A Universe From Nothing Why There Is Something Rather Than Lawrence M Krauss

Gravity's EnginesThe Greatest Story Ever Told--So FarObjective BecomingWhy the Universe Is the Way It Is (Reasons to Believe)Why Science Does Not Disprove GodAtomEdge of the UniverseOur Mathematical UniverseDid God Create the Universe from Nothing?Quantum Man: Richard Feynman's Life in Science (Great Discoveries)VoidThe Lightest Object in the UniverseStrange New WorldsThe Trouble with GravityThe Lightness of BeingThe Grand DesignThe Dancing UniverseRiver Out of EdenA Universe from NothingWhy Does the World Exist?: An Existential Detective StoryIs God a Mathematician?Beyond Star TrekA Universe From NothingThe Quantum UniverseFear of PhysicsDecoding RealityA Universe from NothingThe Fallacy of Fine-TuningThe Big PictureBrief Answers to the Big QuestionsThe Order of TimeThe Book of NothingDr Space Junk vs The UniverseHiding in the MirrorConjuring the UniverseThe Physics of Star TrekTheism, Atheism, and Big Bang CosmologyWelcome to the UniverseReligion for AtheistsThe Universe in a Nutshell

Gravity's Engines

What conceptual blind spot kept the ancient Greeks (unlike the Indians and Maya) from developing a concept of zero? Why did St. Augustine equate nothingness with the Devil? What tortuous means did 17th-century scientists employ in their attempts to create a vacuum? And why do contemporary quantum physicists believe that the void is actually seething with subatomic activity? You'll find the answers in this dizzyingly erudite and elegantly explained book by the English cosmologist John D. Barrow. Ranging through mathematics, theology, philosophy, literature, particle physics, and cosmology, The Book of Nothing explores the enduring hold that vacuity has exercised on the human imagination. Combining high-wire speculation with a wealth of reference that takes in Freddy Mercury and Shakespeare alongside Isaac Newton, Albert Einstein, and Stephen Hawking, the result is a fascinating excursion to the vanishing point of our knowledge. From the Trade Paperback edition.

The Greatest Story Ever Told--So Far

What warps when you're traveling at warp speed? What is the difference between a wormhole and a black hole? Are time loops really possible, and can I kill my grandmother before I am born? Anyone who has ever wondered "could this really happen?" will gain useful insights into the Star Trek universe (and, incidentally, the real world of physics) in this charming and accessible guide. Lawrence M. Krauss boldly goes where Star Trek has gone-and beyond. From Newton to Hawking, from

Einstein to Feynman, from Kirk to Picard, Krauss leads readers on a voyage to the world of physics as we now know it and as it might one day be.

Objective Becoming

From the author of The Architecture of Happiness, a deeply moving meditation on how we can still benefit, without believing, from the wisdom, the beauty, and the consolatory power that religion has to offer. Alain de Botton was brought up in a committedly atheistic household, and though he was powerfully swayed by his parents' views, he underwent, in his mid-twenties, a crisis of faithlessness. His feelings of doubt about atheism had their origins in listening to Bach's cantatas, were further developed in the presence of certain Bellini Madonnas, and became overwhelming with an introduction to Zen architecture. However, it was not until his father's death -- buried under a Hebrew headstone in a Jewish cemetery because he had intriguingly omitted to make more secular arrangements -- that Alain began to face the full degree of his ambivalence regarding the views of religion that he had dutifully accepted. Why are we presented with the curious choice between either committing to peculiar concepts about immaterial deities or letting go entirely of a host of consoling, subtle and effective rituals and practices for which there is no equivalent in secular society? Why do we bristle at the mention of the word "morality"? Flee from the idea that art should be uplifting, or have an ethical purpose? Why don't we build temples? What mechanisms do we

have for expressing gratitude? The challenge that de Botton addresses in his book: how to separate ideas and practices from the religious institutions that have laid claim to them. In Religion for Atheists is an argument to free our soul-related needs from the particular influence of religions, even if it is, paradoxically, the study of religion that will allow us to rediscover and rearticulate those needs. From the Hardcover edition.

