

Philosophy of Science in Practice Newsletter

Nº 11 ∞



SPSP 2018 Poster Prize p. 3

Updates from the SPSP Committee p. 4

In Focus: SPSP 2018 at Ghent University pp. 5-6

Talk of the Town p. 7

SPSP Global: From Biological Practice to Scientific Metaphysics pp. 8-9

Optimist-Improving Work Conditions in Experimental Sciences pp. 10-11

Proust Interview with Kevin Elliott p. 12

ISHPSSB 2019 Call for Abstracts p. 13

SPSP Crossword p. 14

From the Editor:

I would like to thank the SPSP committee and the local organizers for a wonderful conference. We hope that the pictures from the meeting will bring back fond memories for those of you who attended and will serve as updates for those that couldn't make it this time. We here also bring a description of the project of the winner of the SPSP 2018 Poster Prize, Chia-Hua Lin from the University of South Carolina, as well as updates from the SPSP Committee. Among the updates is the announcement of the venue for the next SPSP meeting - at Michigan State University in 2020. We look very much forward to it!

Inspired by Saana's great article on PSP in South Africa in the previous newsletter, Alan Love suggested that we should have a new section called SPSP Global. With this section, we hope to share information on philosophy of science in practice taking place outside Europe and Northern America. The first article in this series is on the East Asia Summer Institute in Taipei, by María Ferreira Ruiz.

In this newsletter you can also learn about the Optimist Platform that Vlasta Sikimic is involved in, and what happened at a summer school in Georgetown, DC, organized by the Active Matter Project. Kevin Elliott takes the Proust Questionnaire. Finally, we remind you of the call for abstracts for the CLMPS and ISHPSSB 2019. We hope to see many of you at one of these meetings!

We are very happy to receive inputs from all of you for future newsletters. We are especially interested in photos and write-ups for our In Focus features, SPSP Global, Talk of the Town, as well as pieces that discuss SPSP issues from a graduate student perspective.

Contributions and suggestions can be sent by email to: sara.green@ind.ku.dk.

Happy holidays and all the best in the Year 2019!

Sara Green

Contributors



Sara Green
University of Copenhagen



Sophie van Baalen
University of Twente



Saana Jukola
University of Bielefeld



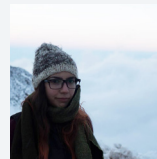
Sophia Efstathiou
Norwegian University of
Science & Technology



Vlasta Sikimić
University of Belgrade



Martin Zach
Charles University



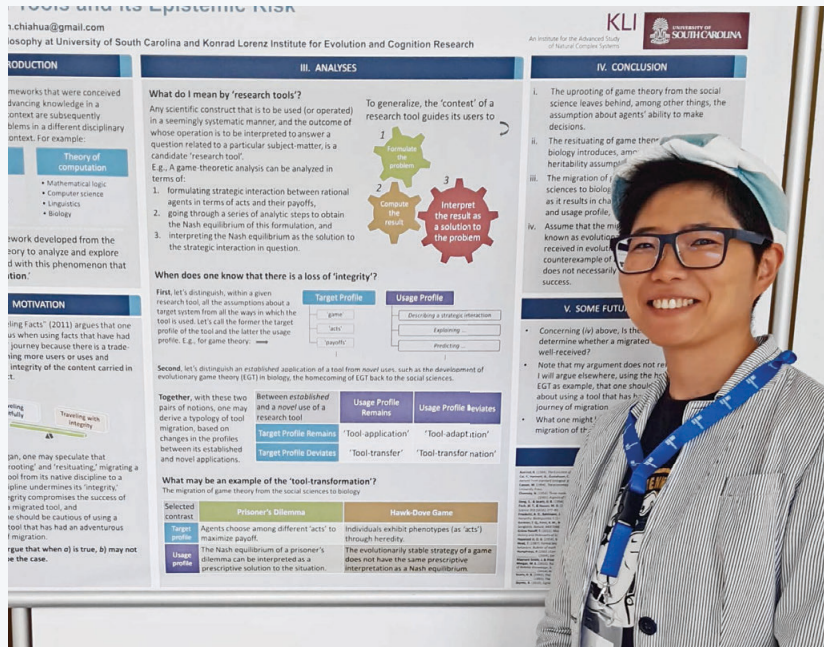
Maria Ferreira Ruiz
University of Buenos Aires



Barton Moffatt
Mississippi State
University

The SPSP 2018 Poster Prize

Congratulations to Chia-Hua Lin!



