Download File The Rise Of The Robots Technology And The Threat Of Mass Unemployment Read Pdf Free

The 21st Century Industrial Robot: When Tools Become Collaborators Dec 12 2020 This book aims to discuss the technical and ethical challenges posed by the present technological framework and to highlight the fundamental role played by human-centred design and human factors in the definition of robotic architectures for human-robot collaboration. The book gives an updated overview of the most recent robotic technology, conceived and designed to collaborate with human beings in industrial working scenarios. The technological development of robotics over the last years and the fast evolution of AI, machine learning and IoT have paved the way for applications that extend far beyond the typical use of robots performing repetitive tasks in exclusive spaces. In this new technological paradigm that is expected to drive the robotics market in the coming years, robots and workers will coexist in the same workplace, sharing not only this lived space, but also the roles and functions inherent to a process of production, merging the benefits of automated and manual performing. However, having robots cooperating in real time with workers, responding in a physical, psychological and social adequate way, requires a human-centred design that not only calls for high safety standards regulating the quality of human-robot interaction, but also demands the robot's fine-grained perception and awareness of the dynamics of its surrounding environment, namely the behaviours of their human peers—their expected actions/responses—fostering the necessary collaborative efforts towards the accomplishment of the tasks to be executed.

Rehabilitation Robotics: Technology and Applications Jun 17 2021 Physical medicine and rehabilitation, also called physiatry, aims to enhance and restore functional ability and quality of life to people with physical impairments or disabilities. Rehabilitation robotics is an area of research dedicated to understanding and enhancing physiatry through the use of robotic devices. It involves the development of robotic devices to assist different sensorimotor functions, different schemes of assisting therapeutic training, and assessment of patient's ability to move. Robots are used mainly as therapy aids instead of assistive devices in rehabilitation robotics. Some of the techniques used within this field are active assisted exercise, active resistive exercise and adaptive exercise. This book elucidates new techniques and their applications in a multidisciplinary manner. The ever growing need of advanced technology is the reason that has fueled the research in the field of rehabilitation robotics in recent times. As this field is emerging at a rapid pace, the contents of this book will help the readers understand the technology and applications of the subject.

Androids, Cyborgs, and Robots in Contemporary Culture and Society Sep 20 2021 Mankind's dependence on artificial intelligence and robotics is increasing rapidly as technology becomes more advanced. Finding a way to seamlessly intertwine these two worlds will help boost productivity in society and aid in a variety of ways in modern civilization. Androids, Cyborgs, and Robots in Contemporary Culture and Society is an essential scholarly resource that delves into the current issues, methodologies, and trends relating to advanced robotic technology in the modern world. Featuring relevant topics that include STEM technologies, brain-controlled androids, biped robots, and media perception, this publication is ideal for engineers, academicians, students, and researchers that would like to stay current with the latest developments in the world of evolving robotics.

Construction Robots Oct 10 2020 Combining architectural theory with the latest trends in manufacturing technology, this volume shows how Single-Task Construction Robots (STCRs) can improve productivity in the construction industry. It presents two hundred types of STCRs and includes numerous real-world case studies, making it an excellent resource for professional engineers and researchers.

Robots that Talk and Listen Apr 15 2021 Robots That Talk and Listen provides a forward-looking examination of speech and language in robots from technical, functional, and social perspectives. Contributors address cultural foundations as well as the linguistic skills and technologies that robots need to function effectively in real-world settings. Among the most difficult and complex is the ability to understand and use language. Speech-enabled automata are already serving as interactive toys, teacher's aides, and research assistants. These robots will soon be joined by personal companions, industrial co-workers, and military support automata. The social impact of these and other robots extends well beyond the specific tasks they perform. Contributors tackle the most knotty of those issues, notably acceptance of advanced, speech-enabled robots and developing ethical and moral controls for robots. Topics in this book include: •Language and Beyond: The True Meaning of "Speech Enabled" •Robots in Myth and Media •Enabling Robots to Converse •Language Learning by Automata •Handling Noisy Settings •Empirical Studies of Robots in Real-World Environments •Acceptance of Intelligent Robots •Managing Robots that Can Lie and Deceive •Envisioning a World Shared with Intelligent Robots

