

ISHPSSB Meeting in Exeter, July 25-29, 2007

Preliminary Program

NB: This is a preliminary program, based on information collated from submissions. Please send any requests, corrections or additions you may have to Robert Meunier (meunier@mpiwg-berlin.mpg.de).

* session organizer

Wednesday July 25
16:00-20:00 Registration
20:00 Welcome Drinks

Thursday July 26
9:30-11:00 Thursday Plenary Session
Presidential Address

Race and Genomics: Old Wine in New Bottles? (Welcome Plenary Session)

George Ellison, Renato Mazzolini, Jenny Reardon, Sahotra Sarkar

11:30-13:00 Thursday Session I **Social and Technological Dimensions of Biology**

Material transfer agreements and policy implications: strategies for research materials in biotechnology

Victor Rodriguez, Koenraad Debackere

Computers, chemistry and companies: the influence of the information concept in the automation of DNA sequencing (1980-1993)

Miguel Garcia-Sancho

Different disciplines, different perspectives on the pertinence of genomics to ways of studying human behaviour: lessons of interviews with researchers

Richard Holdsworth

Boundary objects in computational and mathematical biology

Annamaria Carusi

Intersections in the Evo-Devo Juncture

The nearly neutral theory of Evo-Devo?

*Roberta L. Millstein**

Varieties of intersection: specialties and collaboration networks

*Elihu M. Gerson**

Evolutionary developmental medicine

Jason Robert

The germ is dead – long live the germ!

Grant Yamashita

Emergence, Reduction and Biological Systems

Pluralism about emergence in biology

Mark Bedau

Metabolic circularity as a guiding vision for systems biology

Athel Cornish-Bowden, Maria Luz Cardenas

Emergence, causation and levels in biological systems

*Alexander Powell**

Chair: *John Dupre*

Human Automatism

Victorian physiology and human automatism

*Christopher Smith**

Contemporary automatism: the reification of willing

Holly Andersen

How emergence might overcome epiphenomenalism

Samuel Thomsen

Chair: *Christopher Smith*

Exploring Possible Publishing Venues for ISHPSSB (roundtable)

Gar Allen, Jason Byron (tbc), James Griesemer (tbc), Jane Mainschein (tbc), Kathy Cooke (tbc)

Chair: *Carl Craver**

Logic of Discovery and Functional Ascriptions in Neuroscience: Bringing History and Current Research Together

The history of integration: from Spencer to Sherrington and later

Jean-Claude Dupont

The ‘scientific phrenology’ of David Ferrier: sensory-motor associationism as a paradigm for the ‘birth’ of cognitive neurosciences

Carmela Morabito

Causal role theory of functions and theoretical changes in neuroscience

*Denis Forest**

Chair: *Denis Forest**

Gender and Genetics

A Weimar mongrel: the debates in biology and art on gender, race, and genes

*Helga Satzinger**

Conflict, controversy, and gender in early genetics: selected case studies

Marsha Richmond

Nettie Maria Stevens and the controversy about biological sex determination

Isabel Delgado Echeverria

Chair: *Pnina Abir-Am*

Teaching Biology

Political science at the ...cole Libre des Sciences Politiques (Paris), 1870-1890

Thierry Artzner

Textbook Authors and Textbook Salesmen: Contrasting Communities of Biology Knowledge Production

Adam Shapiro

Cytology textbooks, multidisciplinary, and the making of the new science of aging in the United States, 1924-1945

Hyung Wook Park

Why teach history and philosophy of biology to biology majors?

Neil Haave

Neuroscience, Psychology, and Mental Representations

Digits, strings, and spikes: empirical evidence against computationalism

Gualtiero Piccinini

Mindreading and evolution

Paulo Abrantes

Transactional analogues: non-semantic representation in the mind and elsewhere

Kent Van Cleave

Disease: 17th to 19th Centuries

Syphilis, the Church, and the body: disease, cause, and treatment in 17th century England

Samantha Muka

Science, Religion and Politics: the Construction of Expertise on Cattle Plague in Pre-revolutionary France

Marion Thomas

Jacques Tenon, Felix Vicq d'Azyr, and the hospital reforms of the end of the 18th century in France

Antoine Ermakoff

19th century studies of hysteria and the work of Jean-Martin Charcot

Sarah Fisk

Inside and Outside the Laboratory

Between the laboratory and the deep blue sea: the lab-field border in the marine stations of Naples and Wimereux

Raf De Bont

War and biology: the transformation of entomological research in Japan, 1918-1945

Akihisa Setoguchi

The queer life of the lab rat

Mike Pettit

The rats of NIMH and the urban crisis

Edmund Ramsden

14:30-16:00 Thursday Session II

Multi-Level Selection and Major Transitions: Groups, Individuals, and the Units of Evolution I

What makes a group an evolutionary unit? Reliability and the transition to sociality in hymenopterans

*Andrew Hamilton**

Multilevel selection, evolutionary transitions, and adaptive complexity

Alirio Rosales

Chair: *Andrew Hamilton**

Evolutionary Meta-ethics I

Goodbye to the spooky faculty objection

Anand Vaidya

Moral minds: Still stumbling over the is-ought gap?

Ben Fraser

Minds, morals, and the evolution of intuition?

*Alison Niedbalski**

Chair: *Fritz Allhoff*

What Happened to Evolution After the Synthesis?

Was the modern synthesis really a synthesis?

*Jeffrey Schwartz**

The (almost) forgotten phenotype

Massimo Pugliucci

Where EvoDevo goes beyond the Modern Synthesis

Gerd Müller

Chair: *Jeffrey Schwartz**

Exploratory Experimentation in the Life Sciences

Exploratory Experimentation in Recent Molecular Biology and Genomics
Dick Burian

Varieties of Exploratory Experimentation in Nanotoxicology
*Kevin Elliott**

Metagenomics and the proteorhodopsin case: Exploratory experimentation and its transformative effects
Maureen O'Malley

Chair/Commentator: *Ken Waters*

The Statistical Roots of Biology

The role of evolutionary biology in the establishment of mathematical statistics
Eileen Magnello

Did Fisher's voluntary workers at Rothamsted make a difference in the spread of statistical techniques in agriculture?
*Nancy Hall**

Chair: *Nancy Hall*; Commentator: *Gregory Radick*

Rebels of Life: Iconoclastic Biologists of the 20th Century I

On rebels, icons, and the value of dissent
Oren Harman, Michael Dietrich

Hans Driesch, rebel with two causes
Garland Allen

Wilhelm Johannson: A rebel or a diehard?
Raphael Falk

Different research practices in early molecular genetics: Oswald T. Avery's and Max Delbrück's revolutionary findings and early responses
Ute Deichmann

Chair: *Michael Dietrich**

BioOntologies: A New Type of Theory in Biology?

