

FOUNDATIONS2018

The 19th UK and European Conference on Foundations of Physics

Programme

Tuesday, July 10, 2018; Academy Building*

16.00	<i>Opening words</i>			
16.15	Aula	<i>Introductory lecture: Sabine Hossenfelder "How Beauty leads Physics Astray"</i> <i>Chair: F. A. Muller</i>		
17.30	Garden	<i>Welcome Drinks</i>		

Wednesday, July 11, 2018; Educatorium, Science Park Uithof**

	Session 1 (room 0.42)	Session 2 (room A)	Session 3 (room D)	Session 4 (room 'Rood')
9.00	<i>Coffee and registration</i>			
9.30	Pablo Acuña: Kochen-Specker Theorem in the Context of von Neumann's 'Impossibility Proof'	Natalja Deng: Presentism, Triviality, and the Relativity Objection	Valeriya Chasova: Observers, references and symmetries	Alexander Blum: Heisenberg's 1958 Weltformel and the roots of post-empirical physics
10.10	Gábor Hofer-Szabó: What is quantum contextuality, and what is not?	Cristian Lopez: Time reversal, the arrow of time and metaphysical commitments	Pablo Ruiz de Olano: Symmetries in Physics: Variational, Dynamical, and Hamiltonian	Richard Dawid: Finetuning and the Lack of Fundamental Free Parameters
10.50	<i>Coffee Break</i>			
11.10	Jos Uffink: Schrödinger and the prehistory of the EPR argument	John Dougherty: The inertial structure of a Newtonian cosmos	Sébastien Rivat: Renormalization Scrutinized	Manuel Herrera: Conservation laws: a philosophical analysis of their status
11.50	Louis Vervoort: Are Hidden-Variable Theories for Pilot-Wave Systems Possible? A Bell-test in Hydrodynamic Systems	Tushar Menon: Clocks and chronogeometry: Rotating spacetimes and the relativistic null hypothesis	Joshua Rosaler and Robert Harlander: Naturalness, Wilsonian Renormalization, and "Fundamental Parameters" in Quantum Field Theory	Taimara Passero: The Geometrization as a Thema in the History of Physics
12.30	<i>Lunch Break (Foyer)</i>			
13.30	<i>Plenary Lecture: Charlotte Werndl (room 'Blauw')</i> "On the Relationship Between Boltzmannian and Gibbsian Equilibrium Calculations" Chair: Guido Bacciagaluppi			
14.30	Fabio Costa and Sally Shrapnel: Contextuality in ontological models without causal assumptions	James Fraser: Renormalisation Scheme Dependence Re-examined	Anne Deng: The Role of General Philosophy of Science in the Interpretation of Physical Theories: A Case Study	David Wallace: The Case for Black Hole Thermodynamics
15.10	Ronnie Hermens: ψ -ontic models without ψ	Cristin Chall: Model-Groups as Scientific Research Programmes	Davide Romano: A Proposal for the Classical Limit in Bohm's Theory	Jb Manchak: Some "No Hole" Spacetime Properties Are Unstable
15.50	<i>Coffee Break</i>			
16.30	Lev Vaidman: Beyond "To be or not to be?" Degree and type of presence of a quantum particle in the past	Benjamin Feintzeig: Quantization, Approximation, and Interpretation	Thao Le and Alexandra Olaya-Castro: Perceived objectivity via strong quantum Darwinism and spectrum broadcast structure	Elliott Chen: On Maxwell Gravitation
17.10	Ruward Mulder: Emergence and Pragmatism in David Wallace's Emergent Multiverse	Olimpia Lombardi and Manuel Herrera: Understanding decoherence by comparing classical and quantum irreversibility	Radin Dardashti: What Constitutes a Problem in Physics? The Case of the Strong CP Problem	J. Brian Pitts: What Are Observables in Hamiltonian Einstein-Maxwell Theory?
20.00	<i>Public Lecture: Sir Roger Penrose "Worlds Before the Big Bang: Colliding Black Holes and the Creation of Dark Matter" (room 'Theatron')</i>			

