

CSHPS / SCHPS 2021
Preliminary program / Programme préliminaire

All times in Mountain Daylight Time (GMT-6)

Sat 29 May

9:30 - 11:00	Philosophy of cognitive science Chair : Agnes Bolinska <i>Ingo Brigandt</i> How to Properly Investigate Human Cognitive Difference and Diversity? <i>Andrew Richmond</i> Representation and Representational Explanation <i>Erik Nelson</i> The Grammar of Bird Cognition: Wittgenstein, Corvids, and Nonlinguistic Concepts	Applicability of mathematics Chair : Michael Miller <i>Jessica Oddan</i> Novel Methodology in Reconstructions of Quantum Theory <i>Doreen Fraser</i> Taking the long view on quantum field theory <i>André Curtis-Trudel</i> Computational Pluralism	Early modern philosophy of science Chair : Molly Kao <i>Ryan Michael Miller</i> Descartes, Model-based Scientist <i>Qiu Lin</i> Du Châtelet on Mechanical Explanation versus Physical Explanation <i>Aaron Wells</i> Kant on Mental Association and the Limits of Physiological Explanation
11:00-11:30	BREAK		
11:30 - 12:30	Reduction and emergence in biology Chair : Aja Watkins <i>Erica Onnis</i> Irreducibility, Novelty, or What? Towards a Property Cluster Theory of Emergence <i>Sun Kyeong Yu</i> Biology and Its Tale of Two Reductions	Aristotle and philosophy of science Chair : Margaret Farrell <i>Jennifer Whyte</i> A Turn at the Wheel: The three lives of the Rota Aristotelica <i>Adam Woodcox</i> The Dialect of Aristotle's De Divinatione per Somnum	Underrepresented groups in history Chair : Marga Vicedo Castello <i>Jörg Matthias Determann</i> A More Diverse Universe: Identity and Inclusion in Modern Astronomy <i>Landon D. C. Elkind</i> The Lone Wrangler: Dorothy Wrinch's Original Contributions to Set Theory in the 1920s
12:30-2:00	LUNCH		
2:00-4:00	Subject and agency in biology Chair : Christophe Malaterre <i>Auguste Nahas</i> Cui Bono? The Continental Critique of Teleonomy	Models, modality, representation Chair : Thomas Kivatinos <i>Benedetta Spigola</i> Cassirer on Representation, Representationalism, and Physical Knowledge	Values and inductive risk Chair : Faeze Fazeli <i>Aaron Kenna</i> Contra the Value-Free Ideal of Science

Fermin Fulda
Agential Autonomy and Biological Individuality

Matthew Perkins-McVey
Morphine, alcohol, and the victorious body: how intoxicants intersected bodies and minds in the development of the biological subject

Alistair Whittle
Singing Immunological Songs: An Exploration of Holobiont Individuality

Philippe Verreault-Julien
Representing Non-Actual Targets?

Aditya Jha
Formal Analogies, Scientific Explanation and Understanding

Thomas Donaldson
Abstractionism and Modality

Helen Zhao
The Importance of (An Account of) Empirical Adequacy
Tyler Paetkau
Degrees of Harm and Legitimacy: A Defense of the Inductive Risk Account of Epistemically Detrimental Dissent
Parysa Mostajir
Values in Science: Pragmatist and Feminist Perspectives

Sun 30 May

9:30 - 11:00 **History of science**
Chair : Matthew Wiseman
David Orenstein
A Scientific Centennial: The 1921 Toronto Meeting of the American Association for the Advancement of Science
Vincent Auffrey
“Pour l’amélioration de la race humaine”: The Reception of Eugenics in the French-Canadian Press, 1912-1921
Bertrand Guillaume
Des hivers Belges: Projets de géo-ingénierie climatique de la Sibérie pendant la Guerre Froide

SESSION: Issues in Science Funding Policy
Jamie Shaw, Mark Solovey and Kareem Khalifa

20th c. HOPOS
Chair : Landon Elkind
Alan Richardson
The Reichenbach Scare: Cold War Reason and Closing the Gemeinschaft Gap
Bianca Crewe
The Theory of Knowledge and the Education of the People: Unified Science as Social Epistemology
Deivide Garcia da Silva Oliveira
On Feyerabend's Theory of Experience: The Empiricist Fluidness and Theoretical Speculation