The application of ontologies in the biomedical domain
Michael Ashburner

Bio-Ontologies: a new means of travel for biological facts
*Sabina Leonelli**

What lies beyond Babel? Lessons from the Worm Project
Rachel Ankeny

Chair: *Manfred Laubichler*; Commentator: *Massimo Pigliucci*

Theory in Biology

Popper's dance with Darwin
Michael Bradie

A story about story telling
Astrid Juette

Neutral theories and the unification of evolutionary biology
Julien Delord

Holism-reductionism debate in ecology, ethics and sustainable development
Donato Bergandi

Explaining Development

Why gene regulation networks are the controllers of ontogeny
Roger Sansom

What codes for what in development?

Michael Wheeler

It's not in your genes but the company you keep: phenotype, a view from the bench

Laura Vandenberg, Carlos Sonnenschein, Ana Soto

Scientific pluralism and the evolutionary explanation of development

Jesse Hendrikse

Functions I

Final causes as process prototypes

Boris Hennig

The select few: etiological functions and normativity

Sören Häggqvist

Function as an overarching concept

Francoise Longy

How systems fail: function, malfunction and dysfunction

Gillian Barker

History of Evolutionary Biology

Intimations of natural selection: Patrick Matthew and Charles Darwin's notebooks

Daniel Becquemont

'Darwin's delay': another historiographical myth?

John van Wyhe

Experimentation and the development of Lloyd Morgan's canon

Grant Goodrich

Unpacking the Evolutionary Synthesis: How can so many epistemological and metaphysical issues stand within such a compact explanatory structure?

Richard G. Delisle

16:30-18:00 Thursday Session III

Multi-Level Selection and Major Transitions: Groups, Individuals, and the Units of Evolution II

Darwinian populations and transitions in individuality

Peter Godfrey-Smith

Evolutionary transitions, levels of selection, and cross-level by-products

Samir Okasha

Chair: *Andrew Hamilton**

Evolutionary Meta-ethics II

Evolutionary theory and the deep vindication of moral beliefs: a response to Gibbard

Doug Walters

Against Evolutionary Error Theory: a contract-based alternative

Fritz Allhoff

Chair: *Alison Niedbalski**

Molecular Anthropology: Perspectives from History, Philosophy, and Human Geography

Natural genealogies and the objectivity of approaches, technologies and objects in molecular anthropology

*Marianne Sommer**

Mapping global mobilities: Family connections and difference in the genographic project

Catherine Nash

From flies to humans: the genetic basis of group identity
Lisa Gannett

Chair: *Marianne Sommer**; Commentator: *Jeffrey Schwartz*

Conceptual Development in Industrial Contexts: Breeding, Horticulture and Sericulture in the 19th and 20th Centuries

Mums as the Measure of Men: Global Plant Culture in the Nineteenth Century
Philip J. Pauly

Naturalizing Selection: Ronald A. Fisher and the Rothamsted Experimental Station, 1919-1933
Theodore Varno

Silkworm Breeding and the Development of Genetics in Meiji Japan
Lisa Onaga

Chair: *Jonathan Harwood*; Commentator: *Barbara Kimmelman**

Anagenetic Optimisation Versus Cladogenetic Differentiation

The Frankfurt-theory of constructional morphology: an innovative but unknown approach for reconstructing anagenetic events and its actual importance for understanding chordate evolution
*Michael Gudo**

Anagenesis and cladogenesis in deuterostome evolution: well-known molecular phylogenies and well-forgotten morphological models
Tareq Syed

Chair/Commentator: *Mathias Gutmann*

Rebels of Life: Iconoclastic Biologists of the 20th Century II

Leon Croizat: A radical biogeographer
David Hull

Dan Simberloff and methodological succession in ecology
William Dritschilo

Bill Hamilton: A rebel for truth
Ullica Segerstrale

Chair: *Michael Dietrich**

Botany Between Knowledge and Science: Images, Interspaces, Experiences and Gender

Systematic botany in the romantic Vienna and “Voyages into the flower fields of life”
*Marianne Klemun**

Private letters, public discourse: The botanical correspondence of Mary Treat and Charles Darwin
Dawn Sanders

Discussing the “translation” of J. W. von Goethe’s knowledge of nature into scientific literature for women
*Nicolas Robin**

Between Praxis and Episteme: The Herbarium as Boundary Object
Alexandra Cook

Communication and Aesthetics

Anthropo-biology in the 1940s: Jakob von Uexküll, Norbert Wiener and Arnold Gehlen on the functional circle of inside-outside-relations.
Tobias Cheung

Signaling Processes and Biological Function: An Account of Signal in Cellular Biology
Barton Moffatt

The Evolution of Simple Communication Systems
Simon Huttegger

Are biological structures aesthetic?

Naomi Dar

Development, Inheritance and Evolution

Inheritance in Griffiths and Gray's Developmental Systems Theory

Peter Geldenhuys

A general theory of inheritance and its implications

Matteo Mamei

Fetal programming, predictive adaptive responses and gene-centric thinking

Beth Hannon

Developmental objections to evolutionary modularity

John Sarnacki

Functions II

What did Darwin do to teleology?

Arno Wouters

Developmental systems and etiological theories of teleology

Robert Gadda

Functions in the morphospace

Predrag Sustar

Systems of functions: functional attribution and functional decomposition in biology

Georg Toepfer

19th-Century Theories of Evolution

Vestiges of the Natural History of Creation in America: a quick response in the years 1844-1847

Albert Peacock

C. Darwin and J. D. Hooker: a controversy between friends

Anna-Carolina Regner

Alfred R. Wallace and his vision of anthropology and evolution

Juan Manuel Rodríguez Caso, Rosaura Ruiz Gutiérrez

Alfred Russel Wallace's claims regarding spiritualism

Juliana Ferreira, Roberto Martins

Friday July 27

9:30-11:00 Friday Session IV

Systems Biology: Computational Models Integrating Evolution, Function, and Design

Reconnecting evolutionary and descriptive biology: A network effect in systems biology

*Beckett Sterner**

Comparative and evolutionary genomics of *Azorhizobium caulinodans* as a case study for the workings of the post-genome era

Philippe De Backer, Dirk Gevers, Kyung-Bum Lee, Toshishiro Aono, Chi-Te Liu, Shino Suzuki, Tadahiro Suzuki, Takakazu Kaneko, Manabu Yamada, Satoshi Tabata, Doris M. Kupfer, Fares Z. Najjar, Graham B Wiley, Bruce Roe, Hiroshi Oyaizu, Marcelle Holsters

