

## A Portable Cosmos Revealing The Antikythera Mechanism Scientific Wonder Of The Ancient World

*Advance praise for Philip Plait s Bad Astronomy "Bad Astronomy is just plain good! Philip Plait clears up every misconception on astronomy and space you never knew you suffered from." --Stephen Maran, Author of Astronomy for Dummies and editor of The Astronomy and Astrophysics Encyclopedia "Thank the cosmos for the bundle of star stuff named Philip Plait, who is the world s leading consumer advocate for quality science in space and on Earth. This important contribution to science will rest firmly on my reference library shelf, ready for easy access the next time an astrologer calls." --Dr. Michael Shermer, Publisher of Skeptic magazine, monthly columnist for Scientific American, and author of The Borderlands of Science "Philip Plait has given us a readable, erudite, informative, useful, and entertaining book. Bad Astronomy is Good Science." --James "The Amazing" Randi, President, James Randi Educational Foundation, and author of An Encyclopedia of Claims, Frauds, and Hoaxes of the Occult and Supernatural "Bad Astronomy is a fun read. Plait is wonderfully witty and educational as he debunks the myths, legends, and conspiracies that abound in our society. 'The Truth Is Out There' and it's in this book. I loved it!" --Mike Mullane, Space Shuttle astronaut and author of Do Your Ears Pop in Space?*

*"The Antikythera Mechanism, now 82 small fragments of corroded bronze, was an ancient Greek machine simulating the cosmos as the Greeks understood it. Reflecting the most recent researches, A Portable Cosmos presents it as a gateway to Greek astronomy and technology and their place in Greco-Roman society and thought"--*

*"Ann Druyan has unearthed a treasure. It is a treasure of reason, compassion, and scientific awe. It should be the next book you read." —Sam Harris, author of The End of Faith "A stunningly valuable legacy left to all of us by a great human being. I miss him so." —Kurt Vonnegut Carl Sagan's prophetic vision of the tragic resurgence of fundamentalism and the hope-filled potential of the next great development in human spirituality The late great astronomer and astrophysicist describes his personal search to understand the nature of the sacred in the vastness of the cosmos. Exhibiting a breadth of intellect nothing short of astounding, Sagan presents his views on a wide range of topics, including the likelihood of intelligent life on other planets, creationism and so-called intelligent design, and a new concept of science as "informed worship." Originally presented at the centennial celebration of the famous Gifford Lectures in Scotland in 1985 but never published, this book offers a unique encounter with one of the most remarkable minds of the twentieth century.*

*From the Dead Sea Scrolls to the Terracotta Army, ancient artifacts have long fascinated the modern world. However, the importance of some discoveries is not always immediately understood. This was the case in 1901 when sponge divers retrieved a lump of corroded bronze from a shipwreck at the bottom of the Mediterranean Sea near the Greek island of Antikythera. Little did the divers know they had found the oldest known analog computer in the world, an astonishing device that once simulated the motions of the stars and planets as they were understood by ancient Greek astronomers. Its remains now consist of 82 fragments, many of them containing gears and plates engraved with Greek words, that scientists and scholars have pieced back together through painstaking inspection and deduction, aided by radiographic tools and surface imaging. More than a century after its discovery, many of the secrets locked in this mysterious device can now be revealed. In addition to chronicling the unlikely discovery of the Antikythera Mechanism, author Alexander Jones takes readers through a discussion of how the device worked, how and for what purpose it was created, and why it was on a ship that wrecked off the Greek coast around 60 BC. What the Mechanism has uncovered about Greco-Roman astronomy and scientific technology, and their place in Greek society, is truly amazing. The mechanical know-how that it embodied was more advanced than anything the Greeks were previously thought capable of, but the most recent research has revealed that its displays were designed so that an educated layman could understand the behavior of astronomical phenomena, and how intertwined they were with one's natural and social environment. It was at once a masterpiece of machinery as well as one of the first portable teaching devices. Written by a world-renowned expert on the Mechanism, A Portable Cosmos will fascinate all readers interested in ancient history, archaeology, and the history of science.*

*Gears from the Greeks*

*Geometry and Ornament in Islamic Architecture*

*A Personal View of the Search for God*

*The Cambridge History of Science: Volume 1, Ancient Science*

*The Deaths of the Republic*

*The Varieties of Scientific Experience*

*Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False*

Traces the story of how ancient cultures envisioned artificial life, automata, self-moving devices and human enhancements, sharing insights into how the mythologies of the past related to and shaped ancient machine innovations.