11:00 - 11:30

BREAK

11:30 - 1:00 **Explanation in the life sciences**
Chair : Danielle Brown
Sepehr Ehsani
Principled Mechanistic Explanations in Biology: A Case Study of Alzheimer's Disease
Katie Deaven
Relative Significance Controversies in Evolutionary Biology

Philosophy of physics and ontology
Chair : Jessica Oddan
Frida Trotter
On the Structural Nature of Entanglement
Michael Cuffaro
The Open Systems View

Expertise
Chair : Parysa Mostajir
Kinley Gillette
Conceptualizing deferential models of expert authority
Marga Vicedo Castello
Experience as expertise: Clara Park's call for valuing a mother's knowledge

Lane DesAutels
The Case for Final Causes in Life Science

Thomas De Saegher
Vague Dynamical Ontological Models of Quantum Theory

Kamil Aftyka
The Role of Popular Science in the Formation of Expert Knowledge. Observations About Ludwik Fleck's Epistemology

1:00-2:00

LUNCH

2:00-4:00

DRAKE LECTURE
(followed by social lounge time)
Anita Guerrini
Galileo Among the Giants

Mon 31 May

9:30 - 11:00

History and philosophy of biology

Chair : Lane DesAutels

Jacob P. Neal

From Static to Dynamic: A Historical Account of the Emergence of the Dynamic View of Proteins

Agnes Bolinska

Molecular models as tools for gaining information about protein and DNA structure

Aja Watkins

Accommodating Horizontal Inheritance in Phylogenetics

Laws

Chair : Philippe Verreault-Julien

Chris Meacham

The Nomic Likelihood Account of Laws

Mousa Mohammadian

An Armstrongian Defense of Dispositional Monist Accounts of Laws

Alexandru Manafu

The Analyticity Objection to Special Science Laws

Nature of experiments

Chair : Derek Andrews

Robert Hudson

Explicating Exact versus Conceptual Replication

Brandon Boesch

Representational Practice of Representative Sampling in Public Health Surveillance Systems

Austin Due

Discovering Side Effects and Evaluating Efficacy in Post-Market 'Phase IV' Pharmaceutical Trials: Exploratory or Confirmatory Experiments?

11:00 - 11:30

BREAK

11:30 - 12:30

Aims-based approaches in life sciences

Chair : Ingo Brigandt

Ely Mermans

Controversies Over the Keystone Species Concept: A Brigandt-Longino's Analysis

Alican Basdemir

Integrating-for-Purposes: The Aims-Based Approach to Scientific Integration in Biology

Philosophy of physics

Chair : Michael Cuffaro

Adam Koberinski

Regularizing (away) vacuum energy

Michael Miller

Quantum Determinables

Science and society

Chair : Jamie Shaw

Rachel Katz

Funding the future? Trust and Transparency on Crowdfunding Platforms for Research Projects

Garrett Richards and Svetlana Barkanova

Evaluating STEM Outreach Programs: What Works Best and How Would We Know?

12:30-2:00

LUNCH

2:00-4:00

Marxist theories of science

Chair : Bianca Crewe

Alex Bryant

Gilbert Simondon's contra Marx and Hegel:

Alienation and Analogical Understanding

Spencer Hayden

Marx and Engels: Against Positivism, for

Dialectical Materialism

Zeyad El Nabolsy

Paulin J. Hountondji on Science, Capitalism, and
Imperialism: An African Philosopher's Quest for a
Sociology of Scientific Knowledge in the
Peripheries

George Borg

Discovery and Instrumentation: How Surplus
Knowledge Contributes to Progress in Science

**SESSION: Decentered Sciences: Beyond
Centre/Periphery stories**

*Maria Amuchastegui, Ernst Hamm, Gordon McOuat and
Arden Rogalsky*

Models and metrics

Chair : Aaron Kenna

Ryan O'Loughlin

Climate model comparisons: history and
philosophical implications

Federica Bocchi

Justifying inferences: the case of paleodiversity
measurements and the contemporary biodiversity
crisis

Justin Donhauser

A New, Robust, Method for Weather Event
Attribution

Shimin Zhao

Two statistical approaches to simplicity: a
comparison

Tues 1 June

9:30 - 11:00

**SESSION: Science, Technology and Northern
Exploration**

*Antony Adler, Sarah Pickman and Matthew
Wiseman*

HPS and AI

Chair : Isaac Record

Joseph Wilson

The Ghost in the Machine: Structural Metaphors in the
'Golden Age' of Artificial Intelligence Research, 1956-
1976

