## FALL 2016 – Title Selection
### Computer Science

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Author</th>
<th>Title</th>
<th>Edition/Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>978-3-319-29657-9</td>
<td>Aggarwal</td>
<td>Recommender Systems</td>
<td>The Textbook</td>
</tr>
<tr>
<td>978-1-4899-7795-3</td>
<td>Aiken</td>
<td>Instruction Level Parallelism</td>
<td></td>
</tr>
<tr>
<td>978-3-319-29205-2</td>
<td>Akerkar</td>
<td>Intelligent Techniques for Data Science</td>
<td></td>
</tr>
<tr>
<td>978-3-319-41410-2</td>
<td>Alani</td>
<td>Elements of Cloud Computing Security</td>
<td>A Survey of Key Practicalities</td>
</tr>
<tr>
<td>978-3-319-43004-1</td>
<td>Aldini</td>
<td>Foundations of Security Analysis and Design VIII</td>
<td>FOSAD 2014/2015/2016 Tutorial Lectures</td>
</tr>
<tr>
<td>978-3-319-41335-8</td>
<td>Barrière</td>
<td>Natural Language Understanding in a Semantic Web Context</td>
<td></td>
</tr>
<tr>
<td>978-3-319-29952-5</td>
<td>Brewer</td>
<td>Concise Guide to Computing Foundations</td>
<td>Core Concepts and Select Scientific Applications</td>
</tr>
<tr>
<td>978-3-319-24419-8</td>
<td>Brown</td>
<td>Anthropology-Based Computing</td>
<td>Putting the Human in Human-Computer Interaction</td>
</tr>
<tr>
<td>978-1-4471-7276-5</td>
<td>Cai</td>
<td>Instinctive Computing</td>
<td></td>
</tr>
<tr>
<td>978-3-319-38890-8</td>
<td>Castillo</td>
<td>Managing Information Technology</td>
<td></td>
</tr>
<tr>
<td>978-3-319-28348-7</td>
<td>Closs</td>
<td>DITA – the Topic-Based XML Standard</td>
<td>A Quick Start</td>
</tr>
<tr>
<td>978-3-319-33993-1</td>
<td>Crespi</td>
<td>Networks and New Services: a Complete Story</td>
<td></td>
</tr>
<tr>
<td>978-1-4939-3294-8</td>
<td>Dori</td>
<td>Model-Based Systems Engineering with OPM and SysML</td>
<td></td>
</tr>
<tr>
<td>978-3-319-34041-8</td>
<td>Duggan</td>
<td>System Dynamics Modeling with R</td>
<td></td>
</tr>
<tr>
<td>ISBN</td>
<td>Author</td>
<td>Title</td>
<td>Subtitle</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>978-3-319-40611-4</td>
<td>Dörner</td>
<td>Serious Games</td>
<td>Foundations, Concepts and Practice</td>
</tr>
<tr>
<td>978-3-319-44961-6</td>
<td>Galibus</td>
<td>Elements of Cloud Storage Security</td>
<td>Concepts, Designs and Optimized Practices</td>
</tr>
<tr>
<td>978-3-319-39971-3</td>
<td>Galitsky</td>
<td>Computational Autism</td>
<td></td>
</tr>
<tr>
<td>978-3-319-40891-0</td>
<td>Gartner</td>
<td>Metadata</td>
<td>Shaping Knowledge from Antiquity to the Semantic Web</td>
</tr>
<tr>
<td>978-3-319-42793-5</td>
<td>Guedes</td>
<td>Quantum Zero-Error Information Theory</td>
<td></td>
</tr>
<tr>
<td>978-3-319-34017-3</td>
<td>Hjort Blindell</td>
<td>Instruction Selection</td>
<td>Principles, Methods, and Applications</td>
</tr>
<tr>
<td>978-3-319-29104-8</td>
<td>Kizza</td>
<td>Ethics in Computing</td>
<td>A Concise Module</td>
</tr>
<tr>
<td>978-3-319-34176-7</td>
<td>Knodel</td>
