Universe

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WATERS BRAXTON

Weird Universe Springer Nature
As new discoveries complicate the scientific picture of the universe, the evolving theories about the nature of space and time and the origins and fate of the universe threaten to become overwhelming. Enter David Seargent. Continuing the author's series of books popularizing strange astronomy facts and knowledge, Weird Universe explains the bizarre, complicated terrain of modern cosmology for lay readers. From exploring some of the strange consequences of the theories of special and general relativity, to probing time dilation and the twin and mother-and-baby “paradoxes” and the theory that the universe can be mathematically considered as a hologram, all of the latest findings and conjectures are clearly described in non-technical language. The development of quantum physics and the more recent developments of string and M-theory are looked at, in addition to several hypotheses that have not won wide acceptance from the scientific community, such as modified gravity. Enter the wonderfully weird world of these theories and gain a new appreciation for the latest findings in cosmological research.
How Big Is the Universe? HarperCollins UK
Two world-renowned scientists present an audacious new vision of the cosmos that “steals the thunder from the Big Bang theory.” —Wall Street Journal The Big Bang theory—widely regarded as the leading explanation for the origin of the universe—posits that space and time sprang into being about 14 billion years ago in a hot, expanding fireball of nearly infinite density. Over the last three decades the theory has been repeatedly revised to address such issues as how galaxies and stars first formed and why the expansion of the universe is speeding up today. Furthermore, an explanation has yet to be found for what caused the Big Bang in the first place. In Endless Universe, Paul J. Steinhardt and Neil Turok, both distinguished theoretical physicists, present a bold new cosmology. Steinhardt and Turok “contend that what we think of as the moment of creation was simply part of an infinite cycle of titanic collisions between our universe and a parallel world” (Discover). They recount the remarkable developments in astronomy, particle physics, and superstring theory

that form the basis for their groundbreaking “Cyclic Universe” theory. According to this theory, the Big Bang was not the beginning of time but the bridge to a past filled with endlessly repeating cycles of evolution, each accompanied by the creation of new matter and the formation of new galaxies, stars, and planets. Endless Universe provides answers to longstanding problems with the Big Bang model, while offering a provocative new view of both the past and the future of the cosmos. It is a “theory that could solve the cosmic mystery” (USA Today).

The Mathematical Universe Penguin
An essential companion to the New York Times bestseller Welcome to the Universe Here is the essential companion to Welcome to the Universe, a New York Times bestseller that was inspired by the enormously popular introductory astronomy course for non science majors that Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott taught together at Princeton. This problem book features more than one hundred problems and exercises used in the original course—ideal for anyone who wants to deepen their understanding of the original material and to learn to think like an astrophysicist. Whether you’re a student or teacher, citizen scientist or science enthusiast, your guided tour of the cosmos just got even more hands-on with Welcome to the Universe: The Problem Book. The essential companion book to the acclaimed bestseller Features the problems used in the original introductory astronomy course for non science majors at Princeton University Organized according to the structure of Welcome to the Universe, empowering readers to explore real astrophysical problems that are conceptually introduced in each chapter Problems are designed to stimulate physical insight into the frontier of astrophysics Problems develop quantitative skills, yet use math no more advanced than high school algebra Problems are often multipart, building critical thinking and quantitative skills and developing readers’ insight into what astrophysicists do Ideal for course use—either in tandem with Welcome to the Universe or as a supplement to courses using standard astronomy textbooks—or self-study Tested in the classroom over numerous semesters for more than a decade Prefaced with a review of relevant concepts and equations Full solutions and explanations are provided, allowing students and other readers to check their own understanding

Cosmos Courier Corporation
Experience our universe as you've never seen it before 13.7 billion years old. 93 billion light-years across. It contains over 100 billion galaxies, each containing hundreds of billions of stars. This infinite, vast and complex Universe has been the subject of human fascination and scientific exploration for thousands of years. The wonders of the Universe might seem alien to us and impossible to understand, but away from the telescopes, the labs and the white coats, Professor Brian Cox uses the evidence found in the natural world on Earth to brilliantly explain the truth of the cosmos. Professor Cox will show how the vast and unfathomable phenomena of deep space can be explained, and even experienced, by re-examining the familiar here on Earth. He is determined to answer the most profound questions we can ask about ourselves and the world in which we live, but in a uniquely understandable way. The laws of light, gravity, time, matter and energy that govern us here on Earth are the same as those applied in the Universe. Using his expert knowledge and his infectious enthusiasm, Professor Cox shows us that if we can understand the impact of these governing laws on Earth it will bring us a step closer to an understanding of our Universe.

