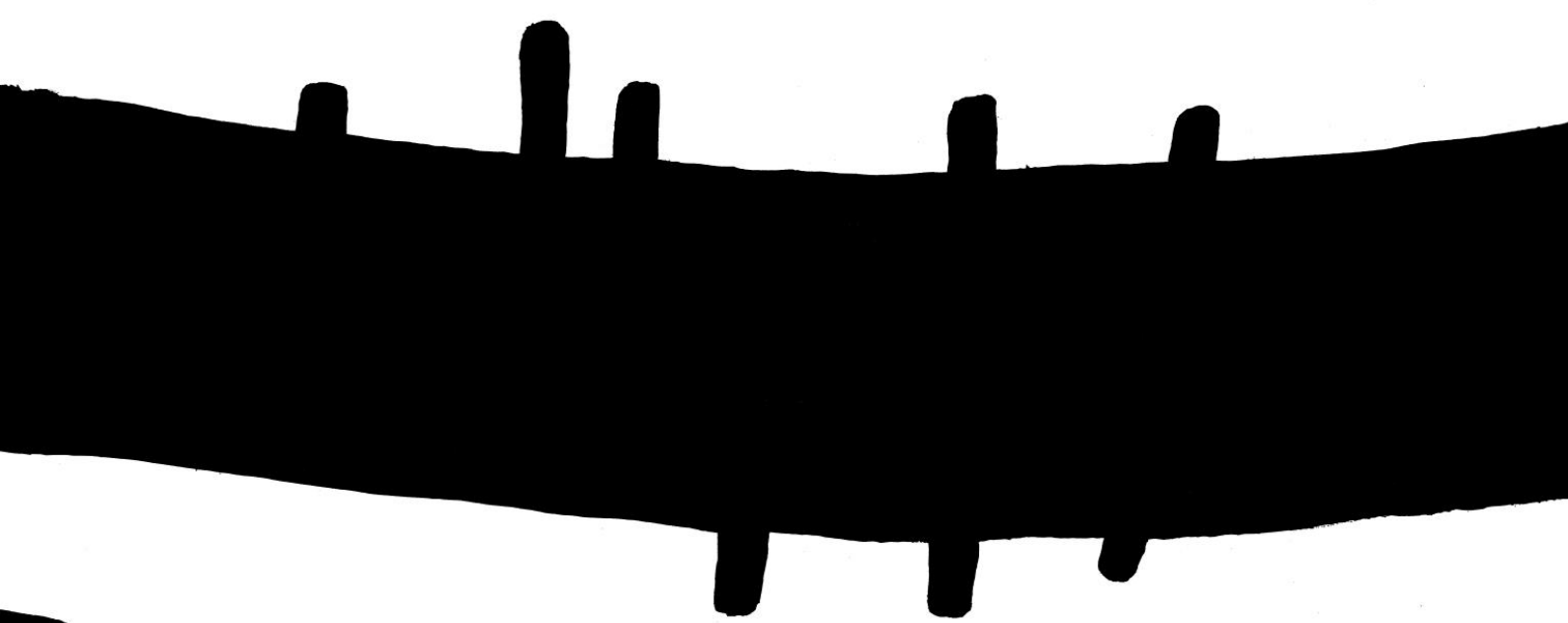


XIII INTERNATIONAL ONTOLOGY CONGRESS

Under the patronage of UNESCO



PHYSIS

PHYSICS AND ONTOLOGY

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San Sebastian 2-6 october
Barcelona 9 october
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2018



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XIII INTERNATIONAL ONTOLOGY CONGRESS

Physics and Ontology

Under the patronage of UNESCO

Under the honorary presidency of François Englert

Program / Programa / Egitaraua

LECTURES, TALKS AND SPECIAL SESSIONS IN SAN SEBASTIÁN

Tuesday, October 2nd
Martes, 2 de Octubre / Asteartea, Urriak 2

Chillida-Leku Museum

17:00 Opening Ceremony / Ceremonia inaugural / Hasiera ekitaldia

*Presidency of the Session: **Pedro M. Echenique** (Prince of Asturias Award and Max Planck Prize for Physics, DIPC)*

- 1) Welcoming Speech / Palabras de bienvenida / Ongi etorriaren hitzak.
- 2) Opening Academic Speech / Palabras de apertura académica / Hasiera akademikoaren hitzak:

The event will begin with a few words of tribute to **Robert Brout**, pioneer along with **François Englert** in the research on the so-called Higgs field and boson.

