

Ac Dc The Savage Tale Of The First Standards War

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Calculus. For some of us, the word conjures up memories of ten-pound textbooks and visions of tedious abstract equations. And yet, in reality, calculus is fun and accessible, and surrounds us everywhere we go. In *Everyday Calculus*, Oscar Fernandez demonstrates that calculus can be used to explore practically any aspect of our lives, including the most effective number of hours to sleep and the fastest route to get to work. He also shows that calculus can be both useful—determining which seat at the theater leads to the best viewing experience, for instance—and fascinating—exploring topics such as time travel and the age of the universe. Throughout, Fernandez presents straightforward concepts, and no prior mathematical knowledge is required. For advanced math fans, the mathematical derivations are included in the appendixes. The book features a new preface that alerts readers to new interactive online content, including demonstrations linked to specific figures in the book as well as an online supplement. Whether you're new to mathematics or already a curious math enthusiast, *Everyday Calculus* will convince even die-hard skeptics to view this area of math in a whole new way.

A generic DC grid model that is compatible with the standard AC system stability model is presented and used to analyse the interaction between the DC grid and the host AC systems. A multi-terminal DC (MTDC) grid interconnecting multiple AC systems and offshore energy sources (e.g. wind farms) across the nations and continents would allow effective sharing of intermittent renewable resources and open market operation for secure and cost-effective supply of electricity. However, such DC grids are unprecedented with no operational experience. Despite lots of discussions and specific visions for setting up such MTDC grids particularly in Europe, none has yet been realized in practice due to two major technical barriers: Lack of proper understanding about the interaction between a MTDC grid and the surrounding AC systems. Commercial unavailability of efficient DC side fault current interruption technology for conventional voltage sourced converter systems This book addresses the first issue in details by presenting a comprehensive modeling, analysis and control design framework. Possible methodologies for autonomous power sharing and exchange of frequency support across a MTDC grid and their impact on overall stability is covered. An overview of the state-of-the-art, challenges and on-going research and development initiatives for DC side fault current interruption is also presented.

Presenting an integrated and holistic perspective on innovation management and product design and development, this monograph offers a unique and original understanding of how these two perspectives are interconnected. This book explores these themes in a scientifically rigorous manner, associating academic findings with examples from business. It provides readers with the conceptual and decision-making tools required to understand and manage the process of innovation at different levels, from the analysis of industry-wide phenomena to the formulation of a strategy and from the planning of operations to the management of technical choices. Chapters cover innovation as an economic and social phenomenon, the formulation of

innovation strategy, the management of product development processes and projects and the technical design of products and services. Offering an invaluable resource to postgraduate students in economics, business and engineering, this book is also intended for managers and entrepreneurs.

AC/DC tells the little-known story of how Thomas Edison wrongly bet in the fierce war between supporters of alternating current and direct current. The savagery of this electrical battle can hardly be imagined today. The showdown between AC and DC began as a rather straightforward conflict between technical standards, a battle of competing methods to deliver essentially the same product, electricity. But the skirmish soon metastasized into something bigger and darker. In the AC/DC battle, the worst aspects of human nature somehow got caught up in the wires; a silent, deadly flow of arrogance, vanity, and cruelty. Following the path of least resistance, the war of currents soon settled around that most primal of human emotions: fear. AC/DC serves as an object lesson in bad business strategy and poor decision making. Edison's inability to see his mistake was a key factor in his loss of control over the "operating system" for his future inventions—not to mention the company he founded, General Electric.

This volume contains special contributions presented at the 5th International Conference on Energy and Sustainability, held by the Wessex Institute of Technology. It is a companion to the Volume containing most of the contributions (Vol. 186 of WIT Transactions on Ecology and the Environment) and comprises papers presented orally during the Conference. The modern world is highly dependent on the exploitation of fossil fuels. More recently, resources depletion and severe environmental effects deriving from the continuous use of these fuels has resulted in an increasing amount of interest in renewable energy resources and the search for sustainable energy policies. The changes required to progress from an economy mainly based on hydrocarbons to one taking advantage of sustainable energy resources are massive and require considerable scientific research as well as engineering systems. The effect also involves collaboration between different disciplines in order to arrive at optimum solutions, including buildings, energy networks, convenience systems, new energy storage solutions, waste to energy technologies, and many others. This book, along with its companion volume, covers topics related to sustainability in energy and power production, storage, distribution and management. These include: Energy Policies; Renewable Energy Resources; Sustainable Energy Production; Environmental Risk Management; Green Buildings; Energy Storage; Biofuels; Processing of Oil and Gas; Drilling and Well Design; CO2 Capture and Management; Pipelines; Energy Efficiency; Energy from Waste; Energy and Transportation.