Matter and Energy Oxford University Press, USA
This book is for anyone who wants a fresh approach to modern physics. Are you tired of amusing anecdotes about scientists' personal lives and eureka moments? Bored of chronological narratives of scientific progress through the ages? No longer wowed by ideas like string theory? Interested in first principles thinking and what it can do for you? This book is for you. This book is designed to take you step by step through the fundamental principles that underlie the physics of space, time, and matter. It is a how-to guide for building up our universe from first principles. By posing questions and answering them with illustrations and examples, the book shows how we can demonstrate what we know about the universe with simple concepts and thought experiments. With this book, you too can apply first principles to build up your own model of the universe and how it works, one you can take with you, and apply it to other areas of your life such as your job, business, even your relationships. There are no complicated mathematics in this book and I have minimized the amount of jargon. Thus, it is suitable anyone of any educational background from high school on. The book aims to be straightforward about how we get from simple ideas to complex physical theories. So, if you are interested in a new way of looking at the universe and are not afraid to unlearn some of what you have learned, take a look inside.

Science, Society, and the Search for Life in the Universe Twenty-First Century Books
Acclaimed by Einstein himself, this is among the clearest, most readable expositions of relativity theory. It explains the problems Einstein faced, the experiments that led to his theories, and what his findings reveal about the forces that govern the universe. 1957 edition.

Endless Universe CRC Press
In a book filled with anecdotes and disarming stories, Zee discusses phenomena ranging from the emergence of galaxies to the curvature of space-time, evidence for the existence of gravity waves, and the shape of the universe at creation and today. 52 halftones & line illustrations.

The Universe: The book of the BBC TV series presented by Professor Brian Cox National Geographic Books
The Structure of the Universe by Paul Halpern, Ph.D., originally published in 1996, is a tour of the knowledge of the deep reaches of space and predictions for its future. Technological marvels such as the Hubble Space Telescope are revealing a wealth of information about the deepest reaches of space. After decades of research, scientists now believe they are closer to discovering the 'missing matter,' the invisible stuff left over from the Big Bang that will determine the ultimate fate of the universe. With each discovery new light is shed on scores of old questions, and at the same time new questions arise.

The Universe and Dr. Einstein Harmony
NEW YORK TIMES BESTSELLER • Deepak Chopra joins forces with leading physicist Menas Kafatos to explore some of the most important and baffling questions about our place in the world. "A riveting and absolutely fascinating adventure that will blow your mind wide open!" —Dr. Rudolph E. Tanzi What happens when modern science reaches a crucial turning point that challenges everything we know about reality? In this brilliant, timely, and practical work, Chopra and Kafatos tell us that we've reached just such a point. In the coming era, the universe will be completely redefined as a "human universe" radically unlike the cold, empty void where human life is barely a speck in the cosmos. You Are the Universe literally means what it says--each of us is a co-creator of reality extending to the vastest reaches of time and space. This seemingly impossible proposition follows from the current state of science, where outside the

