Engineering & Energy
Winter 2019

Buy now!

springer.com | palgrave.com

Part of SPRINGER NATURE
R. J. Bergillos, C. Rodriguez-Delgado, G. Iglesias

Ocean Energy and Coastal Protection
A Novel Strategy for Coastal Management Under Climate Change

This book presents the innovative concept of the dual function of wave farms as both renewable energy generators and coastal protection elements against erosion and flooding. [...] 2020. IX, 87 p. 50 illus., 40 illus. in color. (SpringerBriefs in Energy) Softcover € 49,99 | £ 44,99  € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-31317-3

R. Bonfigli, S. Squartini

Machine Learning Approaches to Non-Intrusive Load Monitoring

Research on Smart Grids has recently focused on the energy monitoring issue, with the objective of maximizing the user consumption awareness in building contexts on the one hand, and providing utilities with a detailed description of customer habits on the other. [...] 2020. VIII, 135 p. 37 illus., 25 illus. in color. (SpringerBriefs in Energy) Softcover € 49,99 | £ 44,99  € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-30781-3

R. M. Buono, E. López Gunn, J. McKay, C. Staddon (Eds.)

Regulating Water Security in Unconventional Oil and Gas


S. Choudhury

Rational Design of Nanostructured Polymer Electrolytes and Solid–Liquid Interphases for Lithium Batteries

This thesis makes significant advances in the design of electrolytes and interfaces in electrochemical cells that utilize reactive metals as anodes. Such cells are of contemporary interest because they offer substantially higher charge storage capacity than state-of-the-art lithium-ion battery technology. [...] 2019. XVII, 230 p. 116 illus., 99 illus. in color. (Springer Theses) Hardcover € 199,99 | £ 179,99  € (D) 213,99 | € (A) 219,99 | CHF 236.00 ISBN 978-3-030-28942-3

A. M. Eltamaly, A. Y. Abdelaziz (Eds.)

Modern Maximum Power Point Tracking Techniques for Photovoltaic Energy Systems

This book introduces and analyses the latest maximum power point tracking (MPPT) techniques, which can effectively reduce the cost of power generated from photovoltaic energy systems. [...] 2020. X, 486 p. (Green Energy and Technology) Hardcover € 129,99 | £ 109,99  € (D) 139,09 | € (A) 142,99 | CHF 153.50 ISBN 978-3-030-05577-6
R. Irnawan
Planning and Control of Expandable Multi-Terminal VSC-HVDC Transmission Systems

This book discusses novel methods for planning and coordinating converters when an existing point-to-point (PtP) HVDC link is expanded into a multi-terminal HVDC (MTDC) system. [...]

2020. XX, 209 p. 169 illus., 116 illus. in color. (Springer Theses) Hardcover
€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50
ISBN 978-3-030-27487-0

T. Herawan, H. Chiroma, J. H. Abawajy (Eds.)
Advances on Computational Intelligence in Energy

The Applications of Nature-Inspired Metaheuristic Algorithms in Energy

Addressing the applications of computational intelligence algorithms in energy, this book presents a systematic procedure that illustrates the practical steps required for applying bio-inspired, metaheuristic algorithms in energy, such as the prediction of oil consumption and other energy products. [...]

2019. XIV, 215 p. (Green Energy and Technology) Hardcover
€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50
ISBN 978-3-030-19628-8
S. No | Application of Liquid Biofuels to Internal Combustion Engines
---|---

This book provides a comprehensive overview of the application of liquid biofuels to internal combustion (IC) engines. Biofuels are one of the most promising renewable and sustainable energy sources. Particularly, liquid biofuels obtained from biomass could become a valid alternative to the use of fossil fuels in the light of increasingly stringent environmental constraints. [...] 

2019. XII, 482 p. 34 illus., 11 illus. in color. (Green Energy and Technology) Hardcover
€ 129,99 | £ 109,99 € (D) 139,09 | € (A) 142,99 | CHF 153.50

---

J. E. Meyer  

The Renewable Energy Transition  
Realities for Canada and the World  

Canada is a well-endowed country that serves as an ideal model to lead the reader through the development of energy, resources, and society historically and into a post-carbon future. The book provides an historical perspective and describes the physical resource limitations, energy budgets, and climate realities that will determine the potential for any transition to renewable energy. [...] 

2020. X, 85 p. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00
ISBN 978-3-030-30749-3

---

S. No  

Application of Liquid Biofuels to Internal Combustion Engines  

This book provides a comprehensive overview of the application of liquid biofuels to internal combustion (IC) engines. Biofuels are one of the most promising renewable and sustainable energy sources. Particularly, liquid biofuels obtained from biomass could become a valid alternative to the use of fossil fuels in the light of increasingly stringent environmental constraints. [...] 

2019. XII, 482 p. 34 illus., 11 illus. in color. (Green Energy and Technology) Hardcover
€ 129,99 | £ 109,99 € (D) 139,09 | € (A) 142,99 | CHF 153.50

---

N. Mahdavi Tabatabaei, E. Kabalci, N. Bizon (Eds.)  

Microgrid Architectures, Control and Protection Methods  

This book presents intuitive explanations of the principles of microgrids, including their structure and operation and their applications. It also discusses the latest research on microgrid control and protection technologies and the essentials of microgrids as well as enhanced communication systems. [...] 

€ 149,99 | £ 129,99 € (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-23722-6

---

T. Kita, Y. Harada, S. Asahi  

Energy Conversion Efficiency of Solar Cells  

This book offers a concise primer on energy conversion efficiency and the Shockley-Queisser limit in single p-n junction solar cells. It covers all the important fundamental physics necessary to understand the conversion efficiency, which is indispensable in studying, investigating, analyzing, and designing solar cells in practice. [...] 

2019. XII, 202 p. 139 illus., 123 illus. in color. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00

---

B. Lal, O. Nashed  

Chemical Additives for Gas Hydrates  

This book offers a straightforward, informative guide to the chemicals used for gas hydrate formation and inhibition, providing the reader with the latest information on the definition, structure, formation conditions, problems, and applications of gas hydrates. [...] 

2020. X, 85 p. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00
ISBN 978-3-030-30749-3

---

Y.H. V. Lun, S.L. D. Tung  

Heat Pumps for Sustainable Heating and Cooling  

This book highlights the significance of using sustainable energy to prevent the deterioration of our planet using heat pumps. Energy sustainability can be achieved through improved energy efficiency. In this regard, heat pumps offer an energy-efficient alternative for heating and cooling. [...] 

2020. IX, 136 p. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00
ISBN 978-3-030-31386-9

---

B. Lal, O. Nashed  

Chemical Additives for Gas Hydrates  

This book offers a straightforward, informative guide to the chemicals used for gas hydrate formation and inhibition, providing the reader with the latest information on the definition, structure, formation conditions, problems, and applications of gas hydrates. [...] 

2020. X, 85 p. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00
ISBN 978-3-030-30749-3

---

Y.H. V. Lun, S.L. D. Tung  

Heat Pumps for Sustainable Heating and Cooling  

This book highlights the significance of using sustainable energy to prevent the deterioration of our planet using heat pumps. Energy sustainability can be achieved through improved energy efficiency. In this regard, heat pumps offer an energy-efficient alternative for heating and cooling. [...] 

2020. IX, 136 p. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00
ISBN 978-3-030-31386-9

---

T. Kita, Y. Harada, S. Asahi  

Energy Conversion Efficiency of Solar Cells  

This book offers a concise primer on energy conversion efficiency and the Shockley-Queisser limit in single p-n junction solar cells. It covers all the important fundamental physics necessary to understand the conversion efficiency, which is indispensable in studying, investigating, analyzing, and designing solar cells in practice. [...] 

2019. XII, 202 p. 139 illus., 123 illus. in color. (Green Energy and Technology) Hardcover
€ 109,99 | £ 99,99 € (D) 117,69 | € (A) 120,99 | CHF 130.00
A. Sayigh (Ed.)
Green Buildings and Renewable Energy
Med Green Forum 2019 - Part of World Renewable Energy Congress and Network
This book highlights selected papers presented during the bi-annual World Renewable Energy Network’s 2019 Med Green Forum. This international forum highlights the importance of growing renewable energy applications in two main sectors: Electricity Generation and Sustainable Building. […]
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-30840-7

S. Okajima, T. Kugo, T. Mori
Nuclear Reactor Physics
This book covers introductory subjects including fundamental principles of nuclear reactions with neutrons, fundamentals of nuclear fission chain reactions, basic concepts of criticality, and static characteristics based on diffusion approximation in neutron transport. […]
€ 79,99 | £ 70,50
€ (D) 85,59 | € (A) 87,99 | CHF 94.50

T. Pavlovic (Ed.)
The Sun and Photovoltaic Technologies
This book covers solar energy and the use of solar radiation in connection with lighting. It provides a detailed introduction to solar energy, photovoltaic (PV) solar energy conversion, and solar lighting technologies, while also discussing all of these elements in the context of the Balkan Peninsula. […]
2020. V, 416 p. (Green Energy and Technology) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-22402-8

H. Qudrat-Ullah, A. A. Kayal (Eds.)
Climate Change and Energy Dynamics in the Middle East
Modeling and Simulation-Based Solutions
This edited volume presents chapters on the dynamics of global climate change and global warming in the Middle East. In this region, it should be noted that even slightly warmer weather can result in an increased demand of energy along with its lower supply, as well as lower labor productivity. […]
2019. XII, 376 p. 166 illus., 150 illus. in color. (Understanding Complex Systems) Hardcover
€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50
ISBN 978-3-030-11201-1

A. Sandak, J. Sandak, M. Brzezicki, A. Kutnar
Bio-based Building Skin
This book provides a compendium of material properties, demonstrates several successful examples of bio-based materials’ application in building facades, and offers ideas for new designs and novel solutions. It features a state-of-the-art review, addresses the latest trends in material selection, assembling systems, and innovative functions of facades in detail. […]
2019. XV, 183 p. (Environmental Footprints and Eco-design of Products and Processes) Hardcover
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
ISBN 978-3-030-13-374-6

M. Qadrdan, M. Abeysekera, J. Wu, N. Jenkins, B. Winter
The Future of Gas Networks
The Role of Gas Networks in a Low Carbon Energy System
This book investigates the role of gas networks in future low-carbon energy systems, and discusses various decarbonisation pathways, providing insights for gas network operators, developers, and policy makers. […]
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
ISBN 978-3-319-66783-6

A. Sayigh (Ed.)
Green Buildings and Renewable Energy
Med Green Forum 2019 - Part of World Renewable Energy Congress and Network
This book highlights selected papers presented during the bi-annual World Renewable Energy Network’s 2019 Med Green Forum. This international forum highlights the importance of growing renewable energy applications in two main sectors: Electricity Generation and Sustainable Building. […]
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-30840-7
The book, based on the research and outcomes of a group of international contributors, addresses a range of advanced energy efficiency technologies and their applications in solar heating, cooling, and power generation, while also providing solutions for tackling recurring low efficiency problems in today's systems.

2019. XI, 539 p. (Green Energy and Technology) Hardcover
€129.99 | £109.99
€(D)139.09 | €(A)142.99 | CHF153.50
ISBN 978-3-030-17282-4
Available

This book describes the fundamentals and applications of wireless power transfer (WPT) in electric vehicles (EVs). Wireless power transfer (WPT) is a technology that allows devices to be powered without having to be connected to the electrical grid by a cable.

2020. XVIII, 162 p. 122 illus., 65 illus. in color. (Power Systems) Hardcover
€114.99 | £99.99
€(D)123.04 | €(A)126.49 | CHF136.00
ISBN 978-3-030-26445-1
Available

This book examines how contemporary urbanism is influenced by digital and low carbon transitions. From its infancy at the scale of individual buildings, a focus on ‘green’ agenda, energy, and resource efficiency has fostered research and policies for low carbon cities, eco-cities, and increasingly intelligent and smarter urban systems.

2020. IX, 65 p. 4 illus., 3 illus. in color. (SpringerBriefs in Geography) Softcover
€19.99 | £17.99
€(D)21.39 | €(A)21.99 | CHF26.64
ISBN 978-3-030-25946-4
Available

This book describes the research experience and outcomes of a group of international contributors, addressing a range of advanced energy efficiency technologies and their applications in solar heating, cooling, and power generation, while also providing solutions for tackling recurring low efficiency problems in today’s systems.

2019. XI, 339 p. (Green Energy and Technology) Hardcover
€119.99 | £109.99
€(D)128.39 | €(A)131.99 | CHF141.50
ISBN 978-3-030-27675-1
Available

This unique volume on wind energy features contributions from the world’s leading research and development pioneers in the field of renewable energy. It discusses advances in offshore wind technology, grid-connected systems, grid stabilization and wind turbine design and highlights.

€119.99 | £109.99
€(D)128.39 | €(A)131.99 | CHF141.50
ISBN 978-3-030-26445-1
Available

This book reflects the current state of knowledge on sustainability in a wide range of fields, from engineering to agriculture, to education. Though primarily intended to offer an update for experts and researchers in the field, it can also be used as a valuable educational tool for relevant undergraduate and graduate courses.

2020. X, 290 p. (Green Energy and Technology) Hardcover
€119.99 | £109.99
€(D)128.39 | €(A)131.99 | CHF141.50
ISBN 978-3-030-27675-1
Available

This book contains selected papers presented during the World Renewable Energy Network’s 28th anniversary congress at the University of Kingston in London. The forum highlighted the integration of renewables and sustainable buildings as the best means to combat climate change.

