2017 MEETING
ISHPSSB & ABFHIB

SÃO PAULO, BRAZIL
16 TO 21 JULY, 2017

PROGRAM
PROGRAM OF THE
2017 MEETING

INTERNATIONAL SOCIETY FOR THE
HISTORY, PHILOSOPHY AND SOCIAL
STUDIES OF BIOLOGY (ISHPSSB)

&

ASSOCIAÇÃO BRASILEIRA DE FILOSOFIA E
HISTÓRIA DA BIOLOGIA (ABFHIB)

ISHPSSB

2017

ABFHIB

SÃO PAULO, BRAZIL
16 TO 21 JULY, 2017
Executive Committee of the ISHPSSB
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Local Committee for the 2017 Meeting
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Carl Craver
Matteo Mossio
Thomas Reydon
Ana Soto
Edna Suárez-Díaz
Joeri Witteveen
Most activities will be held at the Biosciences Institute of the University of São Paulo, in several rooms (see map on the next page). The plenary sessions, however, will occur at the auditorium of the International Diffusion Center (CDI, in Portuguese), inside the campus of the University of São Paulo (transfer buses will be available).
Biosciences Institute
University of São Paulo

1. AG-ZOO  
   (General Auditorium, Zoology)
2. Restaurant
3. CD-A1, CD-A2, CD-A3  
   (Didactic Center, Auditoriums 1, 2, 3)
4. AG-BOT  
   (General Auditorium, Botanic)
5. MINAS1, MINAS2, MINAS3, LABLIC and Secretariat & Conference Shop
7. Bus stop: “Rua do Lago”

Finding aid (alphabetical order)

AG-BOT 4
AG-ZOO 1
CD-A1, CD-A2, CD-A3 3
LABLIC 5
MINAS1, MINAS2, MINAS3 5
Restaurant 2
Secretariat & Conference Shop 5
Conference Program

Sunday, July 16
(On Sunday, all activities will occur at the Butantan Institute)
13:00-17:00 Registration, at Butantan Institute
13:30-15:00 Visit to the museums of Butantan
15:00-16:00 Brazilian music concert
16:00-17:00 Butantan park visit
17:00-18:00 President's welcome speech
18:00-18:40 Cinema
18:40-21:00 Welcome to São Paulo cocktail

Monday, July 17
(All activities will be held at the Biosciences Institute, up to 17:00 o'clock; then, the participants will be taken by bus to CDI*)
08:00-09:00 Registration, secretariat (LABLIC)
09:00-10:30 Parallel Sessions 1 – see page 8
10:30-11:00 Coffee break
11:00-12:30 Parallel Sessions 2 – see page 9
12:30-15:30 Lunch break; meeting of the ISHPSSB Council
15:30-17:00 Parallel Sessions 3 – see page 12
17:00-17:30 Coffee break
17:30-18:00 Transportation to CDI*
18:00-19:30 Plenary conference 1, CDI*
   Naomi Oreskes (Harvard University)
   "Can science be viewed as ex ante authoritative in a post-factual world?"
19:30-21:00 Poster session and refreshments – see page 14

* CDI = Auditorium of the International Broadcasting Center ("Centro de Difusão Internacional" in Portuguese). There will be transportation by bus for all participants and visitors. Boarding on the buses will take place at Rua do Matão, in front of the aisle 14, starting at 17:30 o'clock.
**Tuesday, July 18**
(All activities will be held at the Biosciences Institute, except for birdwatching)
07:00-08:30 Birdwatching at Butantan Institute (limited vacancies, requires advance registration)
08:00-09:00 Registration, secretariat (LABLIC)
09:00-10:30 Parallel Sessions 4 – see page 17
10:30-11:00 Coffee break
11:00-12:30 Parallel Sessions 5 – see page 19
12:30-15:30 Lunch break; early career mentoring lunch; ABFHiB Council meeting
15:30-17:00 Parallel Sessions 6 – see page 21
17:00-17:30 Coffee break
17:30-19:00 Parallel Sessions 7 – see page 24

**Wednesday, July 19**
(All activities will be held at the Biosciences Institute, up to 17:00 o'clock; then, the participants will be taken by bus to CDI*)
08:00-09:00 Registration, secretariat (LABLIC)
09:00-10:30 Parallel Sessions 8 – see page 27
10:30-11:00 Coffee break
11:00-12:30 Parallel Sessions 9 – see page 29
12:30-15:30 Lunch break; Grad. students general meeting; Membership diversity meeting; visit to Butantan lab (registration required)
15:30-17:00 Parallel Sessions 10 – see page 32
17:00-17:30 Coffee break
17:30-18:00 Transportation to CDI*
18:00-19:30 Plenary conference 2, CDI*
  Kevìn N. Laland (Center for Biological Diversity, School of Biology, University of St. Andrews, UK)
  "What use is an extended evolutionary synthesis?"

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Thursday, July 20
(All activities will be held at the Biosciences Institute, up to 17:00 o'clock; then, the participants will be taken by bus to CDI*)
08:00-09:00 Registration, secretariat (LABLIC)
09:00-10:30 Parallel Sessions 11 – see page 35
10:30-11:00 Coffee break
11:00-12:30 Parallel Sessions 12 – see page 37
12:30-15:30 Lunch break; ISHPSSB Council meeting
15:30-17:00 Parallel Sessions 13 – see page 40
17:00-17:30 Coffee break
17:30-18:00 Transportation to CDI*
18:00-19:30 Awards ceremony and ISHPSSB general meeting, at CDI
19:30-20:00 Transportation to conference dinner
20:00-22:30 Conference dinner

Friday, July 21
(All activities will be held at the Biosciences Institute)
08:00-09:00 Registration, secretariat (LABLIC)
09:00-10:30 Parallel Sessions 14 – see page 43
10:30-11:00 Coffee break
11:00-12:30 Parallel Sessions 15 – see page 45
12:30-15:30 Lunch break; ISHPSSB Council meeting
15:30-19:00 Excursions in São Paulo, University of São Paulo and Butantan Institute

* CDI = Auditorium of the International Broadcasting Center ("Centro de Difusão Internacional" in Portuguese). There will be transportation by bus for all participants and visitors. Boarding on the buses will take place at Rua do Matão, in front of the aisle 14, starting at 17:30 o'clock.
Monday, July 17
09:00-10:30 Parallel Sessions 1

ORGANIZED SESSION STANDARD TALKS – AG-ZOO
Heredity and Evolution in an Ibero-American Context
Orgs. Marsha Richmond and Ana Barahona
Chair of the session: Ana Barahona
Lilian Al-Chueyr Pereira Martins & José Franco Monte Sião – (002) The introduction of population genetics studies in Brazil (1943-1960): a bibliometric study
Marsha Richmond – (003) Central-American species/North-American knowledge: The cytogenetic research program of Sally Hughes-Schrader and Franz Schrader

ORGANIZED SESSION STANDARD TALKS – CD-A1
The Enduring Relevance of Organicism for Philosophy of Biology
Orgs.: Jan Baedke and Daniel J. Nicholson
Chair of the session: Jan Baedke
Daniel J. Nicholson – (004) Organicist Philosophy of Biology: Then and now
Jan Baedke – (005) Locating the organism in the environment: Old and new challenges
Daniel Brooks – (006) Joseph Needham’s contributions to the development of the levels concept in Biology (1929-1945)

ORGANIZED SESSION STANDARD TALKS – CD-A2
The Resituation of Scientific Knowledge
Org. and chair of the session: James Griesemer
Carlos Andrés Barragán – (007) Substantiating genetic and cultural continuity: Partial connections between genomic, archaeological and linguistic datasets
L. Scott Cole – (008) Resituating scientific knowledge using commercial platforms
James Griesemer – (009) Situating the resituation of knowledge
INDIVIDUAL PAPERS SESSION – CD-A3
History of Medicine
Chair of the session: Michel Morange
Ruy Jose Henriquez Garrido – (015) Optics and analogy in Fracastoro’s definition of "seeds of contagion at a distance"
Kelly Regina Silva Campos, Luiz Felipe Reversi, Ana Maria de Andrade Caldeira & João José Caluzi – (016) The sociality network of Albert Calmette’s studies about the development process of the bacillus BCG
Michel Morange – (017) Bacteriophage in the Pasteurian tradition

INDIVIDUAL PAPERS SESSION – MINAS1
Neurosciences: Philosophical Perspectives
Chair of the session: Osvaldo Frota Pessoa Jr.
Matthew Smithdeal – (138) Situating the individual: An expanded account of psychological mechanisms
Osvaldo Frota Pessoa Jr. – (020) On the coming revolution in Brain Science

INDIVIDUAL PAPERS SESSION – MINAS2
Life and organisms: Philosophical Perspectives
Chair of the session: Susie Fisher
Susie Fisher – (021) “Life created” – for the love of science?
Thomas Heams – (022) Why life cannot be engineered but can be defined
Flavio D'Abramo – (023) Epigenetics and the molecularization of the social

