

Smart Manufacturing Altran

Vols. for 1970-71 includes manufacturers' catalogs.

This Dictionary covers information and communication technology (ICT), including hardware and software; information networks, including the Internet and the World Wide Web; automatic control; and ICT-related computer-aided fields. The Dictionary also lists abbreviated names of relevant organizations, conferences, symposia and workshops. This reference is important for all practitioners and users in the areas mentioned above, and those who consult or write technical material. This Second Edition contains 10,000 new entries, for a total of 33,000.

This book explores climate services, including projections, descriptive information, analyses, assessments, and an overview of current trends. Due to the pressures now being put on the world's climate, it is vital to gather and share reliable climate observation and projection data, which may be tailored for use by different groups. In other words, it is essential to offer climate services. But despite the growth in the use of these services, there are very few specialist publications on this topic. This book addresses that need. Apart from presenting studies and the results of research projects, the book also offers an overview of the wide range of means available for providing and using climate services. In addition, it features case studies that provide illustrative and inspiring examples of how climate services can be optimally deployed.

Leading innovation expert Alec Ross explains what's next for the world, mapping out the advances and stumbling blocks that will emerge in the next ten years—for businesses, governments, and the global community—and how we can navigate them. While Alec Ross was working as Hillary Clinton's Senior Advisor on Innovation, he traveled to forty-one countries. He visited some of the toughest places in the world—from refugee camps of Congo to Syrian war zones. From phone-charger stands in Rwanda to R&D labs in South Korea, Ross has seen what the future holds. Over the past two decades, the Internet has radically changed markets and businesses worldwide. In *The Industries of the Future*, Ross shows us what's next, highlighting the best opportunities for progress and explaining why countries thrive or sputter. He examines the specific fields that will most shape our economic future over the next ten years, including cybercrime and cybersecurity, the commercialization of genomics, the next step for big data, and the coming impact of digital technology on money, payments, and markets. And in each of these realms, Ross addresses the toughest questions: How will we have to adapt to the changing nature of work? Is the prospect of cyberwar sparking the next arms race? How can the world's rising nations hope to match Silicon Valley in creating their own innovation hotspots? Ross blends storytelling and economic analysis to give a vivid and informed perspective on how sweeping global trends are affecting the ways we live, incorporating the insights of leaders ranging from the founders of Google and Twitter to defense experts like David Petraeus. *The Industries of the Future* takes the intimidating, complex topics that many of us know to be important and boils them down into clear, plain-spoken language. This is an essential work for understanding how the world works—now and tomorrow—and a must-read for businesspeople, in every sector, from every country.

The topics covered in this book range from modeling and programming languages and environments, via approaches for design and verification, to issues of ethics and regulation. In terms of techniques, there are results on model-based engineering, product lines, mission specification, component-based development, simulation, testing, and proof. Applications range from manufacturing to service robots, to autonomous vehicles, and even robots that evolve in the real world. A final chapter summarizes issues on ethics and regulation based on discussions from a panel of experts. The origin of this book is a two-day event, entitled RoboSoft, that took place in November 2019, in London. Organized with the generous support of the Royal Academy of Engineering and the University of York, UK, RoboSoft brought together more than 100 scientists, engineers and practitioners from all over the world, representing 70 international institutions. The intended readership includes researchers and practitioners with all levels of experience interested in working in the area of robotics, and software engineering more generally. The chapters are all self-contained, include explanations of the core concepts, and finish with a discussion of directions for further work. Chapters 'Towards Autonomous Robot Evolution', 'Composition, Separation of Roles and Model-Driven Approaches as Enabler of a Robotics Software Ecosystem' and 'Verifiable Autonomy and Responsible Robotics' are available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

This book is organized around the various sensing techniques used to achieve structural health monitoring. Its main focus is on sensors, signal and data reduction methods and inverse techniques, which enable the identification of the physical parameters, affected by the presence of the damage, on which a diagnostic is established. Structural Health Monitoring is not oriented by the type of applications or linked to special classes of problems, but rather presents broader families of techniques: vibration and modal analysis; optical fibre sensing; acousto-ultrasonics, using piezoelectric transducers; and electric and electromagnetic techniques. Each chapter has been written by specialists in the subject area who possess a broad range of practical experience. The book will be accessible to students and those new to the field, but the exhaustive overview of present research and development, as well as the numerous references provided, also make it required reading for experienced researchers and engineers.