Why the Universe Is the Way It Is (Reasons to Believe)

In the bestselling The Physics of Star Trek, the renowned theoretical physicist Lawrence Krauss took readers on an entertaining and eye-opening tour of the Star Trek universe to see how it stacked up against the real universe. Now, responding to requests for more as well as to a number of recent exciting discoveries in physics and astronomy, Krauss takes a provocative look at how the laws of physics relate to notions from our popular culture -- not only Star Trek, but other films, shows, and popular lore -- from Independence Day to Star Wars to The X-Files. What's the difference between a flying saucer and a flying pretzel? Why didn't the aliens in Independence Day have to bother invading Earth to destroy it? What's new with warp drives? What's the most likely scenario for doomsday? Are ESP and telekinesis impossible? What do clairvoyance and time travel have in common? How might quantum mechanics ultimately affect the fate of life in the universe?

Why Science Does Not Disprove God

The Kalam Cosmological Argument is favoured by Christian apologists to argue that God must have created the universe. This latest book, by philosopher Jonathan MS Pearce, takes that argument to task and finds it seriously lacking, despite its common appeal. This is a must-have counter to the well-worn religious argument.

Atom

Increasingly astronomers recognize that if the cosmos had not unfolded exactly as it did, humanity would not, could not, exist. Yet these researchers--along with countless ordinary folks--resist belief in the biblical Creator. Why? They say a loving God would have made a better home for us, one without trouble and tragedy. In Why the Universe Is the Way It Is, Hugh Ross draws from his depth of study in both science and Scripture to explain how the universe's design fulfills several distinct purposes. He also reveals God's surpassing love and ultimate purposes for each individual. Why the Universe Is the Way It Is will interest anyone who wonders where and how the universe came to be, what or who is responsible for it, why we are here, or how and when the universe ends. Far from leaving the reader at this philosophical jumping-off point, Ross builds toward answering the big

question of human destiny and the specific question of each reader's personal destiny.

Edge of the Universe

The instant New York Times bestseller about humanity's place in the universe—and how we understand it. “Vividimpressive.Splendidly informative.”—The New York Times “Succeeds spectacularly.”—Science “A tour de force.”—Salon Already internationally acclaimed for his elegant, lucid writing on the most challenging notions in modern physics, Sean Carroll is emerging as one of the greatest humanist thinkers of his generation as he brings his extraordinary intellect to bear not only on Higgs bosons and extra dimensions but now also on our deepest personal questions: Where are we? Who are we? Are our emotions, our beliefs, and our hopes and dreams ultimately meaningless out there in the void? Do human purpose and meaning fit into a scientific worldview? In short chapters filled with intriguing historical anecdotes, personal asides, and rigorous exposition, readers learn the difference between how the world works at the quantum level, the cosmic level, and the human level—and then how each connects to the other. Carroll's presentation of the principles that have guided the scientific revolution from Darwin and Einstein to the origins of life, consciousness, and the universe is dazzlingly unique. Carroll shows how an avalanche of discoveries in the past few hundred years has changed our world and what really matters to us. Our lives are

dwarfed like never before by the immensity of space and time, but they are redeemed by our capacity to comprehend it and give it meaning. The Big Picture is an unprecedented scientific worldview, a tour de force that will sit on shelves alongside the works of Stephen Hawking, Carl Sagan, Daniel Dennett, and E. O. Wilson for years to come.

Our Mathematical Universe

Traces the colorful, turbulent life of the Nobel Prize-winning physicist, from the death of his childhood sweetheart during the Manhattan Project to his rise as an icon in the scientific community.

Did God Create the Universe from Nothing?

