

HANSER Specialist Books

COMPUTER / TECHNOLOGY / SCIENCE

RIGHTS GUIDE

**January - June
2017**

Contact: [Gabriele Josiger](mailto:gabriele.josiger@hanser.de) · Carl Hanser Verlag · Kolberger Str. 22 · 81679 Munich · GERMANY
T +49-89-998 30-201 · F +49-89-998 30-227 · gabriele.josiger@hanser.de



Digital Transformation – Practical Knowledge

Understanding Change, Developing Solutions, Increasing Value

ISBN: [978-3-446-45195-7](https://www.hanser.de/978-3-446-45195-7)

270 pages, Hardcover

Publication date: May 2017

Continuously improving the interplay of services, processes, hard- and software to master the new digital paradigm!

Nothing has changed our daily lives, our work and our surroundings more than the Internet and the smartphone. The Internet connects society, automation revolutionizes industry and robots take over our jobs.

Business models that are based on the **Internet of Things (IoT)** require a continuing optimization of the entire value-adding chain. This also requires the steady development of services, processes and software. This book offers a blueprint for this task. It lays out various application areas, effects on society and the consequences on our employment.

- Strategies, Actions and Principles of a Successful Digital Transformation
- Description of the Fundamentals and Triggers
- Considers the Various Branches
- Contains Practical Advice from Pros
- Many Examples
- Supporting Material for downloading

Ernest Wallmüller studied Data Technology and Computer Science. He wrote his thesis about Software Engineering in Application Development and habilitated about Process and Quality Engineering in the area of Information Systems. He is a Scrum-Master and teaches at various universities all over Europe.



**Smart Services and Internet of Things:
Business Models, Implementations and Best Practices**
Industrie 4.0, Internet of Things (IoT) Machine-To-Maschine, big
Data, Augmented Reality Technology

ISBN: [978-3-446-45184-1](https://www.hanser.de/978-3-446-45184-1)

250 pages, Hardcover

Publication date: **May 2017**

This compendium “Smart-Service.World“ offers valuable and applicable ideas how enterprises, in the age of digitization and machine communication, such as Industry 4.0, Internet of Things (IoT), Machine To Machine communication (M2M) can become successful. It lays out a spectrum of present best-practice action models and provides comprehensive recommendations for state-of-the-art solutions that will shape the digital transformation.

This practical guide particularly addresses professionals and leaders in the industry and seeks to inspire them to successfully realize value-added products and services in the Internet of Things.

The reader will find valuable help with the description of methodical tools, practical examples of successful implementations, systematic processes and check lists. It covers the business-to-business (B2B) as well as the business-to-consumer (B2C) area.

The book will support leaders, decision makers and enterprises in an easy- to-understand and practical way for a successful adaptation to a challenging future.

The book ...

- Delivers a “state-of-the-art overview” in the areas of digitization, Industry 4.0 and IoT
- Describes the model of a Smart-Service World based on essential factors for success
- Demonstrates how enterprises can take advantage of digitization in the marketplace by developing profitable business models and smart services
- Provides concrete guidelines for applications and implementations using the best practice approach
- Presents an outlook of future development concerning digitization that management and companies had better pay attention to.



Scenarios of a Digital World Today and Tomorrow

How the Digital Transformation Changes our Lives

ISBN: [978-3-446-45202-2](https://www.hanser.de/978-3-446-45202-2)

270 pages, Hardcover, full colour

Publication date: May 2017

Digital Transformation: Where Do We Stand? What Will Change? Where Are We Heading?

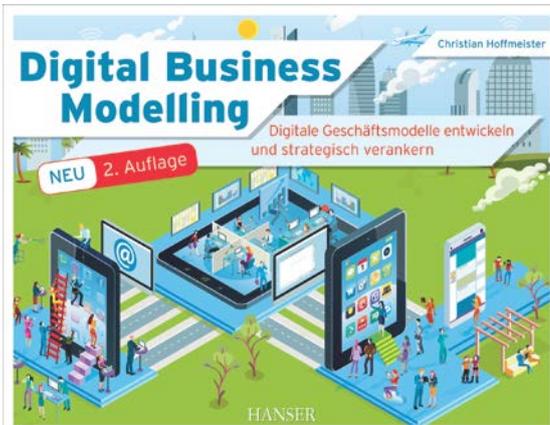
This book presents a unique overview of current and coming changes caused by digital progress, globally and locally. It is applied to 8 areas in society, economy and politics! The text offers a well-founded basis for strategic decisions and innovations using particular examples, operating options and visual futuristic scenarios.

- Well-founded analyses unconventionally presented, coupled with positive and critical positions
- Late development projects, trend analyses and recommendations for actions
- Complex and complicated subject is presented in a vivid and entertaining way
- Balanced, interdisciplinary and multifaceted perspective
- Blog and extra content: animations, sound - and video files and current developments.