"Delightful, funny, and yet rigorous and intelligent: only Jorge and Daniel can reach this exquisite balance." —Carlo Rovelli, author of Seven Brief Lessons on Physics and Helgoland You've got questions: about space, time, gravity, and the odds of meeting your older self inside a wormhole. All the answers you need are right here. As a species, we may not agree on much, but one thing brings us all together: a need to know. We all wonder, and deep down we all have the same big questions. Why can't I travel back in time? Where did the universe come from? What's inside a black hole? Can I rearrange the particles in my cat and turn it into a dog? Researcher-turned-cartoonist Jorge Cham and physics professor Daniel Whiteson are experts at explaining science in ways we can all understand, in their books and on their popular podcast, Daniel and Jorge Explain the Universe. With their signature blend of humor and oh-now-I-get-it clarity, Jorge and Daniel offer short, accessible, and lighthearted answers to some of the most common, most outrageous, and most profound questions about the universe they've received. This witty, entertaining, and fully illustrated book is an essential troubleshooting guide for the perplexing aspects of reality, big and small, from the invisible particles that make up your body to the identical version of you currently reading this exact sentence in the corner of some other galaxy. If the universe came with an FAQ, this would be it.

That the Roman republic died is a commonplace often repeated. In extant literature, the notion is first given form in the works of the orator Cicero (106–43 BCE) and his contemporaries, though the scattered fragments of orators and historians from the earlier republic suggest that the idea was hardly new. In speeches, letters, philosophical tracts, poems, and histories, Cicero and his peers obsessed over the illnesses, disfigurements, and deaths that were imagined to have beset their body politic, portraying rivals as horrific diseases or accusing opponents of butchering and even murdering the state. Body-political imagery had long enjoyed popularity among Greek authors, but these earlier images appear muted in comparison and it is only in the republic that the body first becomes fully articulated as a means for imagining the political community. In the works of republican authors is found a state endowed with nervi, blood, breath, limbs, and organs; a body beaten, wounded, disfigured, and infected; one with scars, hopes, desires, and fears; that can die, be killed, or kill in turn. Such images have often been discussed in isolation, yet this is the first book to offer a sustained examination of republican imagery of the body politic, with particular emphasis on the use of bodily-political images as tools of persuasion and the impact they exerted on the politics of Rome in the first century BCE.

This book presents a systematic design methodology for decoding the interior structure of the Antikythera mechanism, an astronomical device from ancient Greece. The historical background, surviving evidence and reconstructions of the mechanism are introduced, and the historical development of astronomical achievements and various astronomical instruments are investigated. Pursuing an approach based on the conceptual design of modern mechanisms and bearing in mind the standards of science and technology at the time, all feasible designs of the six lost/incomplete/unclear subsystems are synthesized as illustrated examples, and 48 feasible designs of the complete interior structure are presented. This approach provides not only a logical tool for applying modern mechanical engineering knowledge to the reconstruction of the Antikythera mechanism, but also an innovative research direction for identifying the original structures of the mechanism in the future. In short, the book offers valuable new insights for all readers who are interested in the Antikythera mechanism.

*Imagery of the Body Politic in Ciceronian Rome*

*Bright Galaxies, Dark Matter, and Beyond*

*Tales of Science, Love, Sorrow, and Courage*

*Decoding the Heavens*

*A Novel About the History of Philosophy*

*Bad Astronomy*

*Ancient Science*

*In Decoding the Heavens, Jo Marchant tells for the first time the full story of the hundred-year quest to decipher the ancient Greek computer known as the Antikythera Mechanism. Along the way she unearths a diverse cast of remarkable characters and explores the deep roots of modern technology in ancient Greece and the medieval European and Islamic worlds. At its heart, this is an epic adventure and mystery, a book that challenges our assumptions about technology through the ages.*

*This book, The Effortless Gluten-Free & Dairy-Free Meal Prep: 30-Day Easy Meal Plan - Quick and Healthy Recipes - Lose Weight, Save Time and Feel Your Best, including: ● Understanding the Gluten-Free Diet ● Why Meal Prep? ● 30-Day Meal Plan ● Breakfast and Brunch ● Poultry ● Snacks and Siders ● Beef and Pork ● Vegetarian ● Fish and Seafood ● Desserts Get your copy NOW!*

