

Astronomy On The Personal Computer

_____ Pre-order now: the biggest quiz book of 2021. The Astronomy Puzzle Book is a puzzle book that's truly out of this world _____ What's Goldilocks got to do with the study of space? Everyone's heard of NASA, but can you name any of the other 72 space agencies around the world? And do you know your lunar and solar deities? The Astronomy Puzzle Book is packed with more than 100 puzzles that have been inspired by the Royal Observatory's history and collections. The conundrums and riddles in this book celebrate all that is inspiring and fascinating about space, the stars and the history of astronomy. Inside this book, you will find astronomical instruments, star charts, famous astronomers and much more. Explore some of the latest astronomical theories and achievements in space exploration as you decipher the clues and solve the puzzles. Put your problem-solving skills to the test by delving deep into the darkest corners of space. _____ Space has the power to inspire and fascinate all of us on Earth and the history of astronomy has been one of solving puzzles. Now it's your turn.

This long-awaited new edition of Montenbruck and Pflieger's successful book now includes chapters on perturbation calculations and on the calculation of physical ephemerides of the major planets and the sun. The book provides the reader with numerous programs and instructions for time and date calculation and for treating the two-body problem. Each chapter is carefully structured according to topic and closes with the listing of a relevant program, thereby facilitating its use as a practical handbook. The necessary astronomical and numerical fundamentals are also included in the text. The accompanying diskette has equally been completely revised.

A new framework for understanding computing: a coherent set of principles spanning technologies, domains, algorithms, architectures, and designs. Computing is usually viewed as a technology field that advances at the breakneck speed of Moore's Law. If we turn away even for a moment, we might miss a game-changing technological breakthrough or an earthshaking theoretical development. This book takes a different perspective, presenting computing as a science governed by fundamental principles that span all technologies. Computer science is a science of information processes. We need a new language to describe the science, and in this book Peter Denning and Craig Martell offer the great principles framework as just such a language. This is a book about the whole of computing—its algorithms, architectures, and designs. Denning and Martell divide the great principles of computing into six categories: communication, computation, coordination, recollection, evaluation, and design. They begin with an introduction to computing, its history, its many interactions with other fields, its domains of practice, and the structure of the great principles framework. They go on to examine the great principles in different areas: information, machines, programming, computation, memory, parallelism, queueing, and design. Finally, they apply the great principles to networking, the Internet in particular. Great Principles of Computing will be essential reading for professionals in science and engineering fields with a “ computational ” branch, for practitioners in computing who want overviews of less familiar areas of computer science, and for non-computer science majors who want an accessible entry way to the field.

For decades, schoolbooks have taught that Sumer was the cradle of civilization. Conventional scholarship has also held that Aryan civilization came to India by way of invasions from the north. But in this ground-breaking book, three renowned scholars show that there was no "Aryan invasion," and that India, not Sumer, was the cradle of civilized humanity. Through exploring the rich symbols, metaphors, and myths of the Vedas, this book also examines the wealth of India's spirituality and its relevance for today's world.

Astronomy on Your Computer

Silent Sky

Astronomy on the Personal Computer

Astronomy with Your Personal Computer

Fundamental Astronomy

Before the Internet became widely known as a global tool for terrorists, one perceptive U.S. citizen recognized its ominous potential. Armed with clear evidence of computer espionage, he began a highly personal quest to expose a hidden network of spies that threatened national security. But would the authorities back him up? Cliff Stoll's dramatic firsthand account is "a computer-age detective story, instantly fascinating [and] astonishingly gripping" (Smithsonian). Cliff Stoll was an astronomer turned systems manager at Lawrence Berkeley Lab when a 75-cent accounting error alerted him to the presence of an unauthorized user on his system. The hacker's code name was "Hunter"—a mysterious invader who managed to break into U.S. computer systems and steal sensitive military and security information. Stoll began a one-man hunt of his own: spying on the spy. It was a dangerous game of deception, broken codes, satellites, and missile bases—a one-man sting operation that finally gained the attention of the CIA . . . and ultimately trapped an international spy ring fueled by cash, cocaine, and the KGB.