Anti-reductionism and modelling in systems biology: different perspectives

Joris Van Poucke, Philippe De Backer, Gertrudis Van de Vijver, Marcelle Holsters, Dani De Waele, Linda Van Speybroeck

Chair: *Gertrudis Van de Vijver*; Commentator: *Linda Van Speybroeck*

Social, Historical, and Philosophical Perspectives on the Inflation of Gene-related Knowledge

Getting real about genetics and genomics: An anti-realist perspective
*C. Kenneth Waters**

On the dynamics of laboratory research: Views on molecular genetics
Hans-Joerg Rheinberger

The promises of genomics: only society makes them reality!
Christine Hauskeller

Chair: *C. Kenneth Waters**

The Genomic Revolution, Revisited I

The material economy of genomic research: automation, work division, and productivity.
Vincent Ramillon

What does it mean to be 75% pumpkin: the units of comparative genomics
Monika Piotrowska

When is genetic analysis useful and sustainable? Perspectives on some new and old debates about genes and environment
Peter Taylor

Systems biology: the revolution after the revolution?
Jane Calvert, Joan Fujimura

Chair: *Edna Suarez**; Commentator: *Bruno Strasser**

Global Food Security and Science Policy: A Canadian Perspective (roundtable)

David Castle, Keith Culver, James Tansey*

Chair: *David Castle**

Episodes in the History of Speciation Mechanisms

Darwinism and the ever changing definitions of the ‘inheritance of acquired characteristics’
Fern Elsdon-Baker

JBS Haldane and speciation: not a beanbag but a full bag
*Andy Hammond**

An epistemic community glued together: evolutionary studies in the 1930s.
Joe Cain

Chair: *Andy Hammond*

Darwinism in the 21st century: Beyond the Modern Synthesis I

Evolution of networks and networks of evolution
Ehud Lamm

The developmental aspect of heredity and evolution
*Eva Jablonka**

The “benevolent disorder” and recognition processes as conditions for the different adaptation strategies of prokaryotes, eukaryotes and humans
*Marcello Buiatti**

Chair: *Eva Jablonka**

Critically Assessing “The Changing Role of the Embryo” I (roundtable)

Raphael Falk, James Griesemer, Jonathan Hodge, David Hull, Carlos Lopez Beltran, Francisco Vergara-Silva, Rasmus Winther, Ron Amundson*

Chair: *Rasmus Winther**

Exploring Unknown Worlds

Could there be undetected alternative forms of microbial life on earth?

Carol Cleland

Search for extraterrestrial intelligence: a Kuhnian approach on the matter

Carlos Ochoa Olmos

Explaining the origins of life on earth: three explanatory schemes and a set of limit conditions

Christophe Malaterre

Ethics and Evolution I

Aristotle, again: Jürgen Habermas, Leon Kass and the ethical self-understanding of the species

Benjamin Lazier

Evolutionary debunking theories of morality: Halting the slide from moral scepticism to global anti-realism

Aron Vadakin

Connections between purpose and value in nature

Angela Breitenbach

Evolutionary moral psychology and moral philosophy

Chris Zarpentine

Selection I

Forces and causes, probabilities and populations: clarifying the metaphysics of selection

Tim Lewens

Natural selection and the problem of reduction in life sciences

Bartłomiej Swiatczak

Two concepts of selection and their explanatory power

Bence Nanay

Has natural selection outlived its usefulness?

Patrick Bateson

Biomedicine

Methodological convergence of conceptual interpretations in medicine and taxonomy

Carlos Guevara-Casas

Network collaboration, tools of distributed work and IPRs in type-1-diabetes research

Juha Leminen, Reijo Miettinen

Building bioinformatic knowledge: interlinking social networks and producing a valid microarray experiment

Susan Rogers

Non-maleficence and the privatization of biomedical research

Justin Biddle

11:30-13:00 Friday Session V

New Perspectives on Biological Systems

The Language of Living Processes

Brian Goodwin

Distributed and Local Causation in Systems Biology

*Jonathan Davies**

How Systems Biology Makes Sense of (Gen)omics

Ulrich Krohs

From Systems Biology To Evo-Devo And Back

Werner Callebaut

Chair: *Lenny Moss*

Talking to Scientists: Interpreting Interdisciplinary Communication

*Soraya de Chadarevian, Nathaniel Comfort, Elihu Gerson, Neeraja Sankaran, Gail Schmitt, Paul D. Peterson, Christina Matta**

Chair: *Christina Matta**

The Genomic Revolution, Revisited II

Natural history in the genomic age? The making of GenBank, 1982-1987

*Bruno J. Strasser**

Evolutionary tools and comparative genomics: continuity in the shadow

Edna Suarez, Víctor-Hugo Anaya*

Navigating the post-Fordist DNA: network, regulations and variability in genomics and society

Christophe Bonneuil, Jean-Paul Gaudilliere

Chair: *Edna Suarez**; Commentator: *Bruno Strasser**

The Alberch Variations: Pere Alberch and the Cradle of Today's Evo-Devo

The Alberch Variations I: A reconstruction of the conceptual phylogeny of Pere Alberch within the tree of EvoDevo.

Laura Nuño de la Rosa, Miquel De Renzi, Arantza Etxebarria, Diego Rasskin-Gutman

The Alberch Variations II: Alberchian variations on evolutionary palaeobiology

Miquel De Renzi

The Alberch Variations III. Developmental constraints and possible life

Arantza Etxebarria

The Alberch Variations IV. Evo-Devo today

*Diego Rasskin-Gutman**

Chair: *Diego Rasskin-Gutman**

Sociology of the Biology of the Social

Triangulation, social location and ophthalmology: do you see what i see?

