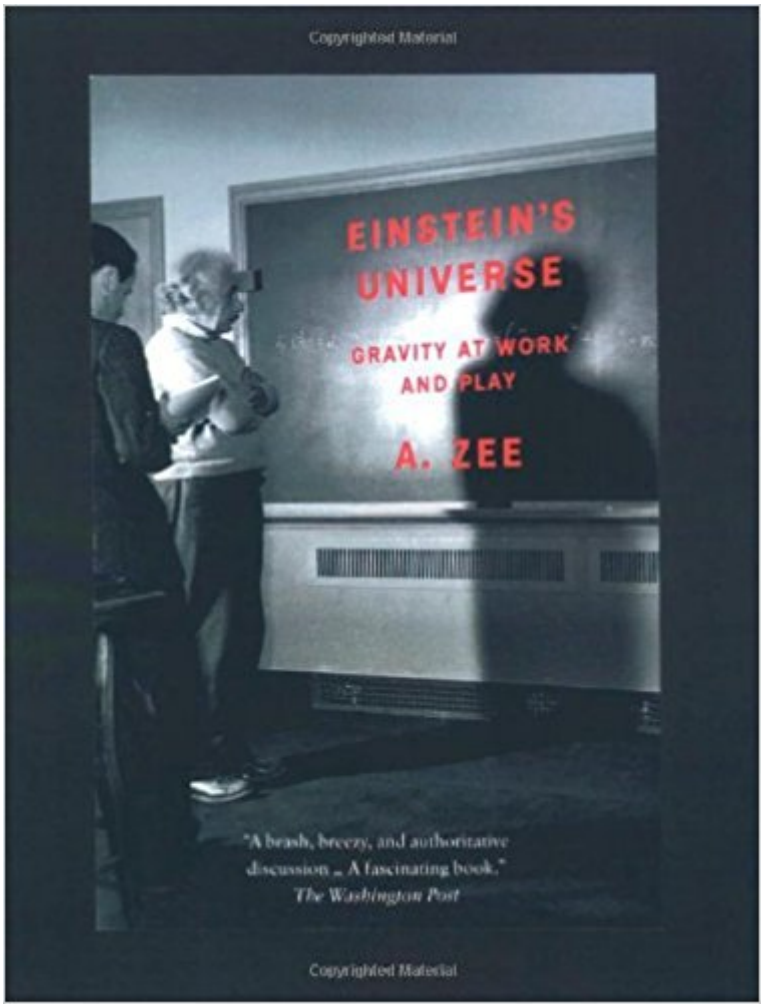
Einstein's Universe: Gravity At Work And Play



Synopsis

On Albert Einstein’s seventy-sixth and final birthday, a friend gave him a simple toy made from a broomstick, a brass ball attached to a length of string, and a weak spring. Einstein was delighted: the toy worked on a principle he had conceived fifty years earlier when he was working on his revolutionary theory of gravity--a principle whose implications are still confounding physicists today.Starting with this winning anecdote, Anthony Zee begins his animated discussion of phenomena ranging from the emergence of galaxies to the curvature of space-time, evidence for the existence of gravity waves, and the shape of the universe in the first nanoseconds of creation and today. Making complex ideas accessible without oversimplifying, Zee leads the reader through the implications of Einstein’s theory and its influence on modern physics. His playful and lucid style conveys the excitement of some of the latest developments in physics, and his new Afterword brings things even further up-to-date.

Book Information

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Customer Reviews

"An extraordinary writer: playful, inspired, and brilliant."--Publishers Weekly"Zee writes with wry, poetic humor.... It’s as if he is conducting an easygoing conversation with his audience...a scientist who can clearly evoke the imagery hidden within a mathematical equation, treating some rather formidable material with enthusiasm and delight."--The New York Times"A brash, breezy, and authoritative discussion...a fascinating book."--The Washington Post"Through his engaging, conversational style, Zee...succeeds in informing while entertaining the reader with disarming stories."--The San Francisco Chronicle"Among the numerous authors who have written

popularizations of contemporary physics, none is better than Zee at explaining things simply."--Library Journal

Anthony Zee is a Permanent Member of the Institute for Theoretical Physics and Professor of Physics at the University of California in Santa Barbara. His other books include Fearful Symmetry and The Unity of Forces.

For the time i bought this book, i knew nothing about Physics. I read the whole book and when i got it finished , i just wanted to read it again because of the astonishing information it contains about physics. For starters it the field, i think this is a Great book!

