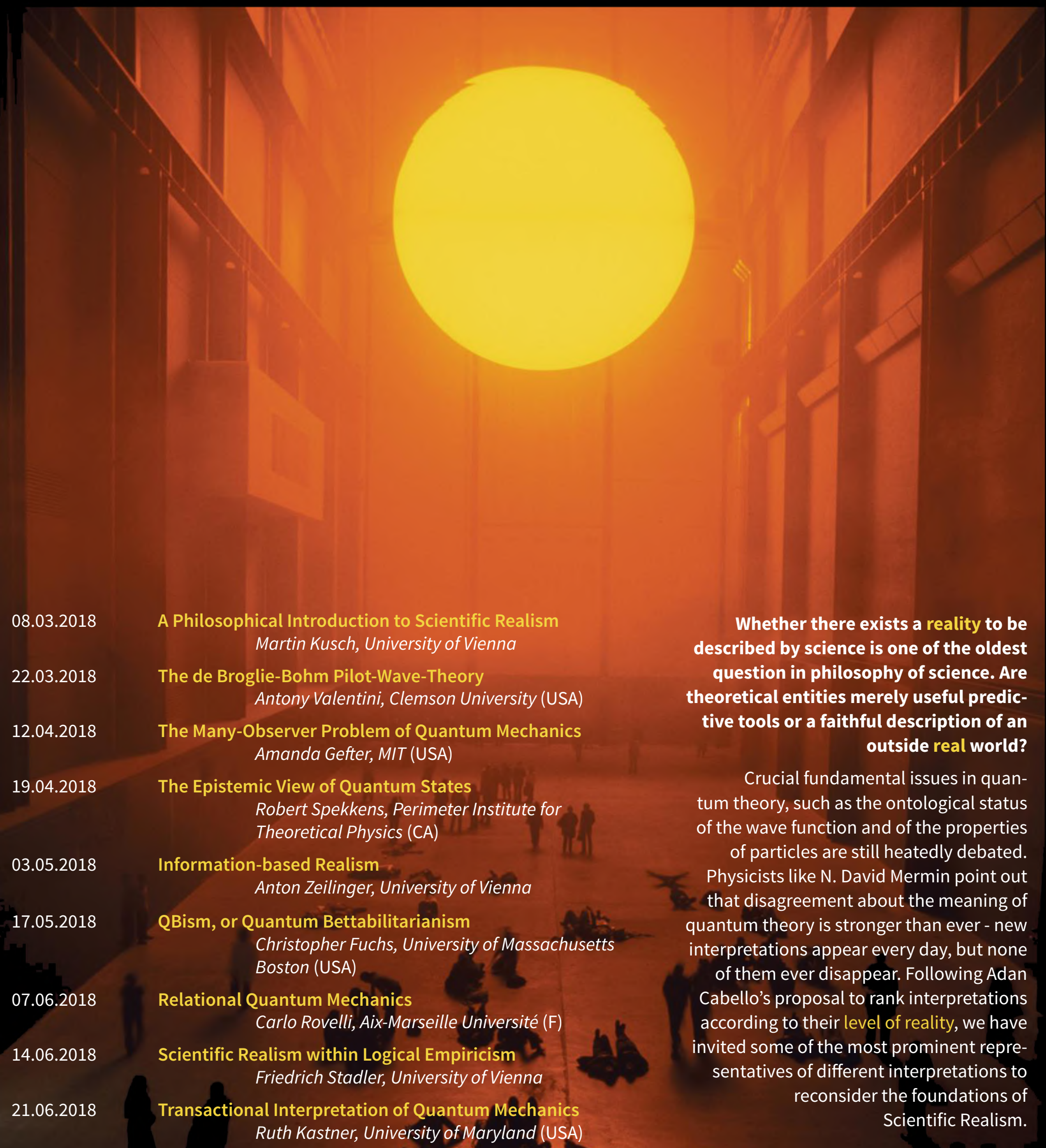
Lecture Series on Foundations of Science:
Scientific Realism

Summer term 2018, Thursdays 16.00-19.00h, Boltzmann-Hörsaal (2.5 ECTS)



Olafur Eliasson *The Weather Project* © Andrew Dunkley & Marcus Leith

08.03.2018	**A Philosophical Introduction to Scientific Realism**	*Martin Kusch, University of Vienna*
22.03.2018	**The de Broglie-Bohm Pilot-Wave-Theory**	*Antony Valentini, Clemson University* (USA)
12.04.2018	**The Many-Observer Problem of Quantum Mechanics**	*Amanda Gefter, MIT* (USA)
19.04.2018	**The Epistemic View of Quantum States**	*Robert Spekkens, Perimeter Institute for Theoretical Physics* (CA)
03.05.2018	**Information-based Realism**	*Anton Zeilinger, University of Vienna*
17.05.2018	**QBism, or Quantum Bettabilitarianism**	*Christopher Fuchs, University of Massachusetts Boston* (USA)
07.06.2018	**Relational Quantum Mechanics**	*Carlo Rovelli, Aix-Marseille Université* (F)
14.06.2018	**Scientific Realism within Logical Empiricism**	*Friedrich Stadler, University of Vienna*
21.06.2018	**Transactional Interpretation of Quantum Mechanics**	*Ruth Kastner, University of Maryland* (USA)

Whether there exists a reality to be described by science is one of the oldest question in philosophy of science. Are theoretical entities merely useful predictive tools or a faithful description of an outside real world?

Crucial fundamental issues in quantum theory, such as the ontological status of the wave function and of the properties of particles are still heatedly debated. Physicists like N. David Mermin point out that disagreement about the meaning of quantum theory is stronger than ever - new interpretations appear every day, but none of them ever disappear. Following Adan Cabello's proposal to rank interpretations according to their level of reality, we have invited some of the most prominent representatives of different interpretations to reconsider the foundations of Scientific Realism.

Further information: ufind.univie.ac.at
Organised by Naturwissenschaftscafé

Scientific advisor: Caslav Brukner
Organisers: Flavio Del Santo, Emanuel Schwarzhans, Moritz Kriegleder, Nino Lauber, Gerd Krizek, Mark Strempel, Angelika Schwarzhans