

Time from Classical Relativistic Physics toward Quantum Gravity

Thursday, 11 July 2019 16:30 (1 hour)

I survey briefly the main lessons about the nature of physical time from (special and general) relativistic physics. They amount to a progressive dismissal of commonsensical assumptions about time and a difficult learning process about what are its real physical features. I then outline how the search for a quantum theory of gravity and spacetime is challenging, even more, our understanding of the spatiotemporal aspects of the world, and suggests a more radical, complete disappearance of time (and space) from the fundamental structure of the universe. The conceptual challenges of this radical disappearance of time will be emphasized, alongside the physical ones.

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