The first edition of this very successful book was one winner of the Astronomical Society of the Pacific 'Astronomy Book of the Year' awards in 1986. There are a further seven subroutines in the new edition which can be linked in any combination with the existing twenty-six. Written in a portable version of BASIC, it enables the amateur astronomer to make calculations using a personal computer. The routines are not specific to any make of machine and are user friendly in that they require only a broad understanding of any particular problem. Since the programs themselves take care of details, they can be used for example to calculate the time of rising of any of the planets in any part of the world at any time in the future or past, or they may be used to find the circumstances of the next solar eclipse visible from a particular place. In fact, almost every problem likely to be encountered by the amateur astronomer can be solved by a suitable combination of the routines given in the book.

Offers Programs That Facilitate Rapid Astronomical Calculations, Which are Written in a Common Subset of BASIC & Run on the Apple

This second edition has been updated and substantially expanded.

Starting with the description of our home galaxy, the Milky Way, this cogently written textbook introduces the reader to the astronomy of

galaxies, their structure, active galactic nuclei, evolution and large scale distribution in the Universe. After an extensive and thorough introduction to modern observational and theoretical cosmology, the focus turns to the formation of structures and astronomical objects in the early Universe. The basics of classical astronomy and stellar astrophysics needed for extragalactic astronomy are provided in the appendix. While this book has grown out of introductory university courses on astronomy and astrophysics and includes a set of problems and solutions, it will not only benefit undergraduate students and lecturers; thanks to the comprehensive coverage of the field, even graduate students and researchers specializing in related fields will appreciate it as a valuable reference work.

The Astronomy Book

Practical Astronomy with your Calculator or Spreadsheet

Handbook of CCD Astronomy

Using Astronomy to Solve Mysteries in Art, History and Literature

The lure of the stars -- An aspiring astronomer -- Cornell and the rotating universe -- Georgetown, Gamow and galaxies -- A professional astronomer at last -- The call of the dome -- The delight of discovery -- Adventures in Andromeda -- Bright light on dark matter -- The dynamic universe -- Speaking out for women -- Wonderful life.

It is said that a typical astronomer of the 19th century spent seven hours working at a desk for every hour spent at the telescope. That's how long the routine analysis of data took with pencil, paper, and logarithmic tables. Thus when Wilhelm Olbers discovered the minor planet Vesta in 1807 and gathered the necessary observations, his friend Gauss needed almost 10 hours to hand calculate its orbit. That achievement astonished many less gifted astronomers of the time, who might have labored days to work out the orbit of a newfound comet. How different things are today! Gauss's method of orbit determination, presented in Chap. 11 of this book, runs to completion on a home computer in a few seconds at most. The machine will issue its accurate results in less time than it takes to key in the observations. In this book, a landmark in the youthful literature of astronomical computer algorithms, Oliver Montenbruck and Thomas Pfleger cover many topics of keen interest to the practical observer. For me its most remarkable feature is the library of interrelated program modules, all elegantly written in PASCAL. Anyone who has tried to create such modules in interpreted BASIC soon runs into trouble: too few letters for variable names, not enough significant digits, and so on. These PASCAL routines are invoked one after another in coordinate transformations and calendar conversions.

Since the dawn of humankind, people have looked upward to the heavens and tried to understand them. This encyclopedia takes you on an expedition through time and space to discover our place in the universe. We invite you to take a journey through the wonders of the universe. Explore the cosmos, from planets to black holes, the Big Bang, and everything in-between! Get ready to discover the story of the universe one page at a time! This educational book for young adults will launch you on a wild trip through the cosmos and the incredible discoveries throughout history. Filled to the brim with beautifully illustrated flowcharts, graphics, and jargon-free language, The Astronomy Book breaks down hard-to-grasp concepts to guide you in understanding almost 100 big astronomical ideas. Big Ideas How do we measure the universe? Where is the event horizon? What is dark matter? Now you can find out all the answers to these questions and so much more in this inquisitive book about our universe! Using incredibly clever visual learning devices like step-by-step diagrams, you'll learn more about captivating topics from the Copernican Revolution. Dive into the mind-boggling theories of recent science in a user-friendly format that makes the information easy to follow. Explore the biographies, theories, and discoveries of key astronomers through the ages such as Ptolemy, Galileo, Newton, Hubble, and Hawking. To infinity and beyond! Journey through space and time with us: - From Myth to Science 600 BCE - 1550 CE - The Telescope Revolution 1550 - 1750 - Uranus to

