Siemens Gigaset Al140 User Guide

This book focuses on the latest emerging technologies in electric vehicles (EV), and their economic and environmental impact. The topics covered include different types of EV such as hybrid electrical vehicle (HEV), battery electrical vehicle (BEV), fuel cell electrical vehicle (FCEV), plug-in hybrid electrical vehicle (PHEV). Theoretical background and practical examples of conventional electrical machines, advanced electrical machines, battery energy sources, on-board charging and off-board charging techniques, and optimization methods are presented here. This book can be useful for students, researchers and practitioners interested in different problems and challenges associated with electric vehicles.
The book presents a broad overview of emerging smart grid technologies and communication systems, offering a helpful guide for future research in the field of electrical engineering and communication engineering. It explores recent advances in several computing technologies and their performance evaluation, and addresses a wide range of topics, such as the essentials of smart grids for fifth generation (5G) communication systems. It also elaborates the role of emerging communication systems such as 5G, internet of things (IoT), IEEE 802.15.4 and cognitive radio networks in smart grids. The book includes detailed surveys and case studies on current trends in smart grid systems and communications for smart metering and monitoring, smart grid energy storage systems, modulations and waveforms for 5G networks. As such, it will be of interest to practitioners and researchers in the field of smart grid and communication infrastructures alike.
This book presents a comprehensive treatment of both functional and decorative textiles used in the automotive industry including seat covers, headliners, airbags, seat belts and tyres. Written in a clear, concise style it explains material properties and the way in which they influence manufacturing processes as well as providing practical production details. The subject treatment cuts across the disciplines of textile chemistry, fabric and plastics technology and production engineering. Environmental effects and recycling are also covered. It is aimed at the design and process engineer in industry as well as researchers in universities and colleges. Quality engineers will also benefit from the book's sections on identifying problems and material limitations.
This atlas presents technical information for professionals who process and use temperate or tropical timber. It combines the main technical characteristics of 283 tropical species and 17 species from temperate regions most commonly used in Europe with their primary uses.
Gain a thorough understanding of the dynamics of today's mobile telecommunications standards with this unique new resource. The book examines the development and adoption trajectories of major European standards, such as UMTS, GSM, ERMES, and TETRA. It presents a framework that analyzes the factors that influenced each standard's level of success, and includes the most-comprehensive case studies on these standards.
This volume provides stepwise instructions for the analysis of numerous clinically important analytes by mass spectrometry. Mass spectrometry offers clinical laboratory scientists a number of advantages including increased sensitivity and specificity, multiple component analysis, and no need for specialized reagents. The techniques described are a must for the measurement of many clinically relevant analytes in the fields of drug analysis, endocrinology, and inborn errors of metabolism. Each chapter provides a brief introduction about a specified analyte, followed by detailed instructions on the analytical protocol. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Cutting edge and practical, Clinical Applications of Mass Spectrometry in Biomolecular Analysis: Methods and Protocols is a great resource for clinical laboratory scientists who are already using or thinking of bringing mass spectrometry to their laboratories.
U.S. Army In World War II, The Technical Services.
Presents the fundamentals and applications of nanofibrous materials and their structures to graduate students and researchers in materials science.
With Tony Buzan's help, you need never be lost for words ever again! This book shows you how to harness the power of your verbal intelligence and become brilliant with words - reading, speaking, remembering and understanding them - improving your social life and your career into the bargin! This book includes Buzan's revolutionary techniques for improving recall and understanding shows you how to - Increase your vocabulary, your creativity and memory; Use mind-maps to develop your word power; Speed-read and improve your comprehension; Become a successful conversationalist and speak.
The improved survival of very preterm and very low birth weight infants in recent decades has been associated with an increase in the prevalence of physical and neurodevelopmental problems. Attention is increasingly being focused on the quality of life of survivors, who are at greater risk of brain damage and consequent neurological disorders, and neuropsychological and behavioural impairments. In this volume, leading experts present a comprehensive and up-to-date perspective on research in various aspects of the long-term consequences of very preterm birth. As well as extending existing knowledge of the neurodevelopmental sequelae following very preterm birth, a shared aim of this burgeoning body of research is to identify the mechanisms underlying variations in outcome, and thus recognise subgroups of children who are at increased risk of neurodevelopmental problems, for whom appropriate intervention strategies can be devised. Pediatricians, neurologists, psychiatrists and psychologists will all find this to be essential reading.
These volumes bring together, from all over the world, papers from specialists working in all the diverse forms of energy derived from the sun. Experts in all fields of research in solar and renewable energy have also contributed an added feature: the latest research and developments in related areas such as wind energy, biomass, photovoltaics and energy conversion. Emphasis is placed on the many solutions solar and renewable energy offers to the global energy problem, and the different ways of combining solar and renewable energy to solve these problems. The work should stimulate readers to consider the broader horizons of renewable energy, energy conservation and the impact of new technologies on society...from the small remote village to the modern metropolis.