<td>Pragmatic Evaluation of Software Architectures</td>
<td></td>
</tr>
<tr>
<td>978-3-319-39995-9</td>
<td>Lakshmivarahan</td>
<td>Forecast Error Correction using Dynamic Data</td>
<td></td>
</tr>
<tr>
<td>978-3-319-42935-9</td>
<td>Mazzola</td>
<td>Cool Math for Hot Music</td>
<td>A First Introduction to Mathematics for Music Theorists</td>
</tr>
<tr>
<td>978-3-319-25176-9</td>
<td>Möller</td>
<td>Guide to Computing Fundamentals in Cyber-Physical Systems</td>
<td>Concepts, Design Methods, and Applications</td>
</tr>
<tr>
<td>978-3-319-40339-7</td>
<td>Neri</td>
<td>Linear Algebra for Computational Sciences and Engineering</td>
<td></td>
</tr>
<tr>
<td>978-3-319-33137-9</td>
<td>O'Regan</td>
<td>Introduction to the History of Computing</td>
<td>A Computing History Primer</td>
</tr>
<tr>
<td>978-3-319-44560-1</td>
<td>O'Regan</td>
<td>Guide to Discrete Mathematics</td>
<td>An Accessible Introduction to the History, Theory, Logic and Applications</td>
</tr>
<tr>
<td>978-981-10-2467-2</td>
<td>Okaie</td>
<td>Target Detection and Tracking by Bionanosensor Networks</td>
<td></td>
</tr>
<tr>
<td>978-3-319-27887-2</td>
<td>Reus</td>
<td>Limits of Computation</td>
<td>From a Programming Perspective</td>
</tr>
<tr>
<td>978-3-319-41185-9</td>
<td>Rowe</td>
<td>Introduction to Cyberdeception</td>
<td></td>
</tr>
<tr>
<td>978-3-319-21935-6</td>
<td>Smart</td>
<td>Cryptography Made Simple</td>
<td></td>
</tr>
<tr>
<td>ISBN</td>
<td>Author</td>
<td>Title</td>
<td>Subtitle</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>978-3-642-31932-7</td>
<td>Soare</td>
<td>Turing Computability Theory and Applications</td>
<td></td>
</tr>
<tr>
<td>978-3-319-29551-0</td>
<td>Turner</td>
<td>Digital Make-Believe</td>
<td></td>
</tr>
<tr>
<td>978-3-319-43297-7</td>
<td>Vissers</td>
<td>Architectural Design Conception and Specification of Interactive Systems</td>
<td></td>
</tr>
<tr>
<td>978-3-319-30332-1</td>
<td>Waterworth</td>
<td>Human-Experiential Design of Presence in Everyday Blended Reality</td>
<td>Living in the Here and Now</td>
</tr>
<tr>
<td>978-3-319-28789-8</td>
<td>Wild</td>
<td>Learning Analytics in R with SNA, LSA, and MPIA</td>
<td></td>
</tr>
</tbody>
</table>
Recommender Systems
The Textbook
This book comprehensively covers the topic of recommender systems, which provide personalized recommendations of products or services to users based on their previous searches or purchases. Recommender system methods have been adapted to diverse applications including query log mining, social networking, news recommendations, and computational advertising. This book synthesizes both fundamental and advanced topics of a research area that has now reached maturity. The chapters of this book are organized into three categories: - Algorithms and evaluation: These chapters discuss the fundamental algorithms in recommender systems, including collaborative filtering methods. [...] More on www.springer.com/978-3-319-29657-9