This multi-volume set is a primary source for basic company and industry information. Names, addresses, SIC code, and geographic location of over 135,000 U.S. companies are included.

Take your ROS skills to the next level by implementing complex robot structures in a ROS simulation
Key Features
Learn fundamental ROS concepts and apply them to solve navigation tasks
Work with single board computers to program smart behavior in mobile robots
Understand how specific characteristics of the physical environment influence your robot's performance
Book Description
Connecting a physical robot to a robot simulation using the Robot Operating System (ROS) infrastructure is one of the most common challenges faced by ROS engineers. With this book, you'll learn how to simulate a robot in a virtual environment and achieve desired behavior in equivalent real-world scenarios. This book starts with an introduction to GoPiGo3 and the sensors and actuators with which it is equipped. You'll then work with GoPiGo3's digital twin by creating a 3D model from scratch and running a simulation in ROS using Gazebo. Next, the book will show you how to use GoPiGo3 to build and run an autonomous mobile robot that is aware of its surroundings. Finally, you'll find out how a robot can learn tasks that have not been programmed in the code but are acquired by observing its environment. You'll even cover topics such as deep learning and reinforcement learning. By the end of this robot programming book, you'll be well-versed with the basics of building specific-purpose applications in robotics and developing highly intelligent autonomous robots from scratch. What you will learn
Get to grips with developing environment-aware robots
Gain insights into how your robots will react in physical environments
Break down a desired behavior into a chain of robot actions
Relate data from sensors with context to produce adaptive responses
Apply reinforcement learning to allow your robot to learn by trial and error
Implement deep learning to enable your robot to recognize its surroundings
Who this book is for
If you are an engineer looking to build AI-powered robots using the ROS framework, this book is for you. Robotics enthusiasts and hobbyists who want to develop their own ROS robotics projects will also find this book useful. Knowledge of Python and/or C++ programming and familiarity with single board computers such as Raspberry Pi is necessary to get the most out of this book.

This book provides an integrated overview of key trends in digital transformation, taking into consideration five interrelated dimensions: strategy and business models, society, organization,

technology and regulation. As such, it provides a framework for the analysis of digital business transformation and its emerging factors, analyzing twenty-five key trends in terms of their future impact. On that basis, the book then delineates a new approach centered on the mutually accelerating links between multiple value creation spaces. It proposes a new mode of production – accelerated production of links (accelution) – and analyzes it with respect to the still-dominant concept of lean production. Based on the results of the international CIGREF research program ISD, the book presents a valuable perspective of the expected impact of the abundance of networks and data as critical resources for enterprises beyond 2020.

Presenting a theory of the theoryless, a computer scientist provides a model of how effective behavior can be learned even in a world as complex as our own, shedding new light on human nature.

Consulting experience and a feeling for trends is the basis for this book, written by the global Head of consulting firm Arthur D. Little. Seven trends form the framework for a book that tells about recent insights, ideas and approaches to innovation in different contexts and under different perspectives. The author is sure that innovation still has a lot in stock for companies who are open to it and willing to change. Many different influences and trends ask for new ideas and the author found many examples where these trends have been used successfully by companies around the world. Readers will profit from the examples and case studies. The more they understand what will be going on in the mid and long term, the more they are enabled to prepare and act accordingly.

The symposium will focus on electric aircraft technology across three programmatic tracks (1) electric power enabled aircraft configurations and system requirements, (2) enabling technologies for electric aircraft propulsion, and (3) electric aircraft system integration and controls

This book aims to explain Data Analytics towards decision making in terms of models and algorithms, theoretical concepts, applications, experiments in relevant domains or focused on specific issues. It explores the concepts of database technology, machine learning, knowledge-based system, high performance computing, information retrieval, finding patterns hidden in large datasets and data visualization. Also, it presents various paradigms including pattern mining, clustering, classification, and data analysis. Overall aim is to provide technical solutions in the field of data analytics and data mining. Features: Covers descriptive statistics with respect to predictive analytics and business analytics. Discusses different data analytics platforms for real-time applications. Explain SMART business models. Includes algorithms in data sciences alongwith automated methods and models. Explores varied challenges encountered by researchers and businesses in the realm of real-time analytics. This book aims at researchers and graduate students in data analytics, data sciences, data mining, and signal processing.