We have long understood black holes to be the points at which the universe as we know it comes to an end - mysterious chasms so destructive and unforgiving that not even light can escape their deadly power. Recent research, however, has led to a cascade of new discoveries that have revealed an entirely new, and crucially important, side to black holes. Super-sized versions, often billions of times more massive than the Sun, lurk in every galaxy in the universe. And these chasms don't just vacuum up everything around them; they also spit out huge clouds of matter

and energy. In Gravity's Engines, renowned astrophysicist Caleb Scharf reveals how these giant black holes profoundly rearrange the cosmos that surrounds them, controlling the number of stars in the galaxies and, in turn, the entire universe. With lucidity and elegance, Scharf traces the two hundred year history of our attempts to discover the nature of black holes, from an English academic turned clergyman in the late 1700's who first identified these 'dark stars' to Einstein and the great revolutions of relativity and quantum mechanics. Engaging with our deepest questions about our origins, he takes us on an intimate journey through our endlessly colourful universe, revealing how the cosmic capacity for life is ultimately governed by - and perhaps could not exist without - black holes.

Quantum Man: Richard Feynman's Life in Science (Great Discoveries)

Two philosophers take opposing viewpoints to debate the fundamental question of whether the Big Bang was created by God or whether it occurred according to scientific theory.

Void

A number of authors have noted that if some physical parameters were slightly

changed, the universe could no longer support life, as we know it. This implies that life depends sensitively on the physics of our universe. Does this "fine-tuning" of the universe suggest that a creator god intentionally calibrated the initial conditions of the universe such that life on earth and the evolution of humanity would eventually emerge? In his in-depth and highly accessible discussion of this fascinating and controversial topic, the author looks at the evidence and comes to the opposite conclusion. He finds that the observations of science and our naked senses not only show no evidence for God, they provide evidence beyond a reasonable doubt that God does not exist.

The Lightest Object in the Universe

Stephen Hawking was recognized as one of the greatest minds of our time and a figure of inspiration after defying his ALS diagnosis at age twenty-one. He is known for both his breakthroughs in theoretical physics as well as his ability to make complex concepts accessible for all, and was beloved for his mischievous sense of humor. At the time of his death, Hawking was working on a final project: a book compiling his answers to the "big" questions that he was so often posed--questions that ranged beyond his academic field. Within these pages, he provides his personal views on our biggest challenges as a human race, and where we, as a planet, are heading next. Each section will be introduced by a leading thinker offering his or her own insight into Professor Hawking's contribution to our

understanding. The book will also feature a foreword from Academy Award winning actor Eddie Redmayne, who portrayed Hawking in the film The Theory of Everything, and an afterword by Hawking's daughter, Lucy Hawking, as well as personal photographs and additional archival material.

Strange New Worlds

Why -nothing- may hold the key to the next era of theoretical physics

The Trouble with Gravity

Fear of Physics is a lively, irreverent, and informative look at everything from the physics of boiling water to cutting-edge research at the observable limits of the universe. Rich with anecdotes and accessible examples, it nimbly ranges over the tools and thought behind the world of modern physics, taking the mystery out of what is essentially a very human intellectual endeavor.

The Lightness of Being

Bestselling author and astrophysicist Mario Livio examines the lives and theories of history’s greatest mathematicians to ask how—if mathematics is an abstract

construction of the human mind—it can so perfectly explain the physical world. Nobel Laureate Eugene Wigner once wondered about “the unreasonable effectiveness of mathematics” in the formulation of the laws of nature. Is God a Mathematician? investigates why mathematics is as powerful as it is. From ancient times to the present, scientists and philosophers have marveled at how such a seemingly abstract discipline could so perfectly explain the natural world. More than that—mathematics has often made predictions, for example, about subatomic particles or cosmic phenomena that were unknown at the time, but later were proven to be true. Is mathematics ultimately invented or discovered? If, as Einstein insisted, mathematics is “a product of human thought that is independent of experience,” how can it so accurately describe and even predict the world around us? Physicist and author Mario Livio brilliantly explores mathematical ideas from Pythagoras to the present day as he shows us how intriguing questions and ingenious answers have led to ever deeper insights into our world. This fascinating book will interest anyone curious about the human mind, the scientific world, and the relationship between them.