The prize winning poster on “Tool migration” sprang out from the ‘method’ chapter of Chia-Hua Lin’s dissertation that she expects to defend in 2018. In the poster, she presents an analytic framework developed for exploring epistemic issues related to the importation of scientific tools, especially models, from one regime into another, a phenomenon that she calls ‘tool migration.’ Specifically, she investigates epistemic issues concerned with the application of theory of computation, originally developed in mathematics and established in computer science and linguistics, but now used in cognitive biology.

Chia-Hua Lin is a Ph.D candidate in the Department of Philosophy at the University of South Carolina. Currently she holds a Write-Up Fellowship at the Konrad Lorenz Institute in Austria to complete her dissertation. Before that, she completed her master’s degree at the National Yang-Ming University in Taiwan.

Driven by her research interest in the sciences of animal cognition, her doctoral thesis is a philosophical analysis of the creative ways in which cognitive biologists use theory of computation

to both produce hypotheses and design experiments that may inform questions concerning species differences between humans and other animals.

In particular, she takes insights from Mary Morgan’s (2011) “Traveling Facts” and asks whether changes to a tool during cross-disciplinary migration necessarily compromises the success of applying the tool in a novel discipline. Applying her framework to analyze the migration of game theory as an example, she discovers that the answer is negative. On the one hand, major changes to a tool may occur due to the uprooting from its home discipline or the resituating to a novel discipline, or both, which lead to what Morgan might call ‘a loss of integrity’ of the migrating tool. On the other hand, losing integrity does not necessarily undermine the success of applying a migrated tool in a novel disciplinary context.

Chia-Hua Lin wishes to express gratitude to all her discussants at the conference for their comments and questions, especially to Till Grüne-Yanoff and Mary Morgan for their extended discussion on her overall research project.

Updates from the SPSP Committee

Note: CLMPST has extended the submission due date to 9 January 2019

SPSP has recently become an international member of the Division of Logic, Methodology and Philosophy of Science and Technology of the International Union of History and Philosophy of Science and Technology (see <http://www.dlmpst.org/>). Via this membership, we can help to shape forward directions in this organisation and the wider network of unions, particularly given the recent merger of the science and social science unions.

We also encourage SPSP members to consider attending the upcoming XVIth Congress on Logic, Methodology, and Philosophy of Science and Technology (CLMPST 2019) to be held in Prague, Czech Republic, 5–10 August 2019, on the theme of Bridging Across Academic Cultures with the program committee chaired by active SPSP member Hanne Andersen and several others SPSP members involved in the programming (see call for papers at <http://clmpst2019.flu.cas.cz/>). Obviously, proposals with a science in practice focus are highly encouraged!

Rachel Ankeny

8th Biennial SPSP—2020
7-10 July 2020

Michigan State University, East Lansing,
Michigan

The Local Organizing Committee is thrilled to announce the dates for the 8th Biennial Conference of the Society for Philosophy of Science in Practice (SPSP) which will be hosted at Michigan State University (MSU), East Lansing, Michigan.

Local Organizing Committee: Kevin Elliott (co-chair), Catherine Kendig (co-chair), Sean Valles (co-chair), Robyn Bluhm, Heather Douglas, Ellie Louson, Greg Lusk, Michael O'Rourke, Robert Pennock, Isaac Record and Arthur Ward.

We welcome you to our robust and diverse center for interdisciplinary philosophy of science in

practice. The Department of Philosophy is known for its engaged approach to the discipline and its growing community of philosophers of science, and the philosophers at MSU work within a vibrant community of more than 60 science studies scholars, more than 20 of whom are employed by Lyman Briggs College, an MSU residential college focused on the study of science.

Travel: MSU is located in East Lansing, adjacent to Lansing, the capital of Michigan. The campus is accessible from five airports. Lansing Capital Region International Airport (LAN) is only 10 miles from the MSU campus. For those using the Detroit Metro Airport (DTW), there is a very nice bus (Michigan Flyer) that makes round trips between DTW and the Marriott Hotel in downtown East Lansing 12 times per day. Travelers can also fly in and out of Chicago and take the daily Blue Water Amtrak train.

