

Seminar

Prof. Jos Uffink

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Schrödinger and the prehistory of the EPR argument.

Wednesday, June 19, 2019

at 16:00 h

ESI, Schrödinger Lecture Hall

Abstract: Although Schrödinger only coined the term “entanglement” (Verschränkung) in 1935, he had been worrying about the phenomenon of (what we now call) entanglement for composite systems since 1927. Indeed, he gave up on his original interpretation of the wave function precisely for this reason. At that time, he thought that Born’s statistical interpretation of the wave function did not suffer from the same problem. In November 1931, his unpublished notebooks show that, in response to a lecture in Berlin by Einstein on the photon box experiment, he already developed all essentials of what we now know as the EPR argument, (Einstein, Podolski and Rosen, 1935). I will argue that Schrödinger’s role in the development of this argument have not yet been sufficiently appreciated by historians of physics. Also, I will comment on the differences between Schrödinger’s and Einstein’s views on the conclusions to be drawn from this argument.

J. Yngvason

June 12, 2019