



## Institute colloquium

# The Institute Colloquium: Do we need so many interpretations of quantum mechanics?

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Host:

Quantum mechanics is unique among physical theories in that 90 years after its introduction and general acceptance as being correct and complete, its interpretation remains a subject of controversy. Unlike classical mechanics, what quantum mechanics still lacks is a clear microscopic formulation, whereby the theory is defined for a closed system  $S$  of any size in terms of concepts relating only to  $S$  itself. Such a formulation, called Compatible Quantum Theory, is presented and shown to account for and clarify the standard quantum phenomena and paradoxes. The question of physical implementation, on the other hand, requires a macroscopic theory, to account for state preparation and the measurement of system properties. It is primarily in different versions of such macroscopic implementation mechanisms that most interpretations of quantum mechanics differ.

**Monday, May 18, 2015 04:30pm - 05:30pm**

Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.