We will post information on: visas, lodging options (inexpensive dormitory accommodations will be available), childcare options, and accessibility accommodations (note: conference meetings rooms are ALD compatible and wheelchair accessible). If you have any questions prior to this, please feel free to contact Catherine Kendig at kendig@msu.edu, Sean Valles at valles@msu.edu, or Kevin Elliott at kce@msu.edu.

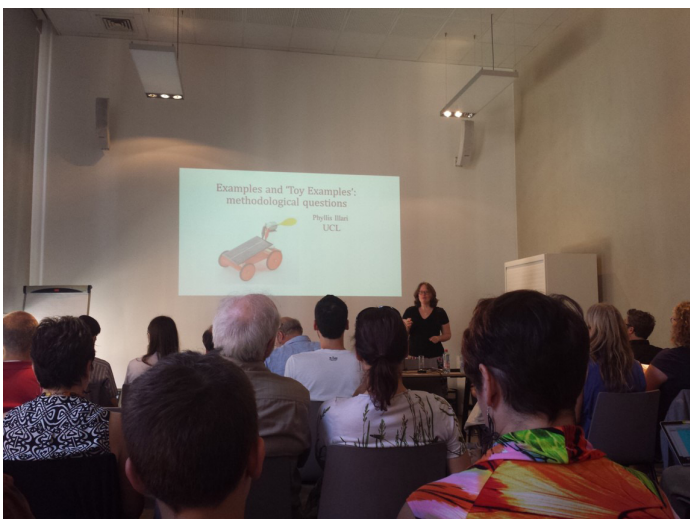
Catherine Kendig, PhD



In Focus: SPSP 2018 at Ghent University

A look back at our last meeting in photos

SPSP 2018 Ghent was a roaring success. Many thanks to all of the people who put in the work to pull it off! Of special note are the local organizing committee and the program committee along with the executive committee, as always.



Talk of the Town

Sara Green and Patrick McGivern

Active Materials Project Summer School and Workshop

The AMP 2018 Summer School and Workshop was held at Georgetown University and aimed to bring together scientists and philosophers interested in issues related to research on active matter and multi-scale modeling. The event was sponsored by the Active Matter Project, funded by the John Templeton Foundation, and organized by Patrick McGivern (University of Wollongong), Robert Batterman (University of Pittsburgh), Pranab Das (Elon University), Daniel Blair (Georgetown University) and Nick Brancazio (University of Wollongong).

In addition to speaker presentations and discussions, the Summer School included a visit at Daniel Blair's lab at the Department of Physics where they study the mechanical properties of soft and biological materials.

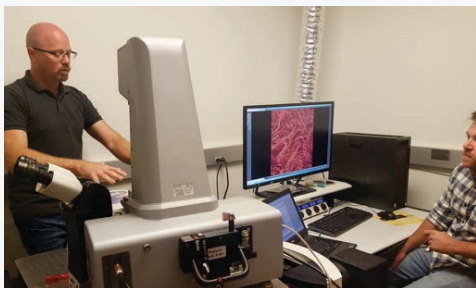
Active materials include self-propelled nanoparticles, motor proteins and microtubules, and colloidal suspensions of cells and bacteria. Such materials display many of the properties associated with larger-scale living systems: they engage in emergent, collective behaviours such as flocking and swarming and exhibit distinctive properties and behaviours across a range of different spatial and temporal scales. The AMP Summer School and Workshop aimed to address questions such as: What are the defining characteristics of active matter? What techniques and strategies are required in order to model and understand active matter systems? Are these distinct from techniques used for modeling systems of inactive matter? Can concepts that have been developed for multi-scaling modeling in other



areas be applied to active materials? Does active matter require new concepts of emergence and other inter-level relations?

Presenting faculty included: Collin Rice (Bryn Mawr College), Dan Needleman (Harvard University), Alisa Bokulich (Boston University), Sara Green (University of Copenhagen), William Bechtel (University of California, San Diego), Robin Hendry (Durham University), Julia Bursten (University of Kentucky), and Patrick McGivern (University of Wollongong).