More than ever before, radiation is a part of our modern daily lives. We own radiation-emitting phones, regularly get diagnostic x-rays, such as mammograms, and submit to full-body security scans at airports. We worry and debate about the proliferation of nuclear weapons and the safety of nuclear power plants. But how much do we really know about radiation? And what are its actual dangers? An accessible blend of narrative history and science, *Strange Glow* describes mankind's extraordinary, thorny relationship with radiation, including the hard-won lessons of how radiation helps and harms our health. Timothy Jorgensen explores how our knowledge of and experiences with radiation in the last century can lead us to smarter personal decisions about radiation exposures today. Jorgensen introduces key figures in the story of radiation—from Wilhelm Roentgen, the discoverer of x-

rays, and pioneering radioactivity researchers Marie and Pierre Curie, to Thomas Edison and the victims of the recent Fukushima Daiichi nuclear power plant accident. Tracing the most important events in the evolution of radiation, Jorgensen explains exactly what radiation is, how it produces certain health consequences, and how we can protect ourselves from harm. He also considers a range of practical scenarios such as the risks of radon in our basements, radiation levels in the fish we eat, questions about cell-phone use, and radiation's link to cancer. Jorgensen empowers us to make informed choices while offering a clearer understanding of broader societal issues. Investigating radiation's benefits and risks, *Strange Glow* takes a remarkable look at how, for better or worse, radiation has transformed our society.

Dishonesty is ubiquitous in our world. The news is frequently filled with high-profile cases of corporate fraud, large-scale corruption, lying politicians, and the hypocrisy of public figures. On a smaller scale, ordinary people often cheat, lie, misreport their taxes, and mislead others in their daily life. Despite such prevalence of cheating, corruption, and concealment, people typically consider themselves to be honest, and often believe themselves to be more moral than most others. This book aims to resolve this paradox by addressing the question of why people are dishonest all too often. What motivates dishonesty, and how are people able to perceive themselves as moral despite their dishonest behaviour? What personality and interpersonal factors make dishonesty more likely? And what can be done to recognize and reduce dishonesty? This is a fascinating overview of state-of-the-art research on dishonesty, with prominent scholars offering their views to clarify the roots of dishonesty.

It's an astonishing fact that capturing all the energy in just one hour's worth of sunlight would enable us to meet the planet's food and energy needs for an entire year. *Project Sunshine* tells the story of how scientists are working to reconnect us to the 'solar economy', harnessing the power of the sun to provide sustainable food and energy for a global population of 10 billion people: an achievement that would end our dependence on 'fossilised sunshine' in the form of coal, oil and gas and remake our connection with the soil that grows our food. Steve McKeivitt and Tony Ryan describe the human race's complex relationship with the sun and take us back through history to see how our world became the place it is today – chemically, geologically, ecologically, climatically and economically – before moving on to the cutting-edge science and technology that will enable us to live happily in a sustainable future.

In 1903, on Coney Island, an elephant named Topsy was electrocuted, and over the past century, this bizarre, ghoulish execution has reverberated through popular culture with the whiff of urban legend. But it really happened, and many historical forces conspired to bring Topsy, Thomas Edison, and those 6600 volts of alternating current together that day. Tracing them all in *Topsy The Startling Story of the Crooked Tailed Elephant*, P.T. Barnum, and the American Wizard, Thomas Edison, journalist Michael Daly weaves together a fascinating popular history, the first book on this astonishing tale. At the turn of the century, the circus in America was at its apex with the circuses of P.T. Barnum and Adam Forepaugh (or 4-Paw) competing in a War of the Elephants, with declarations of whose pachyderms were younger, bigger, or more "sacred". This brought Topsy to America, fraudulently billed as the first native-born, and caught between the circus disputes and the War of the Currents, in which Edison and George Westinghouse (and Nikola Tesla) battled over alternating versus direct current. Rich in period Americana, and full of circus tidbits and larger than life characters—both human and elephant—Topsy is a touching tale and an

entertaining read.

Using the same engrossing anecdotal format that has proved so popular in *Profiles in Audacity*, Alan Axelrod now turns to the dark side of audacious decision-making: those choices that, in retrospect, were shockingly wrongheaded. Although Axelrod investigates some dumb decisions by stupid people and some evil decisions by evil people, the overwhelming majority of these decisions were made by good, smart people whose poor judgment produced disastrous, often irreversible results. The 35 compelling and often poignant stories, which range from ancient times to today, include: The Trojan Horse; the Children's Crusade; the sailing of the Titanic, and the false belief that it just couldn't sink; Edward Bernays's 1929 campaign to recruit women smokers; Neville Chamberlain's appeasement of the Nazis; Ken Lay's deception with Enron; and even the choice to create a "New Coke" and fix what wasn't broke. As with *Profiles in Audacity*, the deftly drawn vignettes will pique interest, satisfy curiosity, give pleasure, and present valuable lessons. And in addition to offering the same insightful analysis of the decision-making process, *Folly* also includes objective post-mortems that explain what went wrong and why. These are cautionary tales—albeit with exquisite twists ranging from acerbic to horrific.

