



changes/slightly damaged spine.

For this set of lectures we assumed that the reader has a reasonable background in physics and some knowledge of general relativity, the modern theory of gravity in macrophysics, and cosmology. Computer methods are presented by leading experts in the three main domains: in numerics, in computer algebra, and in visualization. The idea was that each of these subdisciplines is introduced by an extended set of main lectures and that each is conceived as being of comparable importance. Therefore we believe that the book represents a good introduction into scientific computing for any student who wants to specialize in relativity, gravitation, and/or astrophysics. We took great care to select lecturers who teach in a comprehensible way and who are, at the same time, at the research front of their respective field. In numerics we had the privilege of having a lecturer from the National Center for Supercomputing Applications (NCSA, Champaign, IL, USA) and some from other leading institutions of the world; visualization was taught by a visualization expert from Boeing; and in computer algebra we took recourse to practitioners of different computer algebra systems as applied to classical general relativity up to quantum gravity and differential geometry.

This complete textbook provides detailed content on the theory of operation, diagnosis, repair, and rebuilding of automotive engines. In addition to essential technical expertise, the text helps users develop the skills and knowledge they need for professional success, including critical thinking and awareness of key industry trends and practices. The text emphasizes universal repair techniques and case histories based on real-world scenarios to prepare users for careers in the field. Instructor resources include lesson plans, customizable lab sheets that address NATEF Standards, a customizable test bank with questions based on chapter content, presentations in PowerPoint, and more. Now updated with new, full-color images and information on the latest trends, tools, and technology—including hybrid engines and high-performance components—AUTOMOTIVE ENGINES: DIAGNOSIS, REPAIR, REBUILDING, Seventh Edition, is the ideal resource for automotive programs who want a complete teaching package for their Engines course. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Perceptive text examines shortest paths, network flows, bipartite and nonbipartite matching, matroids and the greedy algorithm, matroid intersections, and the matroid parity problems. Suitable for courses in combinatorial computing and concrete computational complexity. Timely and engaging, AN INTRODUCTION TO THE PHYSICS OF NUCLEI AND PARTICLES focuses on one of the most exciting areas of physics. Author Richard Dunlap has taught this course for the last ten years—during the last two of which he used this text successfully in his own classroom. The author designed this text to provide flexibility and freedom for instructors teaching a one-semester course by including a wealth of problems as well as approximately 20% more material than is necessary for the average 14-week course. In order to ensure that the book is up-to-date and interesting for the students, the author has included recent research results whenever possible and has presented data from ongoing experiments. This is particularly relevant for fields in which there is considerable current research activity, such as neutrino masses and oscillations, quark masses and controlled fusion.

According to many, the readiness of America's forces deteriorated in the 1990s. In the Air Force, the combat readiness of its fighter aircraft has declined. One of its indicators of combat readiness, the mission capable rate, is used to identify the percentage of aircraft unable to perform their missions. From FY94-FY98, the aggregate total not mission capable rate for maintenance steadily increased from 14% to 18.2% while total not mission capable rate for supply increased from 5.5% to 17.5% between FY86 and FY00. The USAF uses the funding/Availability Multi-Method Allocator for Spares model to forecast these rates for its aircraft. While FAMMAS does an excellent job of predicting mission capable rates using finding data and other factors, it does not explain the key drivers influencing mission capable rates, limiting its effectiveness. Studies have identified other variables, manning/(experience levels, retention, fix rates, OPSTEMPO, spare parts issues, and aircraft systems reliability and maintainability as influencing mission capable rates. The research used these and other variables, using the F-16 as an example, to develop regression models that provide more insightful forecasts. Results are obtained from analyzing 600+ variables and 10 years of data, from the REMIS, D041, PDS, and HAF MDS systems.

Motor Business EuropeThe Japan Shipbuilding Information NotesGeneral Specifications for Machinery for Vessels of the United States Navy ...Pocket Kenkyusha Japanese DictionaryOxford University Press, USA

This vintage book contains Alexander D'Agapeyeff's famous 1939 work, ?Codes and Ciphers - A History of Cryptography?. Cryptography is the employment of codes and ciphers to protect secrets, and it has a long and interesting history. This fantastic volume offers a detailed history of cryptography from ancient times to modernity, written by the Russian-born English cryptographer, Alexander D'Agapeyeff. Contents include: ?The beginnings of Cryptography?, ?From the Middle Ages Onwards?, ?Signals, Signs, and Secret Languages?, ?Commercial Codes?, ?Military Codes and Ciphers?, ?Types of Codes and Ciphers?, ?Methods of Deciphering?, etcetera. Many antiquarian texts such as this, especially those dating back to the 1900s and before, are increasingly hard to come by and expensive, and it is with this in mind that we are republishing this book now in an affordable, modern, high quality edition. It comes complete with a specially commissioned new biography of the author.

This book contains chapters on nanocomposites for engineering hard materials for high performance aircraft, rocket and automobile use, using laser pulses to form metal coatings on glass and quartz, and also tungsten carbide-cobalt nanoparticles using high voltage discharges. A major section of this book is largely devoted to chapters outlining and applying analytic methods needed for studies of nanocomposites. As such, this book will serve as good resource for such analytic methods.

Ultimate guide to the discoveries that changed the world From the discovery of the wheel to the worldwide web our thirst for innovation is what makes us human. Science Year by Year takes a fascinating look at our heritage of invention and explores how science has shaped the past and how it may shape the future. Science Year by Year has a new discovery for everyone in the family, with global coverage of all major scientific advances. Groundbreaking thinkers such as Marie Curie, Albert Einstein and Charles Darwin are covered, with their discoveries clearly explained and situated in scientific history with illustrated timelines. Revolutionary innovations such as measuring time, gears and plastics are detailed alongside scientific artefacts such as navigation tools and flying machines. Science Year by Year is perfect for anyone interested in invention and innovation with exciting discoveries to be made by all.

As Vincent De Marcos watches a barge carry off a supersonic airliner to a museum in November 2003, he can't help but think: The old boat still has a place in the world, but the Concorde apparently does not. For the first time in the history of transportation, distances have become longer, and it feels like a funeral—only they are burying the future instead of a person. No one seems to care, but sixteen years later Vincent still can't help thinking about what the world has lost. To him, we still live in the past, and smartphones and tablets, as amazing as they are, will never change that. He struggles