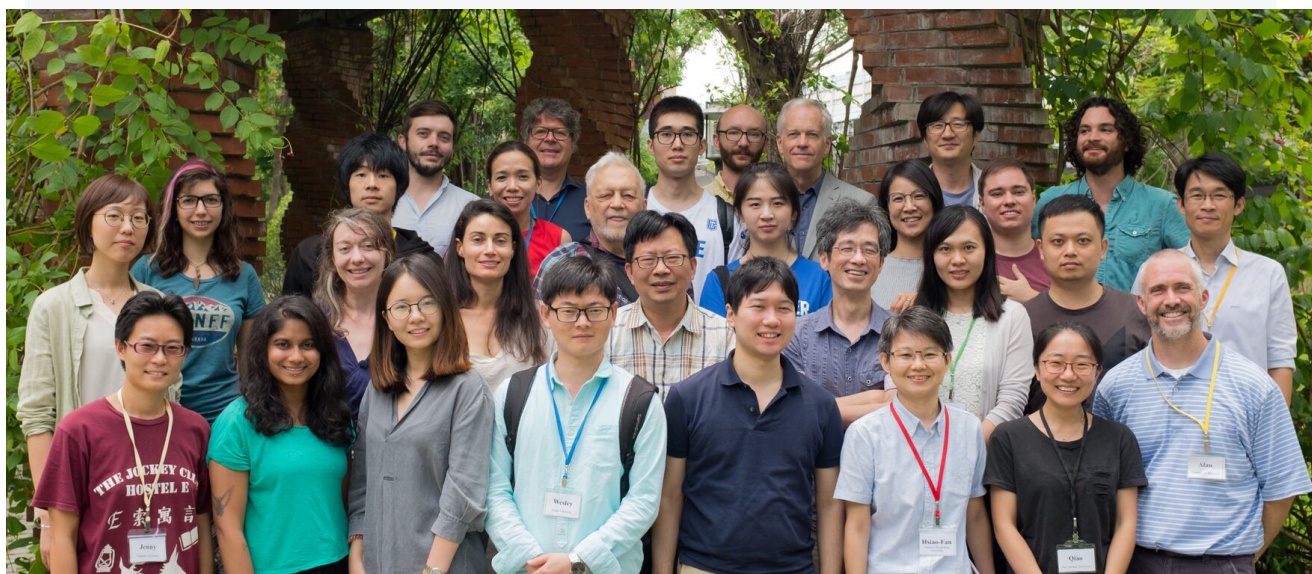
Student participants were Andrew Bollhagen (University of California, San Diego), Nick Brancazio (University of Wollongong), Steve Esser (University of Pennsylvania), Russell Meyer (University of Wollongong), Beau Revlett (University of Kentucky), and Katherine Valde (Boston University).



SPSP Global: From Biological Practice to Scientific Metaphysics

Maria Ferreira Ruiz

*East Asia Summer Institute
Taipei, July 19-27 2018*



The project From Biological Practice to Scientific Metaphysics, led by principal investigators Alan Love, Ken Waters, Marcel Weber, and Bill Wimsatt, celebrated its culmination this year with the third and last Summer Institute (<http://biological-practice-to-metaphysics.org/summer-institutes>). This time, the event took place in Taipei, with the aid of local co-organizer Ruey-Lin Chen (National Chung Cheng University). The aim was to facilitate and encourage the participation of students, postdocs, and junior scholars from across East Asia. Participants came from Taiwan, China, South Korea, Japan, and the Philippines, as well as the project members based in Canada, the United States, and Switzerland.

The busy schedule featured lectures by the PIs, co-investigators, and postdocs, as well as interviews of project members, time devoted to group work, and lots of opportunities for general discussion. It was designed to maximize involvement of all the participants and contribute to the building of a worldwide philosophical community focused on the potential metaphysical implications of biological practice.