Professor A. Zee from Santa Barbara writes an amusing and readable explanation of Eistein’s Universe.However, he tends to wander and at times is not too clear. For my time and education, speaking as a non-mathematical person, I prefer Steven Weinberg’s books on modern physics and cosmology.

In my search to better understand gravity and the universe I was excited to find "Einstein’s Universe" via .com. This is such a great book! Loved it. Professor Zee is a fantastic writer. If you’re intrigued by physics, cosmology, spacetime or simply wish to discover the truth about the "fundamental forces of nature," then I highly recommend this book.

Entertaining and informative!

Sound popularized physics written in an amusing style and a background of historical anecdotes.

Physicist Anthony Zee is a master at making modern physics lucid to readers at all levels. Even though the field of cosmology has advanced at breakneck speed since even the revised Oxford edition of "Einstein’s Universe: Gravity at Work and Play," this book is an excellent introduction and sets a deep background for understanding the context of even the most modern developments in astrophysics and cosmology. Zee consistently breaks the unwritten rule obeyed my most scientists ... the rule against making science both clear as well as entertaining.And I can’t help but include a link to my favorite of his books -- one with nothing to do with astrophysics:Â Swallowing Clouds

An Old Man’s ToyI just read the book: " Einstein’s Universe" which is the retitle of "An Old Man’s Toy". Both titles are available at .com. I am taking the trouble to write a brief account of why I find this book to be a masterpiece. I’ve been reading books on Physics as a hobby. My background is that I have a Masters Degree in Math. I’ve read about ten maybe it is more like 20 books trying to understand Einsteins Equivalence Principle. This principle as he grasped it was according to Einsteins the "happiest thought of his life". I read such statements as Acceleration and Gravity produce the same effect and therefore are equivalent. Again such as the inertaial acceleration in F = ma and gravitational acceleration in F=G m M/ r^2 which is GM/r^2 =g produces inertial acceleration = gravitational acceleration and so they cancel being in different directions up and down so to speak. There were others. The problem is trying to get a picure of the process. Since Newtons force was pushed back for curved space it became a little confusing. After reading Dr Zee’s book I had my picture. The key to what I’m writing is picture. I asked him a question by email to which I had already decided on the answer and what he gave me is exactly the picture I had formed from reading his book. It is really good. I purchased his other books immediately: "Fearful Symmetry" and "The Unity of Forces". Both available at .com.

The author is a professor at UC Santa Barbara (apparently Ed Witten was once his teaching assistant at Princeton) and writes with authority and conviction yet explains quite clearly the limitation of our knowledge and the basis of such limitation (pg 206-207). Indeed, in the last chapter (pg 231), he bluntly quips, "Do we understand gravity? Not really."He talks in plain language the concepts of gravity as a force (in the Prologue); as curvature of space-time and the equivalence principle (pg 1-31), as the exchange of gravitons (pg 42-44), and as a manifestation of superstrings (pg 212-218). Essentially no mathematical calculation is involved, but mathematical concepts are expounded.The prominence of gravity in shaping our universe and reality is explained in reasonable depth (eg. Ch 8 and 10). Without gravity and without its specific features we just will not exist and ponder upon its mystery. The sense of awe is profuse within the prose and is very inspiring.

Quantum Gravity and Spinfoam Theory (Cambridge Monographs on Mathematical Physics) Defining Gravity (Defining Gravity Series Book 1) Gravity: An Introduction to Einstein's General Relativity Beyond Einstein's Unified Field: Gravity & Electro-Magnetism Redefined Einstein Gravity in a Nutshell How Einstein gives Dirac, Klein-Gordon and SchrÃ¶dinger: Deriving the SchrÃ¶dinger, Dirac and Klein-Gordon Equations from the Einstein-Field-Equations via an Intelligent Zero Einstein's Cosmos: How Albert Einstein's Vision Transformed Our Understanding of Space and Time: Great Discoveries Frank Einstein and the Electro-Finger (Frank Einstein series #2): Book Two Frank Einstein and the EvoBlaster Belt (Frank Einstein series #4): Book Four Frank Einstein and the BrainTurbo (Frank Einstein series #3): Book Three Frank Einstein and the Antimatter Motor (Frank Einstein series #1): Book One The Road to Relativity: The History and Meaning of Einstein's "The Foundation of General Relativity", Featuring the Original Manuscript of Einstein's Masterpiece Einstein: A Life of Genius (The True Story of Albert Einstein) (Historical Biographies of Famous People) Â¿Quien fue Albert Einstein? / Who Was Albert Einstein? (Spanish Edition) (Quien Fue? / Who Was?) Gravity: How the Weakest Force in the Universe Shaped Our Lives