*Since its publication in 1939, countless would-be readers of Finnegans Wake - James Joyce's masterpiece, which consumed a third of his life - have given up after a few pages, dismissing it as a "perverse triumph of the unintelligible." In 1944, a young professor of mythology and literature named Joseph Campbell, working with Henry Morton Robinson, wrote the first "key" or guide to entering the fascinating, disturbing, marvelously rich world of Finnegans Wake. The authors break down Joyce's "unintelligible" book page by page, stripping the text of much of its obscurity and serving up thoughtful interpretations via footnotes and bracketed commentary. They outline the book's basic action, and then simplify ? and clarify ? its complex web of images and allusions. A Skeleton Key to Finnegans Wake is the latest addition to the Collected Works of Joseph Campbell series.*

*Reconstructs ancient rituals in their day/night/season combining them with relevant mythology and astronomical observations to understand the ritual's cosmological links.*

*Rock Art and the Mississippian Cosmos*

*The Traffic Systems of Pompeii*

*The Effortless Gluten-Free & Dairy-Free Meal Prep: 30-Day Easy Meal Plan - Quick and Healthy Recipes - Lose Weight, Save Time and Feel Your Best*

*Unlocking James Joyce's Masterwork*

*The Detection of Gravitational Waves*

*Exploring the Evolution of Human Culture and Consciousness*

\*Includes pictures \*Includes online resources and a bibliography for further reading Nearly 2,000 years before Homer wrote his epic poems, the Minoan civilization was centered on the island of Crete, a location that required the Minoans to be a regional sea power. And indeed they were, stretching across the Aegean Sea from about 2700-1500 BCE, with trade routes extending all the way to Egypt. The Minoans may have been the first link in the "European chain," leading to the Ancient Greeks and beyond, but questions persist over the origins of the civilization, the end of the civilization, and substantial parts of their history, including their religion and buildings. All of this is largely because their written language, known today as "Linear A," remains undeciphered, and among the more enigmatic finds of this truly enigmatic culture was a small disk-shaped object excavated among the ruins of the Minoan city of Phaistos in 1908. The disc, which has since become known simply as the "Phaistos Disc," contains a number of pictographic symbols that were unrecognized by the scholars who first laid eyes on the object and remain unknown in the more than 100 years since. The contents of the Phaistos Disc, like the Minoan language of Linear A, remain unclear, but that is not for lack of trying by a plethora of scholars, some more credible than others. Many different theories have been advanced, but there is still no consensus concerning its origins, or even if it was intended to be writing. Discovering ancient shipwrecks hasn't been a novelty for thousands of years, but when artifacts were salvaged from a Roman shipwreck off the Greek island of Antikythera in 1900, the discovery of one set off one of the great mysteries of antiquity. When sponge divers investigated the shipwreck, they found the kind of items often associated with such discoveries, including marble statues, pottery, jewelry, and coins, but they also discovered a strange object, the likes of which nobody had ever seen before. Initially assumed to be pieces of rock, it turned out that the item, soon to be dubbed the Antikythera mechanism, consisted of dozens of pieces, many of which had gears. In fact, while scholars quickly deduced that it had an astronomical purpose, many believed the mechanism was too advanced to actually date back to antiquity. As it turned out, of course, the Antikythera mechanism did date back to the 1st or 2nd century BCE, and as scholars began to more fully comprehend its abilities, fascination over the device grew. In conjunction with the determination that the mechanism was an analog computer of sorts that could predict astronomical phenomena like the positions of stars and eclipses, conjecture over the origins of the device led to theories over what the Romans were going to do with it, and whether the device was created by the Greek genius Archimedes himself. To this day, debate continues over whether there were predecessors to the model, where the astronomical observations that went into creating the model were taken, and whether the ultimate origins of the device might even be Babylonian.

