012.