The second half of the twentieth century has witnessed remarkable advances in technology. The unquestioned leader in this race has been computer technology. Even the most modest personal computers today have computing power that would have astounded the leading technologists a few decades earlier, and what's more, similar advances are predicted for many years to come. Looking towards the future, it has been conservatively estimated that in 2047 computers could easily be 100,000 times more powerful than they were in 1997 (Moore's law [Moore] would lead to an increase on the order of around 10 billion) [Bell]. Because of its enormous capability, computer technology is becoming pervasive across the technology spectrum. Nowadays it is not surprising to discover that very common household gadgets like your toaster contain computer technology. Televisions, microwave ovens, and even electric shavers contain software. And what's more, the use of computer technology has been estimated to double every two years [Gibbs]. In order to keep up with the growing technology demands and to fully utilize the ever more powerful computing platforms, software projects have become more and more ambitious. This has led to software systems becoming dominant forces in system functionality. Furthermore, the ambition to realize significant portions of a system's functionality through software has extended into the high consequence realm. Presently, software controls many critical functions in (1) airplanes, (2) electronic commerce, (3) space-bound systems, (4) medical systems, and (5) various transportation systems such as automobiles and trains.

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« This is a must read for every B2B entrepreneur, SaaS creator or consultant and business school student. It's the kind of book you don't read once, you go back to it on a regular basis. » - Carmen Gereia, CEO & Co-founder, UsabilityChefs Lean B2B helps entrepreneurs and innovators quickly find traction in the enterprise. Packed with more than 20 case studies and used by thousands around the world, Lean B2B consolidates the best thinking around Business-to-Business (B2B) customer development to help entrepreneurs and innovators focus on the right things each step of the way, leaving as little as possible to luck. The book helps: • Assess the market potential of opportunities to find the right opportunity for your team • Find early adopters, quickly establish credibility and convince business stakeholders to work with you • Find and prioritize business problems in corporations and identify the stakeholders with the power to influence a purchase decision • Create a minimum viable product and a compelling offer, validate a solution and evaluate whether your team has found product-market fit • Identify and avoid common challenges faced by entrepreneurs and learn ninja techniques to speed up product-market validation « The book will pay itself off in the first couple of pages! » - Ben Sardella, Co-Founder, Datanyze ????? 86% of Readers Rated it 5-Stars ????? « Treat this book like a map to show you where you are and a compass to show you the direction. I wish I could have read it 2 or 3 years ago. » – Jonathan Gebauer, Founder, exploreB2B « Lean B2B is filled with rock-solid advice for technology entrepreneurs who want a rapid-growth trajectory. Read it to increase your certainty and your success rate. » - Jill Konrath, Author of AGILE SELLING and Selling to Big Companies « Probably the most slept on book in the Lean startup market right now.... There is no sugarcoating here. Garbugli tells you exactly what needs to happen and how to make it happen... literally holds your hand and spells it out. I was really impressed with the overall depth and advice presented. » - AJ, B2B Entrepreneur « The book I read of which I have learned the most. » - Etienne Thouin, Founder and CTO, SQLNext Software « This book is essential reading for would-be entrepreneurs who face the daunting task of entering B2B markets. » – Paul Gillin, Co-Author, Social Marketing to the Business Customer

You would think that established companies with their histories, their workforces, their brands, their products and services, their capabilities of all kinds, must surely be able to co-exist with the new digital age corporations after the 4th Industrial Revolution. But there is no divine right that they will do so. Many, perhaps most, will not make the transition to sustainable survival. In this important book, David Guillebaud explores the forces of disruption - digital technologies, Big Data, algorithms, millennial customers, new business and organizational models - showing where they will affect traditional businesses. He demonstrates that the inertia of many companies in the face of fundamental disruptive forces is explained by managerial denial and he explores why

this is so. But all is not necessarily lost. He shows what it takes to move beyond denial to acceptance of reality, the things that must be done for there to be a prospect for survival in the disruptive age, and alternative strategies for success. And what leaders for this new world look like!