A thrilling biography of the universe, as seen through the lens of today's most cutting-edge scientific thinking. Here's the book that explains the universe. You Are Here is an exhilarating journey that shows the cosmos as it has never been seen before. From the smallest parts of matter to the largest structures in the universe, Christopher Potter traces the life of the universe from theories of its conception to theories of its eventual fate. Along this heart-stopping voyage from quarks to galaxies, he writes entertainingly about the history and philosophy of science. With wisdom and wonder, Potter traverses the cosmos from its formation to its eventual end while exploring everything in between. Some questions You Are Here sets out to answer: What is this everything that has evolved from nothing? And what do we mean by everything? What stuff is nothing made out of? If the universe contains everything there is then what is it contained in? Where are we in the universe? Is there room for God in a material universe? How scared should we be? What fate awaits the universe? Science actually has answers to these questions, and in You Are Here, Potter will explain them to you.

One day Sophie comes home from school to find two questions in her mail: "Who are you?" and "Where does the world come from?" Before she knows it she is enrolled in a correspondence course with a mysterious philosopher. Thus begins Jostein Gaarder's unique novel, which is not only a mystery, but also a complete and entertaining history of philosophy.

Of the 1586 lunar craters that have been named to honour scientists and philosophers, only 28 honor a woman. Who were these women? What has happened to make women

A Skeleton Key to Finnegans Wake

Gravity's Kiss

Imhotep the African

Sophie's World

Awakening Earth

Mind and Cosmos

Frequently Asked Questions about the Universe

The first step in making your ideas a reality SketchUp offers a vast array of tools that help you get your building, woodworking, and design plans out of your head and into a real model. Even if you've never dabbled in the software, SketchUp All-in-One For Dummies makes it easy to get started as quickly as the ideas pop into your head! Providing real-world insight from top SketchUp insiders, these six-books-in-one teach you how to tackle the basics of the program and apply those skills to real-world projects. You'll discover the basics of modeling as they apply to either free or paid versions of SketchUp before diving into creating models to use for making objects, constructing buildings, or redesigning interiors. Navigate the SketchUp product mix Get familiar with the basics of modeling View and share your models Make your architecture, interior design, and woodworking dreams a reality You have tons of great ideas—and now you can harness this powerful software to bring them to life.

Is your worldview enlightened enough to accommodate both science and God at the same time? Dr. Michael Guillen, a best-selling author, Emmy award-winning journalist and former physics instructor at Harvard, used to be an Atheist—until science changed his mind. Once of the opinion that people of faith are weak, small-minded folks who just don't understand science, Dr. Guillen ultimately concluded that not only does science itself depend on faith, but faith is actually the mightiest power in the universe. In Believing Is Seeing, Dr. Guillen recounts the fascinating story of his journey from Atheism to Christianity, citing the latest discoveries in neuroscience, physics, astronomy, and mathematics to pull back the curtain on the mystery of faith as no one ever has. Is it true that "seeing is believing?" Or is it possible that reality can be perceived most clearly with the eyes of faith—and that truth is bigger than proof? Let Dr. Guillen be your guide as he brilliantly argues for a large and enlightened worldview consistent with both God and modern science.

Texts and essays from scientists, writers, theologians, and philosophers reflect the evolution of ideas on the creation of the cosmos and the human's place in the universe. Since precious few architectural drawings and no theoretical treatises on architecture remain from the premodern Islamic world, the Timurid pattern scroll in the collection of the Topkapi Palace Museum Library is an exceedingly rich and valuable source of information. In the course of her in-depth analysis of this scroll dating from the late fifteenth or early sixteenth century, Gülru Necipoğlu throws new light on the conceptualization, recording, and transmission of architectural design in the Islamic world between the tenth and sixteenth centuries. Her text has particularly far-reaching implications for recent discussions on vision, subjectivity, and the semiotics of abstract representation. She also compares the Islamic understanding of geometry with that found in medieval Western art, making this book particularly valuable for all historians and critics of architecture. The scroll, with its 114 individual geometric patterns for wall surfaces and vaulting, is reproduced entirely in color in this elegant, large-format volume. An extensive catalogue includes illustrations showing the underlying geometries (in the form of incised "dead" drawings) from which the individual patterns are generated. An essay by Mohammad al-Asad discusses the geometry of the muqarnas and demonstrates by means of CAD drawings how one of the scroll's patterns could be used to design a three-dimensional vault.