2020. XVI, 1006 p. 600 illus., 508 illus. in color. (Innovative Renewable Energy) Hardcover
€149.99 | £129.99
€(D)160.49 | €(A)164.99 | CHF177.00
Available

This book examines how contemporary urbanism is influenced by digital and low carbon transitions. From its infancy at the scale of individual buildings, a focus on ‘green’ agenda, energy, and resource efficiency has fostered research and policies for low carbon cities, eco-cities, and increasingly intelligent and smarter urban systems.

2020. IX, 65 p. 4 illus., 3 illus. in color. (SpringerBriefs in Geography) Softcover
€19.99 | £17.99
€(D)21.39 | €(A)21.99 | CHF26.64
ISBN 978-3-030-25946-4
Available

This book describes the fundamentals and applications of wireless power transfer (WPT) in electric vehicles (EVs). Wireless power transfer (WPT) is a technology that allows devices to be powered without having to be connected to the electrical grid by a cable.

2020. XVIII, 162 p. 122 illus., 65 illus. in color. (Power Systems) Hardcover
€109.99 | £99.99
€(D)117.69 | €(A)120.99 | CHF136.00
ISBN 978-3-030-26705-6
Available

This book contains selected papers presented during the World Renewable Energy Network’s 28th anniversary congress at the University of Kingston in London. The forum highlighted the integration of renewables and sustainable buildings as the best means to combat climate change.

2020. XVI, 1006 p. 600 illus., 508 illus. in color. (Innovative Renewable Energy) Hardcover
€149.99 | £129.99
€(D)160.49 | €(A)164.99 | CHF177.00
Available

This unique volume on wind energy features contributions from the world’s leading research and development pioneers in the field of renewable energy. It discusses advances in offshore wind technology, grid-connected systems, grid stabilization and wind turbine design and highlights.

€114.99 | £99.99
€(D)123.04 | €(A)126.49 | CHF136.00
ISBN 978-3-030-26445-1
Available

This book reflects the current state of knowledge on sustainability in a wide range of fields, from engineering to agriculture, to education. Though primarily intended to offer an update for experts and researchers in the field, it can also be used as a valuable educational tool for relevant undergraduate and graduate courses.

2020. X, 290 p. (Green Energy and Technology) Hardcover
€119.99 | £109.99
€(D)128.39 | €(A)131.99 | CHF141.50
ISBN 978-3-030-27675-1
Available

This book contains selected papers presented during the World Renewable Energy Network’s 28th anniversary congress at the University of Kingston in London. The forum highlighted the integration of renewables and sustainable buildings as the best means to combat climate change.

2020. XVI, 1006 p. 600 illus., 508 illus. in color. (Innovative Renewable Energy) Hardcover
€149.99 | £129.99
€(D)160.49 | €(A)164.99 | CHF177.00
Available

This unique volume on wind energy features contributions from the world’s leading research and development pioneers in the field of renewable energy. It discusses advances in offshore wind technology, grid-connected systems, grid stabilization and wind turbine design and highlights.

€114.99 | £99.99
€(D)123.04 | €(A)126.49 | CHF136.00
ISBN 978-3-030-26445-1
Available

This book reflects the current state of knowledge on sustainability in a wide range of fields, from engineering to agriculture, to education. Though primarily intended to offer an update for experts and researchers in the field, it can also be used as a valuable educational tool for relevant undergraduate and graduate courses.

2020. X, 290 p. (Green Energy and Technology) Hardcover
€119.99 | £109.99
€(D)128.39 | €(A)131.99 | CHF141.50
ISBN 978-3-030-27675-1
Available
B. Akhgar (Ed.)
Serious Games for Enhancing Law Enforcement Agencies
From Virtual Reality to Augmented Reality
This book provides a comprehensive and practically minded introduction into serious games for law enforcement agencies. Serious games offer wide ranging benefits for law enforcement with applications from professional trainings to command-level decision making to the preparation for crises events. [...] 2019. XV, 231 p. 43 illus., 36 illus. in color. (Security Informatics and Law Enforcement) Hardcover €119,99 | £109,99 €(D)128,39 | €(A)131,99 | CHF141.50 ISBN 978-3-030-29925-5

A. Acemoglu
A Magnetic Laser Scanner for Endoscopic Microsurgery
This book focuses on the design, development, and characterization of a compact magnetic laser scanner for microsurgical applications. In addition, it proposes a laser incision depth controller to be used in soft tissue microsurgeries. The use of laser scanners in soft tissue microsurgery results in high quality ablations with minimal thermal damage to surrounding tissue. [...] 2020. XVII, 87 p. 55 illus., 44 illus. in color. (Springer Theses) Hardcover €139,99 | £119,99 €(D)149,79 | €(A)153,99 | CHF165.50 ISBN 978-3-030-23192-7

S. Akama, Y. Kudo, T. Murai
Topics in Rough Set Theory
Current Applications to Granular Computing
This book discusses current topics in rough set theory. Since Pawlak’s rough set theory was first proposed to offer a basis for imprecise and uncertain data and reasoning from data, many workers have investigated its foundations and applications. [...] 2020. XV, 201 p. 14 illus., 1 illus. in color. (Intelligent Systems Reference Library, Volume 168) Hardcover €119,99 | £109,99 €(D)128,39 | €(A)131,99 | CHF141.50 ISBN 978-3-030-29565-3

B. Akhgar, D. Wells, J. M. Blanco (Eds.)
Investigating Radicalization Trends
Case Studies in Europe and Asia
This book provides a detailed insight into the complex dynamics of radicalization that are in play amongst contemporary society. The authors focus on understanding emerging trends and models that can be used to analyse and understand modern violent extremist and xenophobic discourse. [...] 2020. XIV, 294 p. 35 illus., 18 illus. in color. (Security Informatics and Law Enforcement) Hardcover €109,99 | £99,99 €(D)117,69 | €(A)120,99 | CHF130.00 ISBN 978-3-030-25435-3

A. Agrawal, H. M. Kushwaha, R. S. Jadhav
Microscale Flow and Heat Transfer
Mathematical Modelling and Flow Physics
This book covers concepts and the latest developments on microscale flow and heat transfer phenomena involving a gas. The book is organised in two parts: the first part focuses on the fluid flow and heat transfer characteristics of gaseous slip flows. The second part presents modelling of such flows using higher-order continuum transport equations. [...] 2020. XIX, 365 p. 95 illus., 23 illus. in color. (Mechanical Engineering Series) Hardcover €129,99 | £109,99 €(D)139,09 | €(A)142,99 | CHF153.50 ISBN 978-3-030-10661-4

G. Acampora, W. Pedrycz, A. Vasilakos, A. Vitiello (Eds.)
Computational Intelligence for Semantic Knowledge Management
New Perspectives for Designing and Organizing Information Systems
This book provides a comprehensive overview of computational intelligence methods for semantic knowledge management. Contrary to popular belief, the methods for semantic management of [...] 2020. XVIII, 135 p. 50 illus., 41 illus. in color. (Studies in Computational Intelligence, Volume 837) Hardcover €129,99 | £109,99 €(D)139,09 | €(A)142,99 | CHF153.50 ISBN 978-3-030-23758-5

A. Acemoglu
A Magnetic Laser Scanner for Endoscopic Microsurgery
This book focuses on the design, development, and characterization of a compact magnetic laser scanner for microsurgical applications. In addition, it proposes a laser incision depth controller to be used in soft tissue microsurgeries. The use of laser scanners in soft tissue microsurgery results in high quality ablations with minimal thermal damage to surrounding tissue. [...] 2020. XVII, 87 p. 55 illus., 44 illus. in color. (Springer Theses) Hardcover €139,99 | £119,99 €(D)149,79 | €(A)153,99 | CHF165.50 ISBN 978-3-030-23192-7

A. Acemoglu
A Magnetic Laser Scanner for Endoscopic Microsurgery
This book focuses on the design, development, and characterization of a compact magnetic laser scanner for microsurgical applications. In addition, it proposes a laser incision depth controller to be used in soft tissue microsurgeries. The use of laser scanners in soft tissue microsurgery results in high quality ablations with minimal thermal damage to surrounding tissue. [...] 2020. XVII, 87 p. 55 illus., 44 illus. in color. (Springer Theses) Hardcover €139,99 | £119,99 €(D)149,79 | €(A)153,99 | CHF165.50 ISBN 978-3-030-23192-7
This book discusses topics in mission-oriented sensor networks and systems research and practice, enabling readers to understand the major technical and application challenges of these networks, with respect to their architectures, protocols, algorithms, and application design.

2019. XX, 820 p. 461 illus., 208 illus. in color. (Studies in Systems, Decision and Control, Volume 163) Hardcover
€ 219,99 | £ 199,99
€ (D) 235,39 | € (A) 241,99 | CHF 259.50
ISBN 978-3-319-91145-8

H. M. Ammari (Ed.)
Mission-Oriented Sensor Networks and Systems: Art and Science
Volume 1: Foundations
This book discusses topics in mission-oriented sensor networks and systems research and practice, enabling readers to understand the major technical and application challenges of these networks, with respect to their architectures, protocols, algorithms, and application design.

2019. XX, 820 p. 461 illus., 208 illus. in color. (Studies in Systems, Decision and Control, Volume 163) Hardcover
€ 219,99 | £ 199,99
€ (D) 235,39 | € (A) 241,99 | CHF 259.50
ISBN 978-3-319-91145-8
<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Description</th>
<th>ISBN</th>
<th>Price (€/£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Phenotyping and Mobile Sensing</td>
<td>H. Baumeister, C. Montag (Eds.)</td>
<td>This book offers a snapshot of cutting-edge applications of mobile sensing for digital phenotyping in the field of Psychoinformatics. The respective chapters, written by authoritative researchers, cover various aspects related to the use of these technologies in health, education, and cognitive science research.</td>
<td>978-3-030-31619-8</td>
<td>€ 149.99</td>
</tr>
<tr>
<td>The Economics of Speed: Machine Speed as the Key Factor in Productivity</td>
<td>B. C. Beaudreau</td>
<td>This is the first book to examine the “nuts and bolts” of production processes. It proposes a truly consistent approach to modeling production processes – one that goes beyond the vague principles found in standard economics and provides details that are consistent with the applied mechanics and engineering literature.</td>
<td>978-3-030-26712-4</td>
<td>€ 119.99</td>
</tr>
<tr>
<td>Models of Technologies</td>
<td>M. V. Belov, D. A. Novikov</td>
<td>This book presents the methodology of complex activity with a set of interconnected mathematical models that describe the processes of technology design, adoption and use. It first discusses the technology of complex activity and its general models.</td>
<td>978-3-030-31083-7</td>
<td>€ 89,99</td>
</tr>
<tr>
<td>Reconfigurable Manufacturing Systems: From Design to Implementation</td>
<td>L. Benyousef (Ed.)</td>
<td>This book develops innovative techniques from operational research and management science for the design and implementation of a reconfigurable manufacturing system (RMS), and subsequently analyzes and assesses their performance. A reconfigurable manufacturing system (RMS) is a paradigm that can address many of the challenges posed by the modern market.</td>
<td>978-3-030-28781-8</td>
<td>€ 139,99</td>
</tr>
<tr>
<td>Supervised and Unsupervised Learning for Data Science</td>
<td>M. W. Berry, A. Mohamed, B. W. Yap (Eds.)</td>
<td>This book covers the state of the art in learning algorithms with an inclusion of semi-supervised methods to provide a broad scope of clustering and classification solutions for big data applications. Case studies and best practices are included along with theoretical models of learning for a comprehensive reference to the field.</td>
<td>978-3-030-22474-5</td>
<td>€ 86,99</td>
</tr>
</tbody>
</table>

Due December 2019
Fault-Tolerant Traction Electric Drives
Reliability, Topologies and Components Design
This concise book focuses on the reliability of traction electrical drives. The first chapter presents the Lz-transform approach for the comparative analysis of the fault tolerance of multi-motor electrical drives with multi-phase traction motors. [...]
E. Capelas de Oliveira

Solved Exercises in Fractional Calculus

This book contains a brief historical introduction and state of the art in fractional calculus. The author introduces some of the so-called special functions, in particular, those which will be directly involved in calculations. The concepts of fractional integral and fractional derivative are also presented. [...]

2019. XVIII, 321 p. 15 illus. (Studies in Systems, Decision and Control, Volume 240) Hardcover
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
ISBN 978-3-030-20523-2

B. Brogliato, R. Lozano, B. Maschke, O. Egeland

Dissipative Systems Analysis and Control

Theory and Applications

The third edition of the now standard Dissipative Systems Analysis and Control presents a revised and expanded treatment of dissipative systems theory, constituting a self-contained, advanced introduction for graduate students, researchers and practising engineers. [...]

3rd ed. 2020. XVIII, 711 p. 116 illus. (Communications and Control Engineering) Hardcover
€ 159,99 | £ 139,99
€ (D) 171,19 | € (A) 175,99 | CHF 189.00

N. Bouguila, W. Fan (Eds.)

Mixture Models and Applications

This book focuses on recent advances, approaches, theories and applications related to mixture models. In particular, it presents recent unsupervised and semi-supervised frameworks that consider mixture models as their main tool. The chapters considers mixture models involving several interesting and challenging problems such as parameters estimation, model selection, feature selection, etc. [...]

2020. XII, 355 p. 120 illus., 88 illus. in color. (Unsupervised and Semi-Supervised Learning) Hardcover
€ 114,99 | £ 99,99
€ (D) 123,04 | € (A) 126,49 | CHF 136.00
ISBN 978-3-030-23875-9

W. Bożejko, G. Bočewicz (Eds.)

Modelling and Performance Analysis of Cyclic Systems

Striking a balance between state-of-the-art research and practical applications, this book provides a forum for contributions that cover the main research challenges in the cyclic modeling. [...]