The Grand Design

An exploration of mankind's fascination with worlds beyond our own-by the bestselling author of The Physics of Star Trek Lawrence Krauss -an international leader in physics and cosmology-examines our long and ardent romance with

parallel universes, veiled dimensions, and regions of being that may extend tantalizingly beyond the limits of our perception. Krauss examines popular culture's current embrace (and frequent misunderstanding) of such topics as black holes, life in other dimensions, strings, and some of the more extraordinary new theories that propose the existence of vast extra dimensions alongside our own. BACKCOVER: "An astonishing and brilliantly written work of popular science." -Science a GoGo "A brilliant, thrilling book . . . You'll have so much fun reading that you'll hardly notice you're getting a primer on contemporary physics and cosmology." -Walter Isaacson, author of Benjamin Franklin: An American Life

The Dancing Universe

One of TIME's Ten Best Nonfiction Books of the Decade "Meet the new Stephen Hawking . . . The Order of Time is a dazzling book." --The Sunday Times From the bestselling author of Seven Brief Lessons on Physics, comes a concise, elegant exploration of time. Why do we remember the past and not the future? What does it mean for time to "flow"? Do we exist in time or does time exist in us? In lyric, accessible prose, Carlo Rovelli invites us to consider questions about the nature of time that continue to puzzle physicists and philosophers alike. For most readers this is unfamiliar terrain. We all experience time, but the more scientists learn about it, the more mysterious it remains. We think of it as uniform and universal, moving steadily from past to future, measured by clocks. Rovelli tears down these

assumptions one by one, revealing a strange universe where at the most fundamental level time disappears. He explains how the theory of quantum gravity attempts to understand and give meaning to the resulting extreme landscape of this timeless world. Weaving together ideas from philosophy, science and literature, he suggests that our perception of the flow of time depends on our perspective, better understood starting from the structure of our brain and emotions than from the physical universe. Already a bestseller in Italy, and written with the poetic vitality that made Seven Brief Lessons on Physics so appealing, The Order of Time offers a profoundly intelligent, culturally rich, novel appreciation of the mysteries of time.

River Out of Eden

Internationally renowned theoretical physicist and bestselling author Lawrence Krauss offers provocative, revelatory answers to the biggest philosophical questions: Where did our universe come from? Why does anything exist? And how is it all going to end? 'Why is there something rather than nothing?' is the question atheists and scientists are always asked, and until now there has not been a satisfying scientific answer. Today, exciting scientific advances provide new insight into this cosmological mystery: not only can something arise from nothing, but something will always arise from nothing. A mind-bending trip back to the beginning of the beginning, A Universe from Nothing authoritatively presents the

most recent evidence that explains how our universe evolved - and the implications for how it's going to end. It will provoke, challenge, and delight readers to look at the most basic underpinnings of existence in a whole new way. In the words of Richard Dawkins: this could potentially be the most important scientific book since Darwin's On the Origin of Species.

A Universe from Nothing

Bradford Skow presents an original defense of the 'block universe' theory of time, often said to be a theory according to which time does not pass. Along the way, he provides in-depth discussions of alternative theories of time, including those in which there is 'robust passage' of time or 'objective becoming': presentism, the moving spotlight theory of time, the growing block theory of time, and the 'branching time' theory of time. Skow explains why the moving spotlight theory is the best of these arguments, and rebuts several popular arguments against the thesis that time passes. He surveys the problems that the special theory of relativity has been thought to raise for objective becoming, and suggests ways in which fans of objective becoming may reconcile their view with relativistic physics. The last third of the book aims to clarify and evaluate the argument that we should believe that time passes because, somehow, the passage of time is given to us in experience. He isolates three separate arguments this idea suggests, and explains why they fail.

Why Does the World Exist?: An Existential Detective Story

“A triumphant story for anyone with a shred of faith left in the human spirit.” —David McGlynn, author of One Day You’ll Thank Me What if the end times allowed people to see and build the world anew? This is the landscape that Kimi Eisele creates in her surprising and original debut novel. Evoking the spirit of such monumental love stories as Cold Mountain and the creative vision of novels like Station Eleven, The Lightest Object in the Universe imagines what happens after the global economy collapses and the electrical grid goes down. In this new world, Carson, on the East Coast, is desperate to find Beatrix, a woman on the West Coast who holds his heart. Working his way along a cross-country railroad line, he encounters lost souls, clever opportunists, and those who believe they’ll be saved by an evangelical preacher in the middle of the country. While Carson travels west, Beatrix and her neighbors begin to construct the kind of cooperative community that suggests the end could be, in fact, a bright beginning. Without modern means of communication, will Beatrix and Carson find their way to each other, and what will be left of the old world if they do? The answers may lie with a fifteen-year-old girl who could ultimately decide the fate of the lovers. The Lightest Object in the Universe is a moving and hopeful story about resilience and adaptation and a testament to the power of community, where our best traits, born of necessity, can begin to emerge.