Robot Intelligence Technology and Applications 4 Sep 01 2022 This book covers all aspects of robot intelligence from perception at sensor level and reasoning at cognitive level to behavior planning at execution level for each low level segment of the machine. It also presents the technologies for cognitive reasoning, social interaction with humans, behavior generation, ability to cooperate with other robots, ambience awareness, and an artificial genome that can be passed on to other robots. These technologies are to materialize cognitive intelligence, social intelligence, behavioral intelligence, collective intelligence, ambient intelligence and genetic intelligence. The book aims at serving researchers and practitioners with a timely dissemination of the recent progress on robot intelligence technology and its applications, based on a collection of papers presented at the 4th International Conference on Robot Intelligence Technology and Applications (RiTA), held in Bucheon, Korea, December 14 – 16, 2015. For better readability, this edition has the total of 49 articles grouped into 3 chapters: Chapter I: Ambient, Behavioral, Cognitive, Collective, and Social Robot Intelligence, Chapter II: Computational Intelligence and Intelligent Design for Advanced Robotics, Chapter III: Applications of Robot Intelligence Technology .

Jobocalypse Apr 03 2020 Is your job in danger of getting replaced by robots? Jobocalypse is a look at the rapidly changing face of robotics and how it will revolutionize employment and jobs over the next thirty years. Ben Way lays out the arguments in favor of and against the mechanization of our society, as well as the amazing advantages and untold risks, as we march into this ever-present future. Each entertaining chapter covers the past, present and future of robotic technology, from sex bots to military killing drones, in an easy to understand way. Top #100 Best Selling Books across all Amazon books(July) #1 Amazon Best Seller in Robotics(July) "A fascinating look into the future of robotics and their impact on humanity, be prepared to question when robots will replace you" – Kevin Warwick, Professor of Cybernetics at the University of Reading "The future of work is changing thanks to a variety of things like 3D printing, open source software, and robots. Ben Way has a front-row seat on these huge changes and what they mean for both rich and poor workers. Yes, the robots may take our jobs, but who will build the robots? This book will tell you." – Robert Scoble, Technology Evangelist Chapter 1: The future, backed up Chapter 2: Odd jobs Chapter 3: Adult industry and how to eject safely Chapter 4: Logistics with hard drives Chapter 5: Police, military and the rise of the machines Chapter 6: Agriculture, mining and when bots get dirty Chapter 7: Education and the baby bots Chapter 8: Retail, drink and food with boozy bots Chapter 9: Manufacturing and when robots build themselves Chapter 10: Being probed, digital doctors and numeric nurses Chapter 11: Entertainment and the funny bots Chapter 12: Slavery 2.0 and when bots go wrong Chapter 13: Robot humans and bionics Chapter 14: Humans and the crumbs left for us

Field and Service Robotics Nov 30 2019 Joe Engelberger, the pioneer of the robotics industry, wrote in his 1989 book Robotics in Service that the inspiration to write his book came as a reaction to an industry-sponsored forecast study of robot applications, which predicted that in 1995 applications of robotics outside factories – the traditional domain of industrial robots – would amount to less than 1% of total sales. Engelberger believed that this forecast was very wrong, and instead predicted that the non-industrial class of robot applications would become the largest class. Engelbergers prediction has yet to come to pass. However, he did correctly foresee the growth in non-traditional applications of robots. Robots are now beginning to march from the factories and into field and service applications. This book presents a selection of papers from the first major international conference dedicated to field and service applications of robotics. This selection includes papers from the leading research laboratories in the world together with papers from companies that are building and selling new and innovative robotic technology. It describes interesting aspects of robots in the field ranging from mining, agriculture, construction, cargo handling, subsea operations, removal of landmines, to terrestrial exploration. It also covers a diverse range of service applications, such as cleaning, propagating plants and aiding the elderly and handicapped, and gives considerable attention to the technology required to realise robust, reliable and safe robots.

Gods and Robots May 05 2020 Traces the story of how ancient cultures envisioned artificial life, automata, self-moving devices and human enhancements, sharing insights into how the mythologies of the past related to and shaped ancient machine innovations.

Robot Oriented Design Jan 25 2022 The Cambridge Handbooks on Construction Robotics series focuses on the implementation of automation and robot technology to renew the construction industry and to arrest its declining productivity. The series is intended to give professionals, researchers, lecturers, and students basic conceptual and technical skills and implementation strategies to manage, research, or teach the implementation of advanced automation and robot-technology-based processes and technologies in construction. Currently, the implementation of modern developments in product structures (modularity and design for manufacturing), organizational strategies (just in time, just in sequence, and pulling production), and informational aspects (computer-aided design/manufacturing or computer-integrated manufacturing) are lagging because of the lack of modern integrated machine technology in construction. The Cambridge Handbooks on Construction Robotics books discuss progress in robot systems theory and demonstrate their integration using real systematic applications and projections for off-site as well as on-site building production. Robot-Oriented Design and Management introduces the design, innovation, and management methodologies that are key to the realization and implementation of the advanced concepts and technologies presented in the subsequent volumes. This book describes the efficient deployment of advanced construction and building technology. It is concerned with the coadaptation of construction products, processes, organization, and management, and with automated/robotic technology, so that the implementation of modern technology becomes easier and more efficient. It is also concerned with technology and innovation management methodologies and the generation of life cycle-oriented views related to the use of advanced technologies in construction.

Robotics Goes MOOC Nov 10 2020 This book is part of the Springer MOOC & BOOK project, providing both a MOOC – offered through Federica Web Learning – and a Springer reference book based on the online course, combining the quality of a scientific essay with the communicative power of an online educational product. It provides a state-of-the-art overview of various aspects of the rapidly developing field of robotics, which is vigorously engaged in the growing challenges of emerging new domains.Interacting, exploring and working with humans, the new generation of robots will increasingly touch people and their lives. The book is strictly linked to the MOOC, and includes numerous examples and exercises in addition to those offered in the MOOC. Moreover, it features multimedia content, such as videos and augmented reality, which can be accessed via PC, tablet or any other mobile device. Students who buy the print book can easily access this content through the Springer Multimedia App, optimized for cell phones and tablets. Readers simply scan the image with their cell phone or tablet and they are taken directly to the video, figure, photo, table, PowerPoint slide, etc. Moreover, this content can be shared via other apps, email, messengers, and more.The book, edited by an outstanding, internationally respected expert in the field, includes valuable contributions from more than 30 authors, making this innovative project an authoritative reference resource for senior graduate and PhD level students, as well as for robotics researchers and scientists from related disciplines.This book focuses on Impact.

Robot Intelligence Technology and Applications 5 Apr 27 2022 This book includes papers from the 5th International Conference on Robot Intelligence Technology and Applications held at KAIST, Daejeon, Korea on December 13–15, 2017. It covers the following areas: artificial intelligence, autonomous robot navigation, intelligent

robot system design, intelligent sensing and control, and machine vision. The topics included in this book are deep learning, deep neural networks, image understanding, natural language processing, speech/voice/text recognition, reasoning & inference, sensor integration/fusion/perception, multisensor data fusion, navigation/SLAM/localization, distributed intelligent algorithms and techniques, ubiquitous computing, digital creatures, intelligent agents, computer vision, virtual/augmented reality, surveillance, pattern recognition, gesture recognition, fingerprint recognition, animation and virtual characters, and emerging applications. This book is a valuable resource for robotics scientists, computer scientists, artificial intelligence researchers and professionals in universities, research institutes and laboratories.

More Than Machines? Oct 22 2021 We know that robots are just machines. Why then do we often talk about them as if they were alive? Laura Voss explores this fascinating phenomenon, providing a rich insight into practices of animacy (and inanimacy) attribution to robot technology: from science-fiction to robotics R&D, from science communication to media discourse, and from the theoretical perspectives of STS to the cognitive sciences. Taking an interdisciplinary perspective, and backed by a wealth of empirical material, Voss shows how scientists, engineers, journalists – and everyone else – can face the challenge of robot technology appearing »a little bit alive« with a reflexive and yet pragmatic stance.

Robotics Technology and Its Varied Uses Jul 19 2021

An Introduction to Robot Technology Jun 29 2022 Robotics is now a well established field of endeavour both in industry and research laboratories. There is a danger that the word may be widely in areas where it is inappropriate, so knowing precisely what used even a robot is, how it is controlled and how it may be used in specific applications is of the highest importance. The authors are not only innovators in the development of robots but also highly respected educators. This book has been carefully com piled to crystallize, for the reader, the fundamentals of robot operation and application. The material carefully treads its path between achieving broad coverage and depth where it is needed. Industrialists, teachers and students alike will benefit from the book. Igor Aleksander July 1983 Chapter 1 Robotics: an introduction As a result of the great advances of the last few years many industrial processes have become largely automated, with the human operator playing an ever decreasing role. The fully automated and unmanned factory is probably now only a few decades away.

Welding Robots Aug 20 2021 This book, a unique text on robotics and welding, will be bought by graduate students, and researchers and practitioners in robotics and manufacturing.

Robot Technology Fundamentals Mar 27 2022 Robot Technology Fundamentals covers all the practical aspects, disciplines and latest developments of industrial robots and presents them in a simple, logical and gradually progressive manner. Principles and techniques are introduced by practical examples rather than by abstract theory. The content not only discusses current technology but emphasizes the technology of the future. Each chapter ends with a summary, questions and problems as well as a list of reference material for additional learning. ALSO AVAILABLE Instructor's Guide, ISBN: 0-8273-8237-

Robot Technology and Applications Jul 27 2019

Robot Intelligence Technology and Applications 6 Dec 24 2021 This book aims at serving the researchers and practitioners in related fields with a timely dissemination of the recent progress on robotics and artificial intelligence. This book is based on a collection of papers presented at the 9th International Conference on Robot Intelligence Technology and Applications (RiTA), held at KAIST in Daejeon, Korea, in a hybrid format, on December 16-17, 2021. Humankind is getting through the third year of COVID-19 pandemic. While this pandemic has made everyone's life so challenging, it has also expedited transition of our everyday lives into a new form, often called "the new normal." Although many people often use the terminology, perhaps we still do not have a consensus about what it is and what is should be like. One thing that is clear is that robotics and artificial intelligence technologies are playing critical roles in this phase transition of our everyday lives. We see last-mile delivery robots on the street, AI-embedded service robots in the restaurants, uninhabited shops, non-face-to-face medical services, conferences and talks in metaverses and AI-based online education programs. For better readability, the total of 53 papers are grouped into four chapters: Chapter I: Motion Planning and Control; Chapter II: Design and Robot Application; Chapter III: Sensing, Perception and Recognition; and Chapter IV: Cognition, Autonomy and Intelligence. For those who have research on robot intelligence technology, we believe this book will help them understand the recent robot technologies and applications and enhance their study.

Robots and Robotics: Principles, Systems, and Industrial Applications Feb 11 2021 A comprehensive overview of robotics principles, systems, and applications This practical, straightforward guide gives readers a solid foundation in applied industrial robotics and robotics technology. The book offers start-to-finish coverage of the entire field—from robot design and production to industrial placement and operation. The latest tools and devices used in the trade are clearly explained. Robots and Robotics: Principles, Systems, and Industrial Applications provides hands-on instruction through concise explanations, examples, and hundreds of detailed illustrations. Free downloadable material reinforces key concepts and gives readers access to more advanced information. The book covers programming, power systems, maintenance and repair, sensors, control architecture, and much more. • Equips the reader with the concepts needed to start a career in robotics • Presented in a plain-language, easy-to-understand style • Written by a pair of experienced technical professionals and educators

SUMMARY – Rise Of The Robots: Technology And The Threat Of A Jobless Future By Martin Ford Jul 31 2022 * Our summary is short, simple and pragmatic. It allows you to have the essential ideas of a big book in less than 30 minutes. *By reading this summary, you will learn more about the rise of work automation and the emergence of artificial intelligence: one of the most important and frightening issues in our history. Has the advent of Singularity (the moment when artificial intelligence will surpass human intelligence) arrived? Welcome to the not-so-distant future. *You will also learn that : advanced information technology differs from other technologies because it contributes to ever-increasing automation; all sectors of society are concerned; what the "technological singularity" is or how it works; nanotechnology is the next major technological revolution; several choices are available to Humanity to keep control of its destiny and decide on a new societal paradigm. *Any new so-called "disruptive" technology never comes without a stir. It impacts all sectors: science, economics, psychology, philosophy and the arts. The automation of employment through information technology is the biggest shock wave since the invention of electricity. It is experiencing an exponential progression that continues to wreak havoc along its path. Will we reach the breaking point? *Buy now the summary of this book for the modest price of a cup of coffee!

Robotics Technology and Flexible Automation May 29 2022 The authors, who have over four decades of experience in the industry and academia, have enhanced the coverage of the work by comprehensively adding the latest developments in the field. New topics include robot dynamics, drives, actuator systems, mechatronics, modeling of intelligent systems based on soft computing techniques, CAD/CAM based numerical control part programming, robotic assembly in CIM environment and other industrial applications.

Robotic Industrialization Mar 03 2020 In this volume, concepts, technologies and developments in the field of building-component manufacturing – based on concrete, brick, wood and steel as building materials and on large-scale prefabrication, delivering complex, customized components and products – are introduced and discussed. Robotic industrialization refers to the transformation of parts and low-level components into higher-level components, modules and finally building systems by highly mechanized, automated, or robot-supported industrial settings in structured off-site environments. Components and modules are open building systems (in modular building product structures) that are delivered by suppliers to original equipment manufacturers such as, for example, large-scale prefabrication companies or automated/robotic on-site factories. In particular, innovative large-scale prefabrication companies have altered the building structures, manufacturing processes, and organizational structures significantly to be able to assemble in their factories high-level components and modules from Tier-1 suppliers into customized buildings by heavily utilizing robotic technology in combination with automated logistics and production lines.

Robot Technologies in Intralogistics. Possible Applications and Effects Sep 08 2020 Seminar paper from the year 2018 in the subject Business economics – Supply, Production, Logistics, grade: 1,0, University of Applied Sciences Dortmund, language: English, abstract: In the context of this term paper various robot solutions for the optimization of intra logistic processes shall be presented. The objective is to present the possibilities of optimization by robot systems for logistical applications as well as to show the potentials and challenges of the intelligent systems. In addition, a comparison is made between the five main markets – China, Japan, South Korea, USA and Germany – to provide an overview of the world's advanced robot technology and to illustrate possible differences. The present work is divided into four chapters. The first chapter deals with the thematic introduction. In order to gain a sufficient understanding of intralogistics, the second chapter defines the terms intralogistics, robots, robotics and cyber-physical systems. The third chapter is devoted to the subject of "robotics". After the detailed description of the structure of a robot system in the first sub-chapter of chapter three the application areas for robots in intralogistics as well as their optimization possibilities are explained in the next subchapter. The following subchapter then compares both the positive and negative effects of robotic technologies. In order to gain a global overview of the differently advanced robot implementation, the five main markets are compared as well. Finally, a practical insight into the use of intelligent robot systems is presented and a focus put on possible trends and requirements for intra logistics 4.0. The last chapter, then concludes the topic. This chapter offers a brief, forward-looking look into the future, supported by literature. In addition, the current state of the art in the robotics segment is briefly described here and a conclusion is then drawn.

The Rise of the Robots Aug 08 2020 Piketty on steroids -- a terrifying preview of the massively unequal society to which our tech revolution is taking us

Robot Intelligence Technology and Applications 6 Feb 23 2022 This book aims at serving the researchers and practitioners in related fields with a timely dissemination of the recent progress on robotics and artificial intelligence. This book is based on a collection of papers presented at the 9th International Conference on Robot Intelligence Technology and Applications (RiTA), held at KAIST in Daejeon, Korea, in a hybrid format, on December 16-17, 2021. Humankind is getting through the third year of COVID-19 pandemic. While this pandemic has made everyone's life so challenging, it has also expedited transition of our everyday lives into a new form, often called "the new normal." Although many people often use the terminology, perhaps we still do not have a consensus about what it is and what is should be like. One thing that is clear is that robotics and artificial intelligence technologies are playing critical roles in this phase transition of our everyday lives. We see last-mile delivery robots on the street, AI-embedded service robots in the restaurants, uninhabited shops, non-face-to-face medical services, conferences and talks in metaverses and AI-based online education programs. For better readability, the total of 53 papers are grouped into four chapters: Chapter I: Motion Planning and Control; Chapter II: Design and Robot Application; Chapter III: Sensing, Perception and Recognition; and Chapter IV: Cognition, Autonomy and Intelligence. For those who have research on robot intelligence technology, we believe this book will help them understand the recent robot technologies and applications and enhance their study.

Robotics in Healthcare Mar 15 2021 The work is a collection of contributions resulting from R&D efforts originated from scientific projects involving academia, technological partners, and end-user institutions. The aim is to provide a comprehensive overview of robotics technology applied to Healthcare, and discuss the anticipation of upcoming challenges. The intersection of Robotics and Medicine includes socially and economically relevant areas, such as rehabilitation, therapy, and healthcare. Innovative usages of current robotics technologies are being somewhat stranded by concerns related to social dynamics. The examples covered in this volume show some of the potential societal benefits robotics can bring and how the robots are being integrated in social environments. Despite the aforementioned concerns, a fantastic range of possibilities is being opened. The current trend in social robotics adds to technology challenges and requires R&D to think about Robotics as an horizontal discipline, intersecting social and exact sciences. For example, robots that can act as if they have credible personalities (not necessarily similar to humans) living in social scenarios, eventually helping people. Also, robots can move inside the human body to retrieve information that otherwise is difficult to obtain. The decision autonomy of these robots raises a broad range of subjects though the immediate advantages of its use are evident. The book presents examples of robotics technologies tested in healthcare environments or realistically close to being deployed in the field and discusses the challenges involved. Chapter 1 provides a comprehensive overview of Healthcare robotics and points to realistically expectable developments in the near future. Chapter 2 describes the challenges deploying a social robot in the Pediatrics ward of an Oncological hospital for simple edutainment activities. Chapter 3 focuses on Human-Robot Interaction techniques and their role in social robotics. Chapter 4 focus on R&D efforts behind an endoscopic capsule robot. Chapter 5 addresses experiments in rehabilitation with orthotics and walker robots. These examples have deep social and economic relations with the Healthcare field, and, at the same time, are representative of the R&D efforts the robotics community is developing.

Robot Ethics Jun 25 2019 Prominent experts from science and the humanities explore issues in robot ethics that range from sex to war. Robots today serve in many roles, from entertainer to educator to executioner. As robotics technology advances, ethical concerns become more pressing: Should robots be programmed to follow a code of ethics, if this is even possible? Are there risks in forming emotional bonds with robots? How might society—and ethics—change with robotics? This volume is the first book to bring together prominent scholars and experts from both science and the humanities to explore these and other questions in this emerging field. Starting with an overview of the issues and relevant ethical theories, the topics flow naturally from the possibility of programming robot ethics to the ethical use of military robots in war to legal and policy questions, including liability and privacy concerns. The contributors then turn to human-robot emotional relationships, examining the ethical implications of robots as sexual partners, caregivers, and servants. Finally, they explore the possibility that robots, whether biological-computational hybrids or pure machines, should be given rights or moral consideration. Ethics is often slow to catch up with technological developments. This authoritative and accessible volume

fills a gap in both scholarly literature and policy discussion, offering an impressive collection of expert analyses of the most crucial topics in this increasingly important field.

Rule of the Robots Jan 13 2021 The New York Times-bestselling author of Rise of the Robots shows what happens as AI takes over our lives Imagine it's 2030. You call a bank to discuss your loan application, but you don't get to talk to a person. The bank's AI has spoken: you are denied. At home, feeling stressed, you take pills both invented and prescribed by AI to keep your blood pressure in check. You stream a video starring "actors" generated by machine. And before you turn in, you wonder if collaboration between Big Tech and China means you should choose a new AI provider for your home. As Martin Ford shows in Rule of the Robots, AI will soon flow through our lives like electricity does today, remaking every sphere of human activity. Yet even as Ford maps out AI's disquieting future, he shows how we can prepare for it, advocating for policies such as universal basic income and educational reform. It's crucial that we take his words to heart.

Robotic Systems: Modelling, Technology and Applications Oct 29 2019 Robotics is a vast and dynamic discipline which has witnessed ample progress in the past decade. This book explores all the important aspects of robotic systems in the present day scenario. Significant topics in this field such as mechatronics, control and modeling of robotic systems, human-machine interaction, artificial intelligence in robotics, etc. have been extensively discussed in this text. It strives to provide a fair idea about this discipline and to help develop a better understanding of the latest advances within this field. This book includes contributions of experts and scientists which will provide innovative insights into this field. For all students who are interested in robotics, the case studies included in this book will serve as an excellent guide to develop a comprehensive understanding of the subject.

Aufstieg der Roboter May 17 2021 Künstliche Intelligenz wird immer intelligenter. Algorithmen machen unser Leben leichter, angenehmer, sicherer ... doch die Entwicklung hat auch eine gravierende Kehrseite: Immer mehr Menschen werden von der Technik verdrängt. Jobs für gering Qualifizierte, zum Beispiel in Fast-Food-Ketten und Supermärkten, fallen weg. Doch auch hoch Qualifizierte wie Radiologen werden von Computern ausgestochen, die deutlich schneller – und zuverlässiger – Diagnosen erstellen können.

Rise of the Robots Oct 02 2022

Artificial Intelligence & Robot Technology Jul 07 2020 Human Being is in a 4.0 revolution when technology is growing at the speed of light with artificial intelligence, robot and along with these accomplishments, we also make an enormous impact on our world. Climate change, pandemics, and other negative effects are threatening our lives. This book explores how humans will fit into an evolving ecosystem being impacted by artificial intelligence. We are entering the age of AI and robots when they could take as many as half the jobs in industrialized countries. On the other hand, robots are also making inroads as lovable companions, and they don't eat, drink water, or create waste.

Cooperating Robots for Flexible Manufacturing Jun 05 2020 This book consolidates the current state of knowledge on implementing cooperating robot-based systems to increase the flexibility of manufacturing systems. It is based on the concrete experiences of experts, practitioners, and engineers in implementing cooperating robot systems for more flexible manufacturing systems. Thanks to the great variety of manufacturing systems that we had the opportunity to study, a remarkable collection of methods and tools has emerged. The aim of the book is to share this experience with academia and industry practitioners seeking to improve manufacturing practice. While there are various books on teaching principles for robotics, this book offers a unique opportunity to dive into the practical aspects of implementing complex real-world robotic applications. As it is used in this book, the term "cooperating robots" refers to robots that either cooperate with one another or with people. The book investigates various aspects of cooperation in the context of implementing flexible manufacturing systems. Accordingly, manufacturing systems are the main focus in the discussion on implementing such robotic systems. The book begins with a brief introduction to the concept of manufacturing systems, followed by a discussion of flexibility. Aspects of designing such systems, e.g. material flow, logistics, processing times, shop floor footprint, and design of flexible handling systems, are subsequently covered. In closing, the book addresses key issues in operating such systems, which concern e.g. decision-making, autonomy, cooperation, communication, task scheduling, motion generation, and distribution of control between different devices. Reviewing the state of the art and presenting the latest innovations, the book offers a valuable asset for a broad readership.

The Robotics Divide Aug 27 2019 Societies survive in their environment and compete with each other depending on the technology they develop. Economic, military and political power are directly related to the available technology, while access to technology is key to the well-being of our societies at the individual, community and national level. The Robotics Divide analyzes how robotics will shape our societies in the twenty-first century; a time when industrial and service robotics, particularly for military and aerospace purposes, will become an essential technology. The book, written by experts in the field, focuses on the main technological trends in the field of robotics, and the impact that robotics will have on different facets of social life. By doing so, the authors aim to open the "black box" of a technology which, like any other, is designed, implemented and evaluated according to the economic and cultural patterns of a cosmopolitan society, as well as its relations of power. The Robotics Divide explores future developments in robotics technology and discusses the model of technological development and the implementation of robotics in this competitive market economy. Then the authors examine to what extent it is possible to determine the characteristic features of the robotic divide, namely in what ways the robotic divide differs from the digital divide, and how a model to integrate this technology can be developed without reproducing patterns of inequality and power that have characterized the advent of previous technologies. These issues – inequality, robotics and power – are of concern to robotics and advanced automation engineers, social scientists, economists and science policy experts alike.

Robot Technology and Applications Jan 01 2020

Rule of the Robots Nov 22 2019 The New York Times-bestselling author of Rise of the Robots shows what happens as AI takes over our lives Imagine it's 2030. You call a bank to discuss your loan application, but you don't get to talk to a person. The bank's AI has spoken: you are denied. At home, feeling stressed, you take pills both invented and prescribed by AI to keep your blood pressure in check. You stream a video starring "actors" generated by machine. And before you turn in, you wonder if collaboration between Big Tech and China means you should choose a new AI provider for your home. As Martin Ford shows in Rule of the Robots, AI will soon flow through our lives like electricity does today, remaking every sphere of human activity. Yet even as Ford maps out AI's disquieting future, he shows how we can prepare for it, advocating for policies such as universal basic income and educational reform. It's crucial that we take his words to heart.

Robots in Space Jan 31 2020 2008 Outstanding Academic Title, Choice Magazine Given the near incomprehensible enormity of the universe, it appears almost inevitable that humankind will one day find a planet that appears to be much like the Earth. This discovery will no doubt reignite the lure of interplanetary travel. Will we be up to the task? And, given our limited resources, biological constraints, and the general hostility of space, what shape should we expect such expeditions to take? In Robots in Space, Roger Launius and Howard McCurdy tackle these seemingly fanciful questions with rigorous scholarship and disciplined imagination, jumping comfortably among the worlds of rocketry, engineering, public policy, and science fantasy to expound upon the possibilities and improbabilities involved in trekking across the Milky Way and beyond. They survey the literature—fictional as well as academic studies; outline the progress of space programs in the United States and other nations; and assess the current state of affairs to offer a conclusion startling only to those who haven't spent time with Asimov, Heinlein, and Clarke: to traverse the cosmos, humans must embrace and entwine themselves with advanced robotic technologies. Their discussion is as entertaining as it is edifying and their assertions are as sound as they are fantastical. Rather than asking us to suspend disbelief, Robots in Space demands that we accept facts as they evolve.

Robots for Kids Sep 28 2019 Within the sphere of children's learning and play, the concept of robot and the application of actual robots are undergoing a dramatic expansion. Here the term "robot" refers to a growing range of interactive devices-including toys, pets, assistants to the disabled, and overtly educational tools-which are being used in ways that are expected to have profound and beneficial effects on how our children develop and grow. Robots for Kids: Exploring New Technologies for Learning opens with contributions from leading designers and researchers, each offering a unique perspective into the challenge of developing robots specifically for children. The second part is devoted to the stories of educators who work with children using these devices, exploring new applications and mapping their impact. Throughout the book, essays by children are included that discuss their first-hand experiences and ideas about robots. This is an engaging, entertaining, and insightful book for a broad audience, including HCI, AI, and robotics researchers in business and academia, new media and consumer product developers, robotics hobbyists, toy designers, teachers, and education researchers. * contributions by leaders in the fields of human-computer interaction and robotics * product development stories told by leading designers and researchers in organizations such as Microsoft, MIT Media Lab, Disney, and Sony * product application stories told by educators who are making robots a central part of kids' learning experiences, both in and out of the classroom * essays by kids-some, users of robotic technology, and others, designers in their own right

Rise of the Robots Nov 03 2022 Winner of the 2015 FT & McKinsey Business Book of the Year Award ANew York Times Bestseller Top Business Book of 2015 at Forbes One of NBCNews.com 12 Notable Science and Technology Books of 2015 What are the jobs of the future? How many will there be? And who will have them? As technology continues to accelerate and machines begin taking care of themselves, fewer people will be necessary. Artificial intelligence is already well on its way to making "good jobs" obsolete: many paralegals, journalists, office workers, and even computer programmers are poised to be replaced by robots and smart software. As progress continues, blue and white collar jobs alike will evaporate, squeezing working- and middle-class families ever further. At the same time, households are under assault from exploding costs, especially from the two major industries--education and health care--that, so far, have not been transformed by information technology. The result could well be massive unemployment and inequality as well as the implosion of the consumer economy itself. The past solutions to technological disruption, especially more training and education, aren't going to work. We must decide, now, whether the future will see broad-based prosperity or catastrophic levels of inequality and economic insecurity.Rise of the Robots is essential reading to understand what accelerating technology means for our economic prospects--not to mention those of our children--as well as for society as a whole.