A. Adamatzky, University of the West of England, Bristol, UK; L. Chua, University of California, Berkeley, CA, USA (Eds)

**Memristor Networks**

**Contents**


**Fields of interest**

Computer Hardware; Theory of Computation; Circuits and Systems

**Target groups**

Research

**Discount group**

Professional Non-Medical

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J. M. Carroll, The Pennsylvania State University, University Park, PA, USA (Ed)

**Innovative Practices in Teaching Information Sciences and Technology**

**Experience Reports and Reflections**

**Contents**


**Fields of interest**

Computers and Education; Teaching and Teacher Education; Science Education

**Target groups**

Research

**Discount group**

Professional Non-Medical

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C. Cioffi-