Is God a Mathematician?

The national bestselling author of The Physics of Star Trek returns with an “enthusiastic and entertaining” journey through the science of the cosmos (The Guardian, UK). Taking us on a millennia-spanning journey through the life of a single oxygen atom, physicist and author Lawrence M. Krauss traces the history of the cosmos from the Big Bang to the present—and on into the distant future. With wit and insight, Krauss explicates cutting-edge science and reveals the surprising story of matter: what it is, where it came from, and where it’s going. Along the way, this lively and accessible volume inspires wonder at the powers and unlikely events that conspired to create our solar system, our ecosystem, and us. “Lawrence Krauss has Carl Sagan’s knack of expanding the imagination and explaining the mysteries of the universe in simple terms.” —Stephen Hawking

Beyond Star Trek

Shares provocative and revelatory answers to such philosophical conundrums as the origins of the universe and how it will end, offering scientific explanations about the immense process through which life evolved.

A Universe From Nothing

The author explores recent scientific breakthroughs in the fields of supergravity, supersymmetry, quantum theory, superstring theory, and p-branes as he searches for the Theory of Everything that lies at the heart of the cosmos.

The Quantum Universe

#1 NEW YORK TIMES BESTSELLER When and how did the universe begin? Why are we here? What is the nature of reality? Is the apparent “grand design” of our universe evidence of a benevolent creator who set things in motion—or does science offer another explanation? In this startling and lavishly illustrated book, Stephen Hawking and Leonard Mlodinow present the most recent scientific thinking about these and other abiding mysteries of the universe, in nontechnical language marked by brilliance and simplicity. According to quantum theory, the cosmos does not have just a single existence or history. The authors explain that we ourselves are the product of quantum fluctuations in the early universe, and show how quantum theory predicts the “multiverse”—the idea that ours is just one of many universes that appeared spontaneously out of nothing, each with different laws of nature. They conclude with a riveting assessment of M-theory, an explanation of the laws governing our universe that is currently the only viable candidate for a “theory of everything”: the unified theory that Einstein was looking for, which, if confirmed, would represent the ultimate triumph of human reason.

Fear of Physics

In The Quantum Universe, Brian Cox and Jeff Forshaw approach the world of quantum mechanics in the same way they did in Why Does E=mc2? and make fundamental scientific principles accessible—and fascinating—to everyone. The subatomic realm has a reputation for weirdness, spawning any number of profound misunderstandings, journeys into Eastern mysticism, and woolly pronouncements on the interconnectedness of all things. Cox and Forshaw's contention? There is no need for quantum mechanics to be viewed this way. There is a lot of mileage in the "weirdness" of the quantum world, and it often leads to confusion and, frankly, bad science. The Quantum Universe cuts through the Wu Li and asks what observations of the natural world made it necessary, how it was constructed, and why we are confident that, for all its apparent strangeness, it is a good theory. The quantum mechanics of The Quantum Universe provide a concrete model of nature that is comparable in its essence to Newton's laws of motion, Maxwell's theory of electricity and magnetism, and Einstein's theory of relativity.

Decoding Reality

Expands the search for the origins of the universe beyond God and the Big Bang theory, exploring more bizarre possibilities inspired by physicists, theologians,

mathematicians, and even novelists.