The book addresses, among many others, the following questions:

- What, exactly, is “Digital Transformation?” How and where does it manifest itself?
- Where do we presently find hardware, software and digital services and how do these affect us in our private and professional spheres and in society as a whole?
- How do they impact our social life, our job, mobility, home, our use of health care, leisure, media, our consumption and our overall involvement?
- What will change and what will stay the same, what will disappear? What can and what must we prepare for and what can or should we do?

Thomas Hendrik Klauß is a project manager, planner and consultant for digitization projects. His clients cover the spectrum from the International Blue Chip Company to the small startup and from government agencies to non-profit organizations. **Annika Mierke** is the founder of “das Stilbüro,” a company for design and communication. Annika Mierke consults, plans and realizes communication concepts in the online and offline realms.



Digital Business Modelling

Digital Business Models – Development and Strategic Anchoring
2nd Edition

ISBN: [978-3-446-45176-6](https://www.hanser.de/978-3-446-45176-6)

400 pages, Hardcover, full colour

Publication date: March 2017

Make your own objects and learn about their inherent technical features

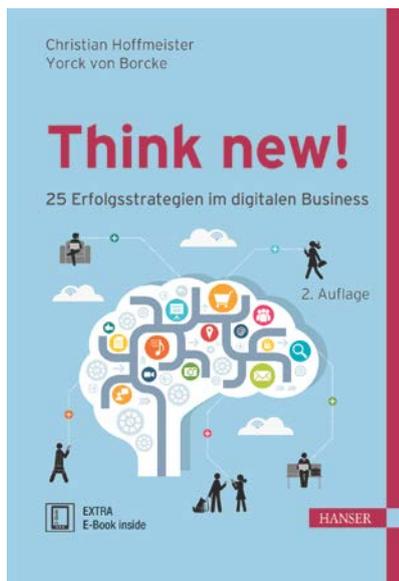
The Digital Value Creation Framework offers a model to create new, successful business models and monitor existent ones. Find out what the customer really wants!

- Actual action guide for digital business models
- All you need to know about the digital economy
- Contains vivid graphics and many practical applications

The changes brought about by the digitization are fundamental, disruptive and revolutionary. Companies can reap enormous benefit, but can also run significant risks. The core question is the following: How to create value in a digital and intangible network economy?

This book imparts the relevant basic knowledge about digital business models and presents the tool “Digital Value Creation (DVC) Framework.” DVC Frameworks can be used to develop and realize new and valuable transformation approaches. Not only that, the intrinsic value of existing business and organization models can be examined and further enhanced. The reader will find a concrete and actionable guide for using the tool for searching new model designs. The text is made more accessible with the use of many examples that help in the practical transfer of the acquired knowledge.

Christian Hoffmeister is a managing partner of the DCI Institute GmbH. The main focus of his work is consulting and support of companies that have been affected by business model - and technology disruption.



Think new!

25 Successful Strategies for Digital Business
2nd revised Edition

ISBN: [978-3-446-45178-0](https://www.hanser.de/978-3-446-45178-0)

220 pages, Hardcover

Publication date: March 2017

What is it that Apple, Google & Co. gets right? How can the rest of us learn from the success of these giants?

- 25 successful strategies for the digital age
- Very applicable in the field
- With many examples and concrete hints

Apple, Google, Facebook and Amazon are the models of many managers in their quest to navigate the digital age. But only a very few players seem to succeed in emulating the success of these giants. This raises the question: What are Apple and the others doing right?

The authors have worked out 25 principles that are the foundation for the success of these companies. The book presents these principles in their theoretical foundation and practical application. The transfer to one's own business is supported with many examples and concrete advice.



Facilitating the Digital Transformation in Your Own Business

Business Models, Ingredient for Success, Case Studies, Guidelines

ISBN: [978-3-446-44678-6](https://www.hanser.de/978-3-446-44678-6)

296 pages, Hardcover

Publication date: **October 2016**

This book shows how to actively manage and master the digital transformation and take advantage of its opportunities!

- Successful and sustainable development of digital business models
- Successful building blocks, capabilities and potentials for leading digitization projects
- Opportunities with intelligent, linked products and with the Internet of Things
- From Big Data to Smart Data

Digitization has quickly developed from a catchword to a strategic economic factor. As not all businesses move along the digital transformation with the same pace, not one industry can refuse to be part of this development. In order to stay viable, the economic player must actively shape the digital transformation and take advantage of the resulting opportunities. Shaping the digital transformation does not only involve the IT department; it is rather a job for the entire company.

Leading authors from inside and outside of academia demonstrate how to successfully design and apply the digital transformation, using strategic contributions and case studies from all different segments of the economy. The text presents guidelines, check lists, success factors and obstacles to ease the practical application.