Sharyn Clough

Politicizing methodology: standardization debates in behavior genetics

Nicole Nelson

Neuronal expressivity: a new technology of innocence

Gesa Lindemann

Sociobiology and evolutionary psychology in the service of "instrumental rationality"

Batya Zelinger

Darwinism in the 21st century: Beyond the Modern Synthesis II

Location, location, location! Negotiating places and perspectives in a biodiversity database

Ayelet Shavit

From transmission to plasticity: the changing concept of heredity since the middle of the twentieth century

Ohad Parnes

Chair: *Eva Jablonka**

Critically Assessing "The Changing Role of the Embryo" II (roundtable)

Raphael Falk, James Griesemer, Jonathan Hodge, David Hull, Carlos Lopez Beltran, Francisco Vergara-Silva,

Rasmus Winther, Ron Amundson*

Chair: *Rasmus Winther**

Environment and Ecology

But is it progress? On the alleged advances of conservation biology over ecology

Stefan Linquist

Inter-, multi- and transdisciplinarity in landscape ecology due to ideas of human (Menschenbilder)
Angela Weil

Growing biology in the National Laboratories: environmental studies research at Argonne and Oak Ridge, 1966-75
Karen Rader

Geographic range as a weakly emergent trait
Todd Grantham, Mark Bedau

Ethics and Evolution II

Altruism and morality: Is disentangling really necessary?
Tomislav Bracanovic

Biological explanations of human actions and the institution of responsible action
Barry Barnes

Virtuous behaviour need not be an evolutionary stable strategy
Vasco Castela

East meets West: Buddhism, neuroplasticity and mirror neurons. Revisiting evolutionary ethics
Sherrie Lyons

Selection II

What's fundamental about Fisher's fundamental theorem of natural selection?
Robert Skipper

What is "natural" in natural selection?
Abhijeet Bardapurkar

Selection vs. drift: apportioning causal responsibility
Jessica Pfeifer

Darwinian Themes

The nature of competition and competition in nature
Sara Schwartz

Evaluating the debate on genic selectionism: based on the heterozygote superiority case
Shunkichi Matsumoto

Individuation of biological entities: Could natural selection help individuate higher entities?
Pierre-Olivier Méthot

14:30-16:00 Friday Session VI

Who is Hijacking Systems Biology? The Problem of Multilevel Explanation in Systems Biology

Physicalism, diachronic emergence and downward causation in experimental biology
*Ana Soto, Carlos Sonnenschein**

From the "DNA is a program", a misleading model and metaphor in molecular biology, toward the role of randomness and extended criticality of living entities
Giuseppe Longo

Middle-out hierarchical options in causation
Denis Noble

Is there nomological closure in explanations in biology?
Paul-Antoine Miquel

Chair: *Carlos Sonnenschein**

The Importance of Homology for Biology and Philosophy I

The phenomenon of homology
Griffiths Paul

Functional homology and homology of function
Alan Love

Typology now: Homology and developmental constraints explain evolvability
Ingo Brigandt

Chair: *Marc Ereshefsky**

Genes->Interpretation->Impact on Science or Society – What have ISHPSSBers achieved by critiquing genetic analyses (of various kinds)?

Bruno J. Strasser, Edna Suarez, Víctor-Hugo Anaya, Christophe Bonneuil, Jean-Paul Gaudilliere, Vincent Ramillon, Monika Piotrowska, Peter Taylor, Jane Calvert, Joan Fujimura*

Chair: *Peter Taylor**

Carving Out Action Potentials: Electrophysiology and the Causal Structure of the Nervous System I

Causes without mechanisms: the Hodgkin-Huxley model revisited
*Marcel Weber**

The nexus, mechanisms and mechanism families
Daniel Sirtes

Woodward's modularity condition, the causal Markov condition, and the causal structure of the central nervous system
Don Goodman

Chair: *Marcel Weber**

Specimens and Nomenclature

Specimens: between nature and the zoological gaze
Taika Dahlbom

Metamorphosis of the private time: natural history as entrepreneurship in Early Modern Dutch Atlantic
Tomomi Kinukawa

DNA bar-coding: a mere tool or the potential to remake our relationship with life?
Rebecca Ellis

On sameness and reference in biological nomenclature
Yann Bertrand

The Impact of Symbiosis and Symbiogenesis on the Study of Evolution and Its Historical and Philosophical Implications I

Endosymbiosis and cell evolution: the history of an idea
Ulrich Kutschera

From symbiosis to symbiome: an epistemological approach
Francisco Carrapi.Áo

Investigations of symbiosis and symbiogenesis in Russia
Andrew P. Sitnykov

Chair: *Natalie Gontier**

Metaphors in Biology

Towards an adequate theory of metaphor in biology
*Jennifer Runke**

The perspective metaphor of metaphor
Andrew Reynolds

Towards an ethics of biological metaphor: the case of promotional metaphors
Brendon Larson

Chair: *Jennifer Runke**

18th- and 19th-Century Biology

“If we only could combine Tournefort’s drawings with Rivinus’s definitions”: the positive program by Johann Georg Siegesbeck (1686-1755) for systematic botany

Alexei Kouprianov

Felix Vicq d’Azyr’s understanding of human cerebral structures and contribution to the field of brain anatomy in the late eighteenth century, in France.

Cherici Celine

Extinction in German Natural History, 1790-1830

Thomas Burnett

The Cambridge school of animal morphology, 1882-1910

Helen Blackman

Race in Biomedicine

The Mexican Institute for Genomic Medicine (INMEGEN) and the invention of the Mexican ‘Mestizo’ genome

Francisco Vergara-Silva, Carlos LÓpez-Beltr-n, Fabrizio Guerrero-McManus

Clustering Humans: Boundaries and Properties

Ludovica Lorusso, Giovanni Boniolo

Found science: founding ‘race’ in science

Sophia Efstathiou

The business of racial criticism in biomedical research

George Ellison, Simon Outram

Models and Experiments

Bridging the gap between theory and experiment in ecology

Brad Wilson

Models-of and models-for: two modes of representation in biological research

Jessica Bolker

Idealization and model organisms

Monica Maria Marquez

Horizons for scientific practice: scientific discovery and progress

James Marcum

Ecology, Environment and Politics

Environmental information in a Greek forest reserve: Scientific rhetoric and images of nature

Ageliki Lefkaditou, Anastasia G. Stamou, Dimitrios Schizas, George P. Stamou

Native American Ecological Restorationists and the Politics of Restoring the Ecocultural Diversity of North America

David Tomblin

Public Participation in the Mutual Conformation of Science, Technology and Society as a Problem for Applied Ecology

Carlo Marcello Almeyra

Public Policy Implications of Environmental Mechanisms

Renard Sexton

16:30-18:00 Friday Session VII

Evolutionary Ethics in Evolution

Towards Analogues of Ordinary Morality in Apes

*Eric Charmetant**

The Impossibility of Evolutionary Realism

Christine Clavier, Chloé Fitzgerald

Normative Domains and Their Evolution

Nicola Knight

Can Naturalized Ethics Help Us Find Moral Truths?