2020. XIII, 190 p. 88 illus., 31 illus. in color. (Studies in Systems, Decision and Control, Volume 241) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

D. Brodić, A. Amelio

The CAPTCHA: Perspectives and Challenges in Artificial Intelligence

This book discusses the CAPTCHA (completely automated public Turing test to tell computers and humans apart), an artificial-intelligence-based test commonly used on websites for preventing security attacks, covering its foundations, the main trends and challenges, as well as innovative features and research aspects. [...]

2020. XVIII, 123 p. (Smart Innovation, Systems and Technologies, Volume 162) Hardcover
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
ISBN 978-3-030-27782-6

N. Bouguila, W. Fan (Eds.)

Mixture Models and Applications

This book focuses on recent advances, approaches, theories and applications related to mixture models. In particular, it presents recent unsupervised and semi-supervised frameworks that consider mixture models as their main tool. The chapters considers mixture models involving several interesting and challenging problems such as parameters estimation, model selection, feature selection, etc. [...]

2020. XII, 355 p. 120 illus., 88 illus. in color. (Unsupervised and Semi-Supervised Learning) Hardcover
€ 114,99 | £ 99,99
€ (D) 123,04 | € (A) 126,49 | CHF 136.00
ISBN 978-3-030-23875-9

W. Bożejko, G. Bočewicz (Eds.)

Modelling and Performance Analysis of Cyclic Systems

Striking a balance between state-of-the-art research and practical applications, this book provides a forum for contributions that cover the main research challenges in the cyclic modeling. [...]

2020. XIII, 190 p. 88 illus., 31 illus. in color. (Studies in Systems, Decision and Control, Volume 241) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

D. Brodić, A. Amelio

The CAPTCHA: Perspectives and Challenges in Artificial Intelligence

This book discusses the CAPTCHA (completely automated public Turing test to tell computers and humans apart), an artificial-intelligence-based test commonly used on websites for preventing security attacks, covering its foundations, the main trends and challenges, as well as innovative features and research aspects. [...]

2020. XVIII, 123 p. (Smart Innovation, Systems and Technologies, Volume 162) Hardcover
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
ISBN 978-3-030-27782-6

B. Brogliato, R. Lozano, B. Maschke, O. Egeland

Dissipative Systems Analysis and Control

Theory and Applications

The third edition of the now standard Dissipative Systems Analysis and Control presents a revised and expanded treatment of dissipative systems theory, constituting a self-contained, advanced introduction for graduate students, researchers and practising engineers. [...]

3rd ed. 2020. XVIII, 711 p. 116 illus. (Communications and Control Engineering) Hardcover
€ 159,99 | £ 139,99
€ (D) 171,19 | € (A) 175,99 | CHF 189.00

E. Capelas de Oliveira

Solved Exercises in Fractional Calculus

This book contains a brief historical introduction and state of the art in fractional calculus. The author introduces some of the so-called special functions, in particular, those which will be directly involved in calculations. The concepts of fractional integral and fractional derivative are also presented. [...]

2019. XVIII, 321 p. 15 illus. (Studies in Systems, Decision and Control, Volume 240) Hardcover
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
ISBN 978-3-030-20523-2
Z. Chen, A. Akbarzadeh
Advanced Thermal Stress Analysis of Smart Materials and Structures
This is the first single volume monograph that systematically summarizes the recent progress in using non-Fourier heat conduction theories to deal with the multiphysical behaviour of smart materials and structures. The book contains six chapters and starts with a brief introduction to Fourier and non-Fourier heat conduction theories. [...] 
2020. X, 304 p. 104 illus., 44 illus. in color. (Structural Integrity, Volume 10) Hardcover 
€ 149,99 | £ 129,99 
€ (D) 160,49 | € (A) 164,99 | CHF 177.00 
ISBN 978-3-030-25200-7 
Available 

J. Chen, Q. Zhu
A Game- and Decision-Theoretic Approach to Resilient Interdependent Network Analysis and Design
This brief introduces game- and decision-theoretical techniques for the analysis and design of resilient interdependent networks. It unites game and decision theory with network science to lay a system-theoretical foundation for understanding the resiliency of interdependent and heterogeneous network systems. [...] 
2020. X, 111 p. 63 illus., 33 illus. in color. (Advances in Intelligent Systems and Computing, Volume 995) Softcover 
€ 99,99 | £ 89,99 
€ (D) 106,99 | € (A) 109,99 | CHF 118.00 
ISBN 978-3-030-18018-8 
Available 

R. Chaki, A. Cortesi, K. Saeed, N. Chaki (Eds.)
Advanced Computing and Systems for Security Volume Ten
This book features extended versions of selected papers that were presented and discussed at the 6th International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2019) held in Kolkata, India on 12–13 March, 2019. Organized by the Departments of Computer Science & Engineering and A. K. [...] 
2020. X, 167 p. 65 illus., 29 illus. in color. (Advances in Intelligent Systems and Computing, Volume 996) Softcover 
€ 99,99 | £ 89,99 
€ (D) 106,99 | € (A) 109,99 | CHF 118.00 
Available 

R. Chaki, A. Cortesi, K. Saeed, N. Chaki (Eds.)
Advanced Computing and Systems for Security Volume Nine
This book features extended versions of selected papers that were presented and discussed at the 6th International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2019) held in Kolkata, India on 12–13 March, 2019. Organized by the Departments of Computer Science & Engineering and A. K. [...] 
2020. X, 111 p. 63 illus., 33 illus. in color. (Advances in Intelligent Systems and Computing, Volume 995) Softcover 
€ 99,99 | £ 89,99 
€ (D) 106,99 | € (A) 109,99 | CHF 118.00 
Available 

A. Chamberlain, A. Crabtree (Eds.)
Into the Wild: Beyond the Design Research Lab
This edited collection opens up new intellectual territories and articulates the ways in which academics are theorising and practicing new forms of research in ‘wild’ contexts. [...] 
€ 139,99 | £ 119,99 
€ (D) 149,79 | € (A) 153,99 | CHF 165.50 
ISBN 978-3-030-18018-8 
Available 

R. Chai, A. Savvaris, A. Tsourićos, S. Chai
Design of Trajectory Optimization Approach for Space Maneuver Vehicle Skip Entry Problems
This book explores the design of optimal trajectories for space maneuver vehicles (SMVs) using optimal control-based techniques. [...] 
2020. XVII, 207 p. 84 illus., 65 illus. in color. (Springer Aerospace Technology) Hardcover 
€ 149,99 | £ 129,99 
€ (D) 160,49 | € (A) 164,99 | CHF 177.00 
Available 

Z. Chen, A. Akbarzadeh
Advanced Thermal Stress Analysis of Smart Materials and Structures
This is the first single volume monograph that systematically summarizes the recent progress in using non-Fourier heat conduction theories to deal with the multiphysical behaviour of smart materials and structures. The book contains six chapters and starts with a brief introduction to Fourier and non-Fourier heat conduction theories. [...] 
2020. X, 304 p. 104 illus., 44 illus. in color. (Structural Integrity, Volume 10) Hardcover 
€ 149,99 | £ 129,99 
€ (D) 160,49 | € (A) 164,99 | CHF 177.00 
ISBN 978-3-030-25200-7 
Available 

A. Chamberlain, A. Crabtree (Eds.)
Into the Wild: Beyond the Design Research Lab
This edited collection opens up new intellectual territories and articulates the ways in which academics are theorising and practicing new forms of research in ‘wild’ contexts. [...] 
€ 139,99 | £ 119,99 
€ (D) 149,79 | € (A) 153,99 | CHF 165.50 
ISBN 978-3-030-18018-8 
Available 

R. Chaki, A. Cortesi, K. Saeed, N. Chaki (Eds.)
Advanced Computing and Systems for Security Volume Nine
This book features extended versions of selected papers that were presented and discussed at the 6th International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2019) held in Kolkata, India on 12–13 March, 2019. Organized by the Departments of Computer Science & Engineering and A. K. [...] 
2020. X, 111 p. 63 illus., 33 illus. in color. (Advances in Intelligent Systems and Computing, Volume 995) Softcover 
€ 99,99 | £ 89,99 
€ (D) 106,99 | € (A) 109,99 | CHF 118.00 
Available
Recent Metaheuristics Algorithms for Parameter Identification

This book presents new, alternative metaheuristic developments that have proved to be effective in various complex problems to help researchers, lecturers, engineers, and practitioners solve their own optimization problems. [...] 2020. XIV, 297 p. (Studies in Computational Intelligence, Volume 854) Hardcover

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-28916-4

G. Chiesa

Technological Paradigms and Digital Eras

Data-driven Visions for Building Design

The book connects the ICT and the architectural worlds, analyzing modeling, materialization and data-driven visions for design issues at different scales. Furthermore, using sample modeling and materialization tools, it explores the links between performance-driven design approaches and the application of new digital technologies. [...] 2020. XVII, 192 p. 88 illus., 31 illus. in color. (PolITO Springer Series) Hardcover

€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50
ISBN 978-3-030-26198-6

C. D. Coman

Continuum Mechanics and Linear Elasticity

An Applied Mathematics Introduction

This is an intermediate book for beginning postgraduate students and junior researchers, and offers up-to-date content on both continuum mechanics and elasticity. The material is self-contained and should provide readers sufficient working knowledge in both areas. [...] 2020. XV, 519 p. 154 illus. (Solid Mechanics and its Applications, Volume 238) Hardcover

€ 84,99 | £ 74,99
€ (D) 90,94 | € (A) 93,49 | CHF 100.50
ISBN 978-3-030-1769-6
I. Damnjanovic, K. Reinschmidt

Data Analytics for Engineering and Construction Project Risk Management

This book provides a step-by-step guidance on how to implement analytical methods in project risk management. The text focuses on engineering design and construction projects and as such is suitable for graduate students in engineering, construction, or project management, as well as practitioners aiming to develop, improve, and/or simplify corporate project management processes. [...] 2020. XV, 379 p. 112 illus., 108 illus. in color. (Risk, Systems and Decisions) Hardcover € 89.99 | £ 79.99 € (D) 96.29 | € (A) 98.99 | CHF 106.50 ISBN 978-3-030-14250-6

O. Datsyshyn, V. Panasyuk

Structural Integrity Assessment of Engineering Components Under Cyclic Contact

This book focuses on surface layers fracture of cyclical contacting bodies (machine parts). Calculation models and calculating procedures of stress-strain states of cyclically contacting solids with cracks, are included. [...] 2020. XIIi, 313 p. 183 illus., 1 illus. in color. (Structural Integrity, Volume 9) Hardcover € 149.99 | £ 129.99 € (D) 160.49 | € (A) 164.99 | CHF 177.00 ISBN 978-3-030-23068-5


Interface Influence on Moisture Transport in Building Components

The Wetting Process

The knowledge of moisture migration inside building materials and construction building components is decisive for the way they behave when in use. [...] 2020. VIII, 62 p. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49.99 | £ 44.99 € (D) 53.49 | € (A) 54.99 | CHF 59.00 ISBN 978-3-030-30802-5

D. E. O. Dewi, Y. W. Hau, A. Z. M. Khudzari, I. I. Muhamad, E. Supriyanto (Eds.)

Cardiovascular Engineering

Technological Advancements, Reviews, and Applications

This book highlights recent technological advances, reviews and applications in the field of cardiovascular engineering, including medical imaging, signal processing and informatics, biomechanics, as well as biomaterials. [...] 2020. VI, 259 p. 65 illus., 33 illus. in color. (Series in BioEngineering) Hardcover € 149.99 | £ 129.99 € (D) 160.49 | € (A) 164.99 | CHF 177.00 ISBN 978-981-10-8404-1
P. Ehrenbrink

The Role of Psychological Reactance in Human–Computer Interaction

This book provides an in-depth investigation on the psychological phenomenon "reactance" in the context of Human-Computer Interaction (HCI). The author argues that the complexity and autonomy of modern technology can sometimes be overwhelming and can then be perceived as a threat to freedom by its users, thereby diminishing acceptance. [...] 

2020. XIII, 143 p. 17 illus., 10 illus. in color. (T-Labs Series in Telecommunication Services) Hardcover
€ 86,99 | £ 74,99
€ (D) 93,08 | € (A) 95,69 | CHF 103.00
ISBN 978-3-030-30309-9

P. Di Barba, S. Wiak

MEMS: Field Models and Optimal Design

This book highlights numerical models as powerful tools for the optimal design of Micro-Electro-Mechanical Systems (MEMS). Most MEMS experts have a background in electronics, where circuit models or behavioral models (i.e. lumped-parameter models) of devices are preferred to field models. This is certainly convenient in terms of preliminary design, e.g. in the prototyping stage. [...] 

2020. IX, 190 p. (Lecture Notes in Electrical Engineering, Volume 573 ) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-21495-1

K. K. Dompere

A General Theory of Entropy
Fuzzy Rational Foundations of Information-Knowledge Certainty

This book presents an epistemic framework for dealing with information-knowledge and certainty-uncertainty problems within the space of quality-quantity dualities. [...] 

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50

P. Domański

Control Performance Assessment: Theoretical Analyses and Industrial Practice

This book presents a comprehensive review of currently available Control Performance Assessment methods. It covers a broad range of classical and modern methods, with a main focus on assessment practice, and is intended to help practitioners learn and properly perform control assessment in the industrial reality. [...] 

2020. XVIII, 367 p. 519 illus., 266 illus. in color. (Studies in Systems, Decision and Control, Volume 245) Hardcover
€ 139,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00

N. Dey, A. S. Ashour, S. Bhattacharyya (Eds.)


This book presents a cutting-edge research procedure in the Nature-Inspired Computing (NIC) domain and its connections with computational intelligence areas in real-world engineering applications. [...] 

