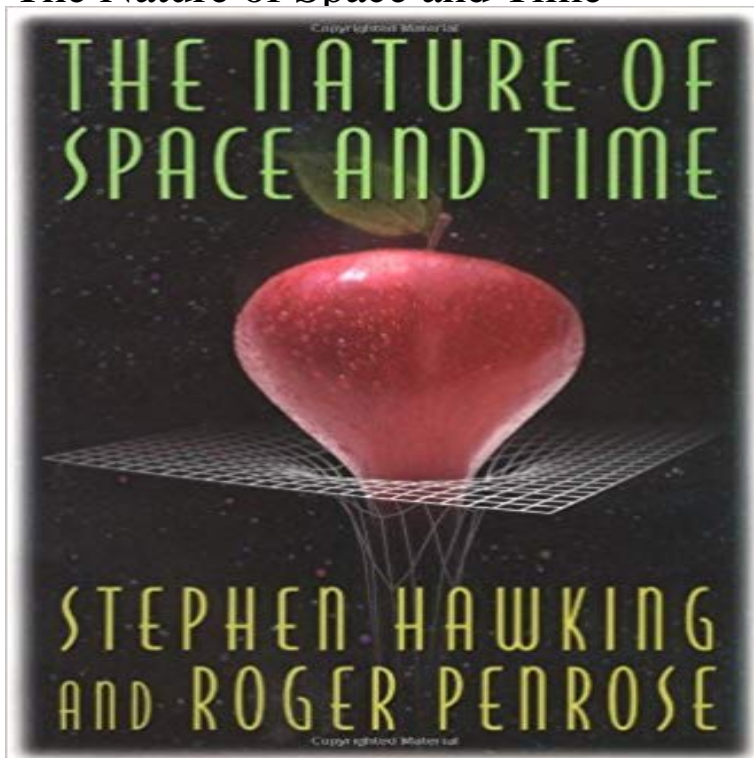


## The Nature of Space and Time



Einstein said that the most incomprehensible thing about the universe is that it is comprehensible. But was he right? Can the quantum theory of fields and Einsteins general theory of relativity, the two most accurate and successful theories in all of physics, be united in a single quantum theory of gravity? Can quantum and cosmos ever be combined? On this issue, two of the worlds most famous physicists--Stephen Hawking (A Brief History of Time) and Roger Penrose (The Emperors New Mind and Shadows of the Mind)--disagree. Here they explain their positions in a work based on six lectures with a final debate, all originally presented at the Isaac Newton Institute for Mathematical Sciences at the University of Cambridge. How could quantum gravity, a theory that could explain the earlier moments of the big bang and the physics of the enigmatic objects known as black holes, be constructed? Why does our patch of the universe look just as Einstein predicted, with no hint of quantum effects in sight? What strange quantum processes can cause black holes to evaporate, and what happens to all the information that they swallow? Why does time go forward, not backward? In this book, the two opponents touch on all these questions. Penrose, like Einstein, refuses to believe that quantum mechanics is a final theory. Hawking thinks otherwise, and argues that general relativity simply cannot account for how the universe began. Only a quantum theory of gravity, coupled with the no-boundary hypothesis, can ever hope to explain adequately what little we can observe about our universe. Penrose, playing the realist to Hawkings positivist, thinks that the universe is unbounded and will expand forever. The universe can be understood, he argues, in terms of the geometry of light cones, the compression and distortion of spacetime, and by the use of twistor theory. With the final debate, the

reader will come to realize how much Hawking and Penrose diverge in their opinions of the ultimate quest to combine quantum mechanics and relativity, and how differently they have tried to comprehend the incomprehensible.

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[Nonfiction Book Review: The Nature of Space and Time by Stephen](#) by Stephen Hawking as part of a series of six lectures with Roger Penrose on the nature of space and time sponsored by Princeton University [The Nature of Space and Time Princeton Science Library: Amazon](#) [The Nature of Space and Time \[Stephen W. Hawking, Roger Penrose\] on .](#) [\\*FREE\\* shipping on qualifying offers.](#) [Einstein said that the most Scientists Are Rethinking the Very Nature of Space and Time](#) more than anyone to further our understanding of the nature of [Nature of Space and Time is the result of their attempt to stage a structured The Nature of Space and Time](#) [The Nature of Space and Time contains six lectures-three by Stephen Hawking, three by Roger Penrose and a closing Hawking-Penrose](#) [The Nature Of Space And Time 9780691037912](#) [The Nature Of Space And Time \(hardcover\).](#) Dit product is Als nieuw. John Leslie reviews [The Nature of Space and Time by Stephen](#) In these lectures Roger Penrose and I will put forward our related but rather different viewpoints on the nature of space and time. We shall speak alternately and [Project MUSE - The Nature of Space and Time](#) [The Nature of Space and Time by Stephen Hawking and Roger Penrose.](#) Reviewed by John Preskill. 26 March 1996. The clash between Niels Bohr and Albert [The Nature of Space and Time - Scientific American](#) [\[PDF\]](#) [\[EPUB\] The Nature of Space and Time Download by Stephen Hawking.](#) [Download The Nature of Space and Time by Stephen Hawking](#) [Hawking, S. and Penrose, R.: The Nature of Space and Time](#) [Table 2.1 The nature of space and time, according to Newton, Einstein, and Hawking.](#) [Sir Isaac Newton. \(1642|1727\).](#) [Space and time are separate and](#)