Professor Oliver Gassmann teaches Technology and Innovation Management at the St. Gallen University. He is also chairman of the Institute for Technology Management at the school.

Philipp Sutter is CEO of the Zühlke Engineering AG in Schlieren, Zurich, Switzerland.



The Fairness Factor –
The Secret of Successful Negotiation

ISBN: [978-3-446-45186-](https://www.hanser.de/978-3-446-45186-1)
200 pages, Hardcover
Publication date: **June 2017**

This book presents a number of negotiating tools that serve as a framework for positive and mutually beneficial negotiating relationships.

For this, one must:

- Have insight into of both negotiating partners' point of view, in order to realize your own and the other's objective.
- Find ways to argue your point and develop arguments to support your objective
- Visualize alternatives in order to reach an agreement with the other side
- Convince the other side through the use of positive and respectful language and active listening.

Further, the authors examine the possible impact of emotions on the result of negotiations. Is there a "silver bullet" out of the tool chest of emotions that yield success? Henning Beck and Birgit Hauser also ask if it makes a difference whether the negotiators have a positive or negative attitude. The text answers these questions and, in addition, offers many practical examples, tips and fun stories from the pages of the negotiating lore.

Henning Beck has a degree in neurobiology and gives popular lectures about subjects such as brain research and creativity. In November 2012 he won the championship of the Science Slam contest.

Birgit Hauser has a business as a mediator since 2009. Before, she had a career as a Human Resource manager with a publicly traded company.

#makers DO IT.



3D-Printing ... and what's next?

Processing, Joining and Finishing
of Your 3D-Printed Parts

ISBN: [978-3-446-45062-2](https://www.hanser.de/978-3-446-45062-2)

300 pages, paperback, full color

Publication date: **March 2017**

Are you enthusiastic about the opportunities of 3D-printing? Have you already printed your first part? Then you know that the printed product is not quite the finished product. After printing comes the interesting part: The parts must be fitted, painted or bonded. This book will show you how the 3D-printed parts can be processed, finished and joined in order to yield an aesthetically pleasing and functional product.

You will learn

- How to design the 3D-printed component in order to achieve the best possible result, while mastering the challenges of voids, variable wall thicknesses or excess stock
- How to handle the digital data (slicing), in order to allow the highest degree of post-printing manipulation
- How to process 3D-printed parts, applying filing, grinding, drilling, milling, molding and laser cutting operations!
- How 3D-printed parts can be joined, either with screws, rivets or through soldering or bonding.
- How to finish 3D-printed parts, using techniques such as sealing, painting, lacquering or printing.

The author **Hartmut Rother** uses many practical examples from the tricks of the trade to turn your 3D-printed part into the exact item that satisfies your expectation in terms of form and function. **Hartmut Rother** is a project manager and designer. He devotes his free time to functional model building, respectively micro model construction.

#makers DO IT.



Do Something with Arduino!

Get Involved and Get Going with a Drum Machine, Robot Car and the Like

ISBN: [978-3-446-45128-5](https://www.hanser.de/978-3-446-45128-5)

200 pages, paperback, full color

Publication date: **May 2017**

Do you own an Arduino and are you excited to put the smart microcontroller into action?

This is a truly practical book with 10 exciting projects. You will learn everything you need to know in order to get the most out of your Arduino. It covers areas from hardware- and electronic use, sketch programming to the combination with other microcontrollers.

You will learn

- How to write and execute programs in the Arduino environment
- What electronic basis knowledge you must have in order to advance from software- to hardware developer
- How to build your first circuit, using breadboard, LEDs, feelers, resistors, and the like.
- How to make and share your Arduino circuit diagrams using Fritzing & Co.
- On the Internet website: All sketches of the examples from the book

Robert Jänisch and Jörn Donges will show you what you can do with Arduino. Think of things like a world alarm clock, a miniature weather station, a plant watering installation; or an Arduino driven drum machine or a self-driving robot car!

If you can't wait to realize your own Arduino projects, this is the right book for you. It delivers the skills to put Arduino into action. The inventor in you will find a host of projects, from easy to tricky. Thus there is something for every level of knowledge and interest. Nothing will hold you back any longer!

Robert Jänisch is the founder of IOX LAB, a certified IT business manager and is responsible for transformation projects for over 17 years. His main focus is the Internet of Things and Industry 4.0. He actively supports the Rhineland maker community with the organization of Arduino meetups.

Jörn Donges has a university degree in physics and works as a free-lance technical editor.

#makers DO IT.



CAD for Makers

Design Your Own DIY Objects with Autodesk 123D, FreeCAD, SketchUp & TinkerCAD.
For 3D-Print, Laser Cutting, etc.