Hardcover
2016. XXI, 498 p. 79 illus., 18 illus. in color.
► 74,89 €
ISBN 978-3-319-29657-9
Gewöhnlich versandfertig in 3-5 Werktagen.

Intelligent Techniques for Data Science
This textbook provides readers with the tools, techniques and cases required to excel with modern artificial intelligence methods. These embrace the family of neural networks, fuzzy systems and evolutionary computing in addition to other fields within machine learning, and will help in identifying, visualizing, classifying and analyzing data to support business decisions. The authors, discuss advantages and drawbacks of different approaches, and present a sound foundation for the reader to design and implement data analytic solutions for real-world applications in an intelligent manner. Intelligent Techniques for Data Science also provides real-world cases of extracting value from data. [...]

More on www.springer.com/978-3-319-29205-2

Hardcover
2016. VII, 279 p. 67 illus., 61 illus. in color.
► 71,68 €
ISBN 978-3-319-29205-2
Erscheinungstermin: August 21, 2016

Forthcoming
A. Aiken, U. Banerjee, A. Kejariwal, A. Nicolau

Instruction Level Parallelism
This book precisely formulates and simplifies the presentation of Instruction Level Parallelism (ILP) compilation techniques. It uniquely offers consistent and uniform descriptions of the code transformations involved. Due to the ubiquitous nature of ILP in virtually every processor built today, from general purpose CPUs to application-specific and embedded processors, this book is useful to the student, the practitioner and also the researcher of advanced compilation techniques. With an emphasis on fine-grain instruction level parallelism, this book will also prove interesting to researchers and students of parallelism at large, in as much as the techniques described yield insights [...]

More on www.springer.com/978-1-4899-7795-3

Hardcover
2016. XVI, 232 p. 75 illus., 34 illus. in color.
► 74,89 €
ISBN 978-1-4899-7795-3
Erscheinungstermin: July 28, 2016

Forthcoming
R. Akerkar, P.S. Sajja

Elements of Cloud Computing Security
A Survey of Key Practicalities
This book offers a thorough yet easy-to-read reference guide to various aspects of cloud computing security. It begins with an introduction to the general concepts of cloud computing, followed by a discussion of security aspects that examines how cloud security differs from conventional information security and reviews cloud-specific classes of threats and attacks. A range of varying threats in cloud computing are covered, from threats of data loss and data breaches, to threats to availability and threats posed by malicious insiders. Further, the book discusses attacks launched on differ-
Natural Language Understanding in a Semantic Web Context

This book serves as a starting point for Semantic Web (SW) students and researchers interested in discovering what Natural Language Processing (NLP) has to offer. NLP can effectively help uncover the large portions of data held as unstructured text in natural language, thus augmenting the real content of the Semantic Web in a significant and lasting way. The book covers the basics of NLP, with a focus on Natural Language Understanding (NLU), referring to semantic processing, information extraction and knowledge acquisition, which are seen as the key links between the SW and NLP communities. Major emphasis is placed on mining sentences in search of entities and relations. In the course...

Managing Information Technology

There are two different, interdependent components of IT that are important to a CIO: strategy, which is long-term; and tactical and operational concerns, which are short-term. Based on this distinction and its repercussions, this book clearly separates strategy from day-to-day operations and projects from operations – the two most important functions of a CIO. It starts by discussing the ideal organization of an IT department and the rationale behind it, and then goes on to debate the most pressing need – managing operations. It also explains some best industry standards and their practical implementation, and discusses project management, again highlighting the differences between [...] More on www.springer.com/978-3-319-38890-8

Networks and New Services: a Complete Story

This book shines a spotlight on software-centric networks and their emerging service environments. The authors examine the road ahead for connectivity, for both humans and ‘things’, considering the rapid changes that have shaken the industry. The book analyses major catalytic shifts that are shaping the communications world: softwarization, virtualization, and cloud computing. It guides the reader through a maze of possible architectural choices, driven by discriminating and sometimes conflicting business considerations. The new ICT capabilities lead us toward smarter environments and to an ecosystem where applications are backed up by shared networking facilities, instead of networks [...] More on www.springer.com/978-3-319-33993-1

System Dynamics Modeling with R

This new interdisciplinary work presents system dynamics as a powerful approach to enable analysts build simulation models of social systems, with a view toward enhancing decision making. Grounded in the feedback perspective of complex systems, the book provides a practical introduction to system dynamics, and covers key concepts such as stocks, flows, and feedback. Societal challenges such as predicting the impact of an emerging infectious disease, estimating population growth, and assessing the capacity of
health services to cope with demographic change can all benefit from the application of computer simulation. This text explains important building blocks of the system[...]

More on www.springer.com/978-3-319-34041-8

**Hardcover**
2016. XVIII, 176 p. 54 illus., 46 illus. in color. (Lecture Notes in Social Networks)
▶ 82,38 €
ISBN 978-3-319-34041-8
Gewöhnlich versandfertig in 3-5 Werktagen.

---

**Serious Games**

*Foundations, Concepts and Practice*

This textbook provides an introduction to the fundamentals of serious games, which differ considerably from computer games that are meant for pure entertainment. Undergraduate and graduate students from various disciplines who want to learn about serious games are one target group of this book. Prospective developers of serious games are another, as they can use the book for self-study in order to learn about the distinctive features of serious game design and development. And ultimately, the book also addresses prospective users of serious game technologies by providing them with a solid basis for judging the advantages and limitations of serious games in different application areas[...]