Monday, July 17
11:00-12:30 Parallel Sessions 2

ORGANIZED SESSION STANDARD TALKS – AG-ZOO
Heredity and Evolution in an Ibero-American Context
Orgs. Marsha Richmond and Ana Barahona
Chair of the session: Marsha Richmond
Marta Velasco Martín – (024) Women geneticists, families and *Drosophila* populations
Ana Barahona – (025) Women and the workplace: The work of Leonor Buentello at the first Unit of Human Genetics in Mexico Panel discussion

ORGANIZED SESSION STANDARD TALKS – CD-A1
Televology and Organization in Biological Systems
Orgs.: Matteo Mossio and Andrea Gambarotto
Chair of the session: Kepa Ruiz-Mirazo
Matteo Mossio – (027) What makes biological organization teleological?
Andrea Gambarotto – (028) Kant and beyond: natural purposiveness from an organizational perspective
Cristian Saborido – (029) Organizational teleology and functional normativity

ORGANIZED SESSION STANDARD TALKS – CD-A2
The Resituation of Scientific Knowledge
Org. and chair of the session: James Griesemer
Jason Oakes – (030) Versioning as a means to track resituation
Alok Srivastava – (031) The work of metabolism of anomalies at sites of scientific communities drives recruitment and re-situation of knowledge from other communities
Panel discussion

INDIVIDUAL PAPERS SESSION – CD-A3
Biological Education I
Chair of the session: Sarah M. Roe
Martin Joseph Bremer – (032) Why science education needs Philosophy
Sarah M. Roe – (033) The Citizen Science Movement according to Feyerabend: Taking advice from a madman
Eduardo Cortez – (034) Applying technology and history of science to develop an innovative teaching-learning sequence about natural selection and nature of science
INDIVIDUAL PAPERS SESSION – MINAS1
Phylogenetics: Philosophical Perspectives
Chair of the session: Celso Neto

Celso Neto – (035) Species cohesion in the age of discordance
Yuichi Amitani & Tetsuji Iseda – (036) What can species theorists learn from Parfit?

Nina Kranke – (160) The molecularization of phylogenetics – preconditions and consequences

INDIVIDUAL PAPERS SESSION – MINAS2
Systems Biology and Big Data: Philosophical Perspectives
Chair of the session: Constantinos Mekios

David Montminy – (038) Is biology once again setting a new agenda for philosophy of science?

Constantinos Mekios – (040) Can organizing principles continue to transform the research program of systems biology in a productive manner?

INDIVIDUAL PAPERS SESSION – MINAS3
Scientific Explorations
Chair of the session: Eleonore Zulnara Freire Setz

Denise de Alemar Gaspar, Marcos Almir Polettini, Eleonore Zulnara Freire Setz & Suzana Barretto Ribeiro – (042) Fauna in Campinas, São Paulo, in the era of sugarcane and coffee cultivation: From 19th century naturalists to 20th century popular and scientific chronicles

Alexandre Kannebley de Oliveira & Julio Cesar Garavello – (043) Systematics, history and biodiversity conservation relationships from the assembly of a freshwater fish species topotypes collection

INDIVIDUAL PAPERS SESSION – AG-BOT
Philosophy of Ecology I
Chair of the session: Michael Goldsby
Michael Goldsby – (044) Conflicting baselines: A crisis in Ecology
Georgia Rae Rainer – (045) Law & Order: Ecology
Bruno Travassos-de-Brito, Renata Pardini & Paulo Inácio de Knegt López de Prado – (046) From models to theories: A bottom-up approach to organize propositions into constitutive theories in Ecology

Monday, July 17
15:30-17:00 Parallel Sessions 3

ORGANIZED SESSIONS DIVERSE FORMAT – AG-ZOO
Mini-workshop
(047) Historical, Philosophical, and Interdisciplinary Writing and Publishing
Org.: ISHPSSB Education Committee
Chair of the session: Isabella Sarto-Jackson
Discussants:
Gregory Radick
Michael Dietrich
Staffan Müller-Wille

ORGANIZED SESSION STANDARD TALKS – CD-A1
The Multiple Guises of Value in Biological Science
Orgs. and Chair of the session: Adrian Currie
Joyce Havstad – (049) Taxonomic discovery, epistemic standards, and ecological aims in Ornithology
Adrian Currie – (050) Extrinsic values, the paradox of material evidence, and crocodiles
Panel discussion

ORGANIZED SESSION STANDARD TALKS – CD-A2
Teleology and Organization in Biological Systems
Orgs.: Matteo Mossio and Andrea Gambarotto
Chair of the session: Andrea Gambarotto
Gaëlle Pontarotti – (051) Connecting biological inheritance with purposiveness: A new insight into evolutionary theory

Kepa Ruiz-Mirazo – (052) The teleological debate at the interface between chemistry and biology

Nei Nunes-Neto – (053) The organizational approach of ecological functions and ecocentrism

ORGANIZED SESSION STANDARD TALKS – CD-A3

Models and Theories in Biology
Org. and chair of the session: Pablo Lorenzano

Karina Alleva, José Díez & Lucía Federico – (054) Models, theory structure and mechanism in Biochemistry: The case of allosterism

Pablo Lorenzano & Martín Díaz – (055) Models, laws and theories in population dynamics

Federico Nahuel Bernabé & Leandro Ariel Giri – (056) Neither one-sex nor two-sex Models: Rethinking the general conceptualization of sexual differences and differentiation in Biology

ORGANIZED SESSION DIVERSE FORMAT – MINAS1

Panel: Between Plants and Snakes: 100 Years of Botanical Studies at Instituto Butantan
Org.: Luiza Teixeira-Costa and Erika Hingst-Zaher
Chair of the session: Luiza Teixeira-Costa

Paulo Henrique Nico Monteiro – (057) Horto Oswaldo Cruz, medicinal plants and health in the XIX Century São Paulo

Adriano Dias de Oliveira – (058) Horto Oswaldo Cruz and the birth of botany in São Paulo

Luiza Teixeira-Costa – (059) Social and medicinal use of the botanical collections at the Horto Oswaldo Cruz

Yasmin Vidal Hirao – (060) Hoehne’s collection of orchids

Erika Hingst-Zaher – (061) Public participation and the research at the Horto Oswaldo Cruz
INDIVIDUAL PAPERS SESSION – MINAS2
Evolution Education
Chair of the session: Nelio Bizzo

**Gonzalo Peñaloza** – (062) The relation between science and religion in the circulation of Darwinism in the school biology in Colombia

**Jing Zhu, Mingjun Zhang & Michael Weisberg** – (063) Why does the Chinese public accept evolution?

**Nelio Bizzo** – (285) Understanding evidence of biological evolution in a Darwinian perspective: The power of philosophy

**Monday, July 17**
**19:30-21:00 Poster session**

**Posters on Biological Education**

**Ana Carolina Biscalquini Talamoni** – (068) Mondino de Luzzi, Alfonso Bovero and the birth of a tradition for the Anatomy teaching

**Antônio Fernando Gouvêa Silva, Paulo Newton Tonolli & Fernando Faria Franco** – (070) The historical construction of enzymes concept and its use in the Biology teaching

**Gregory Alves Dionor, Liziane Martins & Neima Alice Menezes Evangelista** – (071) Approach to History and Philosophy of Science in Brazilian Science Textbooks of Middle and High School

**Ítalo Nascimento de Carvalho** – (072) Structuring concepts in biology: contributions from the philosophy of biology to the high school curriculum


Matheus Luciano Duarte Cardoso & Thaís Cyrino de Mello Forato – (076) Contributions of the History of Biology in the teaching of Photosynthesis: A perspective for classroom

Nathalia Helena Azevedo & Daniela Lopes Scarpa – (077) “What are legume root nodules?” An example of history of science use for designing and evaluating inquiry-based-learning activities

Neima Alice Menezes Evangelista & Vanessa Carvalho dos Santos – (078) The gene concept in Cellular and Molecular Biology Higher Education textbooks

Rafael Luccas & Fernando Santiago dos Santos – (079) Teaching and learning Botany with a democratic and collaborative teaching approach: A report with undergraduate students

Renata de Paula Orofino & Daniela Lopes Scarpa – (080) Contributions from logic to research on science education

Posters on History of Biology

Christine Janczur – (083) Commented translation from an original source in the history of science: Claude Bernard’s Introduction à l’Étude de la Médecine Expérimental (1865)

Leonardo Augusto Luvison Araújo – (085) The cleavage between heredity and development in the early XX century: The importance of scientific practices


Pedrita Fernanda Donda & Lilian Al-Chueyr Pereira Martins – (087) Louis Agassiz’s conceptions on the origin of species and his criticisms on Charles Darwin’s proposal (1859-1874)