A Universe from Nothing

An accessible look at the mysteries that lurk at the edge of the known universe and beyond The observable universe, the part we can see with telescopes, is incredibly vast. Yet recent theories suggest that there is far more to the universe than what our instruments record—in fact, it could be infinite. Colossal flows of galaxies, large empty regions called voids, and other unexplained phenomena offer clues that our own "bubble universe" could be part of a greater realm called the multiverse. How big is the observable universe? What it is made of? What lies beyond it? Was there a time before the Big Bang? Could space have unseen dimensions? In this book, physicist and science writer Paul Halpern explains what we know—and what we hope to soon find out—about our extraordinary cosmos. Explains what we know about the Big Bang, the accelerating universe, dark energy, dark flow, and dark matter to examine some of the theories about the content of the universe and why its edge is getting farther away from us faster Explores the idea that the observable universe could be a hologram and that everything that happens within it might be written on its edge Written by physicist and popular science writer Paul Halpern, whose other books include Collider: The Search for the World's Smallest Particles, and What's Science Ever Done For Us: What the Simpsons Can Teach Us About Physics, Robots, Life, and the Universe

The Fallacy of Fine-Tuning

The marvellous complexity of the Universe emerges from several deep laws and a handful of fundamental constants that fix its shape, scale, and destiny. There is a deep structure to the world which at the same time is simple, elegant, and beautiful. Where did these laws and these constants come from? And why are the laws so fruitful when written in the language of mathematics? Peter Atkins considers the minimum effort needed to equip the Universe with its laws and its constants. He explores the origin of the conservation of energy, of electromagnetism, of classical and quantum mechanics, and of thermodynamics, showing how all these laws spring from deep symmetries. The revolutionary result is a short but immensely rich weaving together of the fundamental ideas of physics. With his characteristic wit, erudition, and economy, Atkins sketches out how the laws of Nature can spring from very little. Or arguably from nothing at all.

The Big Picture

What is gravity? Nobody knows—and just about nobody knows that nobody knows. How something so pervasive can also be so mysterious, and how that mystery can be so wholly unrecognized outside the field of physics, is one of the greatest conundrums in modern science. But as award-winning author Richard Panek shows

in this groundbreaking, mind-bending book, gravity is a cold case that's beginning to heat up. In The Trouble with Gravity, Panek invites the reader to experience this ubiquitous yet elusive force in a breathtakingly new way. Gravity, Panek explains, structures not only our bodies and our physical world, but also our minds and culture. From our very beginnings, humans' conceptions of gravity have been inextricably bound to our understanding of existence itself. As we get closer and closer to solving the riddle of gravity, it is not only physics that is becoming clearer. We are also getting to know ourselves as never before.

Brief Answers to the Big Questions

Available again, with a new preface, a physicist's "exceptionally clear summary of 2,500 years of science and a fascinating account of the ways in which it often does intersect with spiritual beliefs" --Kirkus Reviews

The Order of Time

In Strange New Worlds, renowned astronomer Ray Jayawardhana brings news from the front lines of the epic quest to find planets--and alien life--beyond our solar system. Only in the past two decades, after millennia of speculation, have astronomers begun to discover planets around other stars--thousands in fact. Now

they are closer than ever to unraveling distant twins of the Earth. In this book, Jayawardhana vividly recounts the stories of the scientists and the remarkable breakthroughs that have ushered in this extraordinary age of exploration. He describes the latest findings--including his own--that are challenging our view of the cosmos and casting new light on the origins and evolution of planets and planetary systems. He reveals how technology is rapidly advancing to support direct observations of Jupiter-like gas giants and super-Earths--rocky planets with several times the mass of our own planet--and how astronomers use biomarkers to seek possible life on other worlds. Strange New Worlds provides an insider's look at the cutting-edge science of today's planet hunters, our prospects for discovering alien life, and the debates and controversies at the forefront of extrasolar-planet research. In a new afterword, Jayawardhana explains some of the most recent developments as we search for the first clues of life on other planets.

The Book of Nothing

How did the replication bomb we call ”life” begin and where in the world, or rather, in the universe, is it heading? Writing with characteristic wit and an ability to clarify complex phenomena (the New York Times described his style as ”the sort of science writing that makes the reader feel like a genius”), Richard Dawkins confronts this ancient mystery.