Speakers:

- **François Englert** (Nobel Prize in Physics, Honorary President of this edition. Université Libre de Bruxelles).
- **Jean Marie Frère** (Université Libre de Bruxelles).
- **Gerardus 't Hooft** (Nobel Prize of Physics. Utrecht University).

Lecture / Conferencia / Hitzaldia

François Englert. (Nobel Prize in Physics, Honorary President of this edition. Université Libre de Bruxelles).

Concert / Concierto / Kontzertua

Countertenor: **Carlos Mena**.
Pianist: **Susana García de Salazar**.

Works by A. Donostia, M. Ravel, B. Britten, A. Iglesias.

Appetizer

Wednesday, October 3rd
Miércoles, 3 de octubre / Asteazkena, Urriak 3

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room A: SALÓN DE GRADOS. Second Floor / Segundo Piso / Bigarren Solairua

Morning Lectures

Chair: Simon Kochen (Princeton University)

9:00-9:45 Alberto Cordero (CUNY). *Functional Ontologies and Pluralism.*

9:45-10:30 Michela Massimi (The University of Edinburgh). *Realism, Perspectivism, and Reality.*

10:30-11:15 Carl Hoefer (University of Barcelona). *QM, Non-locality, and Realism.*

11:15-11:30 COFFEE BREAK. THIRD FLOOR

Session at Donostia International Physics Center (DIPC) 12:00

12:00 **Gerardus 't Hooft** (Nobel Prize of Physics. Utrecht University). Seminar.

Evening Lectures

Chair: Bárbara Jiménez (University of Leeds)

15:15-16:00 Julián Pacho (University of the Basque Country). *Nuestra Mente No Estaba Preparada para Esto. Sobre un Conflicto de la Naturaleza Consigo Misma a Causa de la Ciencia*

16:00-16:45 Javier Aguirre (University of the Basque Country). *Popper y los Presocráticos.*

16:45-17:30 Francesc Casadesús (University of Illes Balears). *¿Fue Sócrates un Físico?*

Chair: Michela Massimi (The University of Edinburgh)

17:30-18:15 Tomás Calvo (Complutense University of Madrid). *Physics as Ontology in the Aristotelian Project.*

18:15-19:00 Dimitri El Murr (ENS). *Physis as Tekhnè in Plato's Timaeus: Why is the Kosmos a Perfectly Self-sufficient Animal?*

Special Session 19:00-20:00

Chair: David Wallace (University of Southern California)

Debate with **Simon Kochen** (Princeton University). *The Free Will Theorem: The State of the Art.*

Wednesday, October 3rd
Miércoles, 3 de octubre / Asteazkena, Urriak 3

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room B: SALA DE JUNTAS. Second Floor / Segundo Piso / Bigarren Solairua

Morning Talks

Chair: Neda Ghatrouie (University of Amsterdam)

9:00-9:20 Prashant Kumar (Jawaharlal Nehru University). *Framing What There Is.*

9:20-9:40 Paula Atencia (Complutense University of Madrid). *Scientific Pluralism and Realism: Problems and Strategies to Reduce the Gap.*

9:40-10:00 João Luís de Lemos Cordovil (University of Lisbon). *OSR without Metaphysical Fundamentalism.*

10:00-10:20 Javier Sánchez-Cañizares (University of Navarra). *Classicality First: Why Decoherence Implies Copenhagen Interpretation.*

11:15-11:30 COFFEE BREAK. THIRD FLOOR

Evening Talks

Chair: Paula Atencia (Complutense University of Madrid)

15:00-15:20 Neda Ghatrouie (University of Amsterdam). *The Evolution of The Greek Concept of Physis from Homer and Hesiod to Anaxagoras: Emergence of a New Science.*

15:20-15:40 Jonas Ciurlionis (Vilnius University). *Heraclitus and Hippocrates: the Paradigm of Elements.*

15:40-16:00 Michael Fournier (Dalhousie University). *Using Chew's Bootstrap Model to Think about Epicurus' Minimal Parts.*

16:00-16:20 Vladimir Krasikov (Russian State University of Justice). *Antiquity: The Laws of the Formation of Theoretical Knowledge.*

Wednesday, October 3rd
Miércoles, 3 de octubre / Osteguna, Urriak 3

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room C: SEMINARIO DE FILOSOFÍA. Second Floor / Segundo Piso / Bigarren Solairua

Morning Talks

Chair: Manuel C. Ortiz (University of Navarra)

10:00-10:20 Mario Alvarado (University of Edinburgh). *La Crisis de la Ciencia y sus Principios en la Filosofía de Eduardo Nicol.*