Jerome Ravat

Chair: *Eric Charmetant**; Commentator: *Christine Clavier*

The Importance of Homology for Biology and Philosophy II

Behavioral homology and psychological categories

Marc Ereshefsky

Cognitive kinds and homology

Mohan Matthen

Chair: *Marc Ereshefsky**; Commentator: *Gerd Muller*

Reducing Anti-reductionism: Perspectives on Holism in the Life Sciences

Beyond atomism and holism: the anti-reductionist community in the 20th century

*Jamie Stark**

From classical holism to the biosemiotic turn, 1920-1940

Riin Magnus

Facts and values against the reduction of ethics to biology

Shane Glackin

Chair: *Sabine Brauckmann*

Carving Out Action Potentials: Electrophysiology and the Causal Structure of the Nervous System II

Theories, models, and equations in biology: the heuristic search for emergent simplifications in neurobiology

Kenneth Schaffner

Delineating the phenomenon for electrophysiology: Emil du Bois-Reymond and his students Ludimar Hermann and Julius Bernstein

William Bechtel

When mechanistic models explain: the Hodgkin and Huxley Model of the action potential

Carl Craver

Chair: *Marcel Weber**

Biota, Biology, Place, and Belonging

On the trail of the ivory-bill: science and the struggle to save an endangered species

Mark Barrow

H.C. Watson and the civil claims of “British” plants

*Matthew Chew**

Evaluating the risk posed by biological invasions

Nathan Robert Smith, Michael Trestman

The blueberry maggot goes to Harvard: Guy Bush, Ernst Mayr, and the controversy over sympatric speciation

Jesse Gryn, Christopher Buddle, Charles Vincent

The Impact of Symbiosis and Symbiogenesis on the Study of Evolution and Its Historical and Philosophical Implications II

Viruses as symbionts

Frank P. Ryan

Compositional evolution and symbiosis

Richard A. Watson

Ontological and epistemological implications of symbiosis and symbiogenesis

*Nathalie Gontier**

Chair: *Nathalie Gontier**

Animal Minds

Simplicity and methodology in animal psychology: a case study

Simon Fitzpatrick

Vervetese and its Contexts

Gregory Radick

Convergent Minds? Examining some current assumptions in the study of comparative social cognition of apes, crows, dogs, children and other animals

Hugo Viciana, Hugo Mercier

Chair: *Ulrich Stegmann**

Palaeobiology and Phylogenetics

From weird wonders to stem lineages: the second reclassification of the Burgess Shale fauna

Keynyn Brysse

The trendiness of paleobiology

Derek Turner

Prior probabilities in phylogenetic inference

Joel Velasco

Rational disagreement in phylogenetics: maximum parsimony or maximum likelihood?

Fabrizio McManus

Chair: *Ronald Jenner*

Varieties of Mechanism

Mechanisms, history and parts in compositional biology

Rasmus Winther

Can mechanisms replace laws of nature?

Bert Leuridan

The scorpion's sting: functions, mechanisms, and biomechanical explanation

Trevor Pearce

Ecological mechanisms

Christopher Eliot

Genomics: A New Paradigm?

Waddington's symposia: a retrospective assessment

Jon Umerez

"The Arrowsmith conjecture": concept "emergence" and the "genomic" revolution

Eric Hoffman

The Postgenomic Era and a New Systemic Paradigm in Biology?

Laurence Perbal

How scientists use kinds: genes and modules as a case study

Thomas Reydon

Biology and Society

Transgenic corn through the perspective of communication

Irama Nuñez, Ana Barahona

The emergence of animal law: on institutional conditions of research in life sciences in Germany, The USA and Japan

Nico Luedtke, Hironori Matsuzaki

Educating citizens: scientific literacy and public policy

Glenn Sanford

Justifying the moral agenda on genomics

Cor van der Weele

18:15-20:00 General Business Meeting

Saturday July 28

9:00-10:30 Saturday Session VIII

Mechanisms and Causation in Ecology and Evolution I

Mechanisms in biology in hierarchical context

*Lindley Darden**

Systems biology and the mechanistic framework

Pierre-Alain Braillard

The increasing place of macromolecular machines in the descriptions of molecular biologists: What role do they play in explanations?

Michel Morange

Chair: *Robert Richardson*

Sports, Freaks, Monsters and Mutants: Toward a History of Mutation I

Sub-specific variation in the nineteenth century

Staffan Müller-Wille

Monstrosities and medical men: obstetric encounters with teratology in Britain, 1850-1900

Salim Al-Gailani

Interrogation of a fly

*Igal Dotan**

Medicine and Biology

The medicalization of male menopause in America

Elizabeth Watkins

Harmful environments: A problem for the bio-statistical theory of health

Elselijn Kingma

Unifying phenomenological and biological descriptions of disease

Havi Carel

Hybrids in Ecology: (Post-)Normal Science and the Interface of Interdisciplinary Practices

Epistemic-moral hybrids: discussing ethical normativity in the context of environmental interdisciplinarity. A case study of the federal nature protection agencies in Germany 1906-2006

*Thomas Potthast**

Eco-anthropology: a fertile hybrid? An epistemological approach to an evolving transdisciplinary field

Patrick Blandin

Experimenting with the archive: performance and emergence in the making of databases of nature

Claire Waterton

Hybrids in ecology: putting things in place

Astrid Schwarz

Cultural Inheritance and Niche Construction: Historical and Philosophical Perspectives I

The history and importance of cultural inheritance

*Maria Kronfeldner**

Resolving conceptual tensions in archaeology: applications of niche construction

Lydia Pyne, Julien Riel-Salvatore

The archaeology of cultural inheritance in early *Homo*
Ben Jeffares

Chair: *Manfred Laubichler*

What (If Anything) are the Meaning and Implications of Gene-P? (roundtable)

Paul Griffiths, Lenny Moss, Jonathan Kaplan, Ken Schaffner, Rob Wilson*

Chair: *David Depew*

The Science of Sex and Gender I

Are men and women as different as humans and chimpanzees? Quantifying sex differences in the human genome
Sarah Richardson

Explanatory models in behavioural endocrinology: unifying the mechanisms
*Sylvia Rolloff**

Bias in evolutionary explanations of women's orgasm
Elisabeth Lloyd

Chair: *Sylvia Rolloff**

New Methods for Teaching History and Philosophy of Biology: Museums, Field Stations, and the Internet I (roundtable)

Kristin Johnson (Using museum collections), *Mark Borrello** (Using field stations), *Matt Haber* (Using on-line resources), *John M. Lynch* (Blogging for teachers)

Chair: *Mark Borello**

Evolution of social behaviour

Correlating strategies with neighbours even when the goal is anti-correlation
Ryan Muldoon, Michael Weisberg

Thinking about coalition formation
Yasha Rohwer

Evolution of social behaviour by group selection
Tomi Kokkonen

Beauty, Mate Selection and Evolutionary Psychology: A Critical Review
Yuriditzi Pascacio-Montijo