More on www.springer.com/978-3-319-40611-4

**Hardcover**
1. 2016. XVI, 420 p. 129 illus., 128 illus. in color.
▶ 71,68 €
ISBN 978-3-319-40611-4
Erscheinungstermin: August 9, 2016

---

**Elements of Cloud Storage Security**

*Concepts, Designs and Optimized Practices*

This work provides guidelines for the practical implementation of security architecture in a particular corporate cloud. The authors are mathematicians and specialists in data modeling and security. Experience of scientific collaboration with industry inspired the authors to attempt to conceptualize the common processes and strategies in cloud security, in order to make security system deployment as simple and transparent as possible. The deployment is broken into several essential steps that allow the functionality of security architecture for any cloud to be split into a set of modules. The continuous verification of security support on all levels (data, processes and communication)[...]

More on www.springer.com/978-3-319-44961-6

**Softcover**
2016. X, 104 p. 27 illus. (SpringerBriefs in Computer Science)
▶ ca. 53,49 €
ISBN 978-3-319-44961-6
Erscheinungstermin: October 4, 2016

---

**Metadata**

*Shaping Knowledge from Antiquity to the Semantic Web*

This book offers a comprehensive guide to the world of metadata, from its origins in the ancient cities of the Middle East, to the Semantic Web of today. The author takes us on a journey through the centuries-old history of metadata up to the modern world of crowdsourcing and Google, showing how metadata works and what it is made of. The author explores how it has been used ideologically and how it can never be objective. He argues how central it is to human cultures and the way they develop. Metadata: Shaping Knowledge from Antiquity to the Semantic Web is for all readers with an interest in how we humans organize our knowledge and why this is important. It is suitable for those[...]

More on www.springer.com/978-3-319-40891-0

**Softcover**
2016. IV, 156 p. 33 illus., 28 illus. in color.
▶ 37,44 €
ISBN 978-3-319-40891-0
Erscheinungstermin: October 15, 2016

---

**Quantum Zero-Error Information Theory**

This book aims at presenting the field of Quantum Information Theory in an intuitive, didactic and self-contained way, taking into account several multidisciplinary aspects. Therefore, this book is particularly suited to students and researchers willing to grasp fundamental concepts in Quantum Computation and Quantum Information areas. The field of Quantum Information Theory has increased significantly over the last three decades. Many results from classical information theory were translated and extended to a scenario where quantum effects become important. Most of the results in this area allows for
an asymptotically small probability of error to repre-
represent and transmit information[...]
More on www.springer.com/978-3-319-42793-5

Hardcover
2016. XX, 189 p. 50 illus.
 ► 101.64 €
ISBN 978-3-319-42793-5
Erscheinungstermin: September 18, 2016

J.M. Kizza

**Ethics in Computing**

**A Concise Module**

This textbook raises thought-provoking questions regarding our rapidly-evolving computing technolo-
gies, highlighting the need for a strong ethical frame-
work in our computer science education. Ethics in
Computing offers a concise introduction to this topic,
distilled from the more expansive Ethical and Social
Issues in the Information Age. Features: introduces
the philosophical framework for analyzing computer
ethics; describes the impact of computer technolo-
gy on issues of security, privacy and anonymity; exam-
ines intellectual property rights in the context of com-
puting; discusses such issues as the digital divide,
employee monitoring in the workplace, and health
risks; reviews the[...]
More on www.springer.com/978-3-319-34017-3

Softcover
2016. XVIII, 276 p. 17 illus., 5 illus. in color.
(Undergraduate Topics in Computer Science)
 ► 42.79 €
ISBN 978-3-319-29104-8
Gewöhnlich versandfertig in 3-5 Werktagen.

G. Hjort Blindell

**Instruction Selection**

**Principles, Methods, and Applications**

This book presents a comprehensive, structured, up-
to-date survey on instruction selection. The survey is
structured according to two dimensions: approaches
to instruction selection from the past 45 years are
organized and discussed according to their funda-
mental principles, and according to the characteristics
of the supported machine instructions. The funda-
mental principles are macro expansion, tree cover-
ing, DAG covering, and graph covering. The machine
instruction characteristics introduced are single-out-
put, multi-output, disjoint-output, inter-block, and
interdependent machine instructions. The survey also
examines problems that have yet to be addressed by
existing[...]
More on www.springer.com/978-3-319-34176-7

Hardcover
 ► 2016. XVIII, 177 p. 44 illus.
 ► 42.79 €
ISBN 978-3-319-34176-7
Gewöhnlich versandfertig in 3-5 Werktagen.