10:20-10:40 María Lourdes Domínguez and José Ignacio Barragués (University of the Basque Country). *Una Revisión de la Irrazonable Eficacia de las Matemáticas en las Ciencias Naturales.*

10:40-11:00 Enric Pérez (University of Barcelona). *Unamuno y Schrödinger, Encuentros y Desencuentros.*

11:15-11:30 COFFEE BREAK. THIRD FLOOR

Evening Talks

Chair: Enric Pérez (University of Barcelona)

15:00-15:20 Damiano Sacco (ICI Berlin). *From Aristotle to Heisenberg. The Potential for Dynamis.*

15:20-15:40 Manuel C. Ortiz (University of Navarra). *From Heisenberg Back to Plato: the Problem of Matter in Quantum Physics.*

15:40-16:00 Boris Gubman and Carina Anufrieva (Tver State University). *F. Laruelle's Identities Theory: Synergetic Origin of Scientific Thought and Philosophy.*

16:00-16:20 Wang Zheng (Scuola Normale Superiore, Firenze). *Bruno's Ontology: a Renovated Concept of Nature.*

Thursday, October 4th
Jueves, 4 de octubre / Osteguna, Urriak 4

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room A: SALÓN DE GRADOS. Second Floor / Segundo Piso / Bigarren Solairua

Morning Lectures

Chair: Alberto Cordero (CUNY)

9:00-9:45 Juha Saatsi (University of Leeds). *Scientific Realism about Spin.*

9:45-10:30 Peter Vickers (Durham University). *Is Spin Real?*

Special Session 10:30-11:30

Chair: Pedro M. Echenique (DIPC, University of the Basque Country)

Debate with **Gerardus 't Hooft** (Nobel Prize of Physics. Utrecht University). *A Minority's View on Quantum Mechanics.*

11:30-11:45 COFFEE BREAK. THIRD FLOOR

Morning Lectures

Chair: Carl Hoefer (University of Barcelona)

11:45-12:30 Ruediger Schack (Royal Holloway. University of London). *From Wigner's Friend to Participatory Realism.*

12:30-13:15 Gérard Naddaf (York University). *The Discovery of Physics and the First Secular Theories of Everything.*

13:15-14:00 Elie During (University of Nanterre). *Re-temporalizing Gravity: Whitehead's Relativity Theory and the Question of Nature.*

Evening Lectures

Chair: Miguel A. Ferrero (University of Oviedo)

15:00-15:45 Richard Healey (University of Arizona). *What Does it Mean to Say that a Quark or Higgs Boson Exists?*

15:45-16:30 Pilar Ruiz-Lapuente (University of Barcelona). *The Ontology of Dark Energy and its Implications.*

Chair: Ricardo Muiño (DIPC)

16:30-17:15 Elena Castellani (University of Florence). *Objects, Structures, and Symmetries.*

17:15-18:00 Aitor Bergara (University of the Basque Country) *The Puzzle of Quantum Reality.*

Thursday, October 4th
Jueves, 4 de octubre / Osteguna, Urriak 4

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room B: SALA DE JUNTAS. Second Floor / Segundo Piso / Bigarren Solairua

Morning Talks

Chair: Albert Solé (University of Barcelona)

8:45-9:05 Martina Properzi (University of Rome). *The Fundamental Physics Beyond the Standard Model and the Topological Interpretation of Quantum Computing. Ontological Implications.*

9:05-9:25 Diego Romero-Maltrana (Pontificia Universidad Católica de Valparaíso). *Quantum Mechanics as a Framework Theory.*

9:25-9:45 José Nunes Ramalho Croca (University of Lisbon). *Space and Time in Quantum Physics and the Becoming.*

9:45-10:05 Adán Sus (Valladolid University). *Counting Possibilities in Spacetime Theories.*

10:05-10:25 Óscar Castro (University of Tartu). *Perception without Representation on Slime Molds: The Question of Cognition without Nervous System.*

11:30-11:45 COFFEE BREAK. THIRD FLOOR

Morning Lectures

Chair: Gotzon Arrizabalaga (University of the Basque Country)

11:45-12:30 José Ignacio Galparsoro (University of the Basque Country). *Physis y Techné: la Naturaleza de la Técnica.*

12:30-13:15 Xabier Insausti (University of the Basque Country). *Filosofar en Tiempos Precarios.*

13:15-14:00 Ignacio Ayestarán (University of the Basque Country). *Nihilismo, Capital y Mundo: entre Marx y Debord.*

Evening Talks

Chair: José Ignacio Galparsoro (University of the Basque Country)