The first comprehensive history of the Information Age... how we got there and where we are going The exchange of information is essential for both the organization of nature and the social life of mankind. Until recently, communication between people was more or less limited by geographic proximity. Today, thanks to ongoing innovations in telecommunications, we live in an Information Age where distance has ceased to be an obstacle to the sharing of ideas. The Worldwide History of Telecommunications is the first comprehensive history ever written on the subject, covering every aspect of telecommunications from a global perspective. In clear, easy-to-understand language, the author presents telecommunications as a uniquely human achievement, dependent on the contributions of many ingenious inventors, discoverers, physicists, and engineers over a period spanning more than two centuries. From the crude signaling methods employed in antiquity all the way to today's digital era, The Worldwide History of Telecommunications features complete and fascinating coverage of the groundbreaking innovations that have served to make telecommunications the largest industry on earth, including: Optical telegraphy Electrical telegraphy via wires and cables Telephony and telephone switching Radio transmission technologies Cryptography Coaxial and optical fiber networks Telex and telefax Multimedia applications Broad in scope, yet clear and logical in its presentation, this groundbreaking book will serve as an invaluable resource for anyone involved or merely curious about the ever evolving field of telecommunications. AAP-PSP 2003 Award Winner for excellence in the discipline of the "History of Science"

This book provides an in-depth description of event-based systems, covering topics ranging from local event matching and distributed event forwarding algorithms, through a practical discussion of software engineering issues raised by the event-based style, to state-of-the-art research in event-based systems like composite event detection and security. The authors offer a comprehensive overview, and show the power of event-based architectures in modern system design, encouraging professionals to exploit this technique in next generation large-scale distributed applications like information dissemination, network monitoring, enterprise application integration, or mobile systems.

It is the wedding the world thought would never happen - two of Greece's oldest feuding families to finally unite. But the marriage is not as it seems. Alesia has been bought by Sebastian. Now all he wants is a child to bind the feuding families. Little does he know that is somthing Alesia would never give him.

Intensity modulated radiation therapy (IMRT) has become standard of care for most cancer sites that are managed by radiation therapy. This book documents the evolution of this technology over 35 years to the current level of volumetric arc modulated therapy (VMAT). It covers every aspect of this radiation treatment technology, including the fundamentals of IMRT/VMAT, basic principles and advanced processes for implementation. The physics of IMRT is followed by the clinical application in major disease sites such as central nervous system, head and neck, breast, lung, prostate and cervix. It also provides updated references on each component of IMRT/VMAT. This book is written by leading experts in the field with extensive clinical experience in the practice and implementation of this technology. Key Features ?Provides comprehensive coverage of IMRT for radiation therapy students, dosimetrists, physicists, medical residents and radiation professionals Includes up-to-date descriptions of current instrumentation and practises Diagrams and images are included throughout to illustrate fundamental concepts and aid understanding Provides extensive references for further reading

This book covers modern analog components, their characteristics, and interactions with process parameters. It serves as a comprehensive guide, addressing both the theoretical and practical aspects of modern silicon devices and the relationship between their electrical properties and processing conditions. Based on the authors' extensive experience in the development of analog devices, this book is intended for engineers and scientists in semiconductor research, development and manufacturing. The problems at the end of each chapter and the numerous charts, figures and tables also make it appropriate for use as a text in graduate and advanced undergraduate courses in electrical engineering and materials science. Enables engineers to understand analog device physics, and discusses important relations between process integration, device design, component characteristics, and reliability; Describes in step-by-step fashion the components that are used in analog designs, the particular characteristics of analog components, while comparing them to digital applications; Explains the second-order effects in analog devices, and trade-offs between these effects when designing components and developing an integrated process for their manufacturing.