public eye, some key mysteries cannot be solved, even though they are the very issues that define reality itself: • What Came Before the Big Bang? • Why Does the Universe Fit Together So Perfectly? • Where Did Time Come From? • What Is the Universe Made Of? • Is the Quantum World Linked to Everyday Life? • Do We Live in a Conscious Universe? • How Did Life First Begin? “The shift into a new paradigm is happening,” the authors write. “The answers offered in this book are not our invention or eccentric flights of fancy. All of us live in a participatory universe. Once you decide that you want to participate fully with mind, body, and soul, the paradigm shift becomes personal. The reality you inhabit will be yours either to embrace or to change.” What these two great minds offer is a bold, new understanding of who we are and how we can transform the world for the better while reaching our greatest potential.
Welcome to the Universe Springer Science & Business Media
How the discoveries of observatories have unlocked the secrets of the Universe, from Stonehenge to Hubble.
Our Universe Amberley Publishing Limited
Max Tegmark leads us on an astonishing journey through past, present and future, and through the physics, astronomy and mathematics that are the foundation of his work, most particularly his hypothesis that our physical reality is a mathematical structure and his theory of the ultimate multiverse. In a dazzling combination of both popular and groundbreaking science, he not only helps us grasp his often mind-boggling theories, but he also shares with us some of the often surprising triumphs and disappointments that have shaped his life as a scientist. Fascinating from first to last—this is a book that has already prompted the attention and admiration of some of the most prominent scientists and mathematicians.
The Hole in the Universe University of Arizona Press
“A compelling, enjoyable, and widely accessible exploration of one of the most fundamental scientific issues of our age” (Brian Greene, author of The Elegant Universe). In The Hole in the Universe, an award-winning science writer “provides an illuminating slant on physics and mathematics by exploring the concept of nothing” (Scientific American). Welcome to the world of cutting-edge math, physics, and neuroscience, where the search for the ultimate vacuum, the point of nothingness, the ground zero of theory, has rendered the universe deep, rich, and juicy. Every time scientists and mathematicians think they have reached the ultimate void, something new appears: a black hole, an undulating string, an additional dimension of space or time, repulsive anti-gravity, universes that breed like bunnies. Cole’s exploration at the edge of everything is “as playfully entertaining as it is informative” (San Jose Mercury News). “A strong and sometimes mind-blowing introduction to the edges of modern physics.” —Salon.com “Comprising an expansive set of topics from the history of numbers to string theory, the big bang, even Zen, the book’s chapters are broken into bite-sized portions that allow the author to revel in the puns and awkwardness that comes with trying to describe a concept that no one has fully grasped. It is an amorphous, flowing, mind-bending discussion, written in rich, graceful prose. As clear and accessible as Hawking’s A Brief History of Time, this work deserves wide circulation, not just among science buffs.” —Publishers Weekly, starred review “Here we have the definitive book about nothing, and who would think that nothing could be so interesting . . . not only accessible but compelling reading.” —St. Louis Post-Dispatch
The Structure of the Universe HMH
Semi-autobiographical discussion of astronomy and astronomers, and history of astronomy and cosmology.--
Sizing Up the Universe HarperCollins UK
He also explains the exciting cutting-edge technology scientists employ as they learn - via computer images - to model accurately the movements of planets, suns, and even superclusters of galaxies millions of years into the past and future to explore the role of chaos in the mysterious genesis and fate of the universe.
The Infinite Universe Hachette UK
Traces the history of theories about the nature of the universe, looks at the contributions of scientists from Copernicus to Einstein, and summarizes current theories of cosmic evolution
The Mysteries of the Universe Harper Collins
"Worlds in the making: The evolution of the universe" by Svante Arrhenius (translated by H. Borns). Published by Good Press. Good Press publishes a wide range of titles that encompasses every genre. From well-known classics & literary fiction and non-fiction to forgotten−or yet undiscovered gems−of world literature, we issue the books that need to be read. Each Good Press edition has been meticulously edited and formatted to boost readability for all e-readers and devices. Our goal is to produce eBooks that are user-friendly and accessible to everyone in a high-quality digital format.
Our Universe Gareth Stevens Publishing LLLP
I first had a quick look, then I started reading it. I couldn't stop. -Gerard 't Hooft (Nobel Prize, in Physics 1999) This is a book about the mathematical nature of our Universe. Armed with no more than basic high school mathematics, Dr. Joel L. Schiff takes you on a foray through some of the most intriguing aspects of the world around us. Along the way, you will visit the bizarre world of subatomic particles, honey bees and ants, galaxies, black holes, infinity, and more. Included are such goodies as measuring the speed of light with your microwave oven, determining the size of the Earth with a stick in the ground and the age of the Solar System from meteorites, understanding how the Theory of Relativity makes your everyday GPS system possible, and so much more. These topics are easily accessible to anyone who has ever brushed up against the Pythagorean Theorem and the symbol π, with the lightest dusting of algebra. Through this book, science-curious readers will come to appreciate the patterns, seeming contradictions, and extraordinary mathematical beauty of our Universe.
How Cosmologists Explain the Universe to Friends and Family Springer Science & Business Media
Using space photographs and scaled maps, demonstrates the actual size of objects in the cosmos, from Buzz Aldrin's historic footprint on the Moon to the entire visible universe, with a gatefold of the Gott-Juric Map of the Universe.
Our Mathematical Universe Harper Collins
This fast-paced action novel is set in a future where the world has been almost destroyed. Like the award-winning novel Freak the Mighty, this is Philbrick at his very best. It's the story of an epileptic teenager nicknamed Spaz, who begins the heroic fight to bring human intelligence back to the planet. In a world where most people are plugged into brain-drain entertainment systems, Spaz is the rare human being who can see life as it really is. When he meets an old man called Ryter, he begins to learn about Earth and its past. With Ryter as his companion, Spaz sets off an unlikely quest to save his dying sister -- and in the process, perhaps the world.
You Are the Universe Springer Nature
The study of the origin and evolution of the universe encompasses many of the most fascinating questions in science. What is our place in the universe? How did everything in it get started, from galaxies

and stars, to planets and people? And what does the future hold, for our star, and our universe? Recently, scientists have made remarkable advances in providing concrete answers to these profound questions. The new technologies of observational astronomy, with its ground- and space-based gamma-ray, X-ray, ultraviolet, infrared and radio telescopes, is truly producing a new golden age of discovery. This book presents the excitement of these new discoveries in the larger context of cosmic evolution. The distinguished contributors are leading researchers at the cutting edge of these fields, and they also excel in explaining these subjects to the broader public. They offer the latest insights into these rapidly advancing fields, covering the origin and evolution of the universe, the chemical elements, galaxies, the evolution of stars, planets, and biological life. Essential physical concepts are clearly and carefully explained at the introductory college level. Related concepts from chemistry, geology, and biology are organized and integrated into the discussions. An extensive glossary is provided, and mathematical detail has been deliberately kept simple, to make the chapters accessible to anyone with an appreciation of science. The result is stimulating exploration of the frontiers of modern science that will intrigue both amateurs and professionals.

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