Posters on Philosophy of Biology

Andrea Soledad Olmos – (088) The functional language of Neuroethology

Breno Pascal de Lacerda Brito – (089) The role of non-epistemic values in accepting ecological theories

15
Claudio Ricardo Martins dos Reis & Leonardo Augusto Luvison Araújo – (090) The Nature of Change in Evolutionary Biology: Extended Evolutionary Synthesis?
Felipe Rebelo Gomes Lima & Nei Nunes-Neto – (092) A critique of Norton’s anthropocentric approach to sustainability: Linking intrinsic value to an organizational approach to functional ascriptions
Lucia Carvalho Neco, Nicolas Chaline & Hilton Ferreira Japyassu – (094) An integrative and quantitative concept of complexity as a measure of sociality
Luiz Felipe Reversi, Kelly Regina Silva & João José Caluzi – (095) An organicist perspective to the Philosophy of Science
Marcelo Silva de Carvalho Delfino & Breno Pascal Lacerda Brito – (096) Photomicrography as a method of visual representation in science: A discussion about objectivity in photomicrography from the standpoint of Robert Koch’s contribution
Simon Lohse & Thomas Reydon – (097) Why ELSI research would benefit from (more) philosophy of science
Vanessa Carvalho dos Santos & Jonei Cerqueira Barbosa – (098) What Biology is all about: Expanding the commognitive approach by examining Biology as a discourse
Victor Hugo Oliveira – (099) Occupational therapy and alternative treatment in relation to disorders of the psyche
Tuesday, July 18
09:00-10:30 Parallel Sessions 4

ORGANIZED SESSION STANDARD TALKS – AG-ZOO
Weldon’s Legacy Revisited: From an Integrated Historical and Philosophical Perspective
Org. and chair of the session: Yafeng Shan
Charles H. Pence – (100) Syntheses that weren’t: W.F.R. Weldon’s abandoned ‘synthesis’ of Biometry and Mendelism
Gregory Radick – (101) Biometry without Positivism: The means and ends of Weldon's mathematized Biology
Yafeng Shan – (102) Choice in the Mendelian-Biometrician controversy: Why Weldon was not a Mendelian

ORGANIZED SESSION STANDARD TALKS – CD-A1
From Biological Practice to Scientific Metaphysics: Prospects and Challenges
Org. and chair of the session: Alan C. Love
Janella Baxter – (103) Changing the degree of fine-grained influence with biological technologies
Katherine Liu – (104) Uncovering the complex “real” world through simple models?
Max Dresow – (105) Communities and ecosystems: The view from scientific practice

ORGANIZED SESSION STANDARD TALKS – CD-A2
On the Evolutionary Debunking of Reasons and Morality
Org. and chair of the session: Alejandro Rosas
Jorge Oseguera Gamba – (106) Can metaethical constructivism overcome the evolutionary debunking?
Maximiliano Martínez – (107) Evolutionary explanations and the Darwinian dilemma
Alejandro Rosas & Juan P. Bermúdez – (108) Shared intentionality co-evolves with a sense of fairness
ORGANIZED SESSION STANDARD TALKS – CD-A3
Contraceptive Controversies: Perspectives on Birth Control
Org.: Kate Grauvogel
Chair of the session: Sophia Efstathiou
Christopher ChoGlueck – (109) Why ‘how It works’ has mattered: The values of knowing the morning-after pill’s mechanism
Kate Grauvogel – (110) Controversial contraceptives: Uncoupling the pill and social progress to assess risk
Panel discussion

ORGANIZED SESSION STANDARD TALKS – MINAS1
The Power of One: The Individual in Neuropsychology, Psychology, and Psychiatry
Org. and chair of the session: Rob Wilson
Carl F. Craver – (111) Mr. B as science in amber: Some historical perplexities of Neuropsychiatry
Şerife Tekin – (112) First person perspectives in Psychiatry
Natalia Washington – (113) Diagnostic kinds as human kinds

INDIVIDUAL PAPERS SESSION – MINAS2
Visual Representation and Science
Chair of the session: Erica Torrens
Erica Torrens – (114) Pictures in Biology: Representing human evolution in Mexican visual culture
Gemma Anderson and John Dupré – (115) Representing biology as process
Laura Perini – Beyond depiction: Aesthetics & images in the Life Sciences

INDIVIDUAL PAPERS SESSION – AG-BOT
Social, Historical and Philosophical Studies of Ecology
Chair of the session: Thomas Michael Lewinsohn
Thomas Michael Lewinsohn – (116) The onset of Brazilian ecological science in the 20th century
Diana Bertuol Garcia, Carla Morsello & Renata Pardini – (117) A conceptual framework for understanding the causes of the science-practice gap in Ecology
Guilherme Sanches de Oliveira – (118) Ecological Psychology and the environmentalist promise of “affordances”

Tuesday, July 18
11:00-12:30 Parallel Sessions 5

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Innovative Proposals to Introduce History and Philosophy of Biology in Biology Education
Org.: Maria Elice Brzezinski Prestes and Paulo T. Sano
Chair of the Session: Paulo T. Sano
Thaís Cyrino de Mello Forato & Maria Elice Brzezinski Prestes – (121) Students’ perceptions about relevant elements to prepare teachers to deal with history and nature of science
Filipe Faria Berçot & Maria Elice Brzezinski Prestes – (122) Where do they come from? The 18th century puzzle of aphids in a virtual historical narrative
Panel discussion

ORGANIZED SESSION STANDARD TALKS – CD-A1
Thinking the Organic in German Idealism: Life, Time, and History
Org. and chair of the session: Juan Felipe Guevara-Aristizabal
Juan Felipe Guevara-Aristizabal – (123) Epigenesis and the rupture of Kantian time
Violeta Aréchiga-Córdova – (124) Schelling: Epigenesis and Philosophy
Joan Steigerwald – (125) Schelling’s Natural History of the World Soul

ORGANIZED SESSION STANDARD TALKS – CD-A2
Modeling Individuality: Organisms, Stem Cells, and Cancer
Org. and chair of the session: Melinda Bonnie Fagan
Melinda Bonnie Fagan – (126) Stem cells and lineage models of development
Anne Siebels Peterson – (128) Individuality, generality, and change in Metaphysics and Philosophy of Biology
Panel discussion

ORGANIZED SESSION STANDARD TALKS – CD-A3
Science and Ethics on the Application of Biogenetic and Chemical Technologies to Large-scale Agriculture in Argentina and Brazil
Orgs.: Luciana Zaterka, Pablo Rubén Mariconda and Guillermo Folguera
Chair of the session: Pablo Rubén Mariconda
Pablo Rubén Mariconda – (129) Epistemology and Ethics in large-scale biotechnological applications
Luciana Zaterka – (130) Genetically modified organisms: The scientific inadequacy of the principle of substantial equivalence
Guillhermo Folguera & Christian Francese – (131) Biotechnology, technoscience and theoretical simplification. The case of genetically modified organisms (GMOs)

ORGANIZED SESSION STANDARD TALKS – MINAS1
Population Genetics and Mechanics
Orgs.: Jean Gayon and Maël Montévil
Chair of the session: Matteo Mossio
Jean Gayon – (132) Invariance and reversibility in theoretical Population Genetics
Maël Montévil – (133) What counterpart to the principle of inertia in Population Genetics?
Panel discussion

INDIVIDUAL PAPERS SESSION – MINAS2
Scientific Practices: Philosophical Perspectives I
Chair of the session: Bettina Bock von Wülffingen
Dominic Berry – (135) The history of DNA synthesis: Ways of knowing and making in biology
Rick Shang – (136) Evaluating scientific detection instruments: The case of Positron Emission Tomography

Bettina Bock von Wülfingen – (137) Annotating, retrieving and reactivating: the epistemic role of labels on micro-preparations within bioscience recovery systems (using the example of Alzheimer’s disease preparations)

INDIVIDUAL PAPERS SESSION – MINAS3
Biology, Philosophy and Anthropology
Chair of the session: Elliot Hollingsworth
Pedro Henrique Pereira, Victor Ximenes Marques & Amanda Soares de Melo – (140) Towards a naturalist philosophical Anthropology

Elliot Hollingsworth – (141) Helmuth Plessner’s excentric positionality and schizophrenia

Tuesday, July 18
15:30-17:00 Parallel Sessions 6

ORGANIZED SESSION STANDARD TALKS – AG-ZOO
Dreamers, Visionaries, and Revolutionaries in the Life Sciences
Org. Michael Dietrich
Chair: Oren Harman
Oren Harman – (146) Perchance to dream: Fostering novelty in the Life Sciences
Mark Borrello – (171) David Sloan Wilson: Visionary, idealist, ideologue
Luis Campos – (148) Neanderthals in space: George Church’s modest steps toward possible futures

