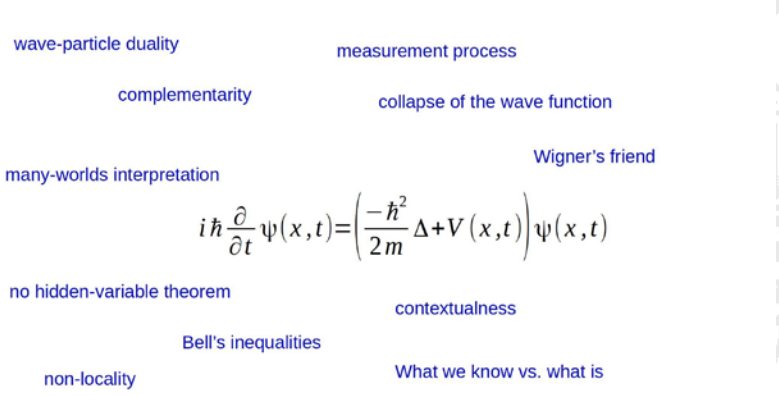
PHYSIKALISCHES KOLLOQUIUM

AM 18. JANUAR 2021 UM 17 UHR C.T.

LIVESCHALTUNG VIA ZOOM

AKTUELLE INFORMATIONEN FINDEN SIE HIER:
WWW.PHYSIK.UNI-FREIBURG.DE



SHUT UP AND CALCULATE! REALLY?

WOLFGANG PAUL
UNI HALLE-WITTENBERG

We all agree on using the Schrödinger equation to treat a quantum mechanical problem. However, since its inception almost 100 years ago, physicists, mathematicians and philosophers are trying to make sense of what this equation means.
I will argue that the belief that the Schrödinger equation is the and not a complete description of the quantum world lies at the heart of these problems. Starting with Nelsons stochastic mechanics derivation of the Schrödinger equation in 1966, what I would call quantum analytical mechanics has been derived in complete analogue to classical analytical mechanics. Based on our recent derivation of quantum Hamilton equations, I will show how to solve a quantum problem without using the Schrödinger equation. I will also discuss consequences of the physical picture underlying the stochastic foundation of quantum mechanics.