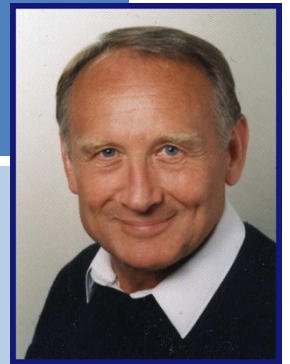




PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 18.05.2022, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1



Prof. Dr. John S. Briggs

Universität Freiburg

"Time in Quantum Mechanics"

As a long-time practitioner of quantum theory I venture to question the commonly-held view that the Time-Dependent Schroedinger Equation (TDSE) is the fundamental quantum equation from which the Time-Independent Schroedinger Equation (TISE) is obtained as a special case. I advance arguments to show that rather it is the TDSE which should be viewed as a half-classical approximation to the TISE, where one variable emerges as classical time. I begin with an overview of Schroedinger's route to the TDSE in 1926. The argument is supported by parallel demonstrations of the emergence of time in classical mechanics, in paraxial optics and in quantum gravity. The talk is perhaps relevant particularly to physics students.

Die Dozenten der Physik

local host: Prof. Dr. Reinhard Dörner | doerner@atom.uni-frankfurt.de