This unique and up-to-date work surveys the use of mechatronics in rail vehicles, notably traction, braking, communications, data sharing, and control. The results include improved safety, comfort, and fuel efficiency. Mechatronic systems are a key element in modern rail vehicle design and operation. Starting with an overview of mechatronic theory, the book goes on to cover topics including modeling of mechanical and electrical systems for rail vehicles, open and closed loop control systems, sensors, actuators and microprocessors. Modern simulation techniques and examples are included throughout, and numerical experiments and developed models for railway application are presented and explained. Case studies are used, alongside practical examples, to ensure that the reader can apply mechatronic theory to real world conditions. These case studies include modeling of a hybrid locomotive and simplified models of railway vehicle lateral dynamics for suspension control studies. Rail Vehicle Mechatronics provides current and in-depth content for design engineers, operations managers, systems engineers and technical consultants world-wide, working with freight, passenger, and urban transit railway systems.

Advances in forensic odontology have led to improvements in dental identification for individual cases as well as in disaster victim identification (DVI). New and updated technologies mean advances in bitemark analysis and age estimation. Growth in the field has strengthened missing persons' networks leading to more and faster identifications of unidentified individuals. A product of the American Society of Forensic Odontology, the Manual of Forensic Odontology, Fifth Edition provides comprehensive and up-to-date information involving all facets of forensic dentistry and explores critical issues relating to the scientific principles supporting the field's evaluations and conclusions. New information in the Fifth Edition includes Scientific principles and the need for more and better research in the field Oral and maxillofacial radiographic features of forensic interest Forensic pathology and its ties to forensic odontology New techniques and

improved technologies for age estimation Advances in bitemark evidence management Animal bitemarks National and international forensic dental organizations Tips for becoming involved in forensic odontology The manual has been an important source of forensic dentistry information for more than 20 years. This new edition is edited by a past president of the American Board of Forensic Odontology and a past Chair of the Odontology Section of the American Academy of Forensic Sciences. Expanded and enhanced with extensive color illustrations, this volume is designed to provide essential information based on sound scientific principles for experienced forensic odontologists and for those new to the discipline.

This book presents the latest developments in packaging for high-frequency electronics. It is a companion volume to “RF and Microwave Microelectronics Packaging” (2010) and covers the latest developments in thermal management, electrical/RF/thermal-mechanical designs and simulations, packaging and processing methods, and other RF and microwave packaging topics. Chapters provide detailed coverage of phased arrays, T/R modules, 3D transitions, high thermal conductivity materials, carbon nanotubes and graphene advanced materials, and chip size packaging for RF MEMS. It appeals to practicing engineers in the electronic packaging and high-frequency electronics domain, and to academic researchers interested in understanding the leading issues in the commercial sector. It is also a good reference and self-studying guide for students seeking future employment in consumer electronics.

ISOEN addresses research in the fields of gas sensors and artificial olfactory systems. In this edition we broadened the participation spectrum to all kinds of analytical instrumentation for odor measurement and to biological olfaction. We also had a strong involvement in industry. The audience comprises materials scientists, chemists, physicists, engineers, biologists, computer scientists, and application specialists (e.g. food, medical, environmental, security).

