

2017 Product And System Technical Training Course Catalog

This book is devoted to the customization design of product/service system (PSS), making use of a systematic design process and a number of methods, especially Industrial Customer Activity Cycle Analysis, Service Quality Function Deployment, Service Function and Attribute Analysis, Modified Service Blueprint, Multi-Objective Optimization and Multi-Criteria Recommendation Method. The book is especially valuable in manipulating the problems of PSS requirements analysis, design conflict, design reuse and proactively response to customer. The methods in the book facilitate modular design of customized solutions and enhance PSS design efficiency. Presenting case studies, this book helps researchers and practitioners to understand the customization process and methods in the early development of PSS.

This book provides basics and selected advanced insights on how to generate reliability, safety and resilience within (socio) technical system developments. The focus is on working definitions, fundamental development processes, safety development processes and analytical methods on how to support such schemes. The method families of Hazard Analyses, Failure Modes and Effects Analysis and Fault Tree Analysis are explained in detail. Further main topics include semiformal graphical system modelling, requirements types, hazard log, reliability prediction standards, techniques and measures for reliable hardware and software with respect to systematic and statistical errors, and combination options of methods. The book is based on methods as applied during numerous applied research and development projects and the support and auditing of such projects, including highly safety-critical automated and autonomous systems. Numerous questions and answers challenge students and practitioners.

Introduction to Information Systems, 8th Edition teaches undergraduate business majors how to use information technology to master their current or future jobs. Students develop a working understanding of information systems and information technology and learn how to apply concepts to successfully facilitate business processes. This program demonstrates that IT is the backbone of any business, whether a student is majoring in accounting, finance, marketing, human resources, production/operations management, or MIS.

The world's most comprehensive, well documented, and well illustrated book on this subject. With an extensive subject and geographical index. 76 photographs and illustrations. Free of charge in digital PDF format on Google Books.

ACCT3 Management is the Asia-Pacific edition of the proven 4LTR press approach to management accounting, designed to enhance students' learning experiences. The text is for teaching students learning the preparers/debits and credits approach and is presented in an easy-to-read and accessible style. This third edition includes a strong suite of student and instructor resources that enhance student learning and revision. New, print versions of this book come with

bonus online study tools on the CourseMate Express platform Learn more about the online tools
cengage.com.au/learning-solutions

This book: Strategic Management of Technological Innovation, Sixth Edition is written for courses that may be called strategic management of technology and innovation, technology strategy, technology innovation, technology management, or for specialized new product development courses that focus on technology. The subject is approached as a strategic process, and as such, is organized to mirror the strategic management process used in most strategy textbooks, progressing from assessing the competitive dynamics of a situation, to strategy formulation, to strategy implementation. Highlights: 1. Complete Coverage for Both Business and Engineering Students 2. New Short Cases and New Indian Cases 3. Cases, Data, and Examples from around the World 4. More Comprehensive Coverage and Focus on Current Innovation Trends

This book comprises select papers presented at the Conference on Innovative Product Design and Intelligent Manufacturing System (IPDIMS 2020). The book discusses the latest methods and advanced tools from different areas of design and manufacturing technology. The main topics covered include design methodologies, industry 4.0, smart manufacturing, and advances in robotics among others. The contents of this book are useful for academics as well as professionals working in the areas of industrial design, mechatronics, robotics, and automation. .

This book gathers the latest advances, innovations, and applications in the field of computational engineering, as presented by leading international researchers and engineers at the 24th International Conference on Computational & Experimental Engineering and Sciences (ICCES), held in Tokyo, Japan on March 25-28, 2019. ICCES covers all aspects of applied sciences and engineering: theoretical, analytical, computational, and experimental studies and solutions of problems in the physical, chemical, biological, mechanical, electrical, and mathematical sciences. As such, the book discusses highly diverse topics, including composites; bioengineering & biomechanics; geotechnical engineering; offshore & arctic engineering; multi-scale & multi-physics fluid engineering; structural integrity & longevity; materials design & simulation; and computer modeling methods in engineering. The contributions, which were selected by means of a rigorous international peer-review process, highlight numerous exciting ideas that will spur novel research directions and foster multidisciplinary collaborations.

This book examines how face recognition technology is affecting privacy and confidentiality in an era of enhanced surveillance. Further, it offers a new approach to the complex issues of privacy and confidentiality, by drawing on Joseph K in Kafka's disturbing novel The Trial, and on Isaiah Berlin's notion of liberty and freedom. Taking into consideration rights and wrongs, protection from harm associated with compulsory visibility, and the need for effective data protection

law, the author promotes ethical practices by reinterpreting privacy as a property right. To protect this right, the author advocates the licensing of personal identifiable images where appropriate. The book reviews American, UK and European case law concerning privacy and confidentiality, the effect each case has had on the developing jurisprudence, and the ethical issues involved. As such, it offers a valuable resource for students of ethico-legal fields, professionals specialising in image rights law, policy-makers, and liberty advocates and activists.

The sinuous form and peculiar evolution of meandering rivers has long captured the imagination of people. Today, meandering rivers exist in some of the most densely populated areas in the World, where they provide environmental and economic wealth and opportunities, as well as posing hazards. Through geological time, the ancestors of these modern meanders built deposits that are now host to mineral resources, groundwater, and hydrocarbons. This Special Publication illustrates the breadth of current research on meandering rivers and their deposits. The collection of research papers demonstrates the state of science on fluvial process–product relationships. The articles cover fundamental and applied studies of both modern and ancient rivers, are based on state-of-the-art technology, include complementary philosophical approaches, and span a wide range of spatial and temporal scales. This book includes some of the most recent advances in the study of the morphodynamics and sedimentology of meandering rivers, and is an important resource for those who want to investigate fluvial systems and their deposits.

Theoretical and practical interests in additive manufacturing (3D printing) are growing rapidly. Engineers and engineering companies now use 3D printing to make prototypes of products before going for full production. In an educational setting faculty, researchers, and students leverage 3D printing to enhance project-related products. Additive Manufacturing Handbook focuses on product design for the defense industry, which affects virtually every other industry. Thus, the handbook provides a wide range of benefits to all segments of business, industry, and government. Manufacturing has undergone a major advancement and technology shift in recent years.

Academic Paper from the year 2021 in the subject Law - IT law, grade: 1,3, Technical University of Munich (MCTS), language: English, abstract: This paper investigates the perspective of the European Patent Office (EPO) on intellectual property rights, particularly patents, for 3D-printed medical products. As a powerful regulatory body, the EPO is a key stakeholder in the regulation and handling of emerging technologies. As such a technology, 3D-printing may call policymakers to adapt the regulatory framework to deal with the specialities of 3D-printing and to increase legal certainty. Policymakers can profit from its insights for various reasons: What kind of new regulation may be needed largely depends on how executive organs such as EPO (attempt to) handle the respective technology. Also, insights from practitioners may help policymakers to identify issues that have been neglected by existing legislation – such as the

implications of emerging technologies like 3D-printing.

This book constitutes the refereed proceedings of the 15th International Conference on Practical Applications of Scalable Multi-Agent Systems, PAAMS 2017, held in Porto, Portugal, in June 2017. The 11 revised full papers, 11 short papers, and 17 Demo papers were carefully reviewed and selected from 63 submissions. The papers report on the application and validation of agent-based models, methods, and technologies in a number of key application areas, including day life and real world, energy and networks, human and trust, markets and bids, models and tools, negotiation and conversation, scalability and resources.

This book gathers selected research articles from the International Conference on Innovative Product Design and Intelligent Manufacturing System (ICIPDIMS 2019), held at the National Institute of Technology, Rourkela, India. The book discusses latest methods and advanced tools from different areas of design and manufacturing technology. The main topics covered include design methodologies, industry 4.0, smart manufacturing, and advances in robotics among others. The contents of this book are useful for academics as well as professionals working in industrial design, mechatronics, robotics, and automation.

This book is dedicated to the issues and complexities of industrial services supply chain management. It analyzes how the transition from products to services can be managed, and how supply chains can be adjusted to reflect this new status quo. The book begins with chapters examining product-service systems structures and servitization – the services infusion process. Next, it presents industrial services as marketing and operations strategy. The focus shifts to service delivery, and this chapter discusses how the actual operations take place. This is followed by an examination of the role of technology and how connected assets are utilized by product vendors in value-creation. The book analyzes the transition from ownership to subscriptions in the pricing decisions chapter. Then the value chain effects chapter offers an overview of the mechanisms through which industrial companies are shortening the distance to end-users and aim for a better position in the value chain. Finally the conclusion addresses theoretical and empirical implications in the industrial services supply chain management.

The two volumes IFIP AICT 397 and 398 constitute the thoroughly refereed post-conference proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2012, held in Rhodes, Greece, in September 2012. The 182 revised full papers were carefully reviewed and selected for inclusion in the two volumes. They are organized in 6 parts: sustainability; design, manufacturing and production management; human factors, learning and innovation; ICT and emerging technologies in production management; product and asset lifecycle management; and services, supply chains and operations. An Introduction to Young Children with Special Needs: Birth Through Age Eight is a comprehensive introduction to educational policies, programs, practices, and services for future practitioners serving young children with delays or disabilities in early intervention-early childhood special education (EI-ECSE). Thoughtfully addressing the needs of children at risk for learning or

development delays or disabilities, revered authors Richard M. Gargiulo and Jennifer L. Kilgo offer evidence-based interventions and instructional techniques that provide students with a broad understanding of important theoretical and philosophical foundations, including evidence-based decision making, developmentally appropriate practices, cultural responsiveness, and activity-based intervention. The Fifth Edition includes the latest developments in and influences on the field of early intervention and early childhood special education, including the Division for Early Childhood's (DEC) Recommended Practices, which are infused throughout the text. With the support of this current and innovative book, readers will gain a firm understanding of the complex field of EI-ECSE to assist them in their future study and careers. A Complete Teaching & Learning Package Contact your rep to request a demo, answer your questions, and explore the robust tools and resources available with this text. SAGE Premium Video Included in the interactive eBook! SAGE Premium Video tools and resources boost comprehension and bolster analysis. Learn more. Interactive eBook Your students save when you bundle the print version with the Interactive eBook (Bundle ISBN: 978-1-5443-6571-8), which includes access to SAGE Premium Video and other multimedia tools. Learn more. SAGE coursepacks SAGE coursepacks makes it easy to import our quality instructor and student resource content into your school's learning management system (LMS). Intuitive and simple to use, SAGE coursepacks allows you to customize course content to meet your students' needs. Learn more. SAGE edge This companion website offers both instructors and students a robust online environment with an impressive array of teaching and learning resources. Learn more.

Industry Competitiveness: Digitalization, Management, and Integration Volume 1 Springer Nature

Mastering the complexity of innovative systems is a challenging aspect of design and product development. Only a systematic approach can help to embed an increasing degree of smartness in devices and machines, allowing them to adapt to variable conditions or harsh environments. At the same time, customer needs have to be identified before they can be translated into consistent technical requirements. The field of Systems Engineering provides a method, a process, suitable tools and languages to cope with the complexity of various systems such as motor vehicles, robots, railways systems, aircraft and spacecraft, smart manufacturing systems, microsystems, and bio-inspired devices. It makes it possible to trace the entire product lifecycle, by ensuring that requirements are matched to system functions, and functions are matched to components and subsystems, down to the level of assembled parts. This book discusses how Systems Engineering can be suitably deployed and how its benefits are currently being exploited by Product Lifecycle Management. It investigates the fundamentals of Model Based Systems Engineering (MBSE) through a general introduction to this topic and provides two examples of real systems, helping readers understand how these tools are used. The first, which involves the mechatronics of industrial systems, serves to reinforce the main content of the book, while the second describes an industrial implementation of the MBSE tools in the context of developing the on-board systems of a commercial aircraft.

This volume constitutes the refereed proceedings of the 24th EuroSPI conference, held in Ostrava, Czech Republic, in September 2017. The 56 revised full papers presented were carefully reviewed and selected from 97 submissions. They are organized in

topical sections on SPI and VSEs, SPI and process models, SPI and safety, SPI and project management, SPI and implementation, SPI issues, SPI and automotive, selected key notes and workshop papers, GamifySPI, SPI in Industry 4.0, best practices in implementing traceability, good and bad practices in improvement, safety and security, experiences with agile and lean, standards and assessment models, team skills and diversity strategies.

The book focuses on smart computing for crowdfunding usage, looking at the crowdfunding landscape, e.g., reward-, donation-, equity-, P2P-based and the crowdfunding ecosystem, e.g., regulator, asker, backer, investor, and operator. The increased complexity of fund raising scenario, driven by the broad economic environment as well as the need for using alternative funding sources, has sparked research in smart computing techniques. Covering a wide range of detailed topics, the authors of this book offer an outstanding overview of the current state of the art; providing deep insights into smart computing methods, tools, and their applications in crowdfunding; exploring the importance of smart analysis, prediction, and decision-making within the fintech industry. This book is intended to be an authoritative and valuable resource for professional practitioners and researchers alike, as well as finance engineering, and computer science students who are interested in crowdfunding and other emerging fintech topics. This book looks at how to design complex products that have many components with intricate relationships and requirements. It also discusses how to manage processes involved in their lifecycle, from concept generation to disposal, with the objectives of increasing customer satisfaction, quality, safety, and usability and meeting program timings and budgets. Part I covers systems engineering concepts, issues, and bases in product design. Part II examines quality, human factors, and safety engineering approaches. Part III describes important tools and methods used in these fields, and Part IV includes other relevant integration topics, interesting applications of useful techniques, and observations from a few "landmark" product development case studies. This book features state-of-the-art contributions from two well-established conferences: Changeable, Agile, Reconfigurable and Virtual Production Conference (CARV2020) and Mass Customization and Personalization Conference (MCPC2020). Together, they focus on the joint design, development, and management of products, production systems, and business for sustainable customization and personalization. The book covers a large range of topics within this domain, ranging from industrial success factors to original contributions within the field.

These proceedings summarize the best papers in each research area represented at the 2015 Annual Meeting of the German Gesellschaft für Arbeitswissenschaft, held at Karlsruhe Institute of Technology (KIT) from February 26-28. The meeting featured more than 160 presentations and 30 posters reflecting the diversity of subject matter in the field of human and industrial engineering.

This licentiate thesis aims to establish the basis for scientifically understanding and supporting the cognitive processes involved in the conceptual design of resource- efficient and effective product-service systems (PSSs). The research carried out is transdisciplinary in nature and includes both prescriptive and descriptive studies. First, the cognitive nature of conceptual PSS designing is investigated. Multiple pre-experimental protocol studies in a laboratory setting are carried out to do so. The cohort of