Human Genetics

When is 'race' a race? The use of the race category in genetics, epidemiology and medicine in recent decades
Snait B. Gissis

DNA Evidence? Genetic anthropology and history
Yulia Egorova

Behavioral genetics and the shared/nonshared environment distinction: How (not) to interpret behavioral genetic research
Kathryn Plaisance

Microbial Ontology

Global microbiology: one more step to a "New Synthesis"?
George Levit

Bacteria and evolution: intercellular communication, cell fusion and natural genetic engineering
James Shapiro

Ontology from the microbe's point of view
John Dupre

Chair: *Carol Cleland*

11:00-12:30 Saturday Session IX

Mechanisms and Causation in Ecology and Evolution II

Mechanism range and natural selection

*Matthew Barker**

The new mechanistic philosophy and the mechanism of competition

Viorel Paslaru

Causal productivity, causal relevance and the nature of selection

Stuart Glennan

Chair: *Matthew Barker**; Commentator: *Lindley Darden*

Sports, Freaks, Monsters and Mutants: Toward a History of Mutation II

“Complex recombinations”: rethinking the death of de Vries’ mutation theory

Luis Campos

Victor Jollos’ research on *Paramecium*: pure lines and the concept of *Dauermodification*

Christina Brandt

Commentator: *Hans-Joerg Rheinberger*

Plastic Minds: A developmental perspective on animal behavior

Developing theories of imitation

Colin Allen

The construction of a developmental niche: a means for phenotypic plasticity

*Karola Stotz**

Development and cultural transmission of tool use in New Caledonian crows

Russell Gray

Chair: *Karola Stotz**; Commentator: *Patrick Bateson*

Ideology in Biology

‘Skandalon’: Haeckel’s pictures of embryos in the struggle of world views

Nick Hopwood

Primordial Soup and the spice of life: J.B.S. Haldane between holism and mechanism

Eric Martin

Stalin and fighters against cell theory

Valery N. Soyfer

A sword from the field of battle: The double helix and the secret of life in 1950s Britain

Robert Bud

Cultural Inheritance and Niche Construction: Historical and Philosophical Perspectives II

Moral nativism: a sceptical response

Kim Sterelny

Niche inheritance: its implications for human cultural inheritance

John Odling-Smee

The role of the environment in human cultural inheritance

Kenneth Reisman

Chair: *Manfred Laubichler*

Perspectives on the Biological Sciences in Nazi Germany and Beyond

Population genetics and psychiatry in the 1930s: British scientists and their views of the Munich school of psychiatric genetics

Volker Roelcke

Isotopes and animal models in biological research during National Socialism

Alexander v. Schwerin

Leviathan and the ultracentrifuge: politics, technology and the life sciences in National Socialist Germany

Bernd Gausemeier

Chair: *Carola Sachse*; Chair: *Sheila Weiss**

The Science of Sex and Gender II

More prodigies, more idiots: effects of differences in high-end intellectual aptitude hypotheses on the production of biological knowledge

Carla Fehr

Symmetry failures in studies of hormonal organization of the human brain: a case study of a new tactic for critical science studies

Rebecca M. Young

Chair: *Sylvia Roloff**; Commentator: *Sarah Richardson*

New Methods for Teaching History and Philosophy of Biology: Museums, Field Stations, and the Internet II

tba (The Virtual Lab), *Mary Sutherland* (The Embryo Project), *Jukka Tienari* (An algebraic model for teaching theoretical biology)

Chair: *Mark Borello**

Unification, Autonomy, and the Future of Biology

What are the prospects for a biological theory of everything?

Marion Blute

Biology and the other sciences; autonomy and cohesion

Diedel Kornet

Cassirer's history of hope

Richard Creath

Implications of current applications of systems biology for the scientific autonomy of biology

Constantinos Mekios

History of Molecular Biology

Not beyond reasonable doubt: a re-examination of Howard Temin's provirus hypothesis

Susie Fisher

Separating molecules, building biology: the evolution of electrophoretic instrumentation and the material epistemology of molecular biology, 1945-1965

Howard Chiang

Sequencing RNA in the 1960s and 1970s: an "RNA world"?

Jerome Pierrel

The visualisation of the invisible in cell biology: the use of models describing cell function as a consequence of the molecular revolution (1970-2000)

Norberto Serpente

Making Microbes Visible to the Philosophy of Biology (roundtable)

*John Dupre, James Shapiro, Katie Kendig, Steve Hughes, Pamela Lyon, Maureen O'Malley**

Chair: *Marc Ereshefsky*

14:00-15:30 Saturday Session X

Explanation by Analogy: Metaphors, Models, or Comparison of Natural Entities?

Is information a metaphor, an allegory or a model?

*Mathias Gutmann**

Genes and information

Michael Bölker, Tareq Syed*

Mirror neurons and intention-understanding

Ben Rathgeber

Molecular machines: a metaphor in the making

Winfried Peters, Suin Roberts, Bernd Buldt

Property of Life: Representations and Reproductions of Life in (Intellectual Property) Law I

An Ongoing Dialogue: Understanding Life Sciences through the Lens of Patent Law in the Early Twentieth Century

Tina Piper

The Laws of Life: The First Patent of an Engineered Life Form

John Emrich

“Killings Kings, Patenting Plants”

Mario Biagioli

Mechanism and its Discontents in 20th-century Biology I: Germany

Julius Schaxel and the emergence of organicism in Germany, 1910-1933

Christian Reifl

Holistic medicine and the rise of sexology in the Weimar Republic

*Jason Byron**

“Do you know Rosenberg’s address?” Adolf Meyer-Abich and biological holism work toward the Führer

Kevin Amidon

Chair: *Thomas Cunningham*

DST and the Unification of Biology

DST and the definition of the organism

Thomas Pradeu

Developmental Systems Theory and the Neo-Darwinian Theory of Evolution

Anouk Barberousse

DST’s concept of expanded inheritance: is it too expanded?

Francesca Merlin

Positional information and parity thesis

*Marie-Claude Lorne**

Chair: *Marie-Claude Lorne**; Commentator: *Philippe Huneman**

Information and Biological Development

Developmental Systems Theory as a claim about inherited information

Nick Shea

Against causal and informational parity

*Ulrich Stegmann**

Biological information as an explanatory metaphor

Arnon Levy

Chair: *Ulrich Stegmann**; Commentator: *Paul Griffiths*

Optimality Modeling and Evolutionary Explanation

What good are optimality models anyway?