15:00-15:20 Marta García (University of the Basque Country). *La Filosofía y las 'Dos Culturas': Maneras de Salvar la Dicotomía.*

15:20-15:40 Miquel Company (University of Illes Balears). *La Mente y Su Vínculo con la Naturaleza: Una Propuesta Dennettiana.*

15:40-16:00 Bárbara Jiménez (University of Leeds). *Naturaleza, Verdad y Belleza en Darwin.*

16:00-16:20 Luis Garagalza and Michael Marder (University of the Basque Country). *Las Raíces de la Physis.*

Thursday, October 4th
Jueves, 4 de octubre / Osteguna, Urriak 4

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room C: SEMINARIO DE FILOSOFÍA. Second Floor / Segundo Piso / Bigarren Solairua

Morning Talks

Chair: Kevin Coffey (New York University, Abu Dhabi)

- 8:45-9:05 Ekai Txapartegi (University of the Basque Country). *The Physics of Chroma*.
9:05-9:25 Michael Bourke (British Columbia Institute of Technology). *Intentionality and Nature*.
9:25-9:45 Mario Hubert (Columbia University). *Nothing Exists, but Thank God it's Epistemic: Why the PBR-Theorem is not Restricted by the Ontological Models Framework*.
9:45-10:05 Oliver Milne (National University of Ireland). *Putnam's Conceptual Relativity and the Faulty Foundations of Ontology*.
10:05-10:25 Aldo Filomeno (Institute of Philosophy, Academy of Sciences of the Czech Republic). *Statistical Necessity as Physical Necessity*.

11:30-11:45 COFFEE BREAK. THIRD FLOOR

Evening Talks

Chair: Ekai Txapartegi (University of the Basque Country)

- 15:00-15:20 Kevin Coffey (New York University, Abu Dhabi). *The Ontology of Mass and Energy in Special Relativistic Particle Dynamics*.
15:20-15:40 Manuel Pretel-Wilson. *The Schism in Physics since Solvay 1927: Determinism versus Indeterminism?*
15:40-16:00 Vicent Picó (University of Valencia). *The Primitive Ontology of Classical Mechanics and Bohmian Mechanics*.
16:00-16:20 Mamuka Dolidze (Tbilisi State University). *Quantum Theory and Stream of Consciousness in Modern Literature*.

Friday, October 5th
Viernes, 5 de octubre / Ostirala, Urriak 5

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa, 70, San Sebastian.

Room A: SALÓN DE GRADOS. Second Floor / Segundo Piso / Bigarren Solairua

Morning Lectures

Chair: Tomás Calvo (Complutense University of Madrid)

9:15-10:00 Demetra Sfendoni-Mentzou (Aristotle University of Thessaloniki). *Aristotle's Direct Realism and our Knowledge of the External World.*

10:00-10:45 Gerhard Seel (University of Bern). *Can Science Decide between Determinism and Indeterminism?*

10:45-11:30 Francis Wolff (École Normale Supérieure). *Why There Was No Galileo in Ancient Greece?*

11:30-11:45 COFFEE BREAK. THIRD FLOOR

Chair: Demetra Sfendoni-Mentzou (Aristotle University of Thessaloniki)

11:45-12:30 Tim Maudlin (New York University). *The Idea of a Canonical Presentation of a Physical Theory.*

12:30-13:15 Carlo Rovelli (Aix-Marseille Université). *The Stratified Notions of Space and Time and Quantum Gravity.*

13:15-14:00 David M. Wallace (University of Southern California). *On the Plurality of Quantum Theories: Intertheoretic Relations in Quantum Theory and their Implications for the Quantum Measurement Problem.*

Special Session 16:30-17:30

Chair: Carlo Rovelli (Aix-Marseille Université)

Many-worlds: from Anaximander to Hugh Everett. Colloquium with David M. Wallace (University of Southern of California).

Friday, October 5th
Viernes, 5 de octubre / Ostirala, Urriak 5

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa 70, San Sebastián.