ISBN: [978-3-446-45020-2](https://www.hanser.de/978-3-446-45020-2)

300 pages, paperback, full color

Publication date: April 2017

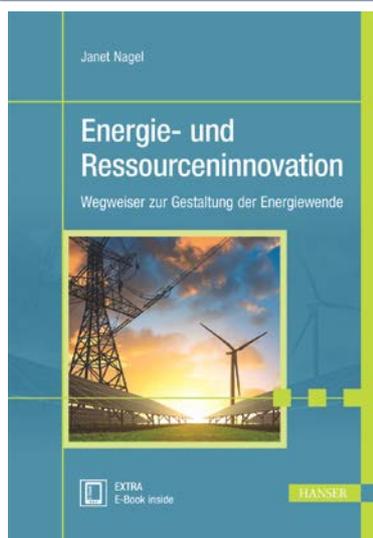
**CAD for Makers – Design Cool Objects
for 3D-Print, Laser Cutting etc**

Do you love putting your own ideas into reality? Do you like to make objects from wood, plastic, or metal? Then you know that paper and pencil are good for a rough sketch, but to make an actual object one needs a digital model. This book will show you everything you need to know about how to create a CAD model for your project in no time – and for free!

You will learn step by step

- The basic CAD knowledge you need to master in order to successfully work with the software of your choice
- Which projects are best suited for Autodesk 123D, FreeCAD, Onshape, SketchUp, TinkerCAD etc.
- How 3D scanning is used to generate your model
- How to create a 2D sketch (DFX) of your model, for instance for laser cutting
- How to generate your CAD model for milling or 3D printing STL (Stereo Lithography)
- How to enter and process STL data in your CAD program
- On the website: CAD models of projects from the book

The author **Ralf Steck** uses many interesting projects to demonstrate what CAD can do for you. Some of these are light swords and action figures, laser cut busts or a 3D model of a house. Regardless whether you work with a 3D printer, milling machine, or laser cutter, this book provides all necessary CAD skills that you need in order to realize your favorite project. **Ralf Steck** studied mechanical engineering and has worked as a freelance specialized journalist since 1996. He also maintains the blog EngineeringSpot.de about hardware and software for digital product development. His hobbies are tinkering with 3D printers and vintage cars; he loves sailing and photography.



Energy and Resources Innovation Guide for Shaping the Energy Paradigm

ISBN: 978-3-446-45200-8
280 pages, Hardcover
Publication date: **March 2017**

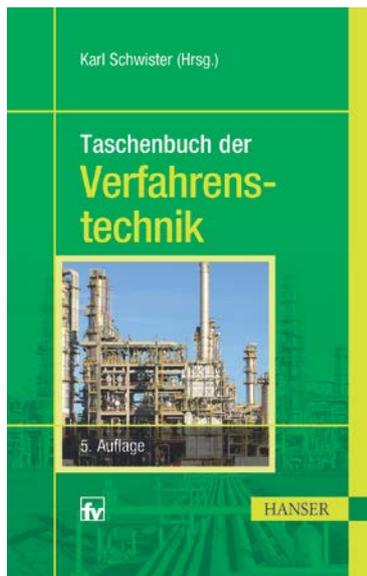
Only Innovation Will Make the Energy Paradigm Work

The energy paradigm moves all of Germany. Nuclear energy is supposed to be replaced with renewable sources. The energy industry will go through fundamental changes. This book will show us the problems and possible solutions:

- How best to integrate volatile energies into the system of energy generation?
- What is the role of conventional energy sources in the future?
- What are the future requirements of energy storage?
- What are the opportunities and potentials of renewable energies and combined heat and power generation in Europe?
- How to evaluate renewable energy?
- What approaches, in terms of supporting decision-making-models, do we have?

The reader will find out which innovations are applicable in the redesign of energy generation and which innovations must yet be created. The text provides a comprehensive introduction to innovation management and gives practical examples for this salient point. This book is a “must” for every person involved in the new energy paradigm.

Janet Nagel teaches Renewable Energies at the Beuth University for Applied Science in Berlin. She is also the owner of “SunSolutions – Process and Management Consulting.”



Pocketbook of Process Technology

ISBN: [978-3-446-44778-3](https://www.hanser.de/978-3-446-44778-3)

665 pages, Paperback

Publication date: April 2017

This pocketbook provides a compact, easy-to-understand and practice oriented general overview of process technology.