*Patrick Forber**

Life history theory, optimality modeling and evolutionary explanation

Stephen Downes

Optimality explanation as anti-reductionism
Angela Potochnik

Optimality: restoring life to the living
Joan Roughgarden

Chair: *Patrick Forber*

The Epistemology of Development, Evolution and Genetics I

How far is history science relevant for philosophy of science? The case of the gene
Jean Gayon

Integration and disintegration in evolutionary biology
*Robert Richardson**

Burian's Paradox and the future of evo-devo
Ron Amundson

Chair: *Hans-Joerg Rheinberger*

Developing Digital Databases and Collaborations

Open forum; Chair: *Jane Maienschein*

Canguilhem in Context

Norm and limit: between Helmuth Plessner and Georges Canguilhem
Thomas Ebke

Living concepts? Georges Canguilhem and the history of biological concepts
Henning Schmidgen

What is a philosophy of individuation? Simondon's theory of the living
Didier Debaise

Michel Foucault and Georges Canguilhem: biopolitics and the attempt at a new biological foundation of the human sciences
Ugo Balzeretti

Representations of Nature in Life Science Pedagogy

Linnaean traditions: school botany and biological recording
Jenny Beckman

Papier-mache flowers, fruits and seeds: the botanical teaching models of Louis Thomas Jerome Auzoux
Margaret Olszewski

Learning through glass: Henry Ward and the Blaschka glass animals in North America
*Ruthanna Dyer**

Dawson teaching sheets: 19th century natural science on cotton
Ingrid Birker, Tania Aldred

Chair: *Ruthanna Dyer**

Reproduction and Reproductive Technology

Reproduction and Cell Cultures: Human Genetics and Prenatal Testing in the Baby-boom Era
María Jesús Santemas

Founding The New Discipline Reproductive Genetics: The Role Of Model, Theory And Language
Bettina Bock v. Wuelfingen

The Child That is Wanted: Kinship and the Body of Evidence
Karin Lesnik-Oberstein

Debates in Reproductive Technologies: Semen Banks and Artificial Insemination in USA

Alicia Vilella

16:00-17:30 Saturday Session XI
New Issues in Levels of Individuality and Units of Selection

How new units of selection may emerge in the course of evolution

Minus Van Baalen

What is a symbiotic superorganism and how do you measure its fitness?

Frederic Bouchard

Evolvability, transitions and the emergence of new individuals

*Philippe Huneman**

Chair: *Philippe Huneman**

Property of Life: Representations and Reproductions of Life in (Intellectual Property) Law II

Representation and invention: animate embodiments

Alain Pottage, Brad Sherman

Genes are patents, patents are genes: the rise and fall of a scientific metaphor in legal analogy

*Hyo Yoon Kang**

Commentator: *Jane Calvert*

Mechanism and its Discontents in 20th-century Biology II: Britain

A reply to naïve mechanicism: J. S. Haldane's shift from vitalism to holism and its effects on his philosophy of biology

Thomas Cunningham

Mechanism without reductionism: colloid chemistry and the mechanist conception of life

Rony Armon

Chair: *Garland Allen*

25 Years on from Marr's Vision: Philosophical Perspectives on the Boundary Between Neurobiology and Cognitive Science

Scientific discovery, understanding, and the modelling of neurocomputational mechanisms

*Matti Sintonen**

Marr's computational theories revisited

Oron Shagrir

Computation, external factors, and cognitive explanations

Amir Horowitz

Marr's computational level and mechanistic explanation: extending the notion of mechanism

Otto Lappi, Anna-Mari Rusanen

More on Information

The informational bee: the integrative role of a causal concept of information

Michael Trestman

Information and DNA: How the unexplanatory metaphor explains

Lindsay Craig

Philosophies of Biology: Naturalistic, Transcendental or Beyond? (Octavian Discussion)

Werner Callebaut, Gertrudis Van de Vijver, Linda Van Speybroeck, Dani De Waele, Lenny Moss, Jonathan Kaplan, Matthew Haber, Andrew Hamilton*

Chair: *David Depew*; Commentators: *Thomas Reydon, Jason Byron, Michel Morange, Filip Kolen, Helena De Preester, Joris Van Poucke*

The Epistemology of Development, Evolution and Genetics II

Regulatory gene networks: historical and epistemological reflections
Manfred Laubichler

Developmental constraints reconsidered in the light of the ZFEL
Robert Brandon

Chair: *Hans-Joerg Rheinberger*; Commentator: *Richard Burian*

Complexity, Systems, Teleology

Evolution in light of Leibniz's principle of the identity of indiscernibles
Jean-Sebastien Bolduc

Teleology and complementarity: Kant, Bohr, biology and atomic physics
Herman Pringe

Towards an understanding of biological and physical states: examining Robert Rosen's ontology of nature
Slobodan Perovic

Who's afraid of irreducible complexity?
Jason Zinser

Cultural Evolution

Making developmental biology second nature: graduate courses as scaffolding for disciplinary inheritance
Christopher DiTeresi

Modularity, memes, and scaffolding in cultural evolution
William Wimsatt

Balinese water temples revisited: approaching Steven Lansing's Balinese ethnography from the perspective of constructivist evolutionary anthropology
Emily Schultz

Working toward evolutionary reasoning in the social sciences: an argument for cultural evolution entailing cumulative knowledge and technical innovation
Jonathan Van Wieren

History of Classical Genetics

Preventive discourse on pathological heredity: materialization of medical power in the Mexican civil law, 1870 to 1930
Fabricio Gonzalez-Soriano

T.H. Morgan's multiple agendas related to regeneration
Mary Sunderland

Opponents can help: Sturtevant, Morgan and the building of the first chromosome maps
Lilian Pereira Martins

Wilhelm Johannsen's concept of the genotype
Nils Roll-Hansen

Species

Taxonomic resolution in ecology: How species concepts produce a plurality of ecological models
Toben Lafrancois

Review of the cohesion concept of species
John Collier

How incommensurability fuels the species problem
Eric Oberheim

Sunday July 29

09:00-10:30 Sunday Session XII Essentialism and Classification I

The unseasonable lateness of Being-What-It-Is, or, the myth of biological essentialism
*John Wilkins**

The ontology of race
Katie Kendig

Thinking populations through Deleuze
Arun Saldanha

Taxonomic freedom: the virtue of dual ambiguity
Matt Haber

Chair: *John Wilkins**

Stasis and Change in Development and Evolution

Evolutionary stasis and developmental stability: Are they related?
*Jonathan Kaplan**

Universal development
James Maclaurin

Two ways that modules enable evolvability
Brett Calcott

Chair: *Jonathan Kaplan**

Metaphysics of Natural Selection, Random Drift, and Mutation: Probability, Causation, and Modality I