Neptune 1750 - 1850 - The Rise of Astrophysics 1850 - 1915 - Atom, Stars, And Galaxies 1915 - 1950 - New Windows on The Universe 1950 - 1917 - The Triumph of Technology 1975 - Present The Series Simply Explained With over 7 million copies sold worldwide to date, The Astronomy Book is part of the award-winning Big Ideas Simply Explained series from DK Books. It uses innovative graphics along with engaging writing to make complex subjects easier to understand. Shortlisted: A Young Adult Library Services Association Outstanding Books for the College Bound and Lifelong Learners list selection A Mom's Choice Awards® Honoring Excellence Gold Seal of Approval for Young Adult Books A Parents' Choice Gold Award winner

The Compendium of Practical Astronomy is unique. The practical astronomer, whether student, novice or accomplished amateur, will find this handbook the most comprehensive, up-to-date and detailed single guide to the subject available. It is based on Roth's celebrated German language handbook for amateur astronomers, which first appeared over 40 years ago.

Extragalactic Astronomy and Cosmology

Physics of Light and Optics (Black & White)

How the Ladies of the Harvard Observatory Took the Measure of the Stars

Celestial Sleuth

Astronomy with your Personal Computer

Now in its fourth edition, this highly regarded book is ideal for those who wish to solve a variety of practical and recreational problems in astronomy using a scientific calculator or spreadsheet. Updated and extended, this new edition shows you how to use spreadsheets to predict, with greater accuracy, solar and lunar eclipses, the positions of the planets, and the times of sunrise and sunset. Suitable for worldwide use, this handbook covers orbits, transformations and general celestial phenomena, and is essential for anyone wanting to make astronomical calculations for themselves. With clear, easy-to-follow instructions for use with a pocket calculator, shown alongside worked examples, it can be enjoyed by anyone interested in astronomy, and will be a useful tool for software writers and students studying introductory astronomy. High-precision spreadsheet methods for greater accuracy are available at www.cambridge.org/practicalastronomy.

A thorough introduction to the computation of celestial mechanics, covering everything from astronomical and computational theory to the construction of rapid and accurate applications programs. The book supplies the necessary knowledge and software solutions for determining and predicting positions of the Sun, Moon, planets, minor planets and comets, solar eclipses, stellar occultations by the Moon, phases of the Moon and much more. This completely revised edition takes advantage of C++, and individual applications may be efficiently realized through the use of a powerful module library. The accompanying CD-ROM contains the complete, fully documented and commented source codes as well as executable programs for Windows 98/2000/XP and LINUX.

Here is a one-volume guide to just about everything computer-related for amateur astronomers! Today's amateur astronomy is inextricably linked to personal computers. Computer-controlled "go-to" telescopes are inexpensive. CCD and webcam imaging make intensive use of the technology for capturing

and processing images. Planetarium software provides information and an easy interface for telescopes. The Internet offers links to other astronomers, information, and software. The list goes on and on. Find out here how to choose the best planetarium program: are commercial versions really better than freeware? Learn how to optimise a go-to telescope, or connect it to a lap-top. Discover how to choose the best webcam and use it with your telescope. Create a mosaic of the Moon, or high-resolution images of the planets... Astronomy with a Home Computer is designed for every amateur astronomer who owns a home computer, whether it is running Microsoft Windows, Mac O/S or Linux. It doesn't matter what kind of telescope you own either - a small refractor is just as useful as a big "go-to" SCT for most of the projects in this book.

How to predict and calculate the positions of stars, planets, the sun, the moon, and satellites using a personal computer and high school mathematics. Our knowledge of the universe is expanding rapidly, as space probes launched decades ago begin to send information back to earth. There has never been a better time to learn about how planets, stars, and satellites move through the heavens. This book is for amateur astronomers who want to move beyond pictures of constellations in star guides and solve the mysteries of a starry night. It is a book for readers who have wondered, for example, where Saturn will appear in the night sky, when the sun will rise and set, or how long the space station will be over their location. In *Celestial Calculations*, J. L. Lawrence shows readers how to find the answers to these and other astronomy questions with only a personal computer and high school math. Using an easy-to-follow step-by-step approach, Lawrence explains what calculations are required, why they are needed, and how they all fit together. Lawrence begins with basic principles: unit of measure conversions, time conversions, and coordinate systems. He combines these concepts into a computer program that can calculate the location of a star, and uses the same methods for predicting the locations of the sun, moon, and planets. He then shows how to use these methods for locating the many satellites we have sent into orbit. Finally, he describes a variety of resources and tools available to the amateur astronomer, including star charts and astronomical tables. Diagrams illustrate the major concepts, and computer programs that implement the algorithms are included. Photographs of actual celestial objects accompany the text, and interesting astronomical facts are interspersed throughout. Source code (in Python 3, JAVA, and Visual Basic) and executables for all the programs and examples presented in the book are available for download at <https://CelestialCalculations.github.io>.