*Myths, Machines, and Ancient Dreams of Technology*

*Gods and Robots*

*Decoding the Mechanisms of Antikythera Astronomical Device*

*A Portable Cosmos*

*The Book Of The Cosmos*

*The History and Mystery of the Ancient World's Most Famous Astronomical Device*

*Sacred Space, Memory, and Cognition*

The autobiography of Paramahansa Yogananda (1893 - 1952) details his search for a guru, during which he encountered many spiritual leaders and world-renowned scientists. When it was published in 1946 it was the first introduction of many westerners to yoga and meditation. The famous opera singer Amelita Galli-Curci said about the book: "Amazing, true stories of saints and masters of India, blended with priceless superphysical information—much needed to balance the Western material efficiency with Eastern spiritual efficiency—come from the vigorous pen of Paramhansa Yogananda, whose teachings my husband and myself have had the pleasure of studying for twenty years."

The bestselling author of All the Shah's Men and The Brothers tells the astonishing story of the man who oversaw the CIA's secret drug and mind-control experiments of the 1950s and '60s. The visionary chemist Sidney Gottlieb was the CIA's master magician and gentlehearted torturer—the agency's "poisoner in chief." As head of the MK-ULTRA mind control project, he directed brutal experiments at secret prisons on three continents. He made pills, powders, and potions that could kill or maim without a trace—including some intended for Fidel Castro and other foreign leaders. He paid prostitutes to lure clients to CIA-run bordellos, where they were secretly dosed with mind-altering drugs. His experiments spread LSD across the United States, making him a hidden godfather of the 1960s counterculture. For years he was the chief supplier of spy tools used by CIA officers around the world. Stephen Kinzer, author of groundbreaking books about U.S. clandestine operations, draws on new documentary research and original interviews to bring to life one of the most powerful unknown Americans of the twentieth century. Gottlieb's reckless experiments on "expendable" human subjects destroyed many lives, yet he considered himself deeply spiritual. He lived in a remote cabin without running water, meditated, and rose before dawn to milk his goats. During his twenty-two years at the CIA, Gottlieb worked in the deepest secrecy. Only since his death has it become possible to piece together his astonishing career at the intersection of extreme science and covert action. Poisoner in Chief reveals him as a clandestine conjurer on an epic scale.

A fascinating account, written in real time, of the unfolding of a scientific discovery: the first detection of gravitational waves.

Lee Smolin offers a new theory of the universe that is at once elegant, comprehensive, and radically different from anything proposed before. Smolin posits that a process of self organization like that of biological evolution shapes the universe, as it develops and eventually reproduces through black holes, each of which may result in a new big bang and a new universe. Natural selection may guide the appearance of the laws of physics, favoring those universes which best reproduce. The result would be a cosmology according to which life is a natural consequence of the fundamental principles on which the universe has been built, and a science that would give us a picture of the universe in which, as the author writes, "the occurrence of novelty, indeed the perpetual birth of novelty, can be understood." Smolin is one of the leading cosmologists at work today,

and he writes with an expertise and force of argument that will command attention throughout the world of physics. But it is the humanity and sharp clarity of his prose that offers access for the layperson to the mind bending space at the forefront of today's physics.

A Physicist Explains How Science Shattered His Atheism and Revealed the Necessity of Faith

The Life of Astronomer Vera Rubin

The Story Behind the Genius of the Greek Computer and its Demise

Daniel X: Watch the Skies

You Are Here

Solving the Mystery of the World's First Computer

Architect of the Cosmos

**The modern materialist approach to life has conspicuously failed to explain such central mind-related features of our world as consciousness, intentionality, meaning, and value. This failure to account for something so integral to nature as mind, argues philosopher Thomas Nagel, is a major problem, threatening to unravel the entire naturalistic world picture, extending to biology, evolutionary theory, and cosmology. Since minds are features of biological systems that have developed through evolution, the standard materialist version of evolutionary biology is fundamentally incomplete. And the cosmological history that led to the origin of life and the coming into existence of the conditions for evolution cannot be a merely materialist history, either. An adequate conception of nature would have to explain the appearance in the universe of materially irreducible conscious minds, as such. Nagel's skepticism is not based on religious belief or on a belief in any definite alternative. InMind and Cosmos, he does suggest that if the materialist account is wrong, then principles of a different kind may also be at work in the history of nature, principles of the growth of order that are in their logical form teleological rather than mechanistic. In spite of the great achievements of the physical sciences, reductive materialism is a world view ripe for displacement. Nagel shows that to recognize its limits is the first step in looking for alternatives, or at least in being open to their possibility.**