J. Knodel, M. Naab

**Pragmatic Evaluation of Software Architectures**

Thorough and continuous architecting is the key to
overall success in software engineering, and architec-
ture evaluation is a crucial part of it. This book
presents a pragmatic architecture evaluation approach
and insights gained from its application in more than
75 projects with industrial customers in the past
decade. It presents context factors, empirical data, and
example cases, as well as lessons learned on mitigating
the risk of change through architecture evaluation. By
providing comprehensive answers to more than 100
typical questions and discussing more than 60 fre-
quent mistakes and lessons learned, the book allows
readers to not only learn how to conduct architec-
ture[...]
More on www.springer.com/978-3-319-34176-7

Softcover
2016. XXIII, 154 p. 40 illus. (The Fraunhofer IESE Series on
Software and Systems Engineering)
 ► 53.49 €
ISBN 978-3-319-34176-7
Gewöhnlich versandfertig in 3-5 Werktagen.

S. Lakshmivarahan, J.M. Lewis, R. Jabrzeski

**Forecast Error Correction using Dynamic Data Assimilation**

This book introduces the reader to a new method of
data assimilation with deterministic constraints
(exact satisfaction of dynamic constraints)—an opti-
mal assimilation strategy called Forecast Sensitivity
Method (FSM), as an alternative to the well-known
four-dimensional variational (4D-Var) data assimila-
tion method. 4D-Var works with a forward in time
prediction model and a backward in time tangent lin-
ear model (TLM). The equivalence of data assimila-
tion via 4D-Var and FSM is proven and problems
using low-order dynamics clarify the process of data
assimilation by the two methods. The problem of
return flow over the Gulf of Mexico that includes
upper-air observations and realistic[...]
More on www.springer.com/978-3-319-39995-9

Hardcover
2016. XVI, 268 p. 125 illus., 104 illus. in color. (Springer
Atmospheric Sciences)
 ► 82.38 €
ISBN 978-3-319-39995-9
Erscheinungstermin: September 2, 2016

Forthcoming
G. Mazzola, M. Mannone, Y. Pang

**Cool Math for Hot Music**

**A First Introduction to Mathematics for Music
Therorsists**

This textbook is a first introduction to mathemat-
ics for music theorists, covering basic topics such as
sets and functions, universal properties, numbers and
recursion, graphs, groups, rings, matrices and mod-
ules, continuity, calculus, and gestures. It approaches
these abstract themes in a new way: Every concept
or theorem is motivated and illustrated by examples
from music theory (such as harmony, counterpoint,
tuning), composition (e.g., classical combinatorics,
dodecaphonic composition), and gestural perfor-
mance. The book includes many illustrations, and
exercises with solutions.
More on www.springer.com/978-3-319-42935-9

Hardcover
2016. X, 326 p. 168 illus., 108 illus. in color. (Computational Music Science)
 ► 71.68 €
ISBN 978-3-319-42935-9
Erscheinungstermin: August 14, 2016
and is accompanied by its informal interpretation. Furthermore, most of the theorems included are first rigorously proved and then shown in practice by a numerical example. When appropriate, topics are presented also by means of [...] More on www.springer.com/978-3-319-40339-7

Hardcover
2016. XXII, 464 p. 8 illus.
► 71,68 €
ISBN 978-3-319-40339-7
Gewöhnlich versandfertig in 3-5 Werktagen.

Guide to Computing
Fundamentals in Cyber-Physical Systems
Concepts, Design Methods, and Applications

This book presents an in-depth review of the state of the art of cyber-physical systems (CPS) and their applications. Relevant case studies are also provided, to help the reader to master the interdisciplinary material. Features: includes self-test exercises in each chapter, together with a glossary; offers a variety of teaching support materials at an associated website, including a comprehensive set of slides and lecture videos; presents a brief overview of the study of systems, and embedded computing systems, before defining CPS; introduces the concepts of the Internet of Things, and ubiquitous (or pervasive) computing; reviews the design challenges of CPS, and their impact on [...] More on www.springer.com/978-3-319-25176-9

Hardcover
2016. XVII, 422 p. 130 illus. (Computer Communications and Networks)
► 74,89 €
ISBN 978-3-319-25176-9
Gewöhnlich versandfertig in 3-5 Werktagen.