Dr Space Junk vs The Universe

What's the meaning of it all? Or rather: what exactly is 'it'? Here Frank Wilczek, Nobel Prize-winning physicist and legend, examines the very nature of reality itself, showing how almost everything we think we know about 'it' is wrong. The Lightness of Being is an engaging tour de force, revealing a universe where matter is the hum of strange music, mass doesn't weigh, and empty space is a multilayered, multicoloured superconductor. Physicists' understanding of the essential nature of reality changed radically over the past quarter century. And Frank Wilczek has played a lead role in establishing the new paradigms. Transcending the clash and mismatch of older ideas about what matter and space is, Wilczek presents some brilliant and clear syntheses. Extraordinarily readable and authoritative, The Lightness of Being is the first book to unwrap these exciting new ideas for the general public. It explores their implications for basic questions about space, mass, energy, and the longed-for possibility of a fully unified theory of Nature. Pointing to new directions where great discoveries in fundamental physics are likely, and providing a visionary context for the experiments in CERN, he envisions a new Golden Age in physics.

Hiding in the Mirror

The renowned science writer, mathematician, and bestselling author of Fermat's Last Theorem masterfully refutes the overreaching claims the "New Atheists," providing millions of educated believers with a clear, engaging explanation of what science really says, how there's still much space for the Divine in the universe, and why faith in both God and empirical science are not mutually exclusive. A highly publicized coterie of scientists and thinkers, including Richard Dawkins, the late Christopher Hitchens, and Lawrence Krauss, have vehemently contended that breakthroughs in modern science have disproven the existence of God, asserting that we must accept that the creation of the universe came out of nothing, that religion is evil, that evolution fully explains the dazzling complexity of life, and more. In this much-needed book, science journalist Amir Aczel profoundly disagrees and conclusively demonstrates that science has not, as yet, provided any definitive proof refuting the existence of God. Why Science Does Not Disprove God is his brilliant and incisive analyses of the theories and findings of such titans as Albert Einstein, Roger Penrose, Alan Guth, and Charles Darwin, all of whose major breakthroughs leave open the possibility— and even the strong likelihood—of a Creator. Bolstering his argument, Aczel lucidly discourses on arcane aspects of physics to reveal how quantum theory, the anthropic principle, the fine-tuned dance of protons and quarks, the existence of anti-matter and the theory of parallel universes, also fail to disprove God.

Conjuring the Universe

The New York Times bestselling tour of the cosmos from three of today's leading astrophysicists Welcome to the Universe is a personal guided tour of the cosmos by three of today's leading astrophysicists. Inspired by the enormously popular introductory astronomy course that Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott taught together at Princeton, this book covers it all—from planets, stars, and galaxies to black holes, wormholes, and time travel. Describing the latest discoveries in astrophysics, the informative and entertaining narrative propels you from our home solar system to the outermost frontiers of space. How do stars live and die? Why did Pluto lose its planetary status? What are the prospects of intelligent life elsewhere in the universe? How did the universe begin? Why is it expanding and why is its expansion accelerating? Is our universe alone or part of an infinite multiverse? Answering these and many other questions, the authors open your eyes to the wonders of the cosmos, sharing their knowledge of how the universe works. Breathtaking in scope and stunningly illustrated throughout, Welcome to the Universe is for those who hunger for insights into our evolving universe that only world-class astrophysicists can provide.

The Physics of Star Trek

Internationally renowned, award-winning theoretical physicist, New York Times bestselling author of A Universe from Nothing, and passionate advocate for reason,

Lawrence Krauss tells the dramatic story of the discovery of the hidden world of reality—a grand poetic vision of nature—and how we find our place within it. In the beginning there was light. But more than this, there was gravity. After that, all hell broke loose… In A Universe from Nothing, Krauss revealed how our entire universe could arise from nothing. Now, he reveals what that something—reality—is. And, reality is not what we think or sense—it's weird, wild, and counterintuitive; it's hidden beneath everyday experience; and its inner workings seem even stranger than the idea that something can come from nothing. In a landmark, unprecedented work of scientific history, Krauss leads us to the furthest reaches of space and time, to scales so small they are invisible to microscopes, to the birth and rebirth of light, and into the natural forces that govern our existence. His unique blend of rigorous research and engaging storytelling invites us into the lives and minds of the remarkable, creative scientists who have helped to unravel the unexpected fabric of reality—with reason rather than superstition and dogma. Krauss has himself been an active participant in this effort, and he knows many of them well. The Greatest Story challenges us to re-envision ourselves and our place within the universe, as it appears that "God" does play dice with the universe. In the incisive style of his scintillating essays for The New Yorker, Krauss celebrates the greatest intellectual adventure ever undertaken—to understand why we are here in a universe where fact is stranger than fiction.

