D-Branes (Cambridge Monographs on Mathematical Physics)
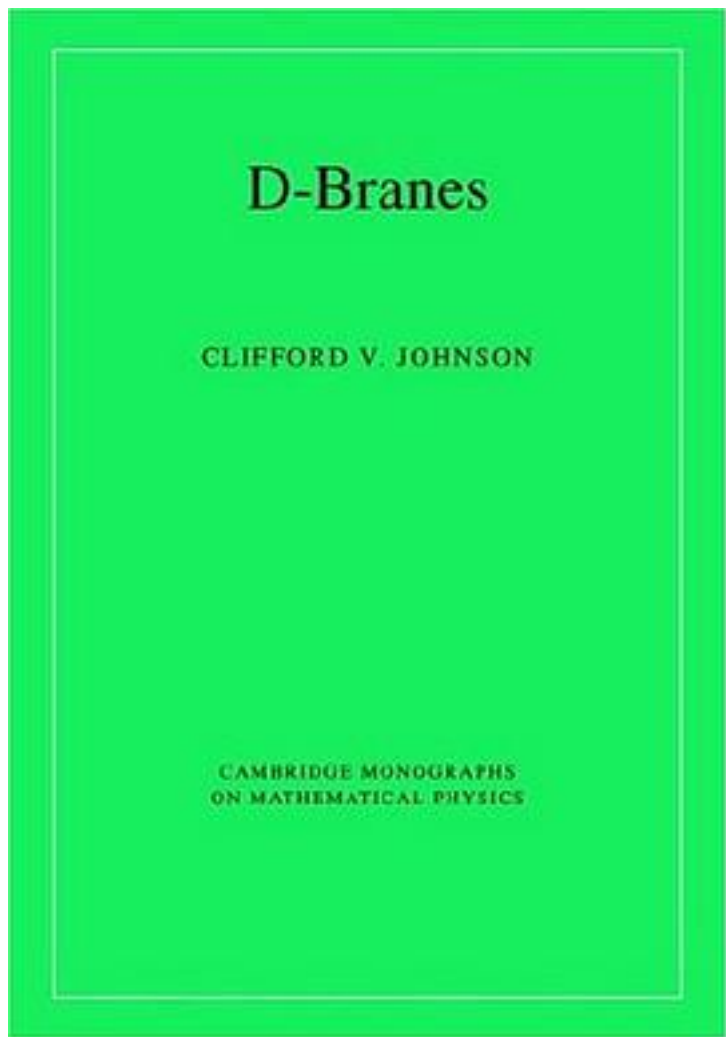
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D-branes represent a key theoretical tool in the understanding of strongly coupled superstring theory and M-theory. They have led to many striking discoveries, including the precise microphysics underlying the thermodynamic behaviour of certain black holes, and remarkable holographic dualities between large-N gauge theories and gravity. This book provides a self-contained introduction to the technology of D-branes, presenting the recent developments and ideas in a pedagogical manner. It is suitable for use as a textbook in graduate courses on modern string theory and theoretical particle physics, and will also be an indispensable reference for seasoned practitioners. The introductory material is developed by first starting with the main features of string theory needed to get rapidly to grips with D-branes, uncovering further aspects while actually working with D-branes. Many advanced applications are covered, with discussions of open problems which could form the basis for other avenues of research.

作者介绍:

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标签

物理

弦论

superstring

量子引力7

自然科学

宇宙学

physics

brane

评论

informative

D膜的经典教材，但是年代较远很多东西又写的简略，并不太喜欢，可以看看他提供的参考文献。

这本书写的很全，但是很多地方写的很简略，直接读不好懂。但是的确涵盖了D膜的很多方向。

Polchinski毕竟有点老，很多内容都没有，相较之下呢，Johnson这本书包括的内容就会新一些(AdS/CFT, F-theory,etc).
对16章代数几何入门那段印象深刻，大体上做到了让物理学家尽可能多地了解一些数学准备.
非微扰弦论之所以引入了这么多fancy的数学(如代数几何和表示论),本质上还是在试探到底什么才是更好的UV描述.
M/F-theory的UV描述未知,才必须让对称性和自洽条件物尽其用

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书评

也许全面是这本书唯一的优点了，当然本书并没有讲到 topological brane, 那是mirror symmetry 的话题。
这是一本不是那么易懂的书，特别是正真讲到brane的时候，需要配合文章才能看懂。
这也是一本必须的书，至少它告诉你哪些文章应当读。

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