Supporting Students for Success in Online and Distance Learning, Third Edition, provides a comprehensive overview of student support both on and off campus. While online and distance learning are the world's fastest growing areas of educational development, they have a fundamental weakness—their graduation rates, which can be lower than 20 percent. In this powerful new edition, Ormond Simpson builds on a rich history of research in distance and e-learning to show how retention rates can be improved through tested support methods, often at a net financial profit to the institutions involved. By comparing the evidence as well as the cost-effectiveness of various support tactics, this book describes how to promote student success and encourage skill-development from a number of different perspectives: definitions and purpose, theory and psychology, ethics, costs and benefits, activities, sources, media, proactive and reactive, assessment and feedback, staff development, writing support into course materials, research, quality assurance and institutional structures. This concise, practical guide is informal and jargon-free, yet its approach to evidence is rigorous, making it invaluable reading for all those interested in recruiting and teaching diverse students for successful online and distance learning.

Academics and policymakers frequently discuss global governance but they treat governance as a structure or process, rarely considering who actually does the governing. This volume focuses on the agents of global governance: 'global governors'. The global policy arena is filled with a wide variety of actors such as international organizations, corporations, professional associations, and advocacy groups, all seeking to 'govern' activity surrounding their issues of concern. *Who Governs the Globe?* lays out a theoretical framework for understanding and investigating governors in world politics. It then applies this framework to various governors and policy arenas, including arms control, human rights, economic development, and global education. Edited by three of the world's leading international relations scholars, this is an important contribution that will be useful for courses, as well as for researchers in international studies and international organizations.

In the offered book the fundamentals of electromagnetic fields and waves are discussed based on the great Maxwell equations. The book is conceived as a textbook for serious technical and classical universities in the considered themes. Nevertheless, it can be used, of course, as the reference book for wide group of engineers, researches and practical experts. Material of this book is divided into four main parts connected between them. The first part (Fundamental of Electrodynamics) is devoted to explanation of Maxwell equations and methods of its solutions. Besides classical interpretation the generalized equations are discussed, which take into consideration the scalar magnetic fields. New approaches allow description of so-called longitudinal electromagnetic waves, which have the absolutely non-standard propagation

properties, and permit to explain various electrodynamic paradoxes, which cannot be explained in another way. The main characteristics of wave processes in the free space and in transmission lines (feeders) are described. The second part (Radio Wave Propagation) investigates the obvious patterns of diffraction and interference phenomena at radio wave propagation for the obstacle presence in the propagation track, which is typical for all practical situations. Radio wave propagation of various frequency ranges is fulfilled separately taking into consideration the specific features of reflections from the atmosphere parts, attenuation in different media, types of propagating waves, multipath effects, diffraction and non-standard conditions of obstacle overcoming including non-usual ways of atmosphere ducts. The third part is devoted to description of various types and antennas, beginning from simplest (vibrators) and ending by complicated adaptive antenna arrays. Description is fulfilled on the reviewing level with many obvious figures, not to rely on strict mathematical methods, but rather on the concept level. Fourth part includes description of UHF devices, which are the elements' base of UHF devices including surface and bulk integrated UHF circuits. These results have in many aspects the pioneer character and they are not widely known to experts. Distinctive feature of the offered book is sufficiently simplifies description of the very complicated electrodynamic problems available for the modern students and for young engineers. Of course, it is impossible to deal without mathematics in these areas but required mathematics can be replaced by the many patterns, which give the chance to understand problems and to determine the complex questions. Sample Chapter(s) Chapter1: GENERAL DEFINITIONS AND RELATIONS OF ELECTRODYNAMICS (498 KB) Contents: FRONT MATTER CHAPTER 1. GENERAL DEFINITIONS AND RELATIONS OF ELECTRODYNAMICS CHAPTER 2. ELECTROMAGNETIC FIELDS AND WAVES CHAPTER 3. MAIN PHYSICAL PHENOMENA AT RADIO WAVES PROPAGATION CHAPTER 4. PROPAGATION OF RADIO WAVES OF DIFFERENT RANGES AND ITS APPLICATION AREAS CHAPTER 5. PRINCIPAL CHARACTERISTICS OF ANTENNAS CHAPTER 6. ANTENNAS OF DECIMILLIMETER, MILLIMETER AND CENTIMETER WAVES CHAPTER 7. ANTENNAS OF DECIMETER, METER AND DECAMETER WAVES CHAPTER 8. ANTENNAS OF HECTOMETER, KILOMETER MYRIAMETER WAVES CHAPTER 9. ANTENNAS FOR TV, RADIO RELAY AND SPACE COMMUNICATION LINES CHAPTER 10. ELECTROMAGNETIC COMPATIBILITY OF RADIO ENGINEERING SYSTEMS. ANTENNAS AND THE PROBLEM OF ITS MINIATURIZATION CHAPTER 11. MAIN COMPONENTS OF THE ELEMENT BASE OF ANTENNA-FEEDER ENGINEERING CHAPTER 12. BASE ELEMENTS AND FUNCTIONAL UNITS OF ANTENNA-FEEDER ENGINEERING BACK MATTER Readership: The book is conceived as a textbook for serious technical and classical universities in the considered themes.