Thursday, July 12, 2018; Auditorium, Science Park Uithof**

	Session 1 (room 0.42)	Session 2 (room A)	Session 3 (room D)	Session 4 (room 'Rood')
9.00	<i>Coffee and registration</i>			
9.30	Raffael Krismer: Pragmatist Quantum Mechanics	Bixin Guo: The Bare Manifold and the Metric Structure: The Nature of Spacetime in General Relativity	Robert Bishop: Determinism in Context	Wayne Myrvold: Explaining Thermodynamics: What Remains to be Done?
10.10	Alexei Grinbaum: What's in the input/output distinction?	Adán Sus: Symmetries, physical possibilities and spacetime	Marij van Strien: Disentangling causality and determinism	Erik Curiel: Irreversibility in Thermodynamics versus in Statistical Mechanics
10.50	<i>Coffee Break</i>			
11.10	Sam Rijken: Non-locality and timelike Bell-type inequalities	Samuel Fletcher: Reduction and Causal Set Theory's Hauptvermutung	Miklós Rédei and Zalán Gyenis: Categorical independence in categorial quantum field theory	Valia Allori: Some Remarks on Explanation in Statistical Mechanics
11.50	Howard Wiseman: Three boos for locality	Christian Wüthrich and Vincent Lam: Laws beyond spacetime	Niels Linnemann and Kian Salimkhani: Reassessing the Weinberg-Witten Theorem	Aldo Filomeno: Statistical necessity without a guiding dynamics
12.30	<i>Lunch Break (Foyer)</i>			
13.30	<i>Plenary Lecture: Emily Adlam (room 'Blauw')</i> "A Tale of Two Anachronisms" Chair: Fedde Benedictus			
14.30	Oliver Reardon-Smith and Paul Busch: Measurement uncertainty and covariance	Daniel Segal Neuman: Is Cosmic Inflation a Testable Theory?	Patricia Palacios and Lapo Casetti: Redefining Equilibrium for Long-range Interacting Systems	Jeremy Butterfield: On Dualities and Equivalences Between Physical Theories
15.10	Leon Loveridge, Paul Busch and Takayuki Miyadera: Symmetry, Reference Frames, and Relational Quantities in Quantum Mechanics	Caspar Jacobs: Why Cosmology Does Not Prove the Past Hypothesis	Geoffrey Sewell: Thermodynamic Completeness and the Differentiability of Entropy	Sebastian De Haro: Formulating Emergence in the Physical Sciences
15.50	<i>Coffee Break</i>			
16.30	Leevi Leppäjärvi, Teiko Heinosaari and Sergey Filippov: Measurement simulability in general probabilistic theories	Juliusz Doboszewski: On cosmological fatalism and large scale structure of spacetime	Márton Gömöri: Why do initial conditions in an actual sequence of experiments approximately follow the uniform distribution over phase space with respect to the Lebesgue measure?	Niels Martens: Symmetry-to-reality inferences: The Aharonov-Bohm Effect as a Case Study for Motivational Realism
17.10	Joanna Luc and Tomasz Placek: On generalised probability space representations of quantum mechanical experiments	Sylvia Wenmackers: What the two-envelopes paradox teaches us about the two-headed arrow of time	Joshua Luczak and Lena Zuchowski: The Ehrenfests' Use of Toy Models to Explore Irreversibility in Statistical Mechanics	Josh Hunt: Symmetry and Degeneracy in the Hydrogen Atom
18.30	<i>Dinner: Ottone⁺</i>			