Astronomy Vs. History

A Life

Great Principles of Computing

Electronic Imaging in Astronomy

The Decade of Discovery in Astronomy and Astrophysics

Fundamental Astronomy is a well-balanced, comprehensive introduction to

classical and modern astronomy. While emphasizing both the astronomical concepts and the underlying physical principles, the text provides a sound basis for more profound studies in the astronomical sciences. This is the fifth edition of the successful undergraduate textbook and reference work. It has been extensively modernized and extended in the parts dealing with extragalactic astronomy and cosmology. You will also find augmented sections on the solar system and extrasolar planets as well as a new chapter on astrobiology. Long considered a standard text for physical science majors, *Fundamental Astronomy* is also an excellent reference work for dedicated amateur astronomers.

Charge-Coupled Devices (CCDs) are the state-of-the-art detector in many fields of observational science. Updated to include all of the latest developments in CCDs, this second edition of the *Handbook of CCD Astronomy* is a concise and accessible reference on all practical aspects of using CCDs. Starting with their electronic workings, it discusses their basic characteristics and then gives methods and examples of how to determine these values. While the book focuses on the use of CCDs in professional observational astronomy, advanced amateur astronomers, and researchers in physics, chemistry, medical imaging, and remote sensing will also find it very valuable. Tables of useful and hard-to-find data, key practical equations, and new exercises round off the book and ensure that it provides an ideal introduction to the practical use of CCDs for graduate students, and a handy reference for more experienced users.

Astronomy Hacks begins the space exploration by getting you set up with the right equipment for observing and admiring the stars in an urban setting. Along for the trip are first rate tips for making most of observations. The hacks show you how to: Dark-Adapt Your Notebook Computer. Choose the Best Binocular. Clean Your Eyepieces and Lenses Safely. Upgrade Your Optical Finder. Photograph the Stars with Basic Equipment.

THE STORY: When Henrietta Leavitt begins work at the Harvard Observatory in the early 1900s, she isn't allowed to touch a telescope or express an original idea. Instead, she joins a group of women "computers," charting the stars for a renowned astronomer who calculates projects in "girl hours" and has no time for the women's probing theories. As Henrietta, in her free time, attempts to measure the light and distance of stars, she must also take measure of her life on Earth, trying to balance her dedication to science with family obligations and the possibility of love. The true story of 19th-century astronomer Henrietta Leavitt explores a woman's place in society during a time of immense scientific discoveries, when women's ideas were dismissed until men claimed credit for them. Social progress, like scientific progress, can be hard to see when one is trapped among earthly complications; Henrietta Leavitt and her female peers believe in both, and their dedication changed the way we understand both the heavens and Earth.

Astronomy Hacks

Celestial Calculations

The Usborne Book of Astronomy & Space Decoding Astronomy in Art and Architecture

Interferometry and Synthesis in Radio Astronomy

From #1 New York Times bestselling author Dava Sobel, the "inspiring" (People), little-known true story of women's landmark contributions to astronomy A New York Times Book Review Notable Book Named one of the best books of the year by NPR, The Economist, Smithsonian, Nature, and NPR's Science Friday Nominated for the PEN/E.O. Wilson Literary Science Writing Award "A joy to read." —The Wall Street Journal In the mid-nineteenth century, the Harvard College Observatory began employing women as calculators, or "human computers," to interpret the observations their male counterparts made via telescope each night. At the outset this group included the wives, sisters, and daughters of the resident astronomers, but soon the female corps included graduates of the new women's colleges—Vassar, Wellesley, and Smith. As photography transformed the practice of astronomy, the ladies turned from computation to studying the stars captured nightly on glass photographic plates. The "glass universe" of half a million plates that Harvard amassed over the ensuing decades—through the generous support of Mrs. Anna Palmer Draper, the widow of a pioneer in stellar photography—enabled the women to make extraordinary discoveries that attracted worldwide acclaim. They helped discern what stars were made of, divided the stars into meaningful categories for further research, and found a way to measure distances across space by starlight. Their ranks included Williamina Fleming, a Scottish woman originally hired as a maid who went on to identify ten novae and more than three hundred variable stars; Annie Jump Cannon, who designed a stellar classification system that was adopted by astronomers the world over and is still in use; and Dr. Cecilia Helena Payne, who in 1956 became the first ever woman professor of astronomy at Harvard—and Harvard's first female department chair. Elegantly written and enriched by excerpts from letters, diaries, and memoirs, *The Glass Universe* is the hidden history of the women whose contributions to the burgeoning field of astronomy forever changed our understanding of the stars and our place in the universe.