**This volume in the highly respected Cambridge History of Science series is devoted to the history of science, medicine and mathematics of the Old World in antiquity. Organized by topic and culture, its essays by distinguished scholars offer the most comprehensive and up-to-date history of ancient science currently available. Together, they reveal the diversity of goals, contexts, and accomplishments in the study of nature in Mesopotamia, Egypt, Greece, Rome, China, and India. Intended to provide a balanced and inclusive treatment of the ancient world, contributors consider scientific, medical and mathematical learning in the cultures associated with the ancient world.**

**"In 1900 a group of sponge divers blown off course in the Mediterranean discovered an Ancient Greek shipwreck dating from around 70 BC." "Lying unnoticed for months amongst their hard-won haul was what appeared to be a formless lump of corroded rock, which turned out to be the most stunning scientific artefact we have from antiquity. For more than a century this 'Antikythera mechanism' puzzled academics, but now, more than 2000 years after the device was lost at sea, scientists have pieced together its intricate workings. Unmatched in complexity for 1000 years, it was able to predict eclipses and track the paths of the Sun and the Moon through the zodiac, and probably even showed ancient astronomers the movements of the five known planets." "In Decoding the Heavens, Jo Marchant tells for the first time the story of the 100-year quest to understand this ancient computer. Along the way she unearths a diverse cast of remarkable characters - ranging from Archimedes to Jacques Cousteau - and explores the deep roots of modern technology not only in ancient Greece but in the Islamic world and medieval Europe too. At heart an epic adventure story, it is a book that challenges our assumptions about technology transfer over the ages while giving us fresh insights into history itself."--BOOK JACKET.**

**A Portable CosmosRevealing the Antikythera Mechanism, Scientific Wonder of the Ancient WorldOxford University Press**

**Sidney Gottlieb and the CIA Search for Mind Control**

**Poisoner in Chief**

**A Portable History of the Universe**

**The Women of the Moon**

**Magnificent Universe**

**The Archimedes Codex**

**The Life of the Cosmos**

How Vera Rubin convinced the scientific community that dark matter might exist, persevering despite early dismissals of her work. We now know that the universe is mostly dark, made up of particles and forces that are undetectable even by our most powerful telescopes. The discovery of the possible existence of dark matter and dark energy signaled a Copernican-like revolution in astronomy: not only are we not the center of the universe, neither is the stuff of which we're made. Astronomer Vera Rubin (1928–2016) played a pivotal role in this discovery. By showing that some astronomical objects seem to defy gravity's grip, Rubin helped convince the scientific community of the possibility of dark matter. In Bright Galaxies, Dark Matter, and Beyond, Ashley Jean Yeager tells the story of Rubin's life and work, recounting her persistence despite early dismissals of her work and widespread sexism in science. Yeager describes Rubin's childhood fascination with stars, her education at Vassar and Cornell, and her marriage to a fellow scientist. At first, Rubin wasn't taken seriously; she was a rarity, a woman in science, and her findings seemed almost incredible. Some observatories in midcentury America restricted women from using their large telescopes; Rubin was unable to collect her own data until a decade after she had earned her PhD. Still, she continued her groundbreaking work, driving a scientific revolution. She received the National Medal of Science in 1993, but never the Nobel Prize—perhaps overlooked because of her gender. She's since been memorialized with a ridge on Mars, an asteroid, a galaxy, and most recently, the Vera C. Rubin Observatory—the first national observatory named after a woman.

It's a dangerous time for Daniel X-and when he's cast in an evil director's TV show, he must fight to stay alive. Daniel X thought he'd seen it all in his dangerous days of hunting outlaws-but there's no business like show business, and Number Five on his list of deadly targets is the most appalling criminal yet. An intergalactic reality television producer has orchestrated the extermination of millions, with a soundtrack and laugh track to accompany it. The evil entertainer's catching it all on film, and he's looking for a big-ticket draw. Who better to star than the Alien Hunter himself? Daniel finds himself cast in the lead role of a terrifying season premiere . . . of the gravest show on Earth. Can Daniel X stop this deranged outlaw-or will he find himself on the cutting room floor?

Breathtaking full-color photography complement an intriguing exploration of outer space, in a visual look at modern astronomy that features pictures from the Mars Pathfinder and Voyager probes, telescope images from around the world, and images from the Hubble telescope.