Hakob Barseghyan and Nichole Levesley

Big-Data and Integrated HPS: Towards a Database of
Intellectual History

Climate science and policy

Chair : Liam Bright

Joshua Luczak

Climate Denialism is Harmful Bullshit

Ahmad Elabbar

Following Climate Science Towards Greater
Emissions: Framing and Subversion in the Trump
Administration's Assessments for Environmental
Policy

Christophe Malaterre
Reconstructing the history of philosophy of science by means of topic-modeling

Faeze Fazeli
Science, Post-Truth, and Superficial Democracies: How Social Psychology Undermines Kitcher's Solution for Climate Change

11:00 - 11:30

BREAK

11:30 - 1:00 **Philosophy of health sciences**
Chair : Brandon Boesch
Paul Istasy and Ben Chin-Yee
The Problem of Trustworthy AI in Medicine
Sarah Clairmont
Valuing Population Health Science

Zahra Meghani
The 'construction' of GE mosquitoes with gene drives as the solution to the high incidence of mosquito-borne diseases: An epistemically and ethically justified scientific practice?

History of 20th Century Physics
Chair : Doreen Fraser
Marco Forgione
The Spacetime View in Feynman's Electrodynamics
Andrea Oldofredi
On the Meaning of the Wave Function: Ettore Majorana's Lectures Notes on Theoretical Physics
Theodora Vardouli and Salmaan Craig
The Circuit and the Bath: Cultures of Energy Modelling at the University of Cambridge, 1960-1980

Scientific reasoning and theory change
Chair : Ely Mermans
Charle André Terrault
Deduction and Induction: False Dichotomy?
David Rattray
C.I. Lewis, F.P. Ramsey, and Scientific Theory Change
Jean-Jacques Rousseau
Les créoles comme modèle de changement scientifique

1:00-2:00

LUNCH

2:00-4:00

INTERNATIONAL KEYNOTE

(followed by social lounge time)

Dhruv Raina

The Circulation of Mathematical Knowledge in 19th Century India and Europe

Wed 2 June

9:30 - 11:00

Annual General Meeting

11:00 - 11:30

BREAK

11:30-1:00 **International and colonialist history of science**
Chair : Gordon McOuat

SESSION: Teaching HPS Through Experiences

Social epistemology
Chair : Justin Donhauser

Gianamar Giovannetti-Singh
 Knowledges of Geography and Geographies of
 Knowledge: Martino Martini's Novus Atlas
 Sinensis and the emergence of mathematical
 cosmography
Fiona Amery
 The Sound of the Aurora Borealis: Discussion and
 Controversy in the First and Second International
 Polar Years
Theo Di Castri
 "An Unusual Natural Laboratory": Ethnicity,
 Deviance and Mid-Century US Settler Colonialism
 in the Construction of Problem Behavior Theory,
 1958-1980

Isaac Record, Marisa Brandt and Eleanor Louson

Remco Heesen and Liam Bright
 Publication Bias is Bad for Science if not
 Necessarily Scientists

Daniel Saunders
 How to Put the Cart Behind the Horse in the
 Cultural Evolution of Gender

Michelle Pham
 Social Roles in Scientific Collaboration

1:00-2:00

LUNCH

2:00-4:00

Cognition and psychiatry
 Chair : Fermin Fulda
Vivien Hamilton and Delia Gavrus
 Plant Cognition and the Re-enchantment of nature

Margaret Farrell
 What Would Imaginary Ancestors Do?

Derek Andrews
 Too Complex to Predict? What Complexity Theory
 Reveals About Natural Kind Analysis in Psychiatry

Danielle Brown
 The Medical Nature of Personality Disorders

Explanation, imagination, learning
 Chair : Kareem Khalifa
Haomiao Yu
 The Epistemology of Scientific Explanation

Michael Stuart
 Metaepistemology of Tools that Extend the Power of the
 Human Scientific Imagination
Thomas Kivatinos
 Familiar Portraits: The Hidden Convergence of
 Explanatory Practices in Science and Metaphysics

Gui Sanches de Oliveira
 Reconceiving modeling: From representation to enaction
 and construction

Philosophy of technology
 Chair : Zahra Meghani
Paula Sanchez-Nunez de Villavicencio
 Exploring the Networked Subject Through Reality
 Augmenting Technologies
Jennifer Jill Fellows
 A Mummery of Bondage: Siri and the Subversion
 of the Master/Slave Dialectic
Arjun Sawhney
 Policing in the Age of Algorithms