Speakers analyzed various topics from the

point of view of scientific practices in the life sciences. Alan Love articulated the distinction between traditional 'metaphysics of science' and scientific metaphysics, and proposed success as the standard that practice-oriented scientific metaphysics should adopt. Bill Wimsatt discussed 'the architecture of nature' by distinguishing between laws and heuristics in combination with other key concepts, such as robustness, modularity, generative entrenchment, and scaffolding. Lauren Ross identified two different senses of causal complexity in psychiatric disorders research, causal heterogeneity and multicausality, and examined possible strategies for dealing with this complexity. By considering experiments in classical embryology, Marcel Weber challenged the view that reductionism holds between classical embryology and molecular developmental biology, and argued that experimental techniques from both fields combined in an interlevel domain of research instead. Janella Baxter delved into CRISPR-Cas9 as an example of technological success, and argued that a proper understanding of this technology requires considering not only its evolutionary history but also its development as a tool. Ken Waters detailed the intellectual path and inquiries that led him



from epistemology to metaphysics and the implications of his pluralist stance. Oliver Lean articulated the main problems at stake when doing metaphysics from science, proposed abandoning reliance on the correspondence between practices and the world as a way to overcome them, and then applied his approach to the metaphysics of information. William Bausman took a step back and dissected the very question of how inferences from practice to metaphysics are even possible through an illuminating analogy with the way adaptations are investigated in paleobiology.

A highlight of Summer Institute was its focus on the participants from East Asia. Students, postdocs, and junior scholars had the opportunity to discuss the specific challenges faced when pursuing a career in philosophy of science in the region. Common threads included publications, language, job market and promotion mecha-

nisms, and funding opportunities. This was an enlightening experience for everyone involved.

In addition, the Summer Institute included a public event meant for a broader audience at the National Taiwan University. Ken Waters, Marcel Weber, and Alan Love conducted a panel discussion on the main concepts in Bill Wimsatt's philosophy: robustness, generative entrenchment, and heuristics. The speakers elaborated on the different nuances of these concepts and their merits for philosophy of science. It was attended by participants of the Summer Institute, local scholars in philosophy and the sciences, and undergraduate students.

An excursion to tour historical places and Dan-shui Old Street, a boat trip across the harbor, and copious local food (including a night market visit) were the final details that made for a successful philosophical event in a vibrant city.



Optimist – Improving Work Conditions in Experimental Science

Vlasta Sikimić

Optimization Methods in Science and Technology

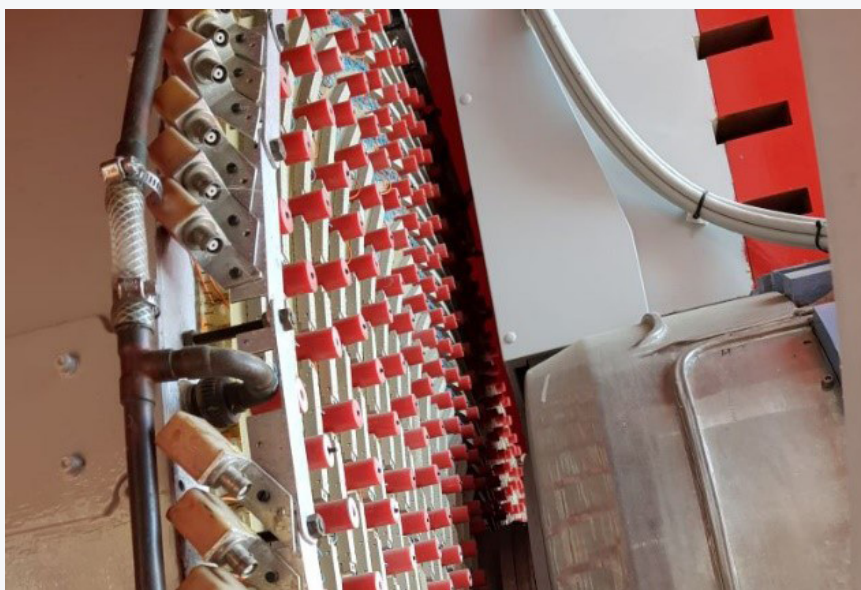
Working on scientific questions is the childhood dream of many researchers, yet, despite their love for science, some scientists are feeling alienated from their subject, disappointed with their work conditions or mistreated by their community. In order to detect the main problems affecting epistemic efficiency and satisfaction among researchers in contemporary experimental physics and biology, we started the Optimist platform. The abbreviation Optimist stands for Optimization Methods in Science and Technology. It is a collaboration between the University of Belgrade, Serbia and the Ruhr-University Bochum, Germany.