Balances science with spirituality in a study of human evolution, from the appearance of reflective consciousness to modern communications, and proposes three additional stages to be realized

Misconceptions and Misuses Revealed, from Astrology to the Moon Landing "Hoax"

Believing Is Seeing

Revealing The Secrets Of The World's Greatest Palimpsest

SketchUp For Dummies

A 2,000-Year-Old Computer - And the Century - Long Search to Discover Its Secrets

The Antikythera Mechanism

Autobiography of a Yogi

*This beautifully illustrated volume examines American Indian rock art across an expansive region of eastern North America during the Mississippian Period (post AD 900). Unlike portable cultural material, rock art provides in situ evidence of ritual activity that links ideology and place. The focus is on the widespread use of cosmograms depicted in Mississippian rock art imagery. This approach anchors broad distributional patterns of motifs and themes within a powerful framework for cultural interpretation, yielding new insights on ancient concepts of landscape, ceremonialism, and religion. It also provides a unified, comprehensive perspective on Mississippian symbolism. A selection of landscape cosmograms from various parts of North America and Europe taken from the ethnographic records are examined and an overview of American Indian cosmographic landscapes provided to illustrate their centrality to indigenous religious traditions across North America. Authors discuss what a cosmogram-based approach can teach us about people, places, and past environments and what it may reveal that more conventional approaches overlook. Geographical variations across the landscape, regional similarities, and derived meaning found in these data are described. The authors also consider the difficult subject of how to develop a more detailed chronology for eastern rock art.*

*\*Includes pictures \*Chronicles the discovery and theories over the mechanism's origins and capabilities \*Includes footnotes, online resources and a bibliography for further reading. \*Includes a table of contents "It multiplies, divides and subtracts, but you can't program it." - Michael Edmunds Discovering ancient shipwrecks hasn't been a novelty for thousands of years, but when artifacts were salvaged from a Roman shipwreck off the Greek island of Antikythera in 1900, the discovery of one set off one of the great mysteries of antiquity. When sponge divers investigated the shipwreck, they found the kind of items often associated with such discoveries, including marble statues, pottery, jewelry, and coins, but they also discovered a strange object, the likes of which nobody had ever seen before. Initially assumed to be pieces of rock, it turned out that the item, soon to be dubbed the Antikythera mechanism, consisted of dozens of pieces, many of which had gears. In fact, while scholars quickly deduced that it had an astronomical purpose, many believed the mechanism was too advanced to actually date back to antiquity. As it turned out, of course, the Antikythera mechanism did date back to the 1st or 2nd century BCE, and as scholars began to more fully comprehend its abilities, fascination over the device grew. In conjunction with the determination that the mechanism was an analog computer of sorts that could predict astronomical phenomena like the positions of stars and eclipses, conjecture over the origins of the device led to theories over what the Romans were going to do with it, and whether the device was created by the Greek genius Archimedes himself. To this day, debate continues over whether there were predecessors to the model, where the astronomical observations that went into creating the model were taken, and whether the ultimate origins of the device might even be Babylonian. The Antikythera Mechanism: The History and Mystery of the Ancient World's Most Famous Astronomical Device chronicles the discovery and study of the famous device. Along with pictures of important people, places, and events, you will learn about the Antikythera mechanism like never before, in no time at all. The story of the amazing discovery of Archimedes' lost works Drawings and writings by Archimedes, previously thought to have been destroyed, have been uncovered beneath the pages of a 13th-century monk's prayer book. These hidden texts, slowly being retrieved and deciphered by scientists, show that Archimedes' thinking (2,200 years ago) was even ahead of Isaac Newton in the 17th century. Archimedes discovered the value of Pi, he developed the theory of specific gravity and made steps towards the development of calculus. Everything we know about him comes from three manuscripts, two of which have disappeared. The third, currently in the Walters Art Museum, is a palimpsest - the text has been scraped off, the book taken apart and its parchment re-used, in this case as a prayer book. William Noel, the project director, and Reviel Netz, a historian of ancient mathematics, tell the enthralling story of the survival of that prayer book from 1229 to the present, and examine the process of recovering the invaluable text underneath as well as investigating into why that text is so important.*