The world order built upon the Peace of Westphalia is faltering. State fragility or failure are endemic, with no fewer than one-third of the states in the United Nations earning a "high warning"-or worse-in the Fragile States Index, and an equal number suffering a decline in sustainability over the past decade.¹ State weakness invites a range of illicit actors, including international terrorists, globally networked insurgents, and transnational criminal organizations (TCOs). The presence and operations of these entities keep states weak and incapable of effective governance, and limit the possibility of fruitful partnerships with the United States and its allies. Illicit organizations and their networks fuel corruption, eroding state legitimacy among the governed, and sowing doubt that the state is a genuine guardian of the public interest. These networks can penetrate the state, leading to state capture, and even criminal sovereignty.² A growing number of weak and corrupt states is creating gaping holes in the global rule-based system of states that we depend on for our security and prosperity. Indeed, the chapters of this book suggest the emergence of a highly adaptive and parasitic alternative ecosystem, based on criminal commerce and extreme violence, with little regard for what we commonly conceive of as the public interest or the public good. The last 10 years have seen unprecedented growth in interactivity between and among a wide range of illicit networks, as well as the emergence of hybrid organizations that use methods characteristic of both terrorist and criminal groups. In a convergence of interests, terrorist organizations collaborate with cartels, and trafficking organizations collude with insurgents. International terrorist organizations, such as al-Qaeda and Hezbollah, engage energetically in transnational crime to raise funds for their operations. Prominent criminal organizations like Los Zetas in Mexico and D-Company in Pakistan have adopted the symbolic violence of terrorists-the propaganda of the deed-to secure their "turf." And networked insurgents, such as the Islamic State of Iraq and the Levant (ISIL), the Revolutionary Armed Forces of Colombia (FARC), and the Liberation Tigers of Tamil Eelam (LTTE), have adopted the techniques of both crime and terror.

This carefully-researched book covers exciting trends in consulting in such fields as marketing, information technology, management, logistics, supply chain, manufacturing, health care and more. Includes complete details on the prestigious management consulting sector, plus our analysis of the information technology consulting business. This reference tool includes thorough market analysis as well as our highly respected trends analysis. You'll find a complete overview, industry analysis and market research report in one superb, value-priced package. It contains thousands of contacts for business and industry leaders, industry associations, Internet sites and other resources. This book also includes statistical tables, an industry glossary and thorough indexes. The corporate profiles section of the book includes our proprietary, in-depth profiles of the 275 leading companies in all facets of consulting. Here you'll find complete profiles of the hot companies that are making news today, the largest, most successful corporations in the business. Purchasers of either the book or PDF version can receive a free copy of the company profiles database on CD-ROM, enabling key word search and export of key information, addresses, phone numbers and executive names with titles for every company profiled.

This book presents selected papers from the Sixteenth International Conference on Intelligent Information Hiding and Multimedia Signal Processing, in conjunction with the Thirteenth International Conference on Frontiers of Information Technology, Applications and Tools, held on November 5–7, 2020, in Ho Chi Minh City, Vietnam. It is divided into two volumes and discusses the latest research outcomes in the field of Information Technology (IT) including information hiding, multimedia signal processing, big data, data mining, bioinformatics, database, industrial and Internet of things, and their applications.

Human error is here to stay. This perhaps obvious statement has a profound implication for society when faced with the types of hazardous system accidents that have occurred over the past three decades. Such accidents have been strongly influenced by human error, yet many system designs in existence or being planned and built do not take human error into consideration.; "A Guide to Practical Human Reliability Assessment" is a practical and pragmatic guide to the techniques and approaches of human reliability assessment HRA. It offers the reader explanatory and practical methods which have been applied and have worked in high technology and high risk assessments - particularly but not exclusively to potentially hazardous industries such as exist in process control, nuclear power, chemical and petrochemical industries. A Guide to Practical Human Reliability Assessment offers the practitioner a comprehensive tool-kit of different approaches along with guidance on selecting different methods for different applications. It covers the risk assessment and the HRA process, as well as methods of task analysis, error identification, quantification, representation of errors in the risk analysis, followed by error reduction analysis, quality assurance and documentation. There are also a number of detailed case studies from nuclear, chemical, offshore, and marine HRA'S, exemplifying the image of techniques and the impact of HRA in existing and design-stage systems.