The vast amount of data available on the web has led to the need for effective retrieval techniques to transform that data into usable machine knowledge. But the creation of integrated knowledge, especially knowledge about the same entity from different web data sources, is a challenging task requiring the solving of interoperability problems. This book addresses the problem of knowledge retrieval and integration from heterogeneous web sources, and proposes a holistic semantic knowledge retrieval and integration approach to creating knowledge graphs on-demand from diverse web sources. Semantic Web Technologies have evolved as a novel approach to tackle the problem of knowledge integration from heterogeneous data, but because of the Extraction-Transformation-Load approach that dominates the process, knowledge retrieval and integration from web data sources is either expensive, or full physical integration of the data is impeded by restricted access. Focusing on the representation of data from web sources as pieces of knowledge belonging to the same entity which can then be synthesized as a knowledge graph helps to solve interoperability conflicts and allow for a more cost-effective integration approach, providing a method that enables the creation of valuable insights from heterogeneous web data. Empirical evaluations to assess the effectiveness of this holistic approach provide evidence that the methodology and techniques proposed in this book help to effectively integrate the disparate knowledge spread over heterogeneous web data sources, and the book also demonstrates how three domain applications of law enforcement, job market analysis, and manufacturing, have been developed and managed using the approach.

This is a meticulously detailed chronological record of significant events in the history of medical informatics and their impact on direct patient care and clinical research, offering a representative sampling of published contributions to the field. The History of Medical Informatics in the United States has been restructured within this new edition, reflecting the transformation medical informatics has undergone in the years since 1990. The systems that were once exclusively institutionally driven – hospital, multihospital, and outpatient information systems – are today joined by systems that are driven by clinical subspecialties, nursing, pathology, clinical laboratory, pharmacy, imaging, and more. At the core is the person – not the clinician, not the institution – whose health all these systems are designed to serve. A group of world-renowned authors have joined forces with Dr Marion Ball to bring Dr Collen’s incredible work to press. These recognized leaders in medical informatics, many of whom are recipients of the Morris F. Collen Award in Medical Informatics and were friends of or mentored by Dr Collen, carefully reviewed, editing and updating his draft chapters. This has resulted in the most thorough history of the subject imaginable, and also provides readers with a roadmap for the subject well into later in the century.

"Designing Software Product Lines with UML is well-written, informative, and addresses a very important topic. It is a valuable contribution to the literature in this area, and offers practical guidance for software architects and engineers." --Alan Brown Distinguished Engineer, Rational Software, IBM Software Group "Gomaa''s process and UML extensions allow development teams to focus on feature-oriented development and provide a basis for improving the level of reuse across multiple software development efforts. This book will be valuable to any software development professional who needs to manage across projects and wants to focus on creating software that is consistent, reusable, and modular in nature." --Jeffrey S Hammond Group Marketing Manager, Rational Software, IBM Software Group "This book brings together a good range of concepts for understanding software product lines and provides an organized method for developing product lines using object-oriented techniques with the UML. Once again, Hassan has done an excellent job in balancing the needs of both experienced and novice software engineers." --Robert G. Pettit IV, Ph.D. Adjunct Professor of Software Engineering, George Mason University "This breakthrough book provides a comprehensive step-by-step approach on how to develop software product lines, which is of great strategic benefit to industry. The development of software product lines enables significant reuse of software architectures. Practitioners will benefit from the well-defined PLUS process and rich case studies." --Hurley V. Blankenship II Program Manager, Justice and Public Safety, Science Applications International Corporation "The Product Line UML based Software engineering (PLUS) is leading edge. With the author''s wide experience and deep knowledge, PLUS is well harmonized with architectural and