Friday, July 13, 2018; Auditorium, Science Park Uithof**

	Session 1 (room 0.42)	Session 2 (room A)	Session 3 (room D)	Session 4 (room 'Rood')
9.00	<i>Coffee and registration</i>			
9.30	Paul M. Näger: A Stronger Bell Argument for (Some Kind of) Parameter Dependence	Mike D. Schneider: Interpretation and crisis in the vacuum	Sebastian Fortin, Hernán Accorinti and Jesus Alberto Jaimes Arriaga: Phonons: a case of intra-theoretic relationship	Nicolas Gisin: Indeterminism in Physics, Real Numbers, Classical Chaos and Bohmian Mechanics
10.10	Gijs Leegwater: Turning indeterminism into determinism: Does it matter when God throws his dice?	Karim Thébault and Sean Gryb: Superpositions of the cosmological constant allow for singularity resolution and unitary evolution in quantum cosmology	Stephan Eijt: 1, 2, Many: Emergence in positron-electron systems	Magdalena Zych, Fabio Costa, Igor Pikovski and Caslav Brukner: Bell's Theorem for Temporal Order
10.50	<i>Coffee Break</i>			
11.10	Tim Palmer: A Finite Theory of Quantum Physics	Rasmus Jaksland: Probing spacetime with a holographic relation between spacetime and entanglement	Jorge Alberto Manero Orozco: Imprints of the Underlying Structure of Physical Theories	C. D. McCoy: Why is Planck's constant a universal constant?
11.50	Siddhant Das and Detlef Dürr: Arrival Time Distributions of Spin-1/2 Particles	Alexander Smith: Quantizing time: Interacting clocks and systems	Angelika Mus-Nowak: Is grounding metaphysics on the findings of current scientific theories justified?	Peter Evans: A sideways look at faithfulness
12.30	<i>Lunch Break (Foyer)</i>			
13.30	<i>Plenary Lecture: Ted Jacobson (room 'Blauw')</i> "Diffeomorphism invariance and the information paradox" <i>Chair: Dennis Dieks</i>			
14.30	Maaneli Derakhshani: Stochastic Mechanics is a Viable Foundation for Quantum Mechanics	Luigi Laino: Between Knots and Links: an Argument in Favour of the Transcendental Representation of Space in Loop Quantum Gravity	Marco Giovanelli: 'Like classical Thermodynamics before Boltzmann'. Why did Einstein Compare Relativity Theory with Thermodynamics?	Marc Holman: Some Issues and Non-Issues in Concordance Cosmology
15.10	Martin Ringbauer: Experimental metaphysics: Probing the foundations of quantum theory	Alexander Afriat: Topology, holes & sources	Vera Matarese: Quantum Gravity: A Threat to Humeanism?	Thomas De Saegher: The Fate of Some Semantic Problems for Fuzzy Links in Relativistic Dynamical Reduction Models
15.50	<i>Coffee Break</i>			
16.30	Pierre Uzan: About Super-Quantum Correlations	Kevin Kadowaki: On Rotation Curve Analysis	Vincent Ardoirel: Phase Transitions, Renormalization Group, and Finite Size Scaling Theory	Timothy Schmitz: Computing in GRW Quantum Mechanics
17.10	John van de Wetering: Reconstruction of quantum theory from universal filters	Simon Friederich: Testing multiverse theories and the problem of researcher degrees of freedom	Jingyi Wu: Explaining Universality: Infinite Limit Systems in the Renormalization Group Method	Antoine Tilloy: A realist redefinition of interacting quantum field theories inspired from dynamical collapse models
18.15	Elise Crull & Guido Bacciagaluppi: book presentation "Grete Hermann - Between Physics and Philosophy" (room 0.42)			

Saturday, July 14, 2018

11.00	Excursion Kröller Müller Museum	We meet at 11:00 outside the Educatorium (Science Park; near the registration desk). A bus will pick us up. When we return to Utrecht late in the afternoon, the bus will make a stop at Utrecht Central train station and be back at the Educatorium no later than 18.30
18.30		

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***) Educatorium, Science Park Uithof, Leuvenlaan 19.

+) Restaurant Ottone is located at Kromme Nieuwegracht 62, at 350 meters East of the Academy Building.