The ultimate guide for those using or planning to use business consultants - and for consultants themselves In the last three decades of the 20th century the management consultancy industry grew at a cracking pace but increased scepticism about the value that consultants genuinely add, combined with the economic slowdown, has made life much tougher for the consulting industry. As firms have cut back on consulting services and begun to review the way they use consultants, consulting firms themselves are looking at how they need to change. People are now talking about business consulting rather than management consulting. Using real examples from a range of private sector firms, public sector organisations and from the consultants themselves, this book explores the new business consulting world and looks at every element of it with the aim of both helping firms make better use of consultants and showing consultants how they need to adapt and provide their clients a better service.

Heavily dominated by the sector of information and communication technologies, economic organizations pursue digital transformation as a differentiating factor and source of competitive advantage. Understanding the challenges of digital transformation is critical to managers to ensure business sustainability. However, there are some problems, such as architecture, security, and reliability, among others, that bring with them the need for studies and investments in this area to avoid significant financial losses. Digital transformation encompasses and challenges many areas, such as business models, organizational structures, human privacy, management, and more, creating a need to investigate the challenges associated with it to create a roadmap for this new digital transformation era. Digital Transformation and Challenges to Data Security and Privacy presents the main challenges of digital transformation and the threats it poses to information security and privacy, as well as models that can contribute to solving these challenges in economic organizations. While highlighting topics such as information systems, digital

trends, and information governance, this book is ideally intended for managers, data analysts, cybersecurity professionals, IT specialists, practitioners, researchers, academicians, and students working in fields that include digital transformation, information management, information security, information system reliability, business continuity, and data protection.

Sugarcane: Agricultural Production, Bioenergy and Ethanol explores this vital source for "green" biofuel from the breeding and care of the plant all the way through to its effective and efficient transformation into bioenergy. The book explores sugarcane's 40 year history as a fuel for cars, along with its impressive leaps in production and productivity that have created a robust global market. In addition, new prospects for the future are discussed as promising applications in agroenergy, whether for biofuels or bioelectricity, or for bagasse pellets as an alternative to firewood for home heating purposes are explored. Experts from around the world address these topics in this timely book as global warming continues to represent a major concern for both crop and green energy production. Focuses on sugarcane production and processing for bioenergy Provides a holistic approach to sugarcane's potential – from the successful growth and harvest of the plant to the end-use product Presents important information for "green energy" options

How can management be developed to create the greatest wealth for society as a whole? This is the question Peter Drucker sets out to answer in Innovation and Entrepreneurship. A brilliant, mould-breaking attack on management orthodoxy it is one of Drucker's most important books, offering an excellent overview of some of his main ideas. He argues that what defines an entrepreneur is their attitude to change: 'the entrepreneur always searches for change, responds to it and exploits it as an opportunity'. To exploit change, according to Drucker, is to innovate. Stressing the importance of low-tech entrepreneurship, the challenge of balancing technological possibilities with limited resources, and the organisation as a learning organism, he concludes with a vision of an entrepreneurial society where individuals increasingly take responsibility for their own learning and careers. With a new foreword by Joseph Maciariello

The book includes the research papers presented in the final conference of the EU funded SARISTU (Smart Intelligent Aircraft Structures) project, held at Moscow, Russia between 19-21 of May 2015. The SARISTU project, which was launched in September 2011, developed and tested a variety of individual applications as well as their combinations. With a strong focus on actual physical integration and subsequent material and structural testing, SARISTU has been responsible for important progress on the route to industrialization of structure integrated functionalities such as Conformal Morphing, Structural Health Monitoring and Nanocomposites. The gap- and edge-free deformation of aerodynamic surfaces known as conformal morphing has gained previously unrealized capabilities such as inherent de-icing, erosion protection and lightning strike protection, while at the same time the technological risk has been greatly reduced. Individual structural health monitoring techniques can now be applied at the part-manufacturing level rather than via extending an aircraft's time in the final assembly line. And nanocomposites no longer lose their improved properties when trying to upscale from neat resin testing to full laminate testing at element level. As such, this book familiarizes the reader with the most significant developments, achievements and key technological steps which have been made possible through the four-year long cooperation of 64 leading entities from 16 different countries with the financial support of the European Commission.