The semi-structured interviews with experimental biologists, that we conducted, revealed dissatisfaction with publishing policies, group structures, and communication. In particular, interviewees addressed the policies of the top journals in their field – Nature, Science, and Cell. They underlined that these journals favorize specific topics, that are perceived as “hot”. Moreover, biologists were under the impression that most

journals are biased towards well-established laboratories.

The scientists also raised the issue of slow retractions of incorrect papers. For instance, one participant said: “The editor first did not agree with the decision of the senior author to retract the paper but tried to convince her to ignore the fact the pictures were manipulated by her group member”.

Biological research is increasingly conducted in large groups. But when it comes to the team structure, participants preferred smaller groups because of the easier communication. Also, all the participants pointed out that that ratio between senior and junior scientists should be small (about 1:5), because junior scientists need supervision and guidance. Another striking point was that biologists on conferences mainly present already submitted research, while avoiding presenting their work in progress, because of the fear that somebody will steal their ideas and results.



The ARGUS detector at the German Electron Synchrotron DESY



Experimental biologist with two-photon excitation microscope

We believe that the issues of scientists should be approached field-specific. Thus, in the case of experimental physics we opted for a different set of questions, available in an online survey. After an online meeting with the Fermi Society of Philosophy we constructed a questionnaire targeting satisfaction of experimental physicists with their work conditions. Questions are designed to evaluate preferences of the scientists, while the method used for this research is quantitative. Targeted problems are alienation from the subject and the research purpose, not enough independence in the research design, as well as insufficient communication through conferences. One interviewee even specified that she is not allowed to choose which conferences to attend, since this is determined on a higher level. For now, the survey has been sent to researchers at DESY, CERN, Fermilab, etc.

Clearly these and similar results should be understood as a cry for help and taken very seriously, before the detachment and frustration destroy the fun of experimental research. Hopefully, data-driven research of this sort will over the time influence policy makers to improve the work conditions for scientists. From the

perspective of the philosophy of science these data can be very valuable. They inform us about the beliefs of experimental scientists, about the dynamics in their research and the structure of their research teams. Moreover, the idea is to put the acquired empirical data “into practice” and calibrate formal models of scientific interaction with them.



The PETRA III Storage-ring

The initiative is open for new collaborators. Current members are: Slobodan Perović (University of Belgrade), Dunja Šešelja (Ludwig Maximilian University of Munich), Christian Straßer (Ruhr-University Bochum), Kaja Damjanović (University of Belgrade), and Vlasta Sikimić (University of Belgrade). The survey for physicists can be found on the following link:

<https://optimist.limequery.com/132999>

General information about the Optimist platform, collaborators and their key publications are available here:

<http://www.ruhr-uni-bochum.de/optimist-survey/>



Share your preprints on the PhilSci Archive!

We would like to remind you to share your papers from SPSP via the PhilSci Archive where there is a conference section allocated to the SPSP meeting.

- The PhilSci-Archive is a free service to philosophers of science, provided by philosophers of science
- Papers can be deposited free of charge and accessed by readers without the need for a user account

Kevin Elliott

TAKES OUR PROUST QUESTIONNAIRE

Saana Jukola

The 'Proust' Questionnaire was a game popularized by Marcel Proust who supposedly believed that by answering questions such as those below one reveals his or her true nature. This questionnaire was modernized more recently by James Lipton and 'In the Actors Studio'.



Kevin Elliott is an Associate Professor jointly appointed in Michigan State University's Lyman Briggs College, the Department of Fisheries and Wildlife, and the Department of Philosophy.

Who are your favourite heroes or heroines? In real life or in fiction.

Recently I've been particularly struck by the individuals involved in non-violent protests as part of the civil rights movement in the United States. At the recent SRPoiSE (Socially Relevant Philosophy of/in Science and Engineering) meeting organized by Justin Biddle at Georgia Tech, we were able to take a field trip to visit the Center for Civil and Human Rights in Atlanta. It was a really powerful experience for me.

What is your favourite food?

Chicago-style deep dish pizza. It reflects my childhood growing up in the Chicago suburbs.

What is the most critical academic or non-academic feedback you ever received?

I don't know if it's the most critical, but my kids are happy to provide a wide range of critical feedback—about the quality of my singing, about how young and inexperienced I looked (until I started losing all my hair), about the way I wave my hands when I talk, about the dumb nicknames I use, about my clothing, and so on.

Where do you write your best work?