design pattern technologies." --Michael Shin Assistant Professor, Texas Tech University Long a standard practice in traditional manufacturing, the concept of product lines is quickly earning recognition in the software industry. A software product line is a family of systems that shares a common set of core technical assets with preplanned extensions and variations to address the needs of specific customers or market segments. When skillfully implemented, a product line strategy can yield enormous gains in productivity, quality, and time-to-market. Studies indicate that if three or more systems with a degree of common functionality are to be developed, a product-line approach is significantly more cost-effective. To model and design families of systems, the analysis and design concepts for single product systems need to be extended to support product lines. Designing Software Product Lines with UML shows how to employ the latest version of the industry-standard Unified Modeling Language (UML 2.0) to reuse software requirements and architectures rather than starting the development of each new system from scratch. Through real-world case studies, the book illustrates the fundamental concepts and technologies used in the design and implementation of software product lines. This book describes a new UML-based software design method for product lines called PLUS (Product Line UML-based Software engineering). PLUS provides a set of concepts and techniques to extend UML-based design methods and processes for single systems in a new dimension to address software product lines. Using PLUS, the objective is to explicitly model the commonality and variability in a software product line. Hassan Gomaa explores how each of the UML modeling views--use case, static, state machine, and interaction modeling--can be extended to address software product families. He also discusses how software architectural patterns can be used to develop a reusable component-based architecture for a product line and how to express this architecture as a UML platform-independent model that can then be mapped to a platform-specific model. Key topics include: Software product line engineering process, which extends the Unified Development Software Process to address software product lines Use case modeling, including modeling the common and variable functionality of a product line Incorporating feature modeling into UML for modeling common, optional, and alternative product line features Static modeling, including modeling the boundary of the product line and information-intensive entity classes Dynamic modeling, including using interaction modeling to address use-case variability State machines for modeling state-dependent variability Modeling class variability using inheritance and parameterization Software architectural patterns for product lines Component-based distributed design using the new UML 2.0 capability for modeling components, connectors, ports, and provided and required interfaces Detailed case studies giving a step-by-step solution to real-world product line problems Designing Software Product Lines with UML is an invaluable resource for all designers and developers in this growing field. The information, technology, and case studies presented here show how to harness the promise of software product lines and the practicality of the UML to take software design, quality, and efficiency to the next level. An enhanced online index allows readers to quickly and easily search the entire text for specific topics.

Clinical conformal radiotherapy is the holy grail of radiation treatment and is now becoming a reality through the combined efforts of physical scientists and engineers, who have improved the physical basis of radiotherapy, and the interest and concern of imaginative radiotherapists and radiographers. Intensity-Modulated Radiation Therapy describes in detail the physics germane to the development of a particular form of clinical conformal radiotherapy called intensity modulated radiation therapy (IMRT). IMRT has become a topic of tremendous importance in recent years and is now being seriously investigated for its potential to improve the outcome of radiation therapy. The book collates the state-of-the-art literature together with the author's personal research experience and that of colleagues in the field to produce a text suitable for new research workers, Ph.D. students, and practicing radiation physicists that require a thorough introduction to IMRT. Fully illustrated, indexed, and referenced, the book has been prepared in a form suitable for supporting a teaching course.

This book presents ongoing research activities of currently available renewable energy technologies and the approaches towards clean technology for enabling a socio-economic model for the present and future generations to live in a clean and healthy environment. The book provides chapter wise implementation of research works in the area of green energy technologies with proper methods used with solution strategies and energy efficiency approaches by combining theory and practical applications. Readers are introduced to practical problems of green computation and hybrid resources optimization with solution based approaches from the current research outcomes. The book will be of use to researchers, professionals, and policy-makers alike.

Professor Robert Sapolsky explores the physiologial effects of stress on the human body.

This book surveys fundamental concepts and practical methods for creating and curating large knowledge bases.

The Signal CorpsThe Emergency, to December 1941

A chronicle of the period from January 1942 through May 1943 during which the fortunes of the Allies turned from disaster to success

With My Life on the Run, Bart Yasso--an icon of one of the most enduringly popular recreational sports in the United States--offers a touching and humorous memoir about the rewards and challenges of running. Recounting his adventures in locales like Antarctica, Africa, and Chitwan National Park in Nepal (where he was chased by an angry rhino), Yasso recommends the best marathons on foreign terrain and tells runners what they need to know to navigate the logistics of running in an unfamiliar country. He also offers practical guidance for beginning, intermediate, and advanced runners, such as 5-K, half marathon, and marathon training schedules, as well as advice on how to become a runner for life, ever-ready to draw joy from the sport and embrace the adventure that each race may offer