€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00

O. Diegel, A. Nordin, D. Motte

A Practical Guide to Design for Additive Manufacturing

This book provides a wealth of practical guidance on how to design parts to gain the maximum benefit from what additive manufacturing (AM) can offer. It begins by describing the main AM technologies and their respective advantages and disadvantages. [...] 

2019. XX, 226 p. 213 illus., 180 illus. in color. (Springer Series in Advanced Manufacturing) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50

P. Ehrenbrink

The Role of Psychological Reactance in Human–Computer Interaction

This book provides an in-depth investigation on the psychological phenomenon "reactance" in the context of Human-Computer Interaction (HCI). The author argues that the complexity and autonomy of modern technology can sometimes be overwhelming and can then be perceived as a threat to freedom by its users, thereby diminishing acceptance. [...] 

2020. XIII, 143 p. 17 illus., 10 illus. in color. (T-Labs Series in Telecommunication Services) Hardcover
€ 86,99 | £ 74,99
€ (D) 93,08 | € (A) 95,69 | CHF 103.00
ISBN 978-3-030-30309-9

P. Di Barba, S. Wiak

MEMS: Field Models and Optimal Design

This book highlights numerical models as powerful tools for the optimal design of Micro-Electro-Mechanical Systems (MEMS). Most MEMS experts have a background in electronics, where circuit models or behavioral models (i.e. lumped-parameter models) of devices are preferred to field models. This is certainly convenient in terms of preliminary design, e.g. in the prototyping stage. [...] 

2020. IX, 190 p. (Lecture Notes in Electrical Engineering, Volume 573 ) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-21495-1

K. K. Dompere

A General Theory of Entropy
Fuzzy Rational Foundations of Information-Knowledge Certainty

This book presents an epistemic framework for dealing with information-knowledge and certainty-uncertainty problems within the space of quality-quantity dualities. [...] 

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50

P. Domański

Control Performance Assessment: Theoretical Analyses and Industrial Practice

This book presents a comprehensive review of currently available Control Performance Assessment methods. It covers a broad range of classical and modern methods, with a main focus on assessment practice, and is intended to help practitioners learn and properly perform control assessment in the industrial reality. [...] 

2020. XVIII, 367 p. 519 illus., 266 illus. in color. (Studies in Systems, Decision and Control, Volume 245) Hardcover
€ 139,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00

N. Dey, A. S. Ashour, S. Bhattacharyya (Eds.)


This book presents a cutting-edge research procedure in the Nature-Inspired Computing (NIC) domain and its connections with computational intelligence areas in real-world engineering applications. [...] 

€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00

O. Diegel, A. Nordin, D. Motte

A Practical Guide to Design for Additive Manufacturing

This book provides a wealth of practical guidance on how to design parts to gain the maximum benefit from what additive manufacturing (AM) can offer. It begins by describing the main AM technologies and their respective advantages and disadvantages. [...] 

2019. XX, 226 p. 213 illus., 180 illus. in color. (Springer Series in Advanced Manufacturing) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50

P. Di Barba, S. Wiak

MEMS: Field Models and Optimal Design

This book highlights numerical models as powerful tools for the optimal design of Micro-Electro-Mechanical Systems (MEMS). Most MEMS experts have a background in electronics, where circuit models or behavioral models (i.e. lumped-parameter models) of devices are preferred to field models. This is certainly convenient in terms of preliminary design, e.g. in the prototyping stage. [...] 

2020. IX, 190 p. (Lecture Notes in Electrical Engineering, Volume 573 ) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-21495-1

K. K. Dompere

A General Theory of Entropy
Fuzzy Rational Foundations of Information-Knowledge Certainty

This book presents an epistemic framework for dealing with information-knowledge and certainty-uncertainty problems within the space of quality-quantity dualities. [...] 

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-18158-1

P. Domański

Control Performance Assessment: Theoretical Analyses and Industrial Practice

This book presents a comprehensive review of currently available Control Performance Assessment methods. It covers a broad range of classical and modern methods, with a main focus on assessment practice, and is intended to help practitioners learn and properly perform control assessment in the industrial reality. [...] 

2020. XVIII, 367 p. 519 illus., 266 illus. in color. (Studies in Systems, Decision and Control, Volume 245) Hardcover
€ 139,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
Techniques, Tools and Methodologies Applied to Global Supply Chain Ecosystems

This book presents the latest developments concerning techniques, tools, and methodologies in supply chain ecosystems. It gathers contributions from a variety of experts, who analyze a range of case studies and industrial sectors such as...

2020. XXXVIII, 457 p. 99 illus., 74 illus. in color. (Intelligent Systems Reference Library, Volume 166) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-26487-1

Available

Springer
Monograph

A. Froehlich (Ed.)
Outer Space and Popular Culture
Influences and Interrelations

This book provides detailed insights into how space and popular culture intersect across a broad spectrum of examples, including cinema, music, art, arcade games, cartoons, comics, and advertisements. [...]

2020. VIII, 177 p. (Southern Space Studies) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-22655-8

Available

Springer
Monograph

J. Gamba
Radar Signal Processing for Autonomous Driving

The subject of this book is theory, principles and methods used in radar algorithm development with a special focus on automotive radar signal processing. In the automotive industry, autonomous driving is currently a hot topic that leads to numerous applications for both safety and driving comfort. [...]

2020. XV, 142 p. (Signals and Communication Technology) Hardcover
€ 109,99 | £ 99,99
€ (D) 117,69 | € (A) 120,99 | CHF 130.00

Available

Springer
Professional book

W. Gao (Ed.)
Metrology

The aim of this handbook is to provide a comprehensive summary of sensing and measurement in precision manufacturing, which is essential for process and quality control. [...]

2019. XVII, 629 p. 476 illus., 387 illus. in color. (Precision Manufacturing) Hardcover
€ 399,99 | £ 349,99
€ (D) 427,99 | € (A) 439,99 | CHF 471.50
ISBN 978-981-10-4937-8

Available

Springer
Handbook

M. Farsi, A. Daneshkhah, A. Hosseinian-Far, H. Jahankhani (Eds.)
Digital Twin Technologies and Smart Cities

This book provides a holistic perspective on Digital Twin (DT) technologies, and presents cutting-edge research in the field. It assesses the opportunities that DT can offer for smart cities, and covers the requirements for ensuring secure, safe and sustainable smart cities. [...]

2020. XII, 212 p. 46 illus., 38 illus. in color. (Internet of Things) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-18731-6

Available

Springer
Monograph

Z. Fei, S. Shi, P. Shi
Analysis and Synthesis for Discrete-Time Switched Systems
A Quasi-Time-Dependent Method

This book presents recent theoretical advances in the analysis and synthesis of discrete-time switched systems under the time-dependent switching scheme, including stability and disturbance attenuation performance analysis, control and filtering, asynchronous switching, finite-time analysis and synthesis, and reachable set estimation. [...]

2020. XIII, 210 p. 73 illus., 72 illus. in color. (Studies in Systems, Decision and Control, Volume 244) Hardcover
€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50

Available

Springer
Monograph

A. Froehlich (Ed.)
Outer Space and Popular Culture
Influences and Interrelations

This book provides detailed insights into how space and popular culture intersect across a broad spectrum of examples, including cinema, music, art, arcade games, cartoons, comics, and advertisements. [...]

2020. VIII, 177 p. (Southern Space Studies) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-22655-8

Available

Springer
Monograph

J. L. García-Alcaraz, C. Sánchez-Ramírez, L. Avelar-Sosa, G. Alor-Hernández (Eds.)
Techniques, Tools and Methodologies Applied to Global Supply Chain Ecosystems

This book presents the latest developments concerning techniques, tools, and methodologies in supply chain ecosystems. It gathers contributions from a variety of experts, who analyze a range of case studies and industrial sectors such as [...]

2020. XXXVIII, 457 p. 99 illus., 74 illus. in color. (Intelligent Systems Reference Library, Volume 166) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-26487-1

Available

Springer
Monograph

Z. Fei, S. Shi, P. Shi
Analysis and Synthesis for Discrete-Time Switched Systems
A Quasi-Time-Dependent Method

This book presents recent theoretical advances in the analysis and synthesis of discrete-time switched systems under the time-dependent switching scheme, including stability and disturbance attenuation performance analysis, control and filtering, asynchronous switching, finite-time analysis and synthesis, and reachable set estimation. [...]

2020. XIII, 210 p. 73 illus., 72 illus. in color. (Studies in Systems, Decision and Control, Volume 244) Hardcover
€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50

Available

Springer
Monograph

A. Froehlich (Ed.)
Outer Space and Popular Culture
Influences and Interrelations

This book provides detailed insights into how space and popular culture intersect across a broad spectrum of examples, including cinema, music, art, arcade games, cartoons, comics, and advertisements. [...]

2020. VIII, 177 p. (Southern Space Studies) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-22655-8

Available

Springer
Monograph

J. L. García-Alcaraz, C. Sánchez-Ramírez, L. Avelar-Sosa, G. Alor-Hernández (Eds.)
Techniques, Tools and Methodologies Applied to Global Supply Chain Ecosystems

This book presents the latest developments concerning techniques, tools, and methodologies in supply chain ecosystems. It gathers contributions from a variety of experts, who analyze a range of case studies and industrial sectors such as [...]

2020. XXXVIII, 457 p. 99 illus., 74 illus. in color. (Intelligent Systems Reference Library, Volume 166) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-26487-1

Available

Springer
Monograph
C. N. Hadjicostis

Estimation and Inference in Discrete Event Systems
A Model-Based Approach with Finite Automata

Estimation and Inference in Discrete Event Systems chooses a popular model for emerging automation systems—finite automata under partial observation—and focuses on a comprehensive study of the key problems of state estimation and event inference. [...] 

2020. XVIII, 346 p. 79 illus., 3 illus. in color. (Communications and Control Engineering) Hardcover € 139.99 | £ 119.99 € (D) 149.79 | € (A) 153.99 | CHF 165.50 ISBN 978-3-030-30820-9

Z. Guo, D. Sha

New Topologies and Modulation Schemes for Soft-Switching Isolated DC–DC Converters

This book presents a series of new topologies and modulation schemes for soft-switching in isolated DC–DC converters. Providing detailed analyses and design procedures for converters used in a broad range of applications, it offers a wealth of engineering insights for researchers and students in the field of power electronics, as well as stimulating new ideas for future research. [...] 

2020. XXV, 243 p. 219 illus., 197 illus. in color. (CPSS Power Electronics Series) Hardcover € 139.99 | £ 119.99 € (D) 149.79 | € (A) 153.99 | CHF 165.50 ISBN 978-3-030-30820-9

J. L. González-Velázquez

Mechanical Behavior and Fracture of Engineering Materials

This book presents the theoretical concepts of stress and strain, as well as the strengthening and fracture mechanisms of engineering materials in an accessible level for non-expert readers, but without losing scientific rigor. [...] 

2020. XI, 244 p. 252 illus., 73 illus. in color. (Structural Integrity, Volume 12) Hardcover € 129.99 | £ 109.99 € (D) 139.09 | € (A) 142.99 | CHF 153.50 ISBN 978-3-030-29240-9

A. Gründinger

Statistical Robust Beamforming for Broadcast Channels and Applications in Satellite Communication

This book investigates adaptive physical-layer beamforming and resource allocation that ensure reliable data transmission in the multi-antenna broadcast channel. The book provides an overview of robust optimization techniques and modelling approximations to deal with stochastic performance metrics. [...] 


A. Grau, Y. Morel, A. Puig-Pey, F. Cecchi (Eds.)

Advances in Robotics Research: From Lab to Market

ECHORD++: Robotic Science Supporting Innovation

In this book Part I presents first an overview of the ECHORD++ project, with its mission and vision together with a detailed structure of its functionalities and instruments: Experiments, Robotic Innovation Facilities and Public end-user Driven Technology Innovation PDTI. [...] 


E. S. Gopi

Pattern Recognition and Computational Intelligence Techniques Using Matlab

This book presents the complex topic of using computational intelligence for pattern recognition in a straightforward and applicable way, using Matlab to illustrate topics and concepts. The author covers computational intelligence tools like particle swarm optimization, bacterial foraging, simulated annealing, genetic algorithm, and artificial neural networks. [...] 

2020. XIII, 256 p. 137 illus., 127 illus. in color. (Transactions on Computational Science and Computational Intelligence) Hardcover € 114,99 | £ 99,99 € (D) 123,04 | € (A) 126,49 | CHF 136,00 ISBN 978-3-030-22272-7

E. S. Gopi

Pattern Recognition and Computational Intelligence Techniques Using Matlab

This book presents the complex topic of using computational intelligence for pattern recognition in a straightforward and applicable way, using Matlab to illustrate topics and concepts. The author covers computational intelligence tools like particle swarm optimization, bacterial foraging, simulated annealing, genetic algorithm, and artificial neural networks. [...] 

2020. XIII, 256 p. 137 illus., 127 illus. in color. (Transactions on Computational Science and Computational Intelligence) Hardcover € 114,99 | £ 99,99 € (D) 123,04 | € (A) 126,49 | CHF 136,00 ISBN 978-3-030-22272-7

J. L. González-Velázquez

Mechanical Behavior and Fracture of Engineering Materials

This book presents the theoretical concepts of stress and strain, as well as the strengthening and fracture mechanisms of engineering materials in an accessible level for non-expert readers, but without losing scientific rigor. [...] 

2020. XI, 244 p. 252 illus., 73 illus. in color. (Structural Integrity, Volume 12) Hardcover € 129.99 | £ 109.99 € (D) 139.09 | € (A) 142.99 | CHF 153.50 ISBN 978-3-030-29240-9

A. Gründinger

Statistical Robust Beamforming for Broadcast Channels and Applications in Satellite Communication

This book investigates adaptive physical-layer beamforming and resource allocation that ensure reliable data transmission in the multi-antenna broadcast channel. The book provides an overview of robust optimization techniques and modelling approximations to deal with stochastic performance metrics. [...] 