The second edition of *Electronic Imaging in Astronomy: Detectors and Instrumentation* describes the remarkable developments that have taken place in astronomical detectors and instrumentation in recent years – from the invention of the charge-coupled device (CCD) in 1970 to the current era of very large telescopes, such as the Keck 10-meter telescopes in Hawaii with their laser guide-star adaptive optics which rival the image quality of the Hubble Space Telescope. Authored by one of the world's foremost experts on the design and development of electronic imaging systems for astronomy, this book has been written on several levels to appeal to a broad readership. Mathematical expositions are designed to encourage a wider audience, especially among the growing community of amateur astronomers with small telescopes with CCD cameras. The book can be used at the college level for an introductory course on modern astronomical detectors and instruments, and as a supplement for a practical or laboratory class.

Describes outer space and the history of astronomy, including the planets of the solar system, the life of a star, the origin of constellations, and how stars are photographed.

The theories and techniques that underlie radio interferometry as applied to astronomy and astrometry are discussed in this text. It is intended for graduate

students and professionals who wish to use interferometric or synthesis-mapping techniques in astronomy, astrometry or geodesy.

Astronomy on the Personal Computer. - 2nd Corr. and Enlarged Ed

A History of Astronomy

New Light on Ancient India

Vera Rubin

Star-names and Their Meanings

For centuries, our ancestors carefully observed the movements of the heavens and wove that astronomical knowledge into their city planning, architecture, mythology, paintings, sculpture, and poetry. This book uncovers the hidden messages and advanced science encoded within these sacred spaces, showing how the rhythmic motions of the night sky played a central role across many different cultures. Our astronomical tour transports readers through time and space, from prehistoric megaliths to Renaissance paintings, Greco-Roman temples to Inca architecture. Along the way, you will investigate unexpected findings at Lascaux, Delphi, Petra, Angkor Wat, Borobudur, and many more archaeological sites both famous and little known. Through these vivid examples, you will come to appreciate the masterful ways that astronomical knowledge was incorporated into each society's religion and mythology, then translated into their physical surroundings. The latest archaeoastronomical studies and discoveries are recounted through a poetic and nontechnical narrative, revealing how many longstanding beliefs about our ancestors are being overturned. Through this celestial journey, readers of all backgrounds will learn the basics about this exciting field and share in the wonders of cultural astronomy.

Astronomers and astrophysicists are making revolutionary advances in our understanding of planets, stars, galaxies, and even the structure of the universe itself. The Decade of Discovery presents a survey of this exciting field of science and offers a prioritized agenda for space- and ground-based research into the twenty-first century. The book presents specific recommendations, programs, and expenditure levels to meet the needs of the astronomy and astrophysics communities. Accessible to the interested lay reader, the book explores: The technological investments needed for instruments that will be built in the next century. The importance of the computer revolution to all aspects of astronomical research. The potential usefulness of the moon as an observatory site. Policy issues relevant to the funding of astronomy and the execution of astronomical projects. The Decade of Discovery will prove valuable to science policymakers, research administrators, scientists, and students in the physical sciences, and interested lay readers. Alternate Selection, Astronomy Book Club

NASA research of Earth-Moon mechanics by astrophysicist Robert Newton leads mathematicians of MSU to a breakthrough in the chronology of civilization. Astronomy Vs. History dissects every historical age and analyses the data from every source imaginable ??" Greek and Egyptian chronology take a good beating, and it goes rapidly downhill from there. Almagest that is supposed to have been written in the 2nd

century A.D. by Ptolemy dates to 16th century; Tycho Brahe, Ptolemy and Copernicus take the blame for taking part in creation of the legend of a mythical Classical Age that never was and misdating medieval events as very ancient ones. In Astronomy Vs. History we are reminded of the crucial role of eclipses in verifying the dating of major historical events, of stone Zodiacs containing the true dates of such events. Our perception of history begins to change dramatically even before we're through with Astronomy Vs. History.