ORGANIZED SESSION STANDARD TALKS – CD-A1
Teaching Brazilian Biology: Historical Case Studies for Nature of Science Education
Orgs.: Nathália Helena Azevedo and Thiago Marinho Del Corso
Chair of the session: Nathália Helena Azevedo
Nathália Helena Azevedo & Thiago Marinho Del Corso – (149) Carlos Chagas (1879 – 1934) and the triple discovery: A teaching-learning sequence with historical inquiry case and nature of science

Rodrigo Ponce & Ursula Simonetti Lovaglio – (150) Case study: Johanna Döbereiner and the nitrogen biological fixation

Adriano Dias Oliveira & Fernanda Pardini Ricci – (151) Case study: Different aspects of the nature of science present in a historical case study about Vital Brazil

ORGANIZED SESSION DIVERSE FORMAT – CD-A2
Dialogue and informal roundtable
Toward a Theory of Organisms: Two Proposals and Three Aims: Using the Theory to Construct Objectivity, Provide Intelligibility and Frame Observations and Experiments
Org.: Carlos Sonnenschein
Chair: Charbel El-Hani
Ana M. Soto – (152) Principles for a theory of organisms
Samuel M. Scheiner – (153) A general theory of organisms
Dialogue and extended roundtable

ORGANIZED SESSION STANDARD TALKS – CD-A3
Collaboration in Contemporary Bioscience: Sociological and Philosophical Approaches
Org.: Phillip Honenberger
Chair of the session: Sabina Leonelli
Niccolò Tempini – (154) Collaborative science and the epistemic consequences of project management (or its lack thereof): Insights from an interdisciplinary research collaboration and data infrastructure development project
Phillip Honenberger – (156) On the dynamics of collaborations in contemporary Biosciences, with lessons drawn from Nature
Panel discussion

INDIVIDUAL PAPERS SESSION – MINAS1
Reductionism: Philosophical Perspectives
Chair of the session: Daniel C. Burnston
Daniel C. Burnston – (066) Getting over atomism
Nahuel Pallitto – (158) Human behaviour, reduction and the lack of lower-level warrants
Nicolás José Lavagnino, Marta Bertolaso & Guillermo Folguera – (159) Omics in cancer research: Winds of change or same old story?

INDIVIDUAL PAPERS SESSION – MINAS2
Primate Evolution: Theoretical and Philosophical Perspectives
Chair of the session: Oren Bader
Michael Dale – (162) The sexual selection of Hominin bipedalism
Alba Leticia Pérez-Ruiz – (207) Cognitive complexity in primates: The social mind
Oren Bader – (164) ‘Being in a group’ – The emotional scaffolding of the evolution of collective intentionality

INDIVIDUAL PAPERS SESSION – MINAS3
Gender and Race: Historical and Philosophical Studies
Chair of the session: Donald Luke Opitz
Donald Luke Opitz – (165) Victoria domesticates Amazonia: Gender and Botany in nineteenth century British surveys of Guiana
Benjamin Rylie Palmer – (166) A fruitful field for women: Oral histories of 20th century women biochemists
Leyla Mariane Joaquim – (167) Race, racism and science: Contemporary perspectives

INDIVIDUAL PAPERS SESSION – AG-BOT
Biological Education II
Chair of the session: Agustín Adúriz-Bravo
Agustín Adúriz-Bravo & Andrea Revel Chion – (168) On the construction of “biology stories”: The value of historical narratives for biology education
Ítalo Nascimento de Carvalho & Dália Melissa Conrado – (169) Modeling socioscientific issues with laws for high school biology teaching

23
**Frederik Moreira-dos-Santos** – (170) Evolutionary explanation and religious beliefs: Where the conflict really lies

**Tuesday, July 18**
**17:30-19:00 Parallel Sessions 7**

**ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO**
Dreamers, Visionaries, and Revolutionaries in the Life Sciences
Org. Michael Dietrich
Chair: Oren Harman
Panel discussion:
**Oren Harman**
**Mark Borrello**
**Luis Campos**

**ORGANIZED SESSION STANDARD TALKS – CD-A1**
Toward a Theory of Organisms: Two Proposals and Three Aims: Using the Theory to Construct Objectivity, Provide Intelligibility and Frame Observations and Experiments
Orgs.: Ana M. Soto and Matteo Mossio
Chair: Samuel M. Scheiner
**Maël Montévil** – (173) Modeling mammary organogenesis from biological first principles
**Carlos Sonnenschein** – (174) Carcinogenesis explained within the context of a theory of organisms
**Samuel M. Scheiner** – (175) A theory of ecoimmunology and its relationship to a general theory of organisms

**INDIVIDUAL PAPERS SESSION – CD-A2**
Cultural Evolution
Chair of the session: Lorenzo Baravalle
**Lorenzo Baravalle** – (176) Invariance and unification in the theory of cultural evolution
**Carlos Gray Santana** – (177) Cultural evolution: Is language a special case?
INDIVIDUAL PAPERS SESSION – CD-A3
General Epistemology and Biology I
Chair of the session: Octavio Valadez-Blanco
Daniel C. Baiardi – (178) The concept of semantic fitness inside a semiotic account of natural kind terms
Octavio Valadez-Blanco – (234) Cancer in the civilizing process: An epistemological and educational approach to historical and socio-environmental roots

INDIVIDUAL PAPERS SESSION – MINAS1
Identity and Individuality
Chair of the session: Anne Sophie Meincke
Denise Regina Percequillo Hossom – (181) From personhood to neighborhood: Biotic communities and personal identity
Anne Sophie Meincke – (182) Processual animalism: Towards a scientifically informed account of biological identity through time

INDIVIDUAL PAPERS SESSION – MINAS2
Scientific Practices: Philosophical Perspectives II
Chair of the session: Maria Strecht Almeida
Robert Meunier – (183) Perspective and practice: A comparative view on Walther Vogt’s and Alfred Sturtevant’s approaches to development
Luciana Sarmento Garbayo – (184) Coordinating measurement and world in Medicine: A model-based approach to the introduction of the metric system standardization in the XIXth and XXth centuries
Maria Strecht Almeida – (185) Beyond multiplicity: Exploring narratives around the life span of the mammalian erythrocyte

INDIVIDUAL PAPERS SESSION – MINAS3
Philosophy of Evolution I
Chair of the session: Makmiller Pedroso
Brandon Allen Conley – (186) Disentangling and integrating Mayr and Tinbergen
Mingjun Zhang – (187) Is methodological adaptationism really so dangerous?

Makmiller Pedroso – (188) Coping with stress: How microbes respond to bottleneck events

INDIVIDUAL PAPERS SESSION – AG-BOT
Race and Ethnicity: Historical Perspectives
Chair of the session: Michael Osborne

Anita Guerrini – (189) Joseph Banks, John Hunter, and the skull trade

Joe Lunn – (190) Martial Race Theory in Africa: Herbert Spencer's institutional influence on European colonial armies during the First World War
Wednesday, July 19  
9:00-10:30 Parallel Sessions 8

ORGANIZED SESSION STANDARD TALKS – AG-ZOO  
Conceptual and Political Challenges in Postgenomics: Organisms, Niches, and Plasticity  
Org.: Maurizio Meloni  
Chair of the session: Maurizio Meloni  
Eva Jablonka – (191) The challenges of the Extended Evolution Synthesis (EES) research framework  
Jan Baedke – (192) No return of the organism? Postgenomic trends in biological theory and society  
Tatjana Buklijas – (193) Uses of epigenetics

ORGANIZED SESSION STANDARD TALKS – CD-A1  
Philosophy of Neuroscience: Broader Implications for Philosophy of Science  
Org.: Marshall Abrams  
Chair of the session: Carl Craver  
Marshall Abrams – (194) Evolutionarily distributed prediction error minimization: R-strategies and selection for misperception  
Lena Kästner & Henrik Walter – (195) Predictive processing: A theory of everything?  
Matteo Colombo – (196) The free-energy principle as a first principle of neuroscience?