Theism, Atheism, and Big Bang Cosmology

A pioneering space archaeologist explores artifacts left behind in space and on Earth, from moon dust to Elon Musk's red sports car. Alice Gorman is a space archaeologist: she examines the artifacts of human encounters with space. These objects, left behind on Earth and in space, can be massive (dead satellites in eternal orbit) or tiny (discarded zip ties around a defunct space antenna). They can be bold (an American flag on the moon) or hopeful (messages from Earth sent into deep space). They raise interesting questions: Why did Elon Musk feel compelled to send a red Tesla into space? What accounts for the multiple rocket-themed playgrounds constructed after the Russians launched Sputnik? Gorman—affectionately known as “Dr Space Junk” —takes readers on a journey through the solar system and beyond, deploying space artifacts, historical explorations, and even the occasional cocktail recipe in search of the ways that we make space meaningful. Engaging and erudite, Gorman recounts her background as a (nonspace) archaeologist and how she became interested in space artifacts. She shows us her own piece of space junk: a fragment of the fuel tank insulation from Skylab, the NASA spacecraft that crash-landed in Western Australia in 1979. She explains that the conventional view of the space race as “the triumph of the white, male American astronaut” seems inadequate; what really interests her, she says, is how everyday people engage with space. To an archaeologist, objects from the past are significant because they remind us of what we might want to hold on to in the future.

Welcome to the Universe

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.

Religion for Atheists

For a physicist, all the world is information. The Universe and its workings are the ebb and flow of information. We are all transient patterns of information, passing on the recipe for our basic forms to future generations using a four-letter digital code called DNA. In this engaging and mind-stretching account, Vlatko Vedral considers some of the deepest questions about the Universe and considers the implications of interpreting it in terms of information. He explains the nature of

information, the idea of entropy, and the roots of this thinking in thermodynamics. He describes the bizarre effects of quantum behaviour — effects such as 'entanglement', which Einstein called 'spooky action at a distance', and explores cutting edge work on harnessing quantum effects in hyperfast quantum computers, and how recent evidence suggests that the weirdness of the quantum world, once thought limited to the tiniest scales, may reach into the macro world. Vedral finishes by considering the answer to the ultimate question: where did all of the information in the Universe come from? The answers he considers are exhilarating, drawing upon the work of distinguished physicist John Wheeler. The ideas challenge our concept of the nature of particles, of time, of determinism, and of reality itself. This edition includes a new foreword from the author, reflecting on changes in the world of quantum information since first publication. Oxford Landmark Science books are 'must-read' classics of modern science writing which have crystallized big ideas, and shaped the way we think.

The Universe in a Nutshell

Bestselling author and acclaimed physicist Lawrence Krauss offers a paradigm-shifting view of how everything that exists came to be in the first place. “Where did the universe come from? What was there before it? What will the future bring? And finally, why is there something rather than nothing?” One of the few prominent scientists today to have crossed the chasm between science and popular culture,

Krauss describes the staggeringly beautiful experimental observations and mind-bending new theories that demonstrate not only can something arise from nothing, something will always arise from nothing. With a new preface about the significance of the discovery of the Higgs particle, A Universe from Nothing uses Krauss's characteristic wry humor and wonderfully clear explanations to take us back to the beginning of the beginning, presenting the most recent evidence for how our universe evolved—and the implications for how it's going to end. Provocative, challenging, and delightfully readable, this is a game-changing look at the most basic underpinning of existence and a powerful antidote to outmoded philosophical, religious, and scientific thinking.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION