

# The Perils of Prediction in the Physical Sciences:

## Historical and Epistemological Perspectives

1st International Workshop – 18/19 March 2021

Funded by the Hellenic Foundation for Research & Innovation

*Department of History and Philosophy of Science*

*School of Science*

*National and Kapodistrian University of Athens*

## Recorded Presentations of the Workshop

Click on the title of the presentation to view it.

[Note: not all presentations are available]

**The workshop took place online on Zoom**

March 18
<b>12:00 – 2:00pm</b> <b>Welcome / Prediction in Classical and Quantum Physics</b> <b>(Chair: Aristotle Tympas)</b>
<b>Theodore Arabatzis</b> , National and Kapodistrian University of Athens <i>The Perils of Prediction Project</i>
<b>Léna Soler</b> , Université de Lorraine, Archives Henri Poincaré <i>What Would It Be like to Be Bohmians? Predictions as Paradigm Dependent: The (Big) Difference That It Makes</i>
<b>Vasiliki Christopoulou</b> , National and Kapodistrian University of Athens <i>From Dimensions to Physical Laws: Lord Rayleigh's Dimensional Approach to Prediction</i>
<b>3:30 – 5:30pm</b> <b>Computation, Simulation, and Prediction</b> <b>(Chair: Ana Simões)</b>
<b>Aristotle Tympas</b> , National and Kapodistrian University of Athens <i>On Searching for One More Imaginary Particle and Missing the One Real Planet: Historiographical Considerations on Scientific Computing</i>
<b>Hans Hasse &amp; Johannes Lenhard</b> , University of Kaiserslautern <i>Created by Prediction: On the History, Ontology, and Computation of the Lennard-Jones Fluid</i>
<b>Stelios Kampouridis</b> , National and Kapodistrian University of Athens <i>"There isn't a single solution to everything": Predictive Reliability and Hierarchy of Models in Computational Quantum Chemistry</i>

<b>6.00 - 8.00pm</b> <b>The Changing Fortunes of Prediction</b> <b>(Chair: Friedrich Steinle)</b>
<b>Radin Dardashti</b> , University of Wuppertal <i>Predictions in Fundamental Physics and the Future of Theory Assessment?</i>
<b>Grigoris Panoutsopoulos</b> , National and Kapodistrian University of Athens <i>The Changing Concept of Prediction in High Energy Physics: From the Standard Model to the Post-Higgs Era</i>
<b>Miles MacLeod</b> , University of Twente <i>Doing without Prediction: The Case of Sustainability Science</i>
<b>March 19</b>
<b>12:30 – 2:00pm</b> <b>Prediction in the Environmental Sciences</b> <b>(Chair: Theodore Arabatzis)</b>
<b>Gabriele Gramelsberger</b> , RWTH Aachen University <i>Cloud Parametrization Deadlock in Climate Models</i>
<b>Matthias Heymann</b> , Aarhus University <i>Climate Modeling and the Perils of Prediction</i>
<b>3:30 – 5:30pm</b> <b>Prediction in the Earth Sciences</b> <b>(Chair: Kostas Gavroglu)</b>
<b>Stathis Arapostathis</b> , National and Kapodistrian University of Athens <i>Dusty Predictions: Technoscientific Networks, Research Politics and Regional Uncertainties</i>
<b>Gregory Clancey</b> , National University of Singapore <i>Predictive Models and Their Markets: The Case of Seismology</i>
<b>Iraklis Katsaloulis</b> , National and Kapodistrian University of Athens <i>Earthquake Prediction: The Greek Case in a Global Context</i>
<b>6.00 - 8.00pm</b> <b>The Epistemology of Prediction</b> <b>(Chair: Hasok Chang)</b>
<b>Wendy Parker</b> , Virginia Tech <i>Predicting Future Weather and Climate: From Models to Expert Judgment</i>
<b>Alex Broadbent</b> , University of Johannesburg <i>What Is a Good Prediction?</i>
<b>Stéphanie Ruphy</b> , Ecole normale supérieure – Université PSL <i>Should We Still Value the Unpredictability of Scientific Inquiry?</i>