The unity of fitness
*Marshall Abrams**

Two requirements for the concept of genetic drift
Matthew Dunn

The case for a frequentist interpretation of fitness
Chris Jenson

Chair: *Marshall Abrams**

Mechanisms, Functions, Organization, and Emergence: New Perspectives on Reductionism I

Marcel Weber, Manfred Laubichler, Sahotra Sarkar, Jason Scott Robert, Colin Allen, Alan Love, Paul Griffiths, Karola Stotz, Bill Bechtel, Bob Richardson, Bill Wimsatt*

Chair: *Karola Stotz**

Philosophies of Science in the 18th Century: Critical Reflections on Methodologies for the Biological Sciences

Kant and the challenges of naturalism
John Zammito

Kant's shifting attitude towards *Naturgeschichte* and Girtanner's synthesis
Marcel Quarfood

Instrumental reasoning in the 18th century
*Joan Steigerwald**

Chair: *Phillip Hunemann*

Pragmatism and Evolutionary Biology

Dewey's Darwinism and the Baldwin effect
David Depew

From the principles of psychology to dynamic systems: the influence of Darwin on James, Dewey, and cognitive neurobiology

Tibor Solymosi

What does a pragmatist genetics look like? Herbert Spencer Jennings and the politics of evolution and heredity
Judy Johns Schloegel

Gospel of Greed: Peirce's misreading of Darwin
*Mark Tschaepé**

Chair: *Mark Tschaepé**

Complexity Management in Biology: Philosophical and Sociological Views I

Systems biology and the limits of human cognition
Alfonso Arroyo Santos

Stems and standards: social mechanisms for managing complexity in immunology
Melinda Fagan

Modularity thinking as a way of managing complexity in developmental biology
*Vivette Garcia**

Chair: *Vivette Garcia**

Rhetorics of Nature

Is the tree of life metaphor really necessary?
Erica Torrens, Ana Barahona

Rhetoric in Stephen Jay Gould's work
Vladimir Cachon

Knowledge and politics in Gaian science
Eileen Crist

What is natural?
Clement Loo

Mathematics in Biology

Mathematical models and biology: a philosophical analysis
Giovanni Boniolo

The Markov Condition and Reliable Model Specification in Population Biology
Bruce Glymour

Probability in Evolutionary Theory
Aidan Lyon

Bayes is the New Black: Agent-Based Modeling and Bayesian Inferences in Biology
Trin Turner, Tom Schenk, Jr.

History of Biomedicine

The erythrocyte as a model, or the virtue of lacking DNA: an account on the material culture of cell aging and apoptosis studies
Maria Strecht Almeida

The making of a pathogen: the early biography of *Helicobacter Pylori*
Joao Nunes

Quantifying excitable tissues in the 1930s
Maxi Stadler

Artificial radioisotopes in biomedicine, 1935-1946: production, experimentation, and gift exchange around the Berkeley Cyclotron
Angela Creager

Foundations For A Genuinely 'Cognitive' Biology

Prolegomena for a cognitive biology

*Pamela Lyon**, *Jon Opie*

Animality: where biological cognition might start
Fred Keijzer

What do nervous systems do?
Daan Franken

Chair: *Carl Craver*

11:00-12:30 Sunday Session XIII **Essentialism and classification II**

Species essentialism without attributes: processes, patterns and biological ontologies
Mathias Brochhausen, Ulf Schwarz

Biology without species
Gal Kober

The role of “good species” in the species problem
Yuichi Amitani

Axiomatizing the tree of life: the impact of logic on biological taxonomy in the early 20th century
Charissa Varma

Chair: *John Wilkins**

Microbiology

Plasmids: between autonomous molecules and symbiotic organisms
Mathias Grote

Evolution without species: the case of mosaic bacteriophages
Gregory J. Morgan, W. Brad Pitts

Constructing extreme nature: Thomas Brock’s microbial ecology at Yellowstone Natural Park
Jessica Tanenbaum

Metaphysics of Natural Selection, Random Drift, and Mutation: Probability, Causation, and Modality II

Fitness, discreteness and compositionality
Denis Walsh

Time in biology: an analytic critique and a possible world semantics approach to the temporal structure of living being
Luciana Garbayo

Chair: *Marshall Abrams**

Mechanisms, Functions, Organization, and Emergence: New Perspectives on Reductionism II

Marcel Weber, Manfred Laubichler, Sahotra Sarkar, Jason Scott Robert, Colin Allen, Alan Love, Paul Griffiths, Karola Stotz, Bill Bechtel, Bob Richardson, Bill Wimsatt

Chair: *Karola Stotz**

Changing Perceptions, Changing Cultures: Molecular Biology and the Rise of the Biotech Industry

From organic chemistry to molecular biology: practical, institutional and strategic shifts in drug development at Hoffmann-La Roche, 1960–1980
Michael Bürgi

DNA at 40: The impact of biotech on collective memory in molecular biology (1993, 1953)
Pinna Abir-Am

Coping with the ‘Hoechst shock’: perceptions and cultures of molecular biology in Germany

*Thomas Wieland**

Chair/Commentator: *Helga Satzinger*

Complexity, Robustness, and Explanatory Power in Biological Modeling

Simplicity and generality in biological modeling

Michael Weisberg

Robustness, multiple models, and realism

Jay Odenbaugh

Modeling trade-offs and scientific explanation

John Matthewson

Chair/Commentator: *William Wimsatt*

Complexity Management in Biology: Philosophical and Sociological Views II

What Simon should have said

James Griesemer

Managing complexity via models

Andrea Loettgers

Chair: *Vivette Garcia**

Evolutionary Epistemology

Two challenges for evolutionary epistemologies based on selection theory

Davide Vecchi

Reductionism in some naturalized epistemologies, or why philosophy matters

Paola Hernandez Chavez

Kornblith on knowledge: reliability, then or now?

Heather Perez

Ecology

post-classical ecology: on the emerging dynamic perspective from self-organizing complex adaptive systems

Yin Gao, William Herfel

“Invasive” species and the diversity-stability hypothesis

Rachel Bryant

In search of community ecology

Gregory Cooper

Historicity in ecology

Eric Desjardins

Premodern Biology

The primacy of the heart in Aristotle’s biology and psychology

Jamie Feldman

The relationships between text and images in microscopy of insects in the 17th century: the example of Swammerdam

Sylvène Renoud

The emergence of themes of research in the epistolar relation between Lazzaro Spallanzani and Charles Bonnet

Maria Elice Brzezinski Prestes

Spontaneous generations, beginning of life and history of life in Lamarck’s theory.

Stéphane Tirard