ORGANIZED SESSION DIVERSE FORMAT – CD-A2  
Type of session: Graduate student workshop  
(197) Decoding science papers (tools for non-scientists)  
Org. and chair of the session: Jessica A. Bolker  
Discussants:  
Ana M. Soto  
Laura Perini  
Dan Burnston
ORGANIZED SESSION STANDARD TALKS – CD-A3
Multidisciplinary Perspectives on Evolutionary Biology, Religion and Society
Org.: James Riley
Chair of the session: Fern Elsdon-Baker
Fern Elsdon-Baker – (198) Creating creationists: Conceptual and methodological issues in social studies of the perceived relationship between evolutionary science and religious belief
Carissa Sharp, Carola Leicht, Karisha George & Fern Elsdon-Baker – (199) The projection of belief in the conflict between science and religion
Stephen Jones, Rebecca Catto & Tom Kaden – (200) Doubt, uncertainty and salience in public perceptions of biological evolution: Results from a qualitative study of the UK and Canada

INDIVIDUAL PAPERS SESSION – MINAS1
Social Studies of Genetics
Chair of the session: Antonello La Vergata
Antonello La Vergata – (201) From biology to utopia: Charles Richet’s mankind in the future
Evan Arnet – (202) Our mutational load and the politics of the human breeding population
Tito Brige Carvalho – (203) Modeling nature, modeling society: Drosophila Genetics in post World War Two Brazil

INDIVIDUAL PAPERS SESSION – MINAS2
Philosophy of Ecology II
Chair of the session: Victor Lefèvre
Victor Lefèvre – (204) Explaining the dynamics of ecosystems: A plea for organicism
Leila C. Cruz & John Collier – (205) Hierarchy Theory as epistemological framework in conservation biology research
Guilherme Sanches de Oliveira – (206) Go big AND go home? The Biome problem and its metaphysical and epistemological roots
INDIVIDUAL PAPERS SESSION – MINAS3
Modeling and Mechanisms: Historical and Philosophical Perspectives
Chair of the session: Jens Harbecke

Jens Harbecke – (210) Two challenges for a Boolean approach to constitutive inference

Luana Poliseli & Jeferson Gabriel da Encarnação Coutinho – (211) Explaining ecological phenomena by means of mechanistic models: Is it possible?

Tobias Cheung – (212) Processual orders of organized living systems: The agent models of Cuvier, Hufeland and Cabanis

Wednesday, July 19
11:00-12:30 Parallel Sessions 9

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Panel with four speakers
(213) Reflections on the Past 50 Years of the History of Biology
Org. and chair of the session: Michael Dietrich
Discussants:
Garland Allen
Ana Barahona
Karen Rader
Marsha Richmond

ORGANIZED SESSION STANDARD TALKS – CD-A1
Conceptual and Political Challenges in Postgenomics: Organisms, Niches, and Plasticity
Org.: Maurizio Meloni
Chair of the session: Tatjana Buklijas

Maurizio Meloni – (214) The politics of nature-nurture: What it was, how it is changing in postgenomic times

Stephen Engelmann – (215) From the evolution of cooperation to the political physiology laboratory: The adventures of biopolitical science
**Benjamin Gregg** – (216) Epigenetics as a political theory of genetically influenced social inequalities

ORGANIZED SESSION STANDARD TALKS – CD-A2
Philosophy of Neuroscience: Broader Implications for Philosophy of Science
Org.: Marshall Abrams
Chair of the session: Marshall Abrams
**Nina Atanasova** – (218) Virtual Morris water maze: The independent life of an experimental system
**Philipp Haueis** – (219) Mesoscale concepts and cortical function

ORGANIZED SESSION STANDARD TALKS – CD-A3
Biodiversity Patterns and their Ecological and Evolutionary Origin
Org. and chair of the session: Davide Vecchi
**Silvia Di Marco** – (220) Eco-evolutionary feedback theory: Bridging the gap between ecological and evolutionary processes
**Elena Casetta & Jorge Marques da Silva** – (221) Are species the main units of biodiversity? A lesson from multispecies biofilms
**Davide Vecchi** – (223) The instability of the homogeneous and the stability of the heterogeneous as causes of biodiversity

ORGANIZED SESSION STANDARD TALKS – MINAS1
Multidisciplinary Perspectives on Evolutionary Biology, Religion and Society
Org.: James Riley
Chair of the session: Bernard Lightman
**Bernard Lightman** – (224) Oliver Lodge, evolution, and religion
**James Riley** – (225) Popes and evolution in the press: A media content analysis of UK newspapers
Glen Moran – (226) British Muslim perceptions of biological evolution

ORGANIZED SESSION STANDARD TALKS – MINAS2
The Cell Theory Reconsidered: From Cell to Organism
Organizer and chair of the session: Sherrie L. Lyons
Maurizio Esposito – (227) Within and beyond the cell: William Emerson Ritter between cytology and politics
Sherrie L. Lyons – (228) “Something is missing”: Daniel Mazia and the concept of the cell body
Gabriel Vallejos – (229) Cell biology and the choice of a fundamental unit of analysis

INDIVIDUAL PAPERS SESSION – MINAS3
Gender and Sexual Orientation: Philosophical Perspectives
Chair of the session: Ingo Brigandt
Ingo Brigandt & Esther Rosario – (230) Three concepts of gender for different social aims
Fabrizio Mc Manus – (231) Queering explanations of human sexual diversity
Jaroslava Varella Valentova & Marco Antonio Correa Varella – (232) Adaptiveness of the sexual orientation spectrum: Resolving the seeming evolutionary puzzle of homosexuality

INDIVIDUAL PAPERS SESSION – AG-BOT
Philosophy of Evolution II
Chair of the session: Giorgio Airoldi
Giorgio Airoldi – (235) A proposal of Design Space to classify and explain evolutionary changes
Alejandro Fábregas-Tejeda – (236) The emerging structure of the Extended Evolutionary Synthesis: Epistemic turmoil and alternative interpretations
Wellington Bittencourt-dos-Santos – (237) Conceptual networks analysis of the integration between internalist and externalist views in Evo-devo
Wednesday, July 19
15:30-17:00 Parallel Sessions 10

ORGANIZED SESSION DIVERSE FORMAT – CD-A1
Panel
Organisms, Membranes and Boundaries: A Process Perspective
Org. and chair of the session: John Dupré
Daniel Nicholson – (238) Mechanisms and the fluidity of life
Stephan Guttinger – (239) Vagueness and the processual nature of membranes
Anne Sophie Meincke – (240) On the metaphysics of living boundaries

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Panel
Agriculture and the Biological Sciences: Heredity, Productivity, Organisms, and the Farmer
Orgs.: Gregory Radick, Berris Charnley and Dominic Berry
Chair of session: Gregory Radick
Barbara Kimmelman – (241) Making Mendelians: Agricultural breeding programs and the early careers of Edward Murray East and Rollins Adams Emerson
Garland Allen – (242) Genetics and the penetration of capital into United States agriculture, 1890-1940: A Marxist analysis
Tiago Saraiva – (243) California cloning: Oranges in circulation and the writing of transnational history
Berris Charnley – (244) “Dedicated to all Miss Ormerod’s correspondents in economic entomology”: The Injurious Insects Movement and the social purpose of science, 1870-1901

ORGANIZED SESSION STANDARD TALKS – CD-A2
Rethinking the Explanatory Role of Neuroscience in Psychopathology Research
Org.: Isabella Sarto-Jackson
Chair of the session: Nina Atanasova
Isabella Sarto-Jackson – (245) Revisiting conceptual frameworks of psychopathologies: The ‘drug-centered’ versus the ‘disease-centered’ model

Paola Hernández Chávez – (246) The logic of dysfunctions in Cognitive Neuroscience: Five methodological principles

Nina Atanasova – (247) ADHD across cultures: A case study in the biopsychosocial model of mental illness

INDIVIDUAL PAPERS SESSION – CD-A3
Experiments and Models: Philosophical Perspectives
Chair of the session: Lena Kästner

Lena Kästner – (248) Experiments in a 2 x 2 table

Jessica A. Bolker – (249) Animal models in translational research: Rosetta Stone or stumbling block?

Sophia Efstathiou – (250) Personalising RCTs: What is the right target?

INDIVIDUAL PAPERS SESSION – MINAS1
Continental Philosophical Perspectives on Biology and Medicine
Chair of the session: Sandra Caponi

Sandra Caponi – (251) Psychiatry and the construction of subjectivity in modern society

Olivier Perru – (252) Canguilhem: A philosophy of life and a philosophical history of life sciences

INDIVIDUAL PAPERS SESSION – MINAS2
Function and teleology
Chair of the session: Amanda Thorell

Amanda Thorell – (256) Physiological function, health and medical theory

Marcela D’Ambrosio, Nelio Bizzo, Marco Solinas & Fernando Santiago dos Santos – (258) The influence of Teleology on the comprehension of evolution and its consequences to education: An analysis from Aristotle to Mayr’s teleological categories
INDIVIDUAL PAPERS SESSION – MINAS3
Philosophy of Evolution III
Chair of the session: Gustavo Caponi
Gustavo Caponi – (259) The physiological and ecological correlate of the phylogenetic exemplar
Matheus Henrique da Mota Ferreira – (261) There in evolution and back again: Evolutionary dialectics of ontogeny and phylogeny through Developmental Psychology and Biology of Cognition

INDIVIDUAL PAPERS SESSION – AG-BOT
History of Evolution I
Chair of the session: Gonzalo Peñaloza
Jairo Robles-Piñeros & Gonzalo Peñaloza – (262) The reception of Darwinism in Colombia in the late 19th century
Douglas Rogério Anfra – (263) Evolution theory and the German social democracy
Luis Felipe Eguiarte Souza – (264) Haldane between scientific facts and a hard place: The Lysenko affair and his conviction to the public understanding of science
Thursday, July 20
9:00-10:30 Parallel Sessions 11