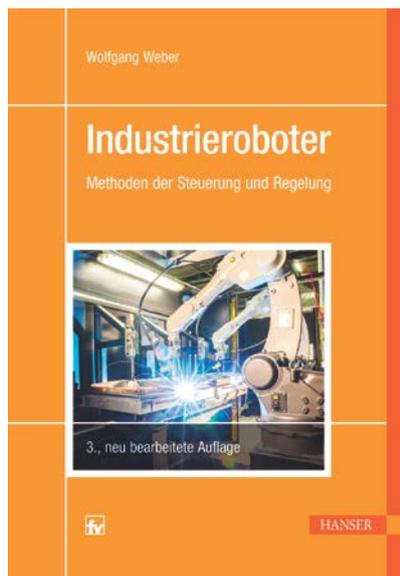
It clearly combines the basic features of all sub-categories such as:

- Mechanical Process Technology
- Thermal Process Technology
- Chemical Process Technology
- Biological Process Technology
- Also: examples of practical applications from the various segments of industry and environmental technology.

Selling points:

- Compact, interdisciplinary reference work for all subjects of process technology with examples from industry and environmental technology
- Practice oriented and clear layout
- Contains helpful hints for professional guidance for students and graduates whose major is related to process technology
- Very well suited to work out process technological problems, for repetition of course work and preparation for tests and exams.
- For students of engineering and natural sciences at technical universities; engineers and technicians in science and industry; managers and industrial engineers involved with environmental and process technological problems; teachers and students at technical and trade schools.

The publisher, **Karl Schwister**, Ph.D., is a professor for chemistry and biological process technology at the University of Applied Sciences in Düsseldorf.



Industry Robots

Methods for Controlling and Handling

ISBN: [978-3-446-43355-7](https://www.hanser.de/978-3-446-43355-7)

242 pages, Paperback

Publication date: February 2017

Industry Robots – A Compact Introduction for Students and Engineers

Introduction to the interdisciplinary subject of robot technology: description of motions, programming and controlling industry robots.

This book addresses students of technical subjects and computer science and provides a basic course in positioning, interpolation, programming and controlling of industrial robots. The text contains a step-by-step introduction to the essential math methods, using simple and applicable examples. Practitioners in the industry who develop advanced and powerful control concepts will find an efficient access for modeling and controlling.

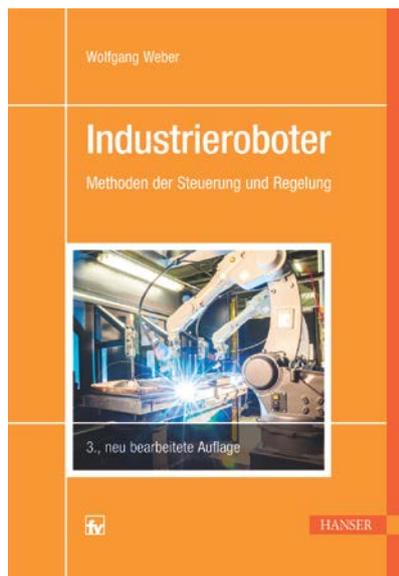
The internet site <http://www.weber-industrieroboter.h-da.de> provides the development- and visualization tool ManDy. Robotic arms with 2 to 10 joints can be defined. Motions of an industry robot can be programmed with a simple, menu driven language. It can be visualized with a solid model, and the motions can be simulated. In addition to ManDy, examples and exercises can be recreated and solved using the included MATLAB-M-Files.

The 3rd edition has been completely reviewed and updated.

Available on the website <http://www.weber-industrieroboter.h-da.de>

- -Design- and visualization tool ManDy
- -Matlab-Files for examples and exercises
- -Solutions to the problems in the book
- -Additional examples

Professor Wolfgang Weber teaches Control Technology/Robotic Technology at the Department Electrical Engineering and Information Technology of the Technical University Darmstadt.



Industry Robots

Methods for Controlling and Handling

ISBN: [978-3-446-43355-7](https://www.hanser.de/978-3-446-43355-7)

242 pages, Paperback

Publication date: February 2017

**CAD for Makers – Design Cool Objects
for 3D-Print, Laser Cutting etc**

Do you love putting your own ideas into reality? Do you like to make objects from wood, plastic, or metal? Then you know that paper and pencil are good for a rough sketch, but to make an actual object one needs a digital model. This book will show you everything you need to know about how to create a CAD model for your project in no time – and for free!

You will learn step by step

- The basic CAD knowledge you need to master in order to successfully work with the software of your choice
- Which projects are best suited for Autodesk 123D, FreeCAD, Onshape, SketchUp, TinkerCAD etc.
- How 3D scanning is used to generate your model
- How to create a 2D sketch (DFX) of your model, for instance for laser cutting
- How to generate your CAD model for milling or 3D printing STL (Stereo Lithography)
- How to enter and process STL data in your CAD program
- On the website: CAD models of projects from the book

The author **Ralf Steck** uses many interesting projects to demonstrate what CAD can do for you. Some of these are light swords and action figures, laser cut busts or a 3D model of a house. Regardless whether you work with a 3D printer, milling machine, or laser cutter, this book provides all necessary CAD skills that you need in order to realize your favorite project. **Ralf Steck** studied mechanical engineering and has worked as a free-lance specialized journalist since 1996. He also maintains the blog EngineeringSpot.de about hardware and software for digital product development. His hobbies are tinkering with 3D printers and vintage cars; he loves sailing and photography.