*The Traffic Systems of Pompeii is the first sustained examination of the development of road infrastructure in Pompeii—from the archaic age to the eruption of Mt. Vesuvius in 79 CE—and its implications for urbanism in the Roman empire. Eric E. Poehler, an authority on Pompeii's uniquely preserved urban structure, distills over five hundred instances of street-level "wear and tear" to reveal for the first time the rules of the ancient road. Through a thorough, yet lively, investigation of every facet of the infrastructure, from the city's urban grid and the shape of the streets to the treatment of their surfaces and the individual elements of construction, the intricacies of the Pompeian traffic system and the changes to its operation over time emerge in vivid detail. Though archaeological expertise forms the backbone of this book, its findings have equally important historical and architectural implications. Later chapters probe how the street design and infrastructure affected social roles and hierarchies among property owners in Pompeii, illuminating the economic forces that push and pull upon the shape of urban space. The final chapters set the road system into its broader context as one major infrastructural and administrative artifact of the Roman empire's deeply urban culture. Where does Pompeii's system fit within the history of Roman traffic control? Is it unique for its innovation, or only for the preservation that permitted its discovery? Poehler marshals evidence from across the Roman world to examine these questions. His measured and thoroughly researched answers make The Traffic Systems of Pompeii a critical step forward in our understanding of infrastructure in the ancient world.*

The Topkapi Scroll

The History of the Most Mysterious Artifacts from Ancient Greece

Transforming the Landscape

The Cosmos in Ancient Greek Religious Experience

An Existential Reading of the Confucian Analects

The Phaistos Disc and Antikythera Mechanism

Imagining The Universe From Heraclitus To Hawking

In Antikythera Mechanism: The Story Behind the Genius of the Greek Computer and Its Demise, Evaggelos Vallianatos, historian and ecopolitical theorist, shows that after the conquest of Persia by Alexander the Great in the late fourth century BCE, the Greeks, especially in Egypt, reached unprecedented heights of achievements in science, technology, and civilization. The Antikythera Mechanism, an astronomical computer probably crafted in Rhodes in the second century BCE, was proof of that prowess. It's the grandfather of our computers. Greek sponge divers discovered the Antikythera Mechanism in 1900 on a 2,100-year-old Roman-era shipwreck. The hand-powered device reveals a sophisticated Greek technology previously unknown to scholars and historians, not seen and understood again until the twentieth and twenty-first centuries. The book not only describes how the sophisticated political and technological infrastructure of the Greeks after Alexander the Great resulted in the Antikythera celestial computer, and the bedrock of science and technology we know today, but also how the influence of Christianity on Greek civilization destroyed the nascent computer age of ancient Greece. Vallianatos, born in Greece and educated in America, is a historian, author, and journalist. He is a passionate champion of Greek culture and a well-suited guide to this historical account. Vallianatos explains how and why Greek scientists employed advanced engineering in translating the beautiful conception of the Antikythera Mechanism into an astronomical computer of genius: a bronze-gear device of mathematical astronomy, predicting the eclipses of the Sun and the Moon; calculating the risings and settings of important stars and constellations, and the movements of the planets around the Sun; while mechanizing the predictions of scientific theories. The computer's accurate calendar connected these cosmic phenomena to the Olympics and other major Panhellenic religious and athletic celebrations, bringing the Greeks closer to their gods, traditions, and the Cosmos.

An Exploration of Imhotep—Architect of the Step Pyramid at Saqqara, High Priest of Ra, and Royal Astronomer—as Well as His Influence as the True Father of African Civilization. In this groundbreaking book, Egyptologist Robert Bauval and astrophysicist Thomas Brophy uncover the mystery of Imhotep, an ancient Egyptian superstar, pharaonic Da Vinci, Michelangelo, Galileo, and Newton all rolled into one. Based on their research at the Step Pyramid Complex at Saqqara, Bauval and Brophy delve into observational astronomy to "decode" the alignments and other design features of the Step Pyramid Complex, to uncover the true origins and genius of Imhotep. Like a whodunit detective story they follow the clues that take them on an exhilarating magical mystery tour starting at Saqqara, leading them to temples in Upper Egypt and to the stones of Nabta Playa and the black African stargazers who placed them there. Imhotep the African describes how Imhotep was the ancient link to the birth of modern civilization, restoring him to his proper place at the center of the birthing of Egyptian, and world, civilization.

The Antikythera Mechanism : a Calendar Computer from Ca. 80 B.C. Revealing the Antikythera Mechanism, Scientific Wonder of the Ancient World