

1. Record Nr.	UNINA9910741157703321
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Titolo	Three Lectures on Complexity and Black Holes // by Leonard Susskind
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-45109-7
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (93 pages)
Collana	SpringerBriefs in Physics, , 2191-5423
Disciplina	523.8875
Soggetti	Quantum field theory String theory Astrophysics Mathematical physics Cosmology Thermodynamics Physics Gravitation Quantum Field Theories, String Theory Theoretical Astrophysics Applications of Graph Theory and Complex Networks Classical and Quantum Gravitation, Relativity Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Lecture I: Hilbert Space is Huge -- Lecture II: Black Holes and the Second Law of Complexity -- Lecture III: The Thermodynamics of Complexity.
Sommario/riassunto	These three lectures cover a certain aspect of complexity and black holes, namely the relation to the second law of thermodynamics. The first lecture describes the meaning of quantum complexity, the analogy between entropy and complexity, and the second law of complexity. Lecture two reviews the connection between the second law of complexity and the interior of black holes. Prof. L. Susskind discusses how firewalls are related to periods of non-increasing complexity which typically only occur after an exponentially long time. The final lecture is

about the thermodynamics of complexity, and “uncomplexity” as a resource for doing computational work. The author explains the remarkable power of “one clean qubit,” in both computational terms and in space-time terms. This book is intended for graduate students and researchers who want to take the first steps towards the mysteries of black holes and their complexity.