Gripper to move

ISBN: [978-3-446-44241-2](https://www.hanser.de/978-3-446-44241-2)

242 pages, Paperback

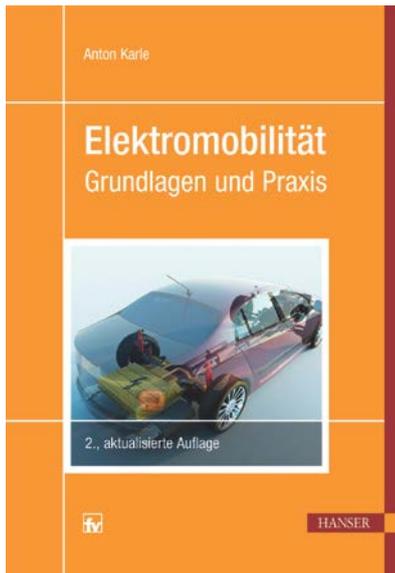
Publication date: **November 2016**

Programmable handling and gripping processes have great potential for automation, yet are often difficult to implement on the shop floor. This book will show how, after the right components have been selected for the required application, a viable project will come to fruition.

The richly illustrated text details the history of automation and progresses from the fundamentals of gripping and handling to the core component of the process, which is the workpiece. It defines the starting situation, the constraints and the continuing motions of the process. Considering the practical orientation, the scope of the text spans from the explanation of simple linear motions to multi-axes kinematics. Application examples are woven into the pertinent text sections of the book. Many examples will show how automation technology is applied in the automobile, electronic, plastic and food industries.

Dr.-Ing. Andres Wolf is CEO of robomotion GmbH, Leinfelden Echterdingen

Henrik A. Schunk is managing partner of SCHUNK GmbH & Co. KG, Lauffen/Neckar



Electromobility

Fundamentals and Praxis
2nd Edition

ISBN : [978-3-446-45099-8](https://www.hanser.de/978-3-446-45099-8)

250 pages, paperback

Publication date: **December 2016**

The increasing availability of electrical cars leads to their ever-increasing importance. Their advantages: to be pollution-free during use, quiet, and low operating costs are contrasted by the disadvantages such as high purchase price and limited range.

This textbook imparts the physical and engineering fundamentals of e-cars compared to cars with a combustion engine. Core statements are supported with calculating basics and simulators. It discusses the legislative framework and the integration with the new energy paradigm. The text discusses the pros and cons of e-vehicles based on the available models on the market and a cost analysis. The author illuminates opportunities and risks of future developments.

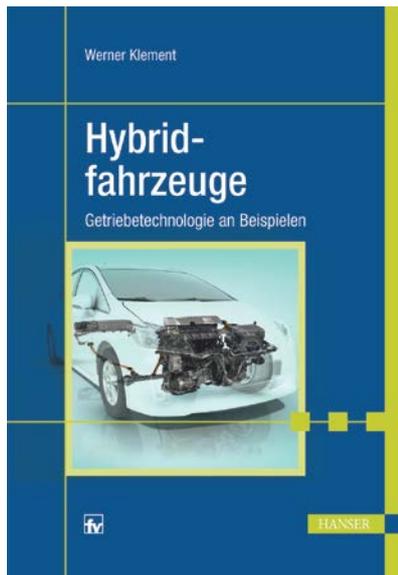
The book provides a fact-based overview of the e-car through a solid description of the technology, the market, and the social framework. As a corollary of these it examines the justification of e-cars and what future developments might hold.

From the contents:

E-vehicles; Basics of Power Trains and Elements of Electric Drives: Electric Motor, Energy Storage, Charging Infrastructure, Energy Management; Power Consumption Calculations; Energy Supply; Cost Calculation; Environmental Impact; Rules and Regulations; Market.

Professor Anton Karle has worked for many years as a research engineer in the automotive industry. Today he is an instructor at the University of Applied Science in Furtwangen; some of the subjects he teaches are technological mechanic, control technology and project management.

The second edition was completely updated.