Linear Algebra for Computational Sciences and Engineering

This book presents the main concepts of linear algebra from the viewpoint of applied scientists such as computer scientists and engineers, without compromising on mathematical rigor. Based on the idea that computational scientists and engineers need, in both research and professional life, an understanding of theoretical concepts of mathematics in order to be able to propose research advances and innovative solutions, every concept is thoroughly introduced

Guide to Discrete Mathematics
An Accessible Introduction to the History, Theory, Logic and Applications

This stimulating textbook presents a broad and accessible guide to the fundamentals of discrete mathematics, highlighting how the techniques may be applied to various exciting areas in computing. The text is designed to motivate and inspire the reader, encouraging further study in this important skill. Features: provides an introduction to the building blocks of discrete mathematics, including sets, relations and functions; describes the basics of number theory, the techniques of induction and recursion, and the applications of mathematical sequences, series, permutations, and combinations; presents the essentials of algebra; explains the fundamentals of automata theory, matrices, [...] More on www.springer.com/978-3-319-44560-1

Hardcover
2016. XXII, 369 p. 119 illus. (Texts in Computer Science)
► ca. 56,70 €
ISBN 978-3-319-44560-1
Erscheinungstermin: October 27, 2016
Forthcoming
Y. Okaie, T. Nakano, T. Hara, S. Nishio

Target Detection and Tracking by Bionanosensor Networks

This book describes the main ideas, methods, results and resources relevant to the study of bionanosensor networks. Its primary goal is to spark application-oriented studies of molecular communication; that is, to investigate how collections of bionanosensors, referred to here as bionanosensor networks, can be used for practical purposes such as nanomedical sensing. In particular, the book focuses on two key functionalities for nanomedical applications: target detection and target tracking. Bionanosensor networks represent a new interdisciplinary research area that expands the traditional area of network engineering by incorporating the latest advances in bionanotechnology. These [...] More on www.springer.com/978-981-10-2467-2

Softcover
2016. Approx. 70 p. 1 illus. (SpringerBriefs in Computer Science)
► ca. 53,49 €
B. Reus

**Limits of Computation**

*From a Programming Perspective*

This textbook discusses the most fundamental and puzzling questions about the foundations of computing. In 23 lecture-sized chapters it provides an exciting tour through the most important results in the field of computability and time complexity, including the Halting Problem, Rice’s Theorem, Kleene’s Recursion Theorem, the Church-Turing Thesis, Hierarchy Theorems, and Cook-Levin’s Theorem. Each chapter contains classroom-tested material, including examples and exercises. Links between adjacent chapters provide a coherent narrative. Fundamental results are explained lucidly by means of programs written in a simple, high-level imperative programming language, which only requires basic [...] More on www.springer.com/978-3-319-27887-2

**Softcover**

2016. XVIII, 348 p. 80 illus. (Undergraduate Topics in Computer Science)  
 ► 48,14 €  
 ISBN 978-3-319-27887-2  
 Gewöhnlich versandfertig in 3-5 Werktagen.

N.P. Smart

**Cryptography Made Simple**

In this introductory textbook the author explains the key topics in cryptography. He takes a modern approach, where defining what is meant by “secure” is as important as creating something that achieves that goal, and security definitions are central to the discussion throughout. The chapters in Part 1 offer a brief introduction to the mathematical foundations: modular arithmetic, groups, finite fields, and probability; primality testing and factoring; discrete logarithms; elliptic curves; and lattices. Part 2 of the book shows how historical ciphers were broken, thus motivating the design of modern cryptosystems since the 1960s; this part also includes a chapter on [...] More on www.springer.com/978-3-319-21935-6

**Hardcover**

2016. XII, 481 p. 119 illus., 15 illus. in color.  
(Information Security and Cryptography)  
 ► 48,14 €  
 ISBN 978-3-319-21935-6  
 Gewöhnlich versandfertig in 3-5 Werktagen.