Room B: SALA DE JUNTAS. Second Floor / Segundo Piso / Bigarren Solairua

Morning Talks

Chair: Íñigo Ongay (University of Deusto)

9:00-9:20 Laura Bujalance (Cela Open Institue (UCJC)). *Continuity and Discontinuity. From the Greek Debate on Physical Action to the Debate in Quantum Physics about Ontological Entities.*

9:20-9:40 Peter Kinane (Independent Researcher). *E-PS: Coherent Philosophy-Physics, Including Quantum Dynamics and Macro World.*

9:40-10:00 Philipp Berghofer (University of Graz). *Ontological Implications of Quantum Field Theory: Fields as the Building Blocks of the Universe?*

10:00-10:20 Sergei Fokin and Rafael Aricieaga Paredes (Escuela Normal No. 3 de Toluca). *White Spot in the Evolution of Quantum Mechanics.*

11:30-11:45 COFFEE BREAK. THIRD FLOOR

Evening Talks

Chair: Laura Bujalance (Cela Open Institue (UCJC))

15:00-15:20 Íñigo Ongay (University of Deusto). *Simplicity, Plurality and Nature: A Machian Approach to the (dis)unity of Science and Nature.*

15:20-15:40 Jesús Zamora-Bonilla (UNED, Madrid). *A Deflationary Ontology for Scientific Realism.*

15:40-16:00 Martin King (University of Bonn). *Ontological Aspects of Effective Field Theories.*

Friday, October 5th
Viernes, 5 de octubre / Ostirala, Urriak 5

Faculty of Education, Philosophy and Anthropology, University of the Basque Country. Avenida de Tolosa, 70 San Sebastián.

Room C: SEMINARIO DE FILOSOFÍA. Second Floor / Segundo Piso / Bigarren Solairua

Morning Talks

Chair: Rita María Pérez (University of the Basque Country)

9:00-9:20 Ignacio García (University of Salamanca). *Dos Conjeturas Científicas de Anaximandro y Anaxímenes.*

9:20-9:40 Ignacio Pajón (Complutense University of Madrid). *Ontología de la Phýsis en Pirrón y Sexto Empírico.*

9:40-10:00 Alessia Ferrari (Independent Researcher). *Ritorno agli Ionici: l'importanza dell'atteggiamento Critico nell'indagine sulla Physis come Lascito alla Contemporaneità.*

10:00-10:20 Bayi Bayi Molongwa (INADEP-African Institute for Prospective Studies). *La Crisis de los Presupuestos que Sustentan la Física Griega a la Luz del NWN (U) Egipcio.*

11:30-11:45 COFFEE BREAK. THIRD FLOOR

Evening Talks

Chair: Ignacio García (University of Salamanca)

14:40-15:00 Núria Estrach (Autonomous University of Barcelona). *Existe un Determinismo Natural de la Maldad Humana: Estado de la Cuestión.*

15:00-15:20 Pablo López (Estudio Teológico Agustiniiano de Valladolid). *Ontología de la Naturaleza Humana: el Ser que ante Todo Está.*

15:20-15:40 Rita María Pérez (University of the Basque Country). *Naturaleza del Discurso Publicitario.*

15:40-16:00 Juan Bautista Bengoetxea and José Luis Luján (Universitat de les Illes Balears). *Naturaleza (Physis) y Prácticas Basadas en Pruebas Empíricas: Modelos, Simulaciones Moleculares y Alimentos Saludables.*

16:00-16:20 César Jesús Alcázar (University of the Basque Country). *Trabajo y Naturaleza Humana en Marx a la Luz Del Conocimiento como Nueva Fuente de Producción.*

Saturday, October 6th
Sábado, 6 de Octubre / Larunbata, Urriak 6

Chillida-Leku Museum

10:30 Closing Ceremony / Ceremonia de clausura / Amaiera ekitaldia

Chair: Javier Echeverría (Ikerbasque)

1) Closing talks.

10.30-11:30 *Greek Thought and Contemporary Physics: the Case of Aristotle's Physics.*
Colloquium with the physicist **Carlo Rovelli** (Aix-Marseille University).

Speakers: **Tomás Calvo** (Complutense University of Madrid)
Gerhard Seel (University of Bern)
Francis Wolff (École Normale Supérieure)

11:30-12:30 **Juan José Gómez-Cadenas** (DIPC) *Is the Neutrino its Own Antiparticle? (What We Talk about when We Talk about Neutrinos).*

2) The session will finish with a closing speech by Prof. **Gerardus 't Hooft** (Nobel Prize of Physics. Utrecht University).

Concert / Concierto / Kontzertua

PIANO CONCERT. Works presented by composers:

Tomás Marco
José María Sánchez-Verdú
Mauricio Sotelo
Gabriel Erkoreka
Pianist: Isabel Puente

Appetizer

XIII INTERNATIONAL ONTOLOGY CONGRESS

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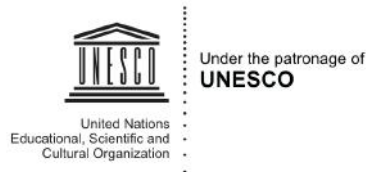
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