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Multiple speakers session
Philosophical Issues in Astrobiology
Orgs. Kelly C. Smith and Carlos Mariscal
Chair of the session: Kelly C. Smith
Erik Persson – (266) Some philosophical thoughts about planetary protection
Leonore Fleming – (267) To serve Man: Eating meat, eating people, and eating aliens
Carlos Mariscal – (268) When astrobiologists write humanities & when humanists write astrobiology
Kelly C. Smith – (269) Pinning down "Life"

ORGANIZED SESSION STANDARD TALKS – CD-A1
Generic and Genetic Perspectives on Evolvability
Org.: Alan C. Love
Chair of the session: Thomas A. Stewart
Thomas A. Stewart – (270) RNA sequencing as a predictive tool for analyzing evolvability
Alan C. Love – (272) Temporal scale and extrinsic contributions to evolvability

ORGANIZED SESSION DIVERSE FORMAT – CD-A2
How is the Human Possible? The Hybrid Hominin, the Hybrid Mind, and Unique Relation of Embodiment to Sociality
Type of session: Roundtable
Orgs.: Lenny Moss and Victor Ximenes Marques
Chair of the session: Victor Ximenes Marques
Lenny Moss – (273) The hybrid Hominin and its evolved hybrid mind: Groundwork for a renewed Philosophical Anthropology?
Discussants:
Victor Ximenes Marques (274)
Elliot Hollingsworth (275)
Phillip Honenberger (276)

ORGANIZED SESSION STANDARD TALKS – CD-A3
The History and Philosophy of Taxonomy as an Information Science
Orgs.: Joeri Witteveen and Staffan Müller-Wille
Chair of the session: Staffan Müller-Wille

Bettina Dietz – (277) Co-authoring taxonomy in eighteenth-century botany

Joeri Witteveen – (278) Anchoring taxonomic names in a deluge of data

Staffan Müller-Wille – (279) “Good and bad species” – Anton Kerner von Marilaun, Charles Darwin, and Gregor Mendel on the ranking of species

ORGANIZED SESSION STANDARD TALKS – MINAS1
Ethnobiology: Historical, Philosophical, and Sociological Issues
Orgs.: David Ludwig and Charbel El-Hani
Chair of the session: David Ludwig

David Ludwig – (280) Revamping the metaphysics of ethnobiological classification

Natalia Hanazaki – (281) Contributions and pitfalls of current Ethnobiology

Fabio Pedro S. F. Bandeira – (282) Integrating communities values of biodiversity and traditional knowledge with scientific knowledge to environmental management: Epistemological limits and challenges

ORGANIZED SESSION STANDARD TALKS – MINAS2
Global Perspectives on Human Genetics: Past and Present
Orgs.: Edna Suárez-Díaz, Rosanna Dent and Vivette García-Deister
Chair of the session: Vivette García-Deister

Soraya De Chadarevian – (286) Human chromosomes in the atomic age
Rosanna Dent – (287) “Men of exuberant health”: Indigenous subjects and the gendered study of human microevolution in midcentury Brazil

INDIVIDUAL PAPERS SESSION – AG-BOT
Philosophy of Evolution IV
Chair of the session: Ciprian Jeler
Ciprian Jeler – (289) Group selection and how not to define a group’s fitness
François Papale – (290) The distinction between populations and individuals in the context of Darwinian explanations: A matter of integration
Tamar Schneider – (120) Ecological Interactions within the Holobiont: On the Holobiont’s interactions of its microorganisms

Thursday, July 20
11:00-12:30 Parallel Sessions 12

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Roundtable
Manipulation and Causation in Biology: Genetics, Evolution and Experimental Intervention
Orgs.: Maurizio Esposito, Davide Vecchi, Gabriel Vallejos and Lorenzo Baravalle
Chair of session: Maurizio Esposito
Maurizio Esposito – (291) Handling life: Intervention and causation in Biology
Davide Vecchi – (292) Prokaryotic transcription as a test case for manipulationist accounts of developmental causation
Gabriel Vallejos – (293) Extrapolating reliable knowledge through different experimental systems
Lorenzo Baravalle – (294) Is genetic drift a force of evolution?
ORGANIZED SESSION STANDARD TALKS – CD-A1
Doing and Undoing Race
Org.: Ageliki Lefkaditou
Chair of the session: Dominic Berry
**Tracy Teslow** – (295) Two takes on race: Exhibitions in mid-20th century United States museums
**Abigail Nieves Delgado** – (296) Ways of seeing faces: Race as visible difference in facial reconstruction
**Ageliki Lefkaditou** – (297) Blood, bone, and DNA: Undoing race at the museum

ORGANIZED SESSION STANDARD TALKS – CD-A2
The History and Philosophy of Taxonomy as an Information Science
Orgs.: Joeri Witteveen and Staffan Müller-Wille
Chair of the session: Joeri Witteveen
**Gordon McOuat** – (298) The threat of sub-species: The intrusion of a taxonomic category and what it might say about meanings in taxonomic practice
**Catherine Kendig** – (299) Individuation, identity, and sortals in biological taxonomy
**Thomas Reydon** – (300) Taxa and systems as holders of information about organisms

ORGANIZED SESSION STANDARD TALKS – CD-A3
Ethnobiology: Historical, Philosophical, and Sociological Issues
Orgs.: David Ludwig and Charbel El-Hani
Chair of the session: David Ludwig
**Charbel El-Hani** – (301) Ethnobiological and ethnoecological research as key contributors to culturally responsive science education: Epistemological grounds and educational studies
**Diego F. Valderrama-Pérez** – (302) Integrating different accounts for interpreting traditional communities’ knowledge in the science classroom: Contributions for dialogue, increase of students’ self-esteem and sense of community belonging
Panel discussion on the relevance of ethnobiology for ISHPSSB

38
ORGANIZED SESSION STANDARD TALKS – MINAS1
Nuclear Environments: Geography and Locality in Atomic Age Ecology and Environmental Research
Org. and chair of the session: Judy Johns Schloegel
Joshua McGuffie – (303) Hidden atomic loci: Cooperation in radioecology at the UCLA Atomic Energy Project and the University of Washington Applied Fisheries Laboratory in the 1940s and 1950s
Alistair Sponsel – (304) The symbiosis between studies of nuclear weapons and studies of coral reefs, 1946-1977
Toshihiro Higuchi – (305) Cold War, hot spots: Global fallout, regional variations, and the question of scale in the U.S. Worldwide Radiostrontium Sampling Program

ORGANIZED SESSION STANDARD TALKS – MINAS2
Global Perspectives on Human Genetics: Past and Present
Orgs.: Edna Suárez-Díaz, Rosanna Dent and Vivette García-Deister
Chair of the session: Rosanna Dent
Elise Burton – (306) The politics of scientific collaboration and the International Biological Program in the Middle East
Vivette García-Deister & Lindsay Smith – (307) "Los migrantes desaparecidos" as a population of cognition: Crisis, unknowability, and the making of the missing
Vitor Richter – (308) Accessing prisoners’ bodies: Ethical and administrative challenges in making Brazil’s national DNA database

INDIVIDUAL PAPERS SESSION – MINAS3
Medicine and Health Sciences: Philosophical Perspectives
Chair of the session: Megan Delehanty
Sara Kolmes – (309) They tried to make me go to rehab
Shane N. Glackin – (310) Supervenient disease: The biological and the social in Medicine
Megan Delehanty – (311) Illness or identity?
INDIVIDUAL PAPERS SESSION – AG-BOT
Philosophy of Evolution V
Chair of the session: Ariel Jonathan Roffé
Marshall Abrams – (312) Imprecise probability in evolution and mechanism
Ariel Jonathan Roffé & Santiago Ginnobili – (314) Optimality models and the propensity interpretation of fitness

Thursday, July 20
15:30-17:00 Parallel Sessions 13

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Roundtable
History, Philosophy and Sociology of Ethnobiology: A Latin American Perspective
Orgs.: Francisco Vergara-Silva, Radamés Villagómez-Reséndiz and Tania González-Rivadeneyra
Chair of the session: Francisco Vergara-Silva
Radamés Villagómez-Reséndiz – (315) Mapping styles of ethnobiological thinking in Latin America: Two kinds of integration between biology and anthropology
Tania González-Rivadeneyra & Arturo Argueta-Villamar – (316) The meaning and use of ‘biocultural’ in Latin American ethnobiology
Alfredo Sáynes-Vásquez – (317) Centers, peripheries, and the historiography of ethnobiology: Eugene Hunn’s periodization as a case study
Panel discussion

ORGANIZED SESSION STANDARD TALKS – CD-A1
Nuclear Environments: Geography and Locality in Atomic Age Ecology and Environmental Research
Org.: Judy Johns Schloegel
Chair of the session: Toshihiro Higuchi
E. Jerry Jessee – (318) The nuclear sacrifice zone: Fallout, science information, and the American West
Judy Johns Schloegel – (319) A classical AEC boundary dispute: Thermal studies and the Great Lakes Research Program at Argonne National Laboratory in the 1970s
Final panel discussion