N.C. Rowe, J. Rrushi

**Introduction to Cyberdeception**

This book is an introduction to both offensive and defensive techniques of cyberdeception. Unlike most books on cyberdeception, this book focuses on methods rather than detection. It treats cyberdeception techniques that are current, novel, and practical, and that go well beyond traditional honeypots. It contains features friendly for classroom use: (1) minimal use of programming details and mathematics, (2) modular chapters that can be covered in many orders, (3) exercises with each chapter, and (4) an extensive reference list. Cyberattacks have grown serious enough that understanding and using deception is essential to safe operation in cyberspace. The deception techniques covered [...] More on www.springer.com/978-3-319-41185-9

**Hardcover**

2016. XII, 334 p. 61 illus., 49 illus. in color.  
 ► 74,89 €  
 ISBN 978-3-319-41185-9  
 Erscheinungstermin: August 20, 2016

R.J. Soare

**Turing Computability**

*Theory and Applications*

Turing’s famous 1936 paper introduced a formal definition of a computing machine, a Turing machine. This model led to both the development of actual computers and to computability theory, the study of what machines can and cannot compute. This book presents classical computability theory from Turing and Post to current results and methods, and their use in studying the information content of algebraic structures, models, and their relation to Peano arithmetic. The author presents the subject as an art to be practiced, and an art in the aesthetic sense of inherent beauty which all mathematicians recognize in their subject. Part 1 gives a thorough development of the foundations of [...] More on www.springer.com/978-3-642-31932-7

**Hardcover**

2016. XXXVI, 263 p. 4 illus. (Theory and Applications of Computability)  
 ► 60,98 €  
 ISBN 978-3-642-31932-7  
 Gewöhnlich versandfertig in 3-5 Werktagen.

P. Turner, J.T. Harviainen (Eds.)

**Digital Make-Believe**

Make-believe plays a far stronger role in both the design and use of interfaces, games and services than we have come to believe. This edited volume illustrates ways for grasping and utilising that connection to improve interaction, user experiences, and customer value. Useful for designers, undergraduates and researchers alike, this new research provides tools for understanding and applying make-believe in various contexts, ranging from digital tools to physical services. It takes the reader through a world of imagination and intuition applied into efficient practice, with topics including the connection of human-computer...
interaction (HCI) to make-believe and backstories, the[...]

More on www.springer.com/978-3-319-29551-0

Hardcover
2016. VIII, 178 p. 20 illus. (Human–Computer Interaction Series)
▶ 60,98 €
ISBN 978-3-319-29551-0
Gewöhnlich versandfertig in 3-5 Werktagen.

Architectural Design
Conception and Specification of Interactive Systems

This book presents a design methodology that is practically applicable to the architectural design of a broad range of systems. It is based on fundamental design concepts to conceive and specify the required functional properties of a system, while abstracting from the specific implementation functions and technologies that can be chosen to build the system. Abstraction and precision are indispensable when it comes to understanding complex systems and precisely creating and representing them at a high functional level. Once understood, these concepts appear natural, self-evident and extremely powerful, since they can directly, precisely and concisely reflect what is considered[...]

More on www.springer.com/978-3-319-30332-1

Hardcover
2016. XI, 105 p. 23 illus. (Human–Computer Interaction Series)
▶ 48,14 €
ISBN 978-3-319-30332-1
Gewöhnlich versandfertig in 3-5 Werktagen.

Human-Experiential Design of Presence in Everyday Blended Reality
Living in the Here and Now

This book explores how our lives and social interactions have become split between two intertwined, but not integrated, realities: the physical and the digital. Our sense of presence in the here and now has become fragmented, and yet earlier design approaches reinforced the problem, rather than leading to improvements. The authors address these issues by laying out a new human computer interaction (HCI) design approach – human-experiential design – rooted in a return to first principles of how people understand the world, both consciously and unconsciously. The application of this approach to the design of blended reality spaces is described in detail. Examples and scenarios of[...]

More on www.springer.com/978-3-319-28789-8

Hardcover
2016. XV, 275 p. 106 illus., 59 illus. in color.
▶ 101,64 €
ISBN 978-3-319-28789-8
Gewöhnlich versandfertig in 3-5 Werktagen.

Learning Analytics in R with SNA, LSA, and MPIA

This book introduces Meaningful Purposive Interaction Analysis (MPIA) theory, which combines social network analysis (SNA) with latent semantic analysis (LSA) to help create and analyse a meaningful learning landscape from the digital traces left by a learning community in the co-construction of knowledge. The hybrid algorithm is implemented in the statistical programming language and environment R, introducing packages which capture – through matrix algebra