Hybrid Vehicles Examples of Transmission Technology

ISBN : [978-3-446-43494-3](https://www.hanser.de/978-3-446-43494-3)

200 pages, paperback

Publication date: March 2017

Requirements and Interplay of Hybrids at One Glance

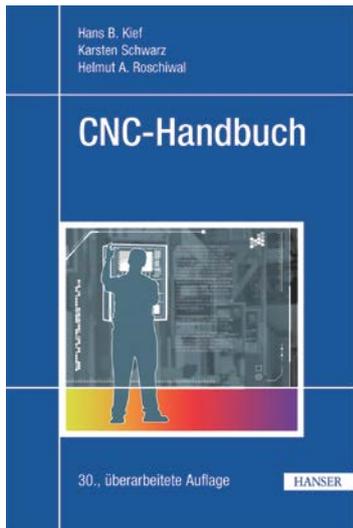
This book presents the fundamentals of hybridization and their functions in a wider context. For this, it deduces and develops the necessary basics as they pertain to power-split concepts. The text does not focus on electric drives or technical details of stated hybrid drives but on the system requirements and their foundations. The author points out the potential of the application of additional electric machines and the usages of these components based on the requirements of a car.

The text presents distinctive explanations for:

- Fundamentals of drives
- Requirements of the vehicle
- Potential benefits of hybridization
- Actual general concepts as examples

This textbook, because of its distinctive examples, provides a practical overview of the fundamentals of hybrid technology and its holistic application. Doing so, it does not lose sight of its benefits. The acquired knowledge can be deepened with exercises, to be found in the last part of the book. The solutions of the exercises are at www.hanser-fachbuch.de.

Professor Werner Klement teaches construction principles and drive technology at the Department of Vehicle Technology of the Technical University Esslingen. He is a dean and head of the Graduate Program Vehicle Technology.



CNC Handbook

CNC, DNC, CAD, CAM, FFS, SPS, RPD, LAN, CNC Machines, CNC Robots, Drives, Energy efficiency, Tools, Industry 4.0, Fabrication Technology, Standards, Norms, Simulation, Glossary

ISBN : [978-3-446-45173-5](https://www.hanser.de/978-3-446-45173-5)

766 pages, FlexCover

Publication date: February 2017

Chinese Rights sold to China Machine Press

With more than 300 000 copies sold, the CNC Handbook is among the most successful textbooks of NC technology. Contributing to this success story are the clearly written texts, beautiful illustrations, excellent value and the up-to-dateness in continuous new editions.

The book presents a wealth of product information from the work tool machine-, control- and supply industry. It is hard to imagine a bookshelf of a NC guy without this work. The 17/18 edition went through a comprehensive revision and actualization.

It contains some new chapters:

- Drive Control (with Drive Calculation and Drive Technology)
- Chained Machine Systems
- NC Programming System for Gear-Cutting Machines
- Integration of Robots and Work Tool Machines
- Human-Robot Interaction
- Smart Objects, Internet of Services, Assistant Systems
- Condition Monitoring and Machine Data Acquisition.

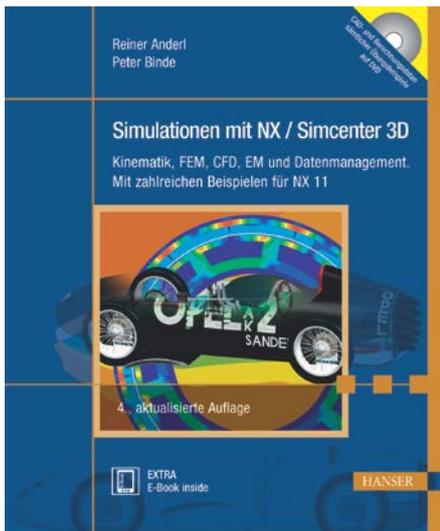
The chapters Generative Fabrication Processes, Industry 4.0, Laser Based Tool Monitoring and Design of Work Tool Machines have been completely revised.

The CNC Handbook is supported by the major industries. For many years, it has been recommended and used as a teaching tool with great success in the trades, Chambers of Commerce, technical and trade schools, and apprenticeship programs.

Hans B. Kief has many years of experience in NC technology. He is the founder of the NC Handbook.

Helmut A. Roschival is founder, board member and majority shareholder of the Roschival + Partner Ingenieur GmbH, Augsburg.

Karsten Schwarz is head of the Technology and Application Center of Siemens Motion Control, Machine Tool Systems.



Simulations with NX / Simcenter 3D
Kinematic, FEM, CFD, EM and Data Management.
With many Examples for NX 11

4th revised Edition

ISBN : [978-3-446-44489-8](https://www.hanser.de/978-3-446-44489-8)

766 pages, Hardcover with DVD
 Publication date: **February 2017**

Test and optimize the performance of digital products with Siemens NX and Simcenter 3D

This standard textbook is now in the 4th printing. It imparts the necessary fundamentals to perform simulations, from simple to complex, with the systems NX and Simcenter 3D from Siemens Company. The book has been written for designers, calculations engineers and students of technical disciplines.