A. M. Krishna, T. Katsumi (Eds.)

Geotechnics for Natural Disaster Mitigation and Management

This volume presents recent advances and developments taking place in geotechnical aspects of natural disaster mitigation and management. The chapters of this book are based on the invited lectures delivered by eminent researchers at the Third Indo-Japan Workshop on Geotechnics for Natural Disaster Mitigation and Management. [...] 2020. X, 145 p. 113 illus., 86 illus. in color. (Developments in Geotechnical Engineering) Hardcover
€ 159.99 | £ 139.99
€ (D) 171.19 | € (A) 175.99 | CHF 189.00

K. Liu, H. Wang, X. Zhang

Ductile Mode Cutting of Brittle Materials

This book provides a systematic and comprehensive interdisciplinary overview of ductile mode cutting of brittle materials, covering a range of topics from the fundamental physics to engineering practices. Discussing the machining mechanics and material properties, it explains the fundamental mechanism of ductile-to-brittle transition in the cutting of brittle materials. [...] 2020. XXIV, 291 p. (Springer Series in Advanced Manufacturing) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

C. Kotze

A Broadband Apparatus for Underserviced Remote Communities

Connecting the Unconnected

This book investigates how broadband internet can be provided to remote and isolated communities through the use of satellite and other enabling technologies, in the form of a self-contained broadband apparatus. It discusses how the proposed design can help bridge the digital divide by removing one of the main hurdles to adopting technologies: infrastructure. [...] 2020. XI, 124 p. (Southern Space Studies) Hardcover
€ 119.99 | £ 109.99
€ (D) 128.39 | € (A) 131.99 | CHF 141.50
ISBN 978-3-030-15765-4

K. M. Koo

Advancing Gene Fusion Detection Towards Personalized Cancer Nanodiagnostics

This book presents a unique concept of merging nanotechnology and novel urinary biomarkers for accurate early prostate cancer detection, discussing an entire progressive pipeline of innovative new strategies in biosensor development, from a simple colorimetric system to a complex system for simultaneous multiple biomarker sensing. [...] 2019. XIII, 102 p. (Springer Theses) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

S. Kim, G. C. Deka (Eds.)

Advanced Applications of Blockchain Technology

This contributed volume discusses diverse topics to demystify the rapidly emerging and evolving blockchain technology, the emergence of integrated platforms and hosted third-party tools, and the development of decentralized applications for various business domains. [...] 2020. X, 278 p. 93 illus., 58 illus. in color. (Studies in Big Data, Volume 60) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

K. Liu, H. Wang, X. Zhang

Ductile Mode Cutting of Brittle Materials

This book provides a systematic and comprehensive interdisciplinary overview of ductile mode cutting of brittle materials, covering a range of topics from the fundamental physics to engineering practices. Discussing the machining mechanics and material properties, it explains the fundamental mechanism of ductile-to-brittle transition in the cutting of brittle materials. [...] 2020. XXIV, 291 p. (Springer Series in Advanced Manufacturing) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

A. M. Krishna, T. Katsumi (Eds.)

Geotechnics for Natural Disaster Mitigation and Management

This volume presents recent advances and developments taking place in geotechnical aspects of natural disaster mitigation and management. The chapters of this book are based on the invited lectures delivered by eminent researchers at the Third Indo-Japan Workshop on Geotechnics for Natural Disaster Mitigation and Management. [...] 2020. X, 145 p. 113 illus., 86 illus. in color. (Developments in Geotechnical Engineering) Hardcover
€ 159.99 | £ 139.99
€ (D) 171.19 | € (A) 175.99 | CHF 189.00
R. Lee (Ed.)

**Applied Computing and Information Technology**

This book gathers the outcomes of the 7th International Conference on Applied Computing and Information Technology (ACIT 2019), which was held on May 29–31, 2019 in Honolulu, Hawaii. [...] 2020. XII, 179 p. 135 illus., 41 illus. in color. (Studies in Computational Intelligence, Volume 847) Hardcover

€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141,50
ISBN 978-3-030-25216-8

---

R. Lee (Ed.)

**Big Data, Cloud Computing, and Data Science Engineering**

This edited book presents the scientific outcomes of the 4th IEEE/ACIS International Conference on Big Data, Cloud Computing, Data Science & Engineering (BCD 2019) which was held on May 29–31, 2019 in Honolulu, Hawaii. [...] 2020. XIII, 214 p. (Studies in Computational Intelligence, Volume 844) Hardcover

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165,50
ISBN 978-3-030-24404-0

---

R. Lee (Ed.)

**Computational Science/Intelligence and Applied Informatics**

This book gathers the outcomes of the 6th ACIS International Conference on Computational Science/Intelligence & Applied Informatics (CSII 2019), which was held on May 29–31, 2019 in Honolulu, Hawaii. [...] 2020. XIII, 188 p. 85 illus., 53 illus. in color. (Studies in Computational Intelligence, Volume 848) Hardcover

€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153,50
ISBN 978-3-030-25224-3

---

R. Lee (Ed.)

**Computer and Information Science**

This book gathers the outcomes of the 18th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2019), which was held on June 12–14, 2019 in Beijing, China. [...] 2020. XIII, 237 p. 163 illus., 91 illus. in color. (Studies in Computational Intelligence, Volume 849) Hardcover

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165,50
ISBN 978-3-030-25212-0

---

R. Lee (Ed.)

**Software Engineering Research, Management and Applications**

This edited book presents the scientific outcomes of the 17th International Conference on Software Engineering, Artificial Intelligence Research, Management and Applications (SERA 2019) held on May 29–31, 2019 in Honolulu, Hawaii. [...] 2020. XIII, 221 p. 77 illus., 39 illus. in color. (Studies in Computational Intelligence, Volume 845) Hardcover

€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165,50

---

R. Lee (Ed.)

**Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing**

This book presents the outcomes of the 20th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2019), which was held on July 8–10, 2019, in Toyama, Japan. [...] 2020. XII, 179 p. 135 illus., 41 illus. in color. (Studies in Computational Intelligence, Volume 850) Hardcover

€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153,50
ISBN 978-3-030-26427-7
J. Liu, Y. Gao, Y. Yin, J. Wang, W. Luo, G. Sun
Sliding Mode Control Methodology in the Applications of Industrial Power Systems
This book presents recent advanced techniques in sliding mode control and observer design for industrial power systems, focusing on their applications in polymer electrolyte membrane fuel cells and power converters. [...] 2020. XXV, 205 p. 84 illus., 70 illus. in color. (Studies in Systems, Decision and Control, Volume 249) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
ISBN 978-3-030-30654-0

Y. Liu, Z. Qin, Z. Ding
Non-Orthogonal Multiple Access for Massive Connectivity
This book discusses non-orthogonal multiple access (NOMA) and the various issues in NOMA networks, including capability, sustainability, and security. This book starts from the basics and key techniques of NOMA. Subsequently, the authors discuss three critical issues in NOMA networks, including compatibility, sustainability, and security. [...] 2020. XIV, 101 p. 25 illus. in color. (Springer-Briefs in Computer Science) Softcover
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
ISBN 978-3-030-30974-9

Z. Les, M. Les
Machine Understanding
Machine Perception and Machine Perception MU
This unique book discusses machine understanding (MU). This new branch of classic machine perception research focuses on perception that leads to understanding and is based on the categories of sensory objects. In this approach the visual and non-visual knowledge, in the form of visual and non-visual concepts, is used in the complex reasoning process that leads to understanding. [...] 2020. XVII, 215 p. (Studies in Computational Intelligence, Volume 842) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-24069-1

V. Litovski
Electronic Filters
Theory, Numerical Recipes, and Design Practice based on the RM Software
This book provides a comprehensive overview of signal filtering, including an introduction, definitions of the terms and algorithms for numerical calculation of the properties of the transfer function in frequency and time domains. [...] 2019. XVII, 437 p. 286 illus., 10 illus. in color. (Lecture Notes in Electrical Engineering, Volume 596) Hardcover
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-29851-4
N. V. M. Lopes (Ed.)

**Smart Governance for Cities: Perspectives and Experiences**

This book provides theoretical perspectives and practical experiences on smart governance for smart cities. It presents a balanced linkage between research, policies and practices on this area. [...] 2020. XII, 223 p. 78 illus., 48 illus. in color. (EAI/Springer Innovations in Communication and Computing) Hardcover € 114.99 | £ 99.99 € (D) 123.04 | € (A) 126.49 | CHF 136.00 ISBN 978-3-030-22069-3

R. Loukanova (Ed.)

**Logic and Algorithms in Computational Linguistics 2018 (LACompLing2018)**

This book focuses mainly on logical approaches to computational linguistics, but also discusses integrations with other approaches, presenting both classic and newly emerging theories and applications. Decades of research on theoretical work and practical applications have demonstrated that computational linguistics is a distinctively interdisciplinary area. [...] 2020. IX, 205 p. 110 illus., 11 illus. in color. (Studies in Computational Intelligence, Volume 860) Hardcover € 129.99 | £ 109.99 € (D) 139.09 | € (A) 142.99 | CHF 153.50 ISBN 978-3-030-30076-0

Y. Lu

**Cell-Free Synthetic Biology**

This book describes advanced studies in cell-free synthetic biology, an emerging biotechnology that focuses on cell-free protein synthesis and cell-free systems for fundamental and industrial research in areas such as genetic circuit design, small-molecule synthesis, [...] 2020. VIII, 37 p. 9 illus., 8 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49.99 | £ 44.99 € (D) 53.49 | € (A) 54.99 | CHF 59.00 ISBN 978-981-13-1170-3

A. C. J. Luo

**Bifurcation and Stability in Nonlinear Dynamical Systems**

This book systematically presents a fundamental theory for the local analysis of bifurcation and stability of equilibriums in nonlinear dynamical systems. Until now, one does not have any efficient way to investigate stability and bifurcation of dynamical systems with higher-order singularity equilibriums. [...] 2019. IX, 395 p. 82 illus., 70 illus. in color. (Nonlinear Systems and Complexity, Volume 28) Hardcover € 149.99 | £ 129.99 € (D) 160.49 | € (A) 164.99 | CHF 177.00 ISBN 978-3-030-22909-2

C. Machado, J. P. Davim (Eds.)

**Entrepreneurship and Organizational Innovation**


D. MacTaggart, A. Hillier (Eds.)

**Topics in Magnetohydrodynamic Topology, Reconnection and Stability Theory**

The book presents an advanced but accessible overview of some of the most important sub-branches of magnetohydrodynamics (MHD); stability theory, magnetic topology, relaxation theory and magnetic reconnection. Although each of these subjects is often treated separately, in practical MHD applications [...] 2020. VII, 265 p. 79 illus., 39 illus. in color. (CISM International Centre for Mechanical Sciences, Volume 591) Hardcover € 139.99 | £ 119.99 € (D) 149.79 | € (A) 153.99 | CHF 165.50 ISBN 978-3-030-16342-6
R. N. Miles
Physical Approach to Engineering Acoustics
This textbook presents the fundamentals of engineering acoustics and examines in depth concepts within the domain that apply to reducing noise, measuring noise, and designing microphones and loudspeakers. The book particularly emphasizes the physical principles used in designing miniature microphones. [...] 2020. XIX, 380 p. 109 illus., 101 illus. in color. (Mechanical Engineering Series) Hardcover € 74,99 | £ 64,99 € (D) 80,24 | € (A) 82,49 | CHF 88.50 ISBN 978-3-030-22675-6

M. Migliore, C. Talamo, G. Paganin
Strategies for Circular Economy and Cross-sectoral Exchanges for Sustainable Building Products
Preventing and Recycling Waste
This book offers a valuable tool for understanding current efforts to promote the reuse and enhancement of pre-consumer waste in the development of new products for the construction sector, as well as the financial and regulatory tools being used to support this trend. [...] 2020. X, 233 p. (Springer Tracts in Civil Engineering) Hardcover € 139,99 | £ 119,99 € (D) 149,79 | € (A) 153,99 | CHF 165.50 ISBN 978-3-030-30317-4

O. Matsushita, M. Tanaka, M. Kobayashi, P. Keogh, H. Kanki
Vibrations of Rotating Machinery Volume 2. Advanced Rotordynamics: Applications of Analysis, Troubleshooting and Diagnosis

S. Madry
Disruptive Space Technologies and Innovations
The Next Chapter
In the past century alone, we have witnessed groundbreaking technological innovations quickly displace established industries, thereby opening up entirely new markets or fields of research. Such “disruptive technologies” are hard to predict in advance, and yet, they have the potential to significantly alter the course of history. [...] 2020. XV, 252 p. 89 illus., 81 illus. in color. (Space and Society) Hardcover € 139,99 | £ 119,99 € (D) 149,79 | € (A) 153,99 | CHF 165.50 ISBN 978-3-030-22187-4

P. N. Mahalle, P. S. Dhotre
Context-Aware Pervasive Systems and Applications
This textbook explores the current challenges in and future prospects of context-aware pervasive systems and applications. The phenomenal advances in broadband technology and ubiquitous access to the Internet have transformed Internet computing into the Internet of Things (IoT), which is now evolving toward the Internet of Everything. [...] 2020. XXI, 155 p. 36 illus., 34 illus. in color. (Intelligent Systems Reference Library, Volume 169) Hardcover € 79,99 | £ 69,99 € (D) 85,59 | € (A) 87,99 | CHF 94.50 ISBN 978-981-32-9951-1