these explorative studies includes experienced industrial practitioners conceptually designing a resource-efficient PSS. These descriptive studies provide quantitative insights into the cognitive effort expended by designers on various design issues and processes during conceptual PSS designing and its potential differences to conceptual product designing. These insights form the basis for future research that can eventually shine light on this complex process with statistically significant empirical results. Second, the essence of extant prescriptive PSS design principles, methods and tools is distilled through a literature analysis and synthesis of the state of the art. Subsequently, important aspects that need to be considered during conceptual PSS designing are consolidated in the form of a PSS design schema. Third, a design navigator named lifecycle-oriented function deployment (LFD) is developed. LFD is essentially a contextual decision-making support tool, developed to guide the conceptual designing of environmentally benign PSSs. This tool informs the designers regarding the potential environmental impacts of specific design parameters of an existing offering. It subsequently guides the designers in the redesign of this existing offering into a PSS with relatively benign environmental impacts. Fourth, the effects of the two proposed prescriptions are tested empirically. True experimental protocol studies are carried out in a laboratory setting to test the effects of the prescriptive PSS design schema on the cognition of PSS designers. LFD is applied in an industrial case study using the action design research method, to support the conceptual redesign of an existing product-centric offering into an environmentally benign PSS. Environmental impacts of the PSS concepts generated using LFD are then evaluated in comparison to that of the existing offering, using simulated lifecycle assessment. A semi-structured interview is carried out to evaluate the utility and usability of LFD, with the company personnel involved in the conceptual redesign process. This licentiate thesis is an effort to effectively design the future research work of the author. This future work will aim to support and establish generalizable scientific knowledge regarding the conceptual designing of resource-efficient and effective PSSs.

This book, with contributions by both leading scholars and industry experts, provides a coherent framework for understanding complex determinants and patterns of industry competitiveness. Divided into eight parts, it covers both quantitative and qualitative research on the following topics: technologies, economic development, and human resources in Industry 4.0; management in the digital economy; artificial intelligence and knowledge management approaches; drivers of sustainable and innovative development in corporations; resilient and competitive systems in the energy sector; compliance and anti-corruption mechanisms; and competence networks and technological integration. Thanks to its highly stimulating discussions on the determinants and patterns of industry competitiveness, this book appeals to a wide readership.

Smart Cities for Technological and Social Innovation establishes a key theoretical framework to understand the implementation and development of smart cities as innovation drivers, in terms of lasting impacts on productivity, livability and sustainability of specific initiatives. This framework is based on empirical analysis of 12 case studies, including pioneer projects from Europe, Asia, the Middle East, and more. It explores how successful smart cities initiatives nurture both technological and social innovation using a combination of regulatory governance and private agency. Typologies of smart city-making approaches are explored in depth.

Integrative analysis identifies key success factors in establishing innovation relating to the effectiveness of social systems, institutional thickness, governance, the role of human capital, and streamlining funding of urban development projects. Cases from a range of geographies, scales, social and economic contexts Explores how smart cities can promote technological and social innovation in terms of direct impacts on livability, productivity and sustainability Establishes an integrative framework based on empirical evidence to develop more innovative smart city initiatives Investigates the role of governments in coordinating, fostering and guiding innovations resulting from smart city developments Interrogates the policies and governance structures which have been effective in supporting the development and deployment of smart cities

These proceedings summarize the best papers in each research field represented at the 2016 Annual Meeting of the Human Factors and Ergonomics Society (GfA) in the German-speaking area, held at Institute of Industrial Engineering and Ergonomics of RWTH Aachen University from March 2–4. The meeting featured more than 200 presentations and 36 posters reflecting the diversity of subject matter in the field of human and industrial engineering. This volume addresses human factors and safety specialists, industrial engineers, work and organizational psychologists, occupational medicines as well as production planners and design engineers.

This book addresses the gap between innovative technologies and their adoption. It showcases research, feasibility studies and projects that demonstrate a variety of ways to implement environmental sustainability in globally operating firms, as well as best practices in areas such as international management, adoption of cleaner technologies, global supply chains, greenhouse gas emission reduction, and transportation. The book provides state-of-the-art information on issues including: Global sustainable management practices Global sustainable food and agricultural markets Global responsible mining and energy Global sustainable sourcing Global sustainable transportation Global conservation innovations and investments Presenting expert contributions from industry, government and academia, discussing a variety of themes and perspectives on the topic "international business as a positive force of environmental sustainability" it is a vital resource for stakeholders in the international business community.

