

Abstract

Quantum entanglement is a non-local correlation between objects that is possible due to the unintuitive principles of quantum mechanics. As strange as it is, entanglement is everywhere at the atomic scale. However, for a long time physicists haven't studied how entanglement is organized in a given system but have instead focused on its consequences. In recent years, the "entanglement revolution" has put the focus back on this fundamental property. I'll explain how this entanglement revolution is changing our understanding of matter, ranging from superconductors to ultra-cold gases. I'll even touch upon black holes and string theory