M. Marinov, J. Piip (Eds.)
Sustainable Rail Transport
This volume presents a collection of rail orientated research articles, covering a variety of topics on rail operations research and management of rail systems as well as innovation, particularly focusing on sustainability aspects. The material consists of the most recent research work of the authors. [...] 2020. X, 310 p. 169 illus., 157 illus. in color. (Lecture Notes in Mobility) Hardcover € 139,99 | £ 119,99 € (D) 149,79 | € (A) 153,99 | CHF 165.50 ISBN 978-3-030-19518-2

P. N. Mahalle, P. S. Dhotre
Context-Aware Pervasive Systems and Applications
This textbook explores the current challenges in and future prospects of context-aware pervasive systems and applications. The phenomenal advances in broadband technology and ubiquitous access to the Internet have transformed Internet computing into the Internet of Things (IoT), which is now evolving toward the Internet of Everything. [...] 2020. XXI, 155 p. 36 illus., 34 illus. in color. (Intelligent Systems Reference Library, Volume 169) Hardcover € 79,99 | £ 69,99 € (D) 85,59 | € (A) 87,99 | CHF 94.50 ISBN 978-981-32-9951-1

M. Marinov, J. Piip (Eds.)
Sustainable Rail Transport
This volume presents a collection of rail orientated research articles, covering a variety of topics on rail operations research and management of rail systems as well as innovation, particularly focusing on sustainability aspects. The material consists of the most recent research work of the authors. [...] 2020. X, 310 p. 169 illus., 157 illus. in color. (Lecture Notes in Mobility) Hardcover € 139,99 | £ 119,99 € (D) 149,79 | € (A) 153,99 | CHF 165.50 ISBN 978-3-030-19518-2

M. Migliore, C. Talamo, G. Paganin
Strategies for Circular Economy and Cross-sectoral Exchanges for Sustainable Building Products
Preventing and Recycling Waste
This book offers a valuable tool for understanding current efforts to promote the reuse and enhancement of pre-consumer waste in the development of new products for the construction sector, as well as the financial and regulatory tools being used to support this trend. [...] 2020. X, 233 p. (Springer Tracts in Civil Engineering) Hardcover € 139,99 | £ 119,99 € (D) 149,79 | € (A) 153,99 | CHF 165.50 ISBN 978-3-030-30317-4

R. N. Miles
Physical Approach to Engineering Acoustics
This textbook presents the fundamentals of engineering acoustics and examines in depth concepts within the domain that apply to reducing noise, measuring noise, and designing microphones and loudspeakers. The book particularly emphasizes the physical principles used in designing miniature microphones. [...] 2020. XIX, 380 p. 109 illus., 101 illus. in color. (Mechanical Engineering Series) Hardcover € 74,99 | £ 64,99 € (D) 80,24 | € (A) 82,49 | CHF 88.50 ISBN 978-3-030-22675-6
K. Naumenko, M. Krüger (Eds.)
Advances in Mechanics of High-Temperature Materials

This book presents a collection of contributions on advanced approaches to the mechanics of materials and mechanics of structures for high-temperature applications, such as power plant components, engines and turbochargers. [...] 
2020. VIII, 211 p. 146 illus., 64 illus. in color. (Advanced Structured Materials, Volume 117) Hardcover 
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50 
ISBN 978-3-030-23868-1

A. Nait-ali (Ed.)
Hidden Biometrics
When Biometric Security Meets Biomedical Engineering

This book explores intrinsic and human body part biometrics and biometrics of human physiological activities, invisible to the naked eye. This includes, for instance, brain structures, skeleton morphology, heart activity, etc. These human body parts can only be visualized using specific imaging techniques or sensors, commonly employed in the biomedical engineering field. [...] 
2020. X, 202 p. 109 illus., 44 illus. in color. (Series in BioEngineering) Hardcover 
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50 

S. Mottaghi, R. Gabbai, H. Benaroya

This self-contained book provides an introduction to the flow-oscillator modeling of vortex-induced bluff-body oscillations. One of the great challenges in engineering science also happens to be one of engineering design – the modeling, analysis and design of vibrating structures driven by fluid motion. [...] 
2020. XIV, 245 p. 43 illus., 10 illus. in color. (Solid Mechanics and Its Applications, Volume 260) Hardcover 
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50 
ISBN 978-3-030-26131-3

Due December 2019

S. Mottaghi, H. Faris, I. Aljarah (Eds.)
Evolutionary Machine Learning Techniques
Algorithms and Applications

This book provides an in-depth analysis of the current evolutionary machine learning techniques. [...] 
2020. VII, 288 p. 73 illus., 56 illus. in color. (Algorithms for Intelligent Systems) Hardcover 
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00 
ISBN 978-3-030-32-998-4

G. Naik (Ed.)
Biomedical Signal Processing
Advances in Theory, Algorithms and Applications

This book reports on the latest advances in the study of biomedical signal processing, and discusses in detail a number of open problems concerning clinical, biomedical and neural signals. It methodically collects and presents in a unified form the research findings previously scattered throughout various scientific journals and conference proceedings. [...] 
2020. X, 432 p. 169 illus., 125 illus. in color. (Series in BioEngineering) Hardcover 
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00 
ISBN 981-13-9096-8
Technological Trends in Improved Mobility of the Visually Impaired

This book provides an insight into recent technological trends and innovations in mobility solutions and platforms to improve mobility of visually impaired people. The authors’ goal is to help to contribute to the social and societal inclusion of the visually impaired.


A. Paiva (Ed.)

Making Smart Cities More Playable

Exploring Playable Cities

This book explores the ways in which the broad range of technologies that make up the smart city infrastructure can be harnessed to incorporate more playfulness into the day-to-day activities that take place within smart cities, making them not only more efficient but also more enjoyable for the people who live and work within their confines. [...] 


A. Nijholt (Ed.)

Women in Nanotechnology

Contributions from the Atomic Level and Up

This book celebrates a few examples of the many women who have advanced the field of nanotechnology. The book opens with an overview of the field, illuminating how nanotechnology is opening the door to manipulating matter on a scale one billionth of a meter. [...] 

ISBN 978-3-030-19950-0

P. M. Norris, L. E. Friedersdorf (Eds.)

Model Selection and Error Estimation in a Nutshell

How can we select the best performing data-driven model? How can we rigorously estimate its generalization error? Statistical learning theory answers these questions by deriving non-asymptotic bounds on the generalization error of a model or, in other words, by upper bounding the true error of the learned model based just on quantities computed on the available data. [...] 

ISBN 978-3-030-24358-6

L. Oneto

Advanced Structural Safety Studies

With Extreme Conditions and Accidents

This book describes principles, industry practices and evolutionary methodologies for advanced safety studies, which are helpful in effectively managing volatile, uncertain, complex, and ambiguous (VUCA) environments within the framework of quantitative risk assessment and [...] 


J. K. Paik

Women in Nanotechnology

Contributions from the Atomic Level and Up

This book celebrates a few examples of the many women who have advanced the field of nanotechnology. The book opens with an overview of the field, illuminating how nanotechnology is opening the door to manipulating matter on a scale one billionth of a meter. [...] 

ISBN 978-3-030-19950-0

P. M. Norris, L. E. Friedersdorf (Eds.)
E. G. Popkova (Ed.)
Growth Poles of the Global Economy: Emergence, Changes and Future Perspectives

The book presents the best contributions from the international scientific conference "Growth Poles of the Global Economy: Emergence, Changes and Future," which was organized by the Institute of Scientific Communications (Volgograd, Russia) together with the universities of Kyrgyzstan and various other cities in Russia.

2020. XXIII, 1413 p. 197 illus., 115 illus. in color. (Lecture Notes in Networks and Systems, Volume 73) Hardcover

€ 279.99 | £ 249.99
€ (D) 299.59 | € (A) 307.99 | CHF 330.50
ISBN 978-3-030-15159-1

Available

J. F. Peters
Computational Geometry, Topology and Physics of Digital Images with Applications

This book discusses the computational geometry, topology and physics of digital images and video frame sequences. This trio of computational approaches encompasses the study of shape complexes, optical vortex nerves and proximities embedded in [...]

2020. XXV, 440 p. 1853 illus., 205 illus. in color. (Intelligent Systems Reference Library, Volume 162) Hardcover

€ 149.99 | £ 129.99
€ (D) 160.49 | € (A) 164.99 | CHF 177.00
ISBN 978-3-030-22191-1

Available

S. Paszkiel
Analysis and Classification of EEG Signals for Brain–Computer Interfaces

This book addresses the problem of EEG signal analysis and the need to classify it for practical use in many sample implementations of brain–computer interfaces. [...]

2020. VI, 132 p. (Studies in Computational Intelligence, Volume 852) Hardcover

€ 119.99 | £ 109.99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Available

S. Patnaik (Ed.)
New Paradigm of Industry 4.0

Internet of Things, Big Data & Cyber Physical Systems

The book provides readers with an overview of the state of the art in the field of Industry 4.0 and related research advancements. The respective chapters identify and discuss new dimensions of both risk factors and success factors, along with performance metrics that can be employed in future research work. [...]

2020. XI, 180 p. (Studies in Big Data, Volume 64) Hardcover

€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-25777-4

Available

P. K. Pattnaik, R. Kumar, S. Pal, S. N. Panda (Eds.)
IoT and Analytics for Agriculture

This book presents recent findings on virtually every aspect of wireless IoT and analytics for agriculture. It discusses IoT-based monitoring systems for analyzing the crop environment, and methods for improving the efficiency of decision-making based on the analysis of harvest statistics. [...]

2020. XVII, 240 p. 84 illus., 60 illus. in color. (Studies in Big Data, Volume 63) Hardcover

€ 169,99 | £ 149,99
€ (D) 181,89 | € (A) 186,99 | CHF 200.50

Available

S. Paszkiel
Analysis and Classification of EEG Signals for Brain–Computer Interfaces

This book addresses the problem of EEG signal analysis and the need to classify it for practical use in many sample implementations of brain–computer interfaces. [...]

2020. VI, 132 p. (Studies in Computational Intelligence, Volume 852) Hardcover

€ 119.99 | £ 109.99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Available

Springer Monograph

J. Parameswaranpillai, S. Siengchin, J. J. George, S. Jose (Eds.)
Shape Memory Polymers, Blends and Composites

Advances and Applications

This book explores the recent advances in the field of shape memory polymers, whose ease of manufacturing and wide range of potential applications have spurred interest in the field. The book presents details about the synthesis, processing, characterization, and applications of shape memory polymers, their blends and composites. [...]


€ 149.99 | £ 129.99
€ (D) 160.49 | € (A) 164.99 | CHF 177.00

Available

Springer Monograph

P. K. Pattnaik, R. Kumar, S. Pal, S. N. Panda (Eds.)
IoT and Analytics for Agriculture

This book presents recent findings on virtually every aspect of wireless IoT and analytics for agriculture. It discusses IoT-based monitoring systems for analyzing the crop environment, and methods for improving the efficiency of decision-making based on the analysis of harvest statistics. [...]

2020. XVII, 240 p. 84 illus., 60 illus. in color. (Studies in Big Data, Volume 63) Hardcover

€ 169,99 | £ 149,99
€ (D) 181,89 | € (A) 186,99 | CHF 200.50

Available

Springer Monograph

J. F. Peters
Computational Geometry, Topology and Physics of Digital Images with Applications

Shape Complexes, Optical Vortex Nerves and Proximities

This book discusses the computational geometry, topology and physics of digital images and video frame sequences. This trio of computational approaches encompasses the study of shape complexes, optical vortex nerves and proximities embedded in [...]

2020. XXV, 440 p. 1853 illus., 205 illus. in color. (Intelligent Systems Reference Library, Volume 162) Hardcover

€ 149.99 | £ 129.99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-22191-1

Available

Springer Monograph

E. G. Popkova (Ed.)
Growth Poles of the Global Economy: Emergence, Changes and Future Perspectives

The book presents the best contributions from the international scientific conference “Growth Poles of the Global Economy: Emergence, Changes and Future,” which was organized by the Institute of Scientific Communications (Volgograd, Russia) together with the universities of Kyrgyzstan and various other cities in Russia. [...]