I tend to get my best ideas when I'm in the shower or walking around. I'm most successful writing

them down in short bursts of activity in random locations, often while waiting to pick up my kids from an afterschool activity. I think the teachers at my daughter's middle school all recognize me as the guy sitting in the hallway typing on my laptop.

What is your favourite entertainment?

Working out or reading, although I don't do a good enough job of reserving time to do fun reading these days.

What profession would you like to attempt besides your own?

I honestly don't know what I would do if I weren't a philosopher. It feels like the perfect job for me.

What is your most treasured possession?

Probably our family's scrapbooks. I've often thought that if there were a fire, they'd be the first thing I'd grab on the way out of the house once our family was out. The computer-generated ones wouldn't be too hard to replace, but the earlier ones that my wife made by hand are especially precious.

Where were or are you happiest?

Walking around the park in our neighborhood with members of my family.

2019 OSLO

CALL FOR
ABSTRACTSISHPSSB OSLO MEETING
7-12 JULY 2019
UNIVERSITY OF OSLO,
BLINDERN CAMPUS

We invite submissions for the next International Society for the History, Philosophy and Social Studies of Biology biennial meeting, which will take place in Oslo, Norway, 7–12 July 2019.

The Council, Local Organizing, and Program Committees are working to put together an exciting program inspired by socially relevant work on biology and the life sciences and featuring Keynote Lectures by [Fern Wickson](#) and [Gísli Pálsson](#). We are building on the strengths of local communities of scholars in the social studies of science, biomedical sciences, science communication, and museum studies, and exploring new and established topics through engaging and innovative formats. We especially encourage historians, sociologists, and biologists to join us and feel at home here, while preserving our society as a great venue for philosophers to meet.

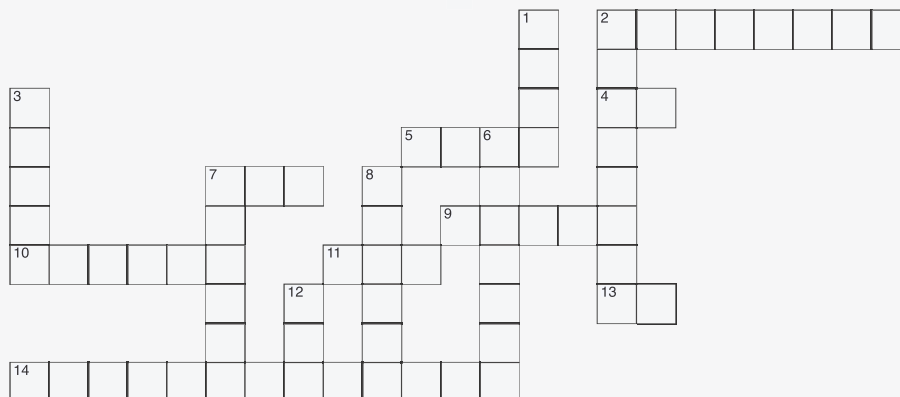
For more information about the conference follow this link:

<http://ishpssb2019.tekniskmuseum.no>


 The image shows two logos side-by-side. On the left is the 'ishpsb' logo, where 'ishp' is in a standard sans-serif font and 'sb' is in a larger, stylized font with a grey swoosh underneath. On the right is the 'Norsk Teknisk Museum' logo, with 'NORSK' in a small sans-serif font above 'TEKNISK' in a larger, bold sans-serif font, and 'MUSEUM' in a smaller sans-serif font below it.

SPSP Crossword

Sophia Efstathiou and Sara Green



ACROSS

- 2 They protested by destroying textile machinery
- 4 Union
- 5 Paradigm was a concept borrowed from art history by this man
- 7 “--- up” work: this is what happens during ‘normal’ science
- 9 SPSP is by other words fun
- 10 She is a Fox of philosophy of biology
- 11 Bi-conditional
- 13 Conditional
- 14 Science, not only medicine, can be this according to Chang

DOWN

- 1 A place for high-energy physics and casework for HPS
- 2 She is a lion of philosophy of biology
- 3 Famous for his Denkstil concept that paralleled paradigms
- 6 A philosopher famous for situating knowledge
- 7 Our companion species in lab science
- 8 A cause usually has that
- 12 We all know by now how the laws of physics do it