ORGANIZED SESSION DIVERSE FORMAT – CD-A2
Multiple speakers session (four talks and one brief commentary)
Challenges and Opportunities of Data Integration
Org.: Sabina Leonelli
Chair of the session: James R Griesemer
Sabina Leonelli – (320) Studying plant traits across cultures: Data integration strategies in plant phenomics
David J. Colaço – (321) The interaction of technique and data: Insights from neural microscopy
Stefano Canali – (322) Integrating data in Molecular Epidemiology: The case of exposome research
Niccolò Tempini – (323) Where health and environment meet: Geolocation as invariance mechanism for integrating diverse data sources

INDIVIDUAL PAPERS SESSION – CD-A3
Philosophy of Evolution VI
Chair of the session: Roger Sansom
Rick Morris – (324) Stranger in a strange land: A forecasting account of evolutionary mismatch
Roger Sansom – (326) Why LaPlaceanism is no threat to evolutionary theory

INDIVIDUAL PAPERS SESSION – MINAS1
Cell and Molecular Biology: Philosophical Issues
Chair of the session: Stephan Guttinger
Ravi Gomatam – (328) The Central Dogma, Quantum Theory and objective semantic information

41
Stephan Guttinger – (012) When size matters: Lithium and what it means to be part of a cell

INDIVIDUAL PAPERS SESSION – MINAS2
Teleology, Autonomy and Agency
Chair of the session: Bernard Feltz
Bernard Feltz – (330) From self-organization to autonomy
Sérgio Izidoro de Souza – (331) Reproduction and auto-production: Kant’s idea of organism
Daniel Sander Hoffmann – (332) Non-mental agency and life

INDIVIDUAL PAPERS SESSION – MINAS3
History of Biology I
Chair of the session: Olivier Perru
Marion Constance Thomas – (333) Biological and social new orders: Charles Robin (1821-1885) and Comteanism in the Third Republic
Johannes Mattes – (334) Travelling olms: Local and global perspectives on the research on Proteus anguinus (1700-1930)
Olivier Perru – (335) The Brothers of the Christian Schools and the botanical research at the beginning of the 20th century: Some examples of their works

INDIVIDUAL PAPERS SESSION – AG-BOT
Evolutionary Psychology and Ethics
Chair of the session: Douglas Allchin
Douglas Allchin – (013) The naturalizing error
Jonatan Garcia-Campos & Saul Sarabia-Lopez – (336) What is a context in the cognitive psychology of reasoning?
Friday, July 21
9:00-10:30 Parallel Sessions 14

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Author Meets Critics
The Eugenic Mind Project
Organizer and chair of the session: Rob Wilson
Discussants
Katie Kendig (338)
Alan Love (339)
Judy Johns Schloegel (340)
Respondent
Rob Wilson

ORGANIZED SESSION DIVERSE FORMAT – CD-A1
Four-papers session – Talks and discussion (two interrelated sessions)
Organisms and Us: Part I: Conceptual, Institutional, and Social Forces Shaping Organism Choice and Use
Org. and chair of the session: Rachel A. Ankeny
Lijing Jiang – (341) From Michurin fish to transgenic carp: Material legacies of socialist science in Chinese biotech
Dook Shepherd – (342) Of windows and worlds: Foundational concepts and their roles in the study of honeybee (A.M.) cognition
Michael Dietrich – (343) Why study sex by the sea? Marine organisms and the problem of fertilization and cell cleavage

ORGANIZED SESSION STANDARD TALKS – CD-A2
Species in the Age of Discordance
Org. and chair of the session: Matt Haber
Jerzy Brzozowski – (345) An anti-realist theory of reference for species names
**Aleta Quinn** – (346) Model reductions and competing paradigms in phylogenetic inference

**Dan Molter** – (347) Individual essence and species form: a lesson from polymorphic rust fungi

**ORGANIZED SESSION STANDARD TALKS – CD-A3**
Methodology in Non-primate Cognition
Org.: Shereen Chang
Chair of the session: Joyce Havstad

**Shereen Chang** – (348) Reasoning by analogy from the cognition of humans to parrots

**Sidney Diamante** – (349) The octopus and Cognitive Science
Panel discussion

**INDIVIDUAL PAPERS SESSION – MINAS1**
History of Biology II
Chair of the session: João Felipe Ginefra Toni

**Gustavo Barreto Vilhena de Paiva** – (351) Henry of Ghent and the two-headed monster: A casuistry of the extremes of life

**João Felipe Ginefra Toni & Ruth Richter** – (352) Evolving morphology: 200 years of Goethe's *Zur Morphologie*

**Pablo Lorenzano** – (353) A structuralist analysis of Mendel’s two hybridist theories and of their intertheoretical relationships

**INDIVIDUAL PAPERS SESSION – MINAS2**
General Epistemology and Biology II
Chair of the session: Gustavo Caponi

**Yoshinari Yoshida** – (354) Characterizing and evaluating a rationalist approach to biology

**Rafael Ventura** – (355) The logic of simulation

**Paulo Jeferson Pilar Araújo** – (356) The Biolinguistic enterprise: A case in epistemological anarchism?

**INDIVIDUAL PAPERS SESSION – MINAS3**
Genetic Drift: Theoretical and Philosophical Perspectives
Chair of the session: Cristian Saborido
Pierrick Bourrat – (357) Interpreting drift physically
Ariel Jonathan Roffé – (358) On genetic drift as an evolutionary force
Cristian Saborido, Victor Luque & Giorgio Airoldi – (359) What is the place of genetic drift in Price equation?

INDIVIDUAL PAPERS SESSION – AG-BOT
Genetics: Philosophical Perspectives
Chair of the session: Brandon Allen Conley
Qiaoying Lu – (360) Revisiting the notion of interaction in the nature-nurture debate
Brandon Allen Conley – (362) Taking genetic representation seriously

Friday, July 21
11:00-12:30 Parallel Sessions 15

ORGANIZED SESSION DIVERSE FORMAT – AG-ZOO
Four-papers session – Talks and discussion (two interrelated sessions)
Organisms and Us: Part II: Using Typical and Atypical Organisms to Represent
Org. and chair of the session: Rachel A. Ankeny
Laura Bottrill – (363) Plant blindness and model organism selection in the Cognitive Sciences
Karina Burns – (364) How much can a Koala ‘bear’? A history of the development of Australian marsupial models in psychological research
Sara Green – (365) Choosing the right organism: On the role and reliability of the August Krogh Principle
Rachel A. Ankeny and Sabina Leonelli – (366) Using organisms as representations
ORGANIZED SESSION STANDARD TALKS – CD-A1
The Evolutionary and Psychological Bases of Mindreading, Metacognition, and Folk Epistemology
Orgs.: Ximena Gonzalez-Grandon and Edouard Machery
Chair of the session: Ximena Gonzalez-Grandon

Edouard Machery – (367) The evolution of epistemology
Ximena Gonzalez-Grandon – (368) Practical metacognition and feeling of knowledge
Panel discussion

INDIVIDUAL PAPERS SESSION – CD-A2
Genes and Information
Chair of the session: María Cerezo
Charbel N. El-Hani – (373) Recent developments in the debates about the gene concept: The dynamic, systemic gene
María José Ferreira Ruiz & Jon Umerez – (374) Conflations in the parity thesis: Causation and information
María Cerezo – (375) Pros and cons of a causal dispositionalist theory of genes: Parity, complexity and simultaneity

INDIVIDUAL PAPERS SESSION – CD-A3
History of Biology III
Chair of the session: Gregory J. Morgan
Koen B. Tanghe & Mike Kestemont – (371) The birth of Evolutionary Biology in Great-Britain: A stylometric peek behind a 19th century veil of anonymity
Jennifer Bernard – (376) Lynn Margulis, architect of the endosymbiotic theory

INDIVIDUAL PAPERS SESSION – MINAS1
History/Philosophy of Biology and Anthropology
Chair of the session: Susanne Lettow
Susana Gisela Lamas, Marta Crivos & Vicente Dressino – (379) Niche construction as a tool to understand parasitism: The case of a Mbyá Guaraní community

Susanne Lettow – (380) Life, Earth, human diversity. Henrik Steffen's Anthropology and the invention of race
Author Index