One chapter is devoted to each of the following subjects:

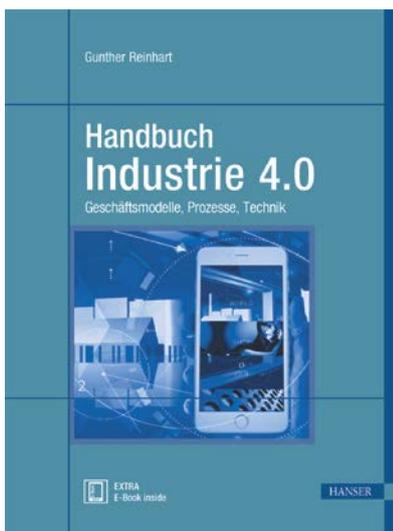
- Motion Simulation (MKS)
- Design Simulation FEM (Nastran)
- Advanced Simulation (FEM, CFD and EM)
- Management of Calculation and Simulation Data (Team Center for Simulation).

Each chapter starts with a concise theoretical introduction, followed by practical problems with increasing difficulty. Nearly all exercises are based on the CAD model of the legendary Opel Rak2.

The text uses a methodology that has been adapted to NX 11 and Simcenter 3D, the new 3D-CAE solution. It contains new and revised content, such as "Post-Processing" at advanced simulation (FEM). Additionally, the motion simulation has been introduced with the new LMS Solver.

The book comes with a DVD containing the CAD and calculation data of all exercises. The exercises can be performed with the NX versions 9, 10, 11 and, most likely, future versions.

Industry 4.0



Handbook Industry 4.0
Business Models, Processes, Technology
ISBN : [978-3-446-44642-7](https://www.hanser.de/9783446446427)
700 pages, Hardcover, full colour
Publication date: April 2017

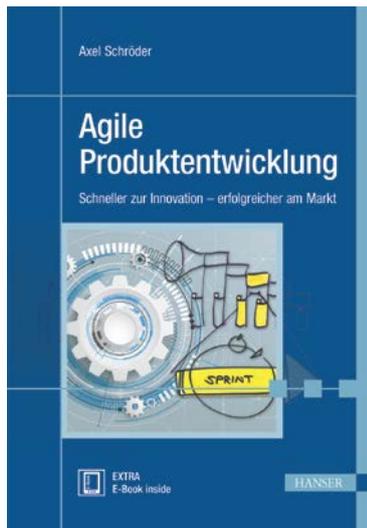
Unique overview of the industry 4.0

The automation of production is ever increasing. This is due to what is called the 4th Industrial Revolution, or Industry 4.0 (I 4.0). It will completely change the way products are developed, manufactured and distributed in the coming years. The digital linking of customers, producers and suppliers will establish entirely new processes.

This handbook aspires to accompany this journey. It describes how companies can open up markets by tapping into universally available computer capacities (Cloud) and intelligently applied usage of data banks (Big Data). It imparts how new technologies can help to yield customized products and services. The text focuses on the implementation of available resources to the digital, smart factory. Many existing automation components, work tool – and processing machines are already I4.0 compliant. The challenge lies in the realization of robust real-time communication between the Cyber Physical Systems (CPS). The handbook explains the interfaces, the linking with existing information technology (IT) and the creation of new structures and processes.

Any enterprise that wants to remain viable is already involved with Industry 4.0. This handbook is an indispensable guide for the path to the new industrial age.

Professor **Gunther Reinhart** teaches Science of Management and Assembly Technology at the Technical University Munich. He is also head of the Fraunhofer Research Institution for Casting, Composite and Processing Technology (IGCV) in Augsburg.



Agile Product Development

More Quickly to Innovate – More Successful on the Market

ISBN : [978-3-446-45015-8](https://www.hanser.de/978-3-446-45015-8)

280 pages, Hardcover

Publication date: **March 2017**

Turn to Agile if you want to keep your customers.

Product development with Agile by now is more than best practice; rather, it has turned to a survival strategy for companies. Innovative development processes are called for because the product cycles become ever shorter, the development teams are spread around the globe, and the complexity of the products is ever increasing.

The answers to this development are Agile methods with fewer rules, iterative processes and less bureaucracy, as shown in the text:

- Learn the basics: the roles with their rituals and the introduction in the organization
- Achieve quick and transparent results with the help of an Agile Coach
- Introduce Agile Sprint-Rhythms: clear objectives, unequivocal commitments, freedom in execution and successful conclusions
- Take advantage of the experience of others: Leaders from 12 companies describe their understanding of Agile and the implementation in their own organization beginning with the point of departure, team dynamic and lasting improvements.

Teams working with Agile realize the ongoing progress that is evident in short sprint cycles. The individual teams recognize each other's merit and create a positive work environment. All involved individuals advance, step by step, on an upward spiral, achieving success and happy customers. Be inspired as well!

Axel Schröder is the CEO of the Axel Schröder Company Consulting, located in Sauerlach near Munich, Germany, and operating for over 20 years. The consulting company has a staff of about 30 employees and focuses on R&D-management of technology based enterprises.

