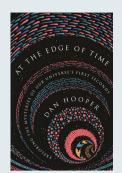
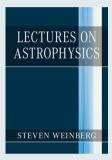
## books & arts



## At the Edge of Time: Exploring the Mysteries of Our Universe's First Seconds By Dan Hooper

PRINCETON UNIVERSITY PRESS: 2019. 248PP. £20.00

To understand the Universe is a challenging endeavour. Yet over the last century or so, cosmology has emerged as a precise, data-led discipline, starting from the revolution brought about by Einstein's theory of general relativity. In this book, Dan Hooper specifically focuses on the first seconds of the Universe and discusses our understanding of the Big Bang, the cosmological expansion and the dark components of the Universe. Given the author's expertise, several chapters of the book focus on dark matter, its nature, our search for it and its alternatives.

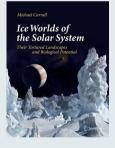


## Lectures on Astrophysics

By Steven Weinberg

CAMBRIDGE UNIVERSITY PRESS: 2020. 226PP. £34.99

*Lectures on Astrophysics* is an efficiently compact book dealing with the 'nuts and bolts' of astrophysics, as Weinberg describes it. Its four chapters cover individual stars, binaries, the interstellar medium and galaxies. The author presents a series of analytical equations and their corresponding derivations that are necessary to understand the inner workings of these systems. Topics include the structure of stars, binary dynamics and evolution (including gravitational wave emission), heating and cooling of the interstellar medium and the gravitational potential of galactic disks. The book is an excellent resource for senior undergraduate or graduate astrophysics students.



## **Ice Worlds of the Solar System: Their Tortured Landscapes and Biological Potential** *By Michael Carroll*

SPRINGER INTERNATIONAL PUBLISHING: 2019. XIII, 166PP. £32.99

The outer Solar System is home to an ensemble of planetary bodies, collectively described in this book as ice worlds. Michael Carroll takes us on a tour that starts from Ceres and goes by ice moons, ocean worlds, cryovolcanic worlds and concludes with Titan, Pluto and 486958 Arrokoth. These ice worlds are stunning in their diversity and dynamism. This book brings together current knowledge, open questions and future outlooks and combines them with often lyrical descriptions and eye-catching artistic representations to create an informative but also engaging introduction to the topic that will be appealing to scientists and the general public.

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