This is a book for the amateur astronomer who wishes to carry out astronomical calculations using a personal computer with the minimum of fuss. It is not specific to any make of machine, neither are the programmes confined to specific calculations, Rather, it presents a collection of twenty-six subroutines, written in a portable version of BASIC, which can be mixed and matched according to personal requirements. Furthermore, the user need only have a broad understanding of the problem; the subroutines themselves take care of the details. For example, the routines can be used to calculate the time of rising of any of the planets in any part of the world at any time in the future or past; or they may be used to find the circumstances of the next solar eclipse visible from a particular place. Almost every problem likely to be encountered by the amateur astronomer can be solved by a suitable combination of the routines given here.

An Introduction

Big Ideas Simply Explained

Astronomy Labs for the Personal Computer

Celestial BASIC

In Search of the Cradle of Civilization

Well-balanced, carefully reasoned study covers such topics as Ptolemaic theory, work of Copernicus, Kepler, Newton, Eddington's work on stars, much more. Illustrated.

References.

Astronomy on the Personal Computer Springer

For a general audience interested in solving mysteries in art, history, and literature using the methods of science, 'forensic astronomy' is a thrilling new field of exploration. Astronomical calculations are the basis of the studies, which have the advantage of bringing to readers both evocative images and a better understanding of the skies. Weather facts, volcano studies, topography, tides, historical letters and diaries, famous paintings, military records, and the friendly assistance of experts in related fields add variety, depth, and interest to the work. The chosen topics are selected for their wide public recognition and intrigue, involving artists such as Vincent van Gogh, Claude Monet, Edvard Munch, and Ansel Adams; historical events such as the Battle of Marathon, the death of Julius Caesar, the American Revolution, and World War II; and literary authors such as Chaucer, Shakespeare, Joyce, and Mary Shelley. This book sets out to answer these mysteries indicated with the means and expertise of astronomy, opening the door to a richer experience of human culture and its relationship with nature. Each subject is carefully analyzed. As an example using the study of sky paintings by Vincent van Gogh, the analytical method would include: - computer calculations of historical skies above France in the 19th century - finding and quoting the clues found in translations of original letters by Van Gogh - making site visits to France to determine the precise locations when Van Gogh set up his easel and what

celestial objects are depicted. For each historical event influenced by astronomy, there would be a different kind of mystery to be solved. As an example: - How can the phase of the Moon and time of moonrise help to explain a turning point of the American Civil War - the fatal wounding of Stonewall Jackson at Chancellorsville in 1863? For each literary reference to astronomy, it was determined which celestial objects were being described and making an argument that the author is describing an actual event. For example, what was the date of the moonlit scene when Mary Shelley first had the idea for her novel "Frankenstein?" These and more fun riddles will enchant and delight the fan of art and astronomy.

A bold reassessment of "smart cities" that reveals what is lost when we conceive of our urban spaces as computers Computational models of urbanism—smart cities that use data-driven planning and algorithmic administration—promise to deliver new urban efficiencies and conveniences. Yet these models limit our understanding of what we can know about a city. A City Is Not a Computer reveals how cities encompass myriad forms of local and indigenous intelligences and knowledge institutions, arguing that these resources are a vital supplement and corrective to increasingly prevalent algorithmic models. Shannon Mattern begins by examining the ethical and ontological implications of urban technologies and computational models, discussing how they shape and in many cases profoundly limit our engagement with cities. She looks at the methods and underlying assumptions of data-driven urbanism, and demonstrates how the "city-as-computer" metaphor, which undergirds much of today's urban policy and design, reduces place-based knowledge to information processing. Mattern then imagines how we might sustain institutions and infrastructures that constitute more diverse, open, inclusive urban forms. She shows how the public library functions as a steward of urban intelligence, and describes the scales of upkeep needed to sustain a city's many moving parts, from spinning hard drives to bridge repairs. Incorporating insights from urban studies, data science, and media and information studies, A City Is Not a Computer offers a visionary new approach to urban planning and design.

A Gentle Introduction to Computational Astronomy

Astronomy with a Home Computer

A City Is Not a Computer

Detectors and Instrumentation

CUCKOO'S EGG