Abrams, 27
Abrams, M., 27, 30, 40
Adúriz-Bravo, A., 23
Airoldi, G., 31
Alabi, L.P., 14
Allchin, D., 42
Allen, G., 29, 32
Alleva, K., 13
Almeida, M.S., 25
Amitani, Y., 11
Anderson, G., 18
Anfra, D.R., 34
Ankeny, R.A., 43, 45
Araújo, L.A.L., 15, 16
Araújo, P.J.P., 44
Aréchiga-Córdova, V., 19
Argueta-Villamar, A., 40
Arnet, E., 28
Arteaga, J.S., 16
Assunção, L.M.S., 16
Atanasova, N., 30, 32
Azevedo, N.H., 15, 21
Bader, O., 23
Baedke, J., 8, 27
Baiardi, D.C., 25
Bandeira, F.P.S.F., 36
Barahona, A., 8, 9, 29
Baravalle, L., 24, 37
Barbosa, J.C., 16
Barragán, C.A., 8
Bass, R., 30
Baumann, M.C., 15
Baxter, J., 17
Berçot, F.F., 19

Bermúdez, J.P., 17
Bernabé, F.N., 13
Bernard, J., 46
Berry, D., 20, 32, 38
Bertolaso, M., 23
Bittencourt-dos-Santos, W., 31
Bizzo, N., 14, 33
Bolker, J.A., 27, 33
Borrrello, M., 16, 21, 24
Bottrill, L., 45
Bourrat, P., 45
Brando, F.R., 14
Bremer, M.J., 10
Brigandt, I., 31
Brito, B.P.L., 15, 16
Brooks, D., 8
Brzozowski, J., 43
Buklijas, T., 27, 29
Burns, K., 45
Burnston, D., 27
Burnston, D.C., 22
Burton, E., 39
Caldeira, A.M.A., 9
Caluzi, J.J., 9, 16
Campos, K.R.S., 9
Campos, L., 21, 24
Canali, S., 41
Caponi, G., 34, 44
Caponi, S., 33
Cardoso, M.L.D., 15
Carvalho, I.N., 14, 23
Carvalho, T.B., 28
Casetta, E., 30
Catto, R., 28
Cerezo, M., 46
Chaline, N., 16
Chang, S., 44
Charnley, B., 32
Chávez, P.H., 33
Cheung, T., 29
Chion, A.R., 23
ChoGlueck, C., 18
Colaço, D.J., 41
Cole, L.S., 8
Collier, J., 28
Colombo, M., 27
Conley, B.A., 25, 45
Conrado, D.M., 23
Corso, T.M., 21
Cortez, E., 10
Coutinho, J.G.E., 29
Craver, C.F., 18, 30
Crivos, M., 47
Cruz, L.C., 28
Currie, A., 12
D’Ambrosio, M., 33
D'Abramo, F., 9
Dale, M., 23
De Chadarevian, S., 36
DeChristofino, A., 30
Delehanty, M., 39
Delfino, M.S.C., 16
Delgado, A.N., 38
Delsin, L.F., 14
Dent, R., 36, 39
Di Marco, S., 30
Diamante, S., 44
Díaz, M., 13
Dietrich, M., 12, 21, 24, 29, 43
Díez, B., 36
Díez, J., 13
Dionor, G.A., 14
Donda, P.F., 15
Dresow, M., 17
Dressino, V., 47
Dupré, J., 18, 32
Efstathiou, S., 18, 33
El-Hani, C., 22, 36, 38, 46
Elsdon-Baker, F., 28
Engelmann, S., 29
Esposito, M., 31, 37
Evangelista, N.A.M., 14, 15
Fábregas-Tejeda, A., 31
Fagan, M.B., 19
Federico, L., 13
Feltz, B., 42
Ferreira, M.H.M., 34
Fisher, S., 9
Fleming, L., 35
Folguera, G., 20, 23
Forato, T.C.M., 15, 19
Francese, C., 20
Franco, F.F., 14
Galante, D., 14
Gallo, T.M., 14
Gamba, J.O., 17
Gambarotto, A., 10, 12
Garavello, J.C., 11
Garbayo, L.S., 25
Garcia, D.B., 19
García-Campos, J., 42
García-Deister, V., 36, 39
Garrido, R.J.H., 9
Gaspar, D.A., 11
Gayon, J., 20
George, K., 28
Gennobili, S., 40
Giri, L.A., 13
Glackin, S.N., 39
Goicouria, L., 30
Goldsby, M., 11
Gomatam, R., 41
Gonzalez-Grandon, X., 46
González-Rivadeneyra, T., 40
Grauvogel, K., 18
Green, S., 45
Gregg, B., 30
Griesemer, J., 8, 10
Griesemer, J.R., 41
Gruskin, D., 30
Guerrini, A., 26
Guevara-Aristizabal, J.F., 19
Guttingen, S., 32, 41
Haber, M., 43
Hanazaki, N., 36
Harbecke, J., 29
Harmon, O., 21, 24
Haueis, P., 30
Havstad, J., 12
Heams, T., 9
Higuchi, T., 39, 40
Hingst-Zaher, E., 13
Hirao, Y.V., 13
Hoffmann, D.S., 42
Hollingsworth, E., 21, 35
Honenberger, P., 22, 36
Hossom, D.R.P., 25
Iseda, T., 11
Jablonska, E., 27
Janczur, C., 15
Japyassu, H.F., 16
Jeler, C., 37
Jessee, E.J., 41
Jiang, L., 43
Joaquim, L.M., 23
Jones, S., 28
Kaden, T., 28
Kästner, L., 27, 33
Kendig, C., 38
Kendig, K., 43
Kestemont, M., 46
Kimmelman, B., 32
Knox, D., 30
Kolmes, S., 39
Kranke, N., 11
La Vergata, A., 28
Laland, K.N., 6
Lamas, S.G., 47
Lavagnino, N.J., 23
Lefèvre, V., 28
Lefkaditou, A., 38
Leicht, C., 28
Leonelli, S., 22, 41, 45
Lettow, S., 46
Lewinsohn, T.M., 18
Lightman, B., 30
Lima, F.R.G., 16
Liu, K., 17
Lohse, S., 16
Lorenzano, P., 13, 44
Lovaglio, U.S., 22
Love, A., 43
Love, A.C., 17, 35
Lu, Q., 45
Prado, P.I.K.L., 12
Prestes, M.E.B., 19
Quinn, A., 44
Rader, K., 29
Radick, G., 12, 17, 32
Rainer, G. R., 12
Reis, C.R.M., 16
Reversi, F., 9
Reversi, L.F., 16
Reydon, T., 16, 38
Ribeiro, S.B., 11
Ricci, F.P., 22
Richmond, M., 8, 9, 29
Richter, R., 44
Richter, V., 39
Riley, J., 28, 30
Robles-Piñeros, J., 34
Rodrigues, F., 14
Roe, S.M., 10
Roffé, A.J., 40, 45
Rosario, E., 31
Rosas, A., 17
Ruiz, M.J.F., 46
Ruiz-Mirazo, K., 10, 13
Saborido, C., 10, 44
Sano, P.T., 19
Sansom, R., 41
Santana, C.G., 24
Santos, C.M.D., 14
Santos, F.M., 24
Santos, F.S., 15, 33
Santos, V.C., 15, 16
Sarabia-Lopez, S., 42
Saraiva, T., 32
Sarto-Jackson, I., 12, 32
Sáynes-Vásquez, A., 40
Scarpa, D.L., 15
Scheiner, S.M., 22, 24
Schloegel, J.J., 39, 40, 43
Schneider, T., 37
Setz, E.Z.F., 11
Shan, Y., 17
Shang, R., 21, 30
Sharp, C., 28
Shepherd, D., 43
Silva, A.F.G., 14
Silva, J.M., 30
Silva, K.R., 16
Smith, K.C., 35
Smithdeal, M., 9
Solinas, M., 33
Sonnenschein, C., 22, 24
Soto, A.M., 22, 24, 27
Souza, L.F.E., 34
Souza, S.I., 42
Sponsel, A., 39
Srivastava, A., 10
Steigerwald, J., 19
Stewart, T.A., 35
Suárez-Díaz, E., 36, 39
Talamoni, A.C.B., 14
Tanghe, K.B., 46
Teixeira, V.C., 14
Teixeira-Costa, L., 13
Tekin, S., 18
Tempini, N., 22, 41
Teslow, T., 38
Thomas, M.C., 42
Thorell, A., 33
Toni, J.F.G., 44
Tonolli, P.N., 14
Torrens, E., 18
Travassos-de-Britto, B., 12
Umerez, J., 46
Valadez-Blanco, O., 25
Valderrama-Pérez, D.F., 38
Valentova, J.V., 31
Vallejos, G., 31, 37
Varella, M.A.C., 31, 42
Vecchi, D., 30, 37
Ventura, R., 44
Vergara-Silva, F., 40
Villagómez-Reséndiz, R., 40

Walter, H., 27
Washington, N., 18
Weisberg, M., 14
Wilson, R., 18, 43
Witteveen, J., 36, 38
Wong, M.T.O., 43
Wülfingen, B.B., 20
Yoshida, Y., 44
Zaterka, L., 20
Zhang, M., 14, 26
Zhu, J., 14
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