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The Industrial Revolution for Kids introduces young readers to the Industrial Revolution in a "revolutionary" way: through the usual people, places, and inventions of the time: the incredibly wealthy Rockefellers and Carnegies, dirty and dangerous factories, new forms of transportation and communication, but also through the eyes of everyday workers, kids, sports figures, and social activists whose names never appeared in history books. Readers learn about new machines that impacted American life—through the people who invented them and the people who built and operated them—and new forms of transportation that revolutionized society—through the people who designed them as well as the people who built and used them. Hannah Montague, who revolutionized the clothing industry with her highly popular detachable collars and cuffs, and Clementine Lamadrid, who either helped save starving New Yorkers or scammed the public into contributing to her One-Cent Coffee Stands, help tell the human stories of the Industrial Revolution. Twenty-one engaging and fun crosscurricular activities bring the times and technologies to life. Kids will make an assembly line sandwich, analyze the interchangeable parts of a common household fixture, weave a placemat, tell a story through photographs, and much more. Resources include books to read,

In the receiving line, holding a gun concealed by a handkerchief, was Leon Czolgosz, a young man with anarchist leanings. When he reached McKinley, Czolgosz fired two shots, one of which would prove fatal. The backdrop of the assassination was among the largest of many world's fairs held in the late 19th and early 20th centuries. The Exposition celebrated American progress, highlighting the new technology electricity. Over 100,000 light bulbs outlined the Exposition's building—on display inside were the latest inventions utilizing the new power source. This new treatment of the McKinley assassination is the first to focus on the compelling story of the Exposition: its labor and construction challenges; the garish Midway; the fight for inclusion of an accurate African-American display to offset racist elements of the Midway; and the impressive exhibit halls.

If you've ever wondered whether you have what it takes to be the ultimate human-machine hero, then this book is for you.

Three broad sectors of the economy are generally recognized as key to a low carbon future: energy, construction and transportation. Of these, carbon management in the built environment remains the least well-studied. This much-needed book brings together the latest developments in the field of climate change science, building design, materials science, energy and policy in a form readily accessible to both students of the built environment and practitioners. Although several books exist in the broad area of carbon management, this is the first to bring together carbon management technology, technique and policy as they apply to the building sector. Clear and succinct sections on the overarching principles, policies, approaches and technologies are combined with case studies and more in-depth coverage of the most relevant topics. It explains how to produce a simple carbon footprint calculation, while also being an informative guide for those developing or implementing more advanced approaches. This easy to read book is the ideal primer for anyone needing to get to grips with carbon management in the built environment.

In *Philosophizing Rock Performance: Dylan, Hendrix, Bowie*, Wade Hollingshaus capitalizes on this notion by embracing a set of historiographical logics that re-imagine these three artists. Noting how Dylan, Hendrix, and Bowie first established their reputations amid the anti-establishment sentiments that emerged in Western counties during the 1960s and early 1970s, he connects them with the concurrent formative phase of Continental philosophy in the work of Giorgio Agamben, Jean-François Lyotard, Michel de Certeau, Jacques Rancière, Guy Debord, and Michel Foucault. In *Philosophizing Rock Performance*, Hollingshaus draws on the work of these latter Continental thinkers to explore how we might otherwise think about Dylan, Hendrix, and Bowie.

New technologies may be heralded as life-changing innovations or feared as risks to moral values, human health, and environmental safety. Anxieties surrounding technology are often heightened by perceptions that their benefits will accrue to small sections of society while the risks are more widely distributed. *Innovation and Its Enemies* identifies the tension between the need for innovation and the pressure to maintain continuity, social order and stability as one of today's biggest policy challenges.

"It might be the best book on animals I've ever read. It's also the only one that's made me laugh out loud." —Helen Macdonald, *The New York Times Book Review* Beginning with Yuka, a 39,000-year-old mummified woolly mammoth recently found in the Siberian permafrost, each of the sixteen essays in *Animals Strike Curious Poses* investigates a different famous animal named and immortalized by humans. Modeled loosely after a medieval bestiary, these witty, playful, whip-smart essays, from a winner of