2020. XXIII, 1413 p. 197 illus., 115 illus. in color. In 2 volumes, not available separately. (Lecture Notes in Networks and Systems, Volume 73) Hardcover

€ 279.99 | £ 249.99
€ (D) 299,59 | € (A) 307,99 | CHF 330.50
ISBN 978-3-030-15159-1

Available

Springer Monograph
S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti

Heat Transfer Enhancement in Externally Finned Tubes and Internally Finned Tubes and Annuli

This Brief deals with externally finned tubes, their geometric parameters, Reynolds number, dimensionless variables, friction factor, plain plate fins on round tubes, the effect of fin spacing, correlations, pain individually finned tubes, circular fins with staggered tubes, [...] 2020. IX, 125 p. 96 illus., 22 illus. in color. (SpringerBriefs in Applied Sciences and Technology, Volume 88) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-05341-3

F. Ros, S. Guillaume (Eds.)

Sampling Techniques for Supervised or Unsupervised Tasks

This book describes in detail sampling techniques that can be used for unsupervised and supervised cases, with a focus on sampling techniques for machine learning algorithms. It covers theory and models of sampling methods for managing scalability and the “curse of dimensionality”, their implementations, evaluations, and applications. [...] 2020. XIII, 232 p. 40 illus., 30 illus. in color. (Unsupervised and Semi-Supervised Learning) Hardcover
€ 114,99 | £ 99,99
€ (D) 123,04 | € (A) 126,49 | CHF 136.00

I. V. Safonov, I. V. Kurilin, M. N. Rychagov, E. V. Tolstaya

Document Image Processing for Scanning and Printing

This book continues first one of the same authors “Adaptive Image Processing Algorithms for Printing” and presents methods and software solutions for copying and scanning various types of documents by conventional office equipment, offering techniques for correction of distortions and [...] 2019. XVIII, 305 p. 249 illus., 165 illus. in color. (Signals and Communication Technology) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
ISBN 978-3-030-05341-3

M. O. Rüter

Error Estimates for Advanced Galerkin Methods

This monograph provides a compendium of established and novel error estimation procedures applied in the field of Computational Mechanics. It also includes detailed derivations of these procedures to offer insights into the concepts used to control the errors obtained from employing Galerkin methods in finite and linearized hyperelasticity. [...] 2019. XIV, 508 p. 179 illus. in color. (Lecture Notes in Applied and Computational Mechanics, Volume 88) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti

Electric Fields, Additives and Simultaneous Heat and Mass Transfer in Heat Transfer Enhancement

This Brief deals with electrode design and placement, enhancement of both liquid and gas flow, vapor space condensation, in-tube condensation, falling film evaporation, correlations. [...] 2020. XXII, 140 p. 64 illus., 62 illus. in color. (Studies in Systems, Decision and Control, Volume 253) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

H. S. Dhiman, D. Deb

Decision and Control in Hybrid Wind Farms

This book focuses on two of the most important aspects of wind farm operation: decisions and control. The first part of the book deals with decision-making processes, and explains that hybrid wind farm operation is governed by a set of alternatives that the wind farm operator must choose from in order to achieve optimal delivery of wind power to the utility grid. [...] 2020. XXII, 140 p. 64 illus., 62 illus. in color. (Studies in Systems, Decision and Control, Volume 253) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
Principles of Radio Navigation for Ground and Ship-Based Aircrafts

This book systematically presents the operating principles and technical characteristics of the main radio navigating systems (RNSs) that make it possible to adequately evaluate the corresponding scratch indexes and levels of air safety for air vehicles, the chief concern of the International Civil Aviation Organization (ICAO). [...]


S. Saremi, S. Mirjalili
Optimisation Algorithms for Hand Posture Estimation

This book reviews the literature on hand posture estimation using generative methods, identifying the current gaps, such as sensitivity to hand shapes, sensitivity to a good initial posture, difficult hand posture recovery in cases of loss in tracking, and lack of addressing multiple objectives to maximize accuracy and minimize computational cost. [...]


S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Insert Devices and Integral Roughness in Heat Transfer Enhancement

This Brief describes heat transfer and pressure drop in heat transfer enhancement by insert devices and integral roughness. The authors deal with twisted-tape insert laminar and turbulent flow in tubes and annuli in smooth tubes and rough tubes, segmented twisted-tape inserts, [...]

2020. IX, 177 p. 194 illus., 99 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,00 | £ 44,99 € (D) 52,43 | € (A) 53,90 | CHF 58.00 ISBN 978-3-030-20775-5

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Two-Phase Heat Transfer Enhancement

This Brief concerns heat transfer and pressure drop in heat transfer enhancement for boiling and condensation. The authors divide their topic into six areas: abrasive treatment and coatings, combined structured and porous surfaces, basic principles of boiling mechanism, vapor space condensation, convective vaporization, and forced condensation inside tubes. [...]

2020. VIII, 121 p. 80 illus., 29 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,00 | £ 44,99 € (D) 52,43 | € (A) 53,90 | CHF 58.00 ISBN 978-3-030-20754-0

S. Saremi, S. Mirjalili
Performance Evaluation Criteria in Heat Transfer Enhancement

This Brief deals with Performance Evaluation Criteria (PEC) for heat exchangers, single phase flow, objective function and constraints, algebraic formulation, constant flow rate, fixed flow area, thermal resistance, heat exchanger effectiveness, [...]

2020. IX, 111 p. 103 illus., 23 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | £ 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20760-1

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Introduction to Enhanced Heat Transfer

This Brief stands as a primer for heat transfer fundamentals in heat transfer enhancement devices, the definition of heat transfer area, passive and active enhancement techniques and their potential and benefits and commercial applications. [...]

2020. XI, 103 p. 84 illus., 29 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | € 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20742-7

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Performance Evaluation Criteria in Heat Transfer Enhancement

This Brief deals with Performance Evaluation Criteria (PEC) for heat exchangers, single phase flow, objective function and constraints, algebraic formulation, constant flow rate, fixed flow area, thermal resistance, heat exchanger effectiveness, [...]

2020. IX, 111 p. 103 illus., 23 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | £ 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20760-1

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Introduction to Enhanced Heat Transfer

This Brief stands as a primer for heat transfer fundamentals in heat transfer enhancement devices, the definition of heat transfer area, passive and active enhancement techniques and their potential and benefits and commercial applications. [...]

2020. XI, 103 p. 84 illus., 29 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | € 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20742-7

S. Saremi, S. Mirjalili
Optimisation Algorithms for Hand Posture Estimation

This book reviews the literature on hand posture estimation using generative methods, identifying the current gaps, such as sensitivity to hand shapes, sensitivity to a good initial posture, difficult hand posture recovery in cases of loss in tracking, and lack of addressing multiple objectives to maximize accuracy and minimize computational cost. [...]


S. Saremi, S. Mirjalili
Performance Evaluation Criteria in Heat Transfer Enhancement

This Brief deals with Performance Evaluation Criteria (PEC) for heat exchangers, single phase flow, objective function and constraints, algebraic formulation, constant flow rate, fixed flow area, thermal resistance, heat exchanger effectiveness, [...]

2020. IX, 111 p. 103 illus., 23 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | £ 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20760-1

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Introduction to Enhanced Heat Transfer

This Brief stands as a primer for heat transfer fundamentals in heat transfer enhancement devices, the definition of heat transfer area, passive and active enhancement techniques and their potential and benefits and commercial applications. [...]

2020. XI, 103 p. 84 illus., 29 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | € 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20742-7

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Performance Evaluation Criteria in Heat Transfer Enhancement

This Brief deals with Performance Evaluation Criteria (PEC) for heat exchangers, single phase flow, objective function and constraints, algebraic formulation, constant flow rate, fixed flow area, thermal resistance, heat exchanger effectiveness, [...]

2020. IX, 111 p. 103 illus., 23 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | £ 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20760-1

S. K. Saha, H. Ranjan, M. S. Emani, A. K. Bharti
Introduction to Enhanced Heat Transfer

This Brief stands as a primer for heat transfer fundamentals in heat transfer enhancement devices, the definition of heat transfer area, passive and active enhancement techniques and their potential and benefits and commercial applications. [...]

2020. XI, 103 p. 84 illus., 29 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | € 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20742-7

S. Saremi, S. Mirjalili
Performance Evaluation Criteria in Heat Transfer Enhancement

This Brief deals with Performance Evaluation Criteria (PEC) for heat exchangers, single phase flow, objective function and constraints, algebraic formulation, constant flow rate, fixed flow area, thermal resistance, heat exchanger effectiveness, [...]

2020. IX, 111 p. 103 illus., 23 illus. in color. (SpringerBriefs in Applied Sciences and Technology) Softcover € 49,99 | £ 44,99 € (D) 53,49 | € (A) 54,99 | CHF 59.00 ISBN 978-3-030-20760-1
A. Shaban-Nejad, M. Michalowski (Eds.)
Precision Health and Medicine
A Digital Revolution in Healthcare
This book highlights the latest advances in the application of artificial intelligence to healthcare and medicine. [...] 2020. XIX, 197 p. 84 illus., 45 illus. in color. (Studies in Computational Intelligence, Volume 843) Hardcover €139,99 | £119,99 €(D)149,79 | €(A)153,99 | CHF165.50 ISBN 978-3-030-24408-8

A. Shaban
Vibration of Discrete and Continuous Systems

R. Sethi, A. Di Molfetta
Groundwater Engineering
A Technical Approach to Hydrogeology, Contaminant Transport and Groundwater Remediation
This textbook employs a technical and quantitative approach to explain subsurface hydrology and hydrogeology, and to offer a comprehensive overview of groundwater-related topics such as flow in porous media, aquifer characterization, contaminant description and transport, risk assessment, and groundwater remediation. [...] 2019. XVI, 466 p. (Power Systems) Hardcover €149,99 | £129,99 €(D)160,49 | €(A)164,99 | CHF177.00 ISBN 978-3-030-21769-3

K. Schon
High Voltage Measurement Techniques
Fundamentals, Measuring Instruments, and Measuring Methods
This book conveys the theoretical and experimental basics of a well-founded measurement technique in the areas of high DC, AC and surge voltages as well as the corresponding high currents. Additional chapters explain the acquisition of partial discharges and the electrical measured variables. [...] 2019. XVI, 466 p. (Power Systems) Hardcover €149,99 | £129,99 €(D)160,49 | €(A)164,99 | CHF177.00 ISBN 978-3-030-21769-3

D. Schulze
Pulver und Schüttgüter
Fließeigenschaften und Handhabung

A. Sciarretta, A. Vahidi
Energy-Efficient Driving of Road Vehicles
Toward Cooperative, Connected, and Automated Mobility
This book elaborates the science and engineering basis for energy-efficient driving in conventional and autonomous cars. After covering the physics of energy-efficient motion in conventional, hybrid, and electric powertrains, the book chiefly focuses on the energy-saving potential of connected and automated vehicles. [...] 2020. XIX, 294 p. 122 illus., 64 illus. in color. (Lecture Notes in Intelligent Transportation and Infrastructure) Hardcover €119,99 | £109,99 €(D)128,39 | €(A)131,99 | CHF141.50 ISBN 978-3-030-24126-1

A. Shaban-Nejad, M. Michalowski (Eds.)
Precision Health and Medicine
A Digital Revolution in Healthcare
This book highlights the latest advances in the application of artificial intelligence to healthcare and medicine. [...] 2020. XIX, 197 p. 84 illus., 45 illus. in color. (Studies in Computational Intelligence, Volume 843) Hardcover €139,99 | £119,99 €(D)149,79 | €(A)153,99 | CHF165.50 ISBN 978-3-030-24408-8
Applications of Emerging Memory Technology
Beyond Storage
The book intends to bring under one roof research work of leading groups from across the globe working on advanced applications of emerging memory technology nanodevices. The applications dealt in the text will be beyond conventional storage application of semiconductor memory devices. 

2020. XXIII, 229 p. 166 illus., 149 illus. in color. (Springer Series in Advanced Microelectronics, Volume 63) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Springer Professional book
A. E. Smith (Ed.)
Women in Industrial and Systems Engineering
Key Advances and Perspectives on Emerging Topics
This book presents a diversity of innovative and impactful research in the field of industrial and systems engineering (ISE) led by women investigators. After a Foreword by Margaret L. Brandeau, an eminent woman scholar in the field, the book is divided into the following sections: Analytics, Education, Health, Logistics, and Production. 

2020. XIII, 609 p. 177 illus., 148 illus. in color. (Women in Engineering and Science) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.00

Springer Monograph
O. N. Skrypnik
Radio Navigation Systems for Airports and Airways
This book highlights the design principles of ground based radio-navigation systems used in solving navigation tasks in the airfield and on air routes. Mathematical correlations are illustrated that describe its operation, peculiarities of disposition, main technical characteristics, generalized structural diagrams as well as the inter-operation with onboard equipment. 

2019. XVII, 226 p. 164 illus., 154 illus. in color. (Springer Aerospace Technology) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Springer Professional book
G. Solari
Wind Science and Engineering
Origins, Developments, Fundamentals and Advancements
This book provides an essential overview of wind science and engineering, taking readers on a journey through the origins, developments, fundamentals, recent advancements and latest trends in this broad field. 

2019. XV, 944 p. (Springer Tracts in Civil Engineering) Hardcover
€ 179,99 | £ 159,99
€ (D) 192,59 | € (A) 197,99 | CHF 212.50
ISBN 978-3-030-18814-6

Springer Monograph
A. K. Singh, M. Fujita, A. Mohan (Eds.)
Design and Testing of Reversible Logic
The book compiles efficient design and test methodologies for the implementation of reversible logic circuits. The methodologies covered in the book are design approaches, test approaches, fault tolerance in reversible circuits and physical implementation techniques. 

2020. XIV, 265 p. 156 illus., 52 illus. in color. (Lecture Notes in Electrical Engineering, Volume 577) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Springer Monograph
A. E. Smith (Ed.)
Women in Industrial and Systems Engineering
Key Advances and Perspectives on Emerging Topics
This book presents a diversity of innovative and impactful research in the field of industrial and systems engineering (ISE) led by women investigators. After a Foreword by Margaret L. Brandeau, an eminent woman scholar in the field, the book is divided into the following sections: Analytics, Education, Health, Logistics, and Production. 

2020. XIII, 609 p. 177 illus., 148 illus. in color. (Women in Engineering and Science) Hardcover
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.00

Springer Monograph
O. N. Skrypnik
Radio Navigation Systems for Airports and Airways
This book highlights the design principles of ground based radio-navigation systems used in solving navigation tasks in the airfield and on air routes. Mathematical correlations are illustrated that describe its operation, peculiarities of disposition, main technical characteristics, generalized structural diagrams as well as the inter-operation with onboard equipment. 

2019. XVII, 226 p. 164 illus., 154 illus. in color. (Springer Aerospace Technology) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Springer Professional book
J. Stark
Product Lifecycle Management (Volume 1)
21st Century Paradigm for Product Realisation
This fourth edition of the book provides readers with a detailed explanation of PLM, enabling them to gain a full understanding and the know-how to implement PLM within their own business environment. 

4th ed. 2020. XXV, 574 p. 519 illus., 57 illus. in color. (Decision Engineering) Hardcover
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-28863-1

Springer Monograph
M. Suri (Ed.)
Applications of Emerging Memory Technology
Beyond Storage
The book intends to bring under one roof research work of leading groups from across the globe working on advanced applications of emerging memory technology nanodevices. The applications dealt in the text will be beyond conventional storage application of semiconductor memory devices. 