Food Science and Technology: Trends and Future Prospects presents different aspects of food science i.e., food microbiology, food chemistry, nutrition, process engineering that should be applied for selection, preservation, processing, packaging, and distribution of quality food. The authors focus on the fundamental aspects of food and also highlight emerging technology and innovations that are changing the food industry. The chapters are written by leading researchers, lecturers, and experts in food chemistry, food microbiology, biotechnology, nutrition, and management. This book is valuable for researchers and students in food science and technology and it is also useful for food industry professionals, food entrepreneurs, and farmers.

A comprehensive overview of current developments and applications in biofuels production Process Systems

Engineering for Biofuels Development brings together the latest and most cutting-edge research on the production of biofuels. As the first book specifically devoted to process systems engineering for the production of biofuels, Process Systems Engineering for Biofuels Development covers theoretical, computational and experimental issues in biofuels process engineering. Written for researchers and postgraduate students working on biomass conversion and sustainable process design, as well as industrial practitioners and engineers involved in process design, modeling and optimization, this book is an indispensable guide to the newest developments in areas including: Enzyme-catalyzed biodiesel production Process analysis of biodiesel production (including kinetic modeling, simulation and optimization) The use of ultrasonification in biodiesel production Thermochemical processes for biomass transformation to biofuels Production of alternative biofuels In addition to the comprehensive overview of the subject of biofuels found in the Introduction of the book, the authors of various chapters have provided extensive discussions of the production and separation of biofuels via novel applications and techniques.

Smart Product-Service Systems draws on innovative practice and academic research to demonstrate the unique benefits of Smart PSS and help facilitate its effective implementation. This comprehensive guide explains how Smart PSS reshapes product-service design in several unique aspects, including a closed-loop product design and redesign manner, value co-creation with integrated human-machine intelligence, and solution design context-awareness. Readers in industry as well as academia will find this to be an invaluable guide to the current body of technical knowledge on Smart Product-Service Systems (Smart PSS), future research trajectories, and experiences of implementation. Rapid development of information and communication technologies, artificial intelligence, and digital technologies have driven today's industries towards the so-called digital servitization era. As a result, a promising IT-driven business paradigm, known as Smart Product-Service Systems (Smart PSS) has emerged, where a large amount of low cost, high performance smart, connected products are leveraged, together with their generated on-demand services, as a single solution bundle to meet individual customer needs. Explains what factors a company needs to consider in their transition towards digital servitization and its advantages Describes how this field relates to the sustainability movement, and how Smart PSS can be implemented in a sustainable way Includes detailed case studies from different industries, including DELTA Electronics Inc. Singapore (smart commercialization), COMAC aviation industry (smart manufacturing servitization), and Van High Tech (smart building services)

This document provides the comprehensive list of Chinese Industry Standards - Category: QC; QC/T; QCT.

Healthcare Information Technology Project Management in the current state isn't working well enough! Not for lack of trying, or lack of skill, or lack of commitment, but for lack of the proper tool set. This book introduces the Lean Integrated

Project Delivery and the Lean Construction Institute's methodology referred to as the Last Planner System of Production Control(R) to Healthcare IT. It is designed to walk you through the steps quickly and easily; a "Vade Mecum" which is Latin for "go with me." Used since the 1600's as a term for guidebooks sufficiently compact to be carried in a pocket, from the beginning, Vade Mecum has also been used for such constant companions as gold, medications, and gems of wisdom. "This book is not just another Project Management book. The tools provided in this book will help deeply integrate IT projects into the business of our Healthcare System, both in clinical and business environments." Michael Garcia, SVP and CIO, Jackson Health System, Miami

Information is considered essential in every business model, which is why staying abreast of the latest resources can help combat many challenges and aid businesses in creating a synthesis between people and information, keeping up with evolving technologies, and keeping data accurate and secure. The Handbook of Research on Knowledge Management for Contemporary Business Environments is a critical scholarly publication that examines the management of knowledge resources in modern business contexts. Including a wide range of topics such as information systems, sustainable competitive advantage, and knowledge sharing, this publication is a vital reference source for managers, academicians, researchers, and students seeking current research on strategies that are able to manage the information in more than one context for present and future generations.

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