Indexes are arranged by geographic area, activities, personal name, and consulting firm name.

The rapid introduction of sophisticated computers, services, telecommunications systems, and manufacturing systems has caused a major shift in the way people use and work with technology. It is not surprising that computer-aided modeling has emerged as a promising method for ensuring products meet the requirements of the consumer. The Handbook of Digital Human Modeling provides comprehensive coverage of the theory, tools, and methods to effectively achieve this objective. The 56 chapters in this book, written by 113 contributing authorities from Canada, China, France, Germany, the Netherlands, Poland, Sweden, Taiwan, UK, and the US, provide a wealth of international knowledge and guidelines. They cover applications in advanced manufacturing, aerospace, automotive, data visualization and simulation, defense and military systems, design for impaired mobility, healthcare and medicine, information systems, and product design. The text elucidates tools to help evaluate product and work design while reducing the need for physical prototyping. Additional software and demonstration materials on the CRC Press web site include a never-before-released 220-page step-by-step UGS-Siemens Jack™ help manual developed at Purdue University. The current gap between capability to correctly predict outcomes and set expectation for new and existing products and processes affects human-system performance, market acceptance, product safety, and satisfaction at work. The handbook provides the fundamental concepts and tools for digital human modeling and simulation with a focus on its foundations in human factors and ergonomics. The tools identified and made available in this handbook help reduce the need for physical prototyping. They enable engineers to quantify acceptability and risk in design in terms of the human factors and ergonomics.

The oceans cover 70% of the terrestrial surface, and exert a pervasive influence on the Earth's environment but their nature is poorly recognized. Knowing the ocean's role deeply and understanding the complex, physical, biological, chemical and geological systems operating within it represent a major challenge to scientists today. Seafloor observatories offer scientists new opportunities to study multiple, interrelated natural phenomena over time scales ranging from seconds to decades, from episodic to global and long-term processes. Seafloor Observatories poses the important and apparently simple question, "How can continuous and reliable monitoring at the seafloor by means of Seafloor Observatories extend exploration and improve knowledge of our planet?" The book leads the reader through: the present scientific challenges to be addressed with seafloor observatories the technical solutions for their architecture an excursus on worldwide ongoing projects and programmes some relevant scientific multidisciplinary results and a presentation of new and interesting long-term perspectives for the coming years. Current results will yield significant improvements and exert a strong impact not only on our present knowledge of our planet but also on human evolution.

For too long the prevalent view has been that the public and private sectors differ dramatically when it comes to innovation. This book takes a radically different tack, not as a rhetorical stance, but as the basis for fruitful empirical analysis. The studies here show that public service organizations and their leaders can be innovative in their own right. The contributions made here provide insights that will productively inform future research and practice. Ian Miles, University of Manchester, UK This book is devoted to the study of public-private innovation networks in services (ServPPINs). These are a new type of innovation network which have rapidly developed in service economies. ServPPINs are collaborations between public and private service organizations, their objective being the development of new and improved services which encompass both technological and non-technological innovations. The book presents in-depth empirical research from different service sectors across Europe in order to explore the nature of these public-private collaborations. It elucidates the processes of formation, entrepreneurship and management, the types of innovations ServPPINs generate, and the nature of the public

policies required to support them. This multidisciplinary book will appeal to academics and students in economics, management, and the sociology of services and innovation. Managers in the public and private service sector and public authorities will also find much to interest them.

A collection of reproducible activities perfect for skill-building on self-awareness, emotional control, empathy, social expertness, personal influence, mastery of vision and more. Emotional Intelligence explains why, despite equal intellectual capacity, training, or experience, some people excel while others of the same caliber do not do as well.

Smart Intelligent Aircraft Structures (SARISTU) Proceedings of the Final Project Conference Springer

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