2020. XXIII, 229 p. 166 illus., 149 illus. in color. (Springer Series in Advanced Microelectronics, Volume 63) Hardcover
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50

Springer Monograph
J. Treur
Network-Oriented Modeling for Adaptive Networks: Designing Higher-Order Adaptive Biological, Mental and Social Network Models
This book addresses the challenging topic of modeling adaptive networks, which often manifest inherently complex behavior. Networks by themselves can be modeled using a neat, declarative, and conceptually transparent Network-Oriented Modeling approach. [...] 2020. XVII, 412 p. (Studies in Systems, Decisions and Control, Volume 251) Hardcover
€ 149,99 | £ 129,99
€ (D) 160,49 | € (A) 164,99 | CHF 177.00
ISBN 978-3-030-31444-6
J. Vinnem, W. Røed

**Offshore Risk Assessment Vol. 1**
Principles, Modelling and Applications of QRA Studies
This is the first textbook to address quantified risk assessment (QRA) as specifically applied to offshore installations and operations. [...] 2020. XXVIII, 552 p. (Studies in Fuzziness and Soft Computing, Volume 387) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

J. Vinnem, W. Røed

**Offshore Risk Assessment Vol. 2**
Principles, Modelling and Applications of QRA Studies
This is the first textbook to address quantified risk assessment (QRA) as specifically applied to offshore installations and operations. [...] 2020. XX, 158 p. 116 illus., 22 illus. in color. (Springer Series in Reliability Engineering) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

R. Trujillo-Cabezas, J. L. Verdegay

**Integrating Soft Computing into Strategic Prospective Methods**
Towards an Adaptive Learning Environment Supported by Futures Studies
This book discusses how to build optimization tools able to generate better future studies. It aims at showing how these tools can be used to develop an adaptive learning environment that can be used for decision making in the presence of uncertainties. [...] 2020. XXII, 230 p. (Studies in Fuzziness and Soft Computing, Volume 387) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

F. Vollertsen, S. Friedrich, B. Kuhfuß, P. Maaß, C. Thomy, H. Zoch (Eds.)

**Cold Micro Metal Forming**
Research Report of the Collaborative Research Center "Micro Cold Forming" (SFB 747), Bremen, Germany
This open access book contains the research report of the Collaborative Research Center "Micro Cold Forming" (SFB 747) of the University of Bremen, Germany. The topical research focus lies on new methods and [...] 2020. XII, 358 p. 244 illus., 197 illus. in color. (Lecture Notes in Production Engineering) Hardcover
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 66.61
ISBN 978-3-030-11279-0

J. Vinnem, W. Reed

**Signal Processing of Airborne Radar Stations**
Plane Flight Control in Difficult Meteoconditions
This book highlights new methods and parametric algorithms for the digital coherent processing of signals in airborne radar systems located on air vehicles. Using the autoregressive (AR) model, it delivers more accurate danger assessments for flight in wind shear and atmospheric turbulence, while also suggesting how they could be implemented. [...] 2020. X, 218 p. 158 illus., 15 illus. in color. (Springer Aerospace Technology) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50
ISBN 978-3-030-11279-0

G. A. Tsihrintzis, M. Virvou, E. Sakkopoulos, L. C. Jain (Eds.)

**Machine Learning Paradigms**
Applications of Learning and Analytics in Intelligent Systems
This book is the inaugural volume in the new Springer series on Learning and Analytics in Intelligent Systems. The series aims at providing, in hard-copy and soft-copy form, books on all aspects of learning, analytics, advanced intelligent systems and related technologies. [...] 2019. XX, 548 p. 139 illus., 101 illus. in color. (Learning and Analytics in Intelligent Systems, Volume 1) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

R. Trujillo-Cabezas, J. L. Verdegay

**Integrating Soft Computing into Strategic Prospective Methods**
Towards an Adaptive Learning Environment Supported by Futures Studies
This book discusses how to build optimization tools able to generate better future studies. It aims at showing how these tools can be used to develop an adaptive learning environment that can be used for decision making in the presence of uncertainties. [...] 2020. XXII, 230 p. (Studies in Fuzziness and Soft Computing, Volume 387) Hardcover
€ 139.99 | £ 119.99
€ (D) 149.79 | € (A) 153.99 | CHF 165.50

J. Vinnem, W. Reed

**Offshore Risk Assessment Vol. 1**
Principles, Modelling and Applications of QRA Studies
This is the first textbook to address quantified risk assessment (QRA) as specifically applied to offshore installations and operations. [...] 4th ed. 2020. XXXVIII, 552 p. 173 illus., 26 illus. in color. (Springer Series in Reliability Engineering) Hardcover
€ 99,99 | £ 89,99
€ (D) 106,99 | € (A) 109,99 | CHF 118.00
ISBN 978-1-4471-7443-1

J. Vinnem, W. Reed

**Offshore Risk Assessment Vol. 2**
Principles, Modelling and Applications of QRA Studies
This is the first textbook to address quantified risk assessment (QRA) as specifically applied to offshore installations and operations. [...] 4th ed. 2020. XXXIV, 484 p. 116 illus., 22 illus. in color. (Springer Series in Reliability Engineering) Hardcover
€ 84,99 | £ 74,99
€ (D) 90,94 | € (A) 93,49 | CHF 100.50

F. Vollertsen, S. Friedrich, B. Kuhfuß, P. Maaß, C. Thomy, H. Zoch (Eds.)

**Cold Micro Metal Forming**
Research Report of the Collaborative Research Center "Micro Cold Forming" (SFB 747), Bremen, Germany
This open access book contains the research report of the Collaborative Research Center "Micro Cold Forming" (SFB 747) of the University of Bremen, Germany. The topical research focus lies on new methods and [...] 2020. XII, 358 p. 244 illus., 197 illus. in color. (Lecture Notes in Production Engineering) Hardcover
€ 49,99 | £ 44,99
€ (D) 53,49 | € (A) 54,99 | CHF 66.61
ISBN 978-3-030-11279-0
B. Weiss  
Talker Quality in Human and Machine Interaction  
Modeling the Listener’s Perspective in Passive and Interactive Scenarios  
The book discusses subjective ratings of quality and preference of unknown voices and dialog partners – their likability, for example. Human natural and artificial voices are studied in passive listening and interactive scenarios. [...]  
2020. XII, 150 p. 9 illus., 5 illus. in color.  
(T-Labs Series in Telecommunication Services) Hardcover  
€ 86,99 | £ 74,99  
€ (D) 93,08 | € (A) 95,69 | CHF 103.00  
Recent Advances in Modeling, Analysis and Systems Control: Theoretical Aspects and Applications

This book describes recent developments in a wide range of areas, including the modeling, analysis and control of dynamical systems, and explores related applications. The book provided a forum where researchers have shared their ideas, results on theory, and experiments in application problems. [...]  
€ 139,99 | £ 119,99  
€ (D) 149,79 | € (A) 153,99 | CHF 165.50  
ISBN 978-3-030-26148-1
This open access book provides a concise explanation of the fundamentals and background of the surround sound recording and playback technology Ambisonics. [...] 2019. XIV, 210 p. 171 illus., 35 illus. in color. (Springer Topics in Signal Processing, Volume 19) Hardcover €49,99 | £44,99 €(D) 53,49 | €(A) 54,99 | CHF 66.61 ISBN 978-3-030-17206-0
€ 79,99 | £ 69,99
€ (D) 85,59 | € (A) 87,99 | CHF 94.50
978-3-319-73219-0

Gupta (Ed), Advanced Manufacturing Technologies (Materials Forming, Machining and Tribology)
€ 139,99 | £ 119,99
€ (D) 149,79 | € (A) 153,99 | CHF 165.50
978-3-319-56098-4

Hamblen et al., Rapid Prototyping of Digital Systems
€ 59,99 | £ 54,99
€ (D) 64,19 | € (A) 65,99 | CHF 71.00
978-0-387-72670-0

Hauschild (Eds), Life Cycle Assessment
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-319-98805-4

Huijsing, Operational Amplifiers 3rd ed.
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-319-28126-1

Hurley (Eds), SFPE Handbook of Fire Protection Engineering 5th ed.
€ 794,38 | £ 699,99
€ (D) 849,99 | € (A) 873,82 | CHF 936.50
978-1-4939-2564-3

Itskov, Tensor Algebra and Tensor Analysis for Engineers (Mathematical Engineering), 5th ed.
€ 79,99 | £ 69,99
€ (D) 85,59 | € (A) 87,99 | CHF 94.50
978-3-319-98805-4

€ 109,99 | £ 99,99
€ (D) 117,69 | € (A) 120,99 | CHF 130.00
978-3-319-77695-8

Jazar, Vehicle Dynamics 3rd ed.
€ 129,99 | £ 109,99
€ (D) 139,09 | € (A) 142,99 | CHF 153.50
978-3-319-53440-4

Jiménez et al., Introduction to Embedded Systems
€ 79,99 | £ 69,99
€ (D) 85,59 | € (A) 87,99 | CHF 94.50
978-1-4614-3142-8

Kay, Intuitive Probability and Random Processes using MATLAB®
€ 99,99 | £ 89,99
€ (D) 106,99 | € (A) 109,99 | CHF 118.00
978-0-387-24157-9

Küchler, High Voltage Engineering (VDI-Buch)
€ 109,99 | £ 99,99
€ (D) 117,69 | € (A) 120,99 | CHF 130.00
978-3-642-11992-7

Kurzke/Halliwell, Propulsion and Power
€ 169,99 | £ 149,99
€ (D) 181,89 | € (A) 186,99 | CHF 200.50
978-3-319-75977-7

LaMeres, Introduction to Logic Circuits & Logic Design with VHDL 2nd ed.
€ 69,99 | £ 59,99
€ (D) 74,89 | € (A) 76,99 | CHF 82.50
978-3-030-12488-5

Lau, Fan-Out Wafer-Level Packaging
€ 109,99 | £ 99,99
€ (D) 117,69 | € (A) 120,99 | CHF 130.00
978-981-10-8883-4

Lavretsky/Wise, Robust and Adaptive Control (Advanced Textbooks in Control and Signal Processing)
€ 74,99 | £ 67,99
€ (D) 80,24 | € (A) 82,49 | CHF 100.10
978-1-4471-4395-6

€ 74,99 | £ 64,99
€ (D) 80,24 | € (A) 82,49 | CHF 88.50
978-3-319-56043-4

€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-319-93682-6

Mehregany, Innovation for Engineers
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
978-3-319-73219-0

Moukalled et al., The Finite Volume Method in Computational Fluid Dynamics (Fluid Mechanics and Its Applications 113)
€ 94,99 | £ 85,50
€ (D) 101,64 | € (A) 104,49 | CHF 126.62
978-3-319-45308-3

Pahl et al., Engineering Design 3rd ed.
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-86428-318-5

Paz/Kim, Structural Dynamics 6th ed.
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-319-94742-6

Pecher (Eds), Handbook of Ocean Wave Energy (Ocean Engineering & Oceanography 7)
€ 49,99 | £ 43,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
978-3-319-39888-4

€ 99,99 | £ 89,99
€ (D) 106,99 | € (A) 109,99 | CHF 118.00
978-3-319-44970-8

Poor, An Introduction to Signal Detection and Estimation (Springer Texts in Electrical Engineering), 2nd ed.
€ 84,10 | £ 69,99
€ (D) 89,99 | € (A) 92,51 | CHF 99.50
978-1-4419-2837-5

Potter, Engineering Analysis
€ 79,99 | £ 69,99
€ (D) 85,59 | € (A) 87,99 | CHF 94.50
978-3-319-91682-8

Quan, Introduction to Multicopter Design and Control
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-961-10-3381-0

Reif (Ed), Automotive Mechatronics (Bosch Professional Automotive Information)
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-658-03974-5

Renilson, Submarine Hydrodynamics 2nd ed.
€ 119,99 | £ 109,99
€ (D) 128,39 | € (A) 131,99 | CHF 141.50
978-3-319-79056-5

Bosch Automotive Electrics and Automotive Electronics (Bosch Professional Automotive Information), 5th ed.
€ 89,99 | £ 79,99
€ (D) 96,29 | € (A) 98,99 | CHF 106.50
978-3-658-07183-5

Schipijve, Fatigue of Structures and Materials 2nd ed.
€ 59,95 | £ 53,99
€ (D) 64,15 | € (A) 65,95 | CHF 86.08
978-1-4020-6807-2

Schlichting (Deceased)/Gersten, Boundary-Layer Theory 9th ed.
€ 219,99 | £ 199,99
€ (D) 235,39 | € (A) 241,99 | CHF 259.50
978-3-662-52917-1

Layer Theory 9th ed.
€ 49,99 | £ 43,99
€ (D) 53,49 | € (A) 54,99 | CHF 59.00
978-3-319-39888-4
Ordering Service

Order your books directly online in an easy and fast way at springer.com

Americas: Call toll-free 1-800-SPRINGER, 8:30 am – 5:30 pm ET
outside Americas: +49 (0) 6221-345-4301

Americas: customerservice@springernature.com
outside Americas: row-booksellers@springernature.com

Same day processing for Web Shop orders. All other orders are processed successively upon receipt.

$, £ and € are net prices, subject to local VAT. prices with * include VAT: The €(D) includes 7% on books and 19% on electronic products for Germany, the €(A) includes 10% on books and 20% on electronic titles for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents, please add PST, QST or GST. Please add $5.00 for shipping one book and $1.00 for each additional book. Outside the US and Canada add $10.00 for first book, $5.00 for each additional book. Prices and other details are subject to change without notice. All errors and omissions excepted.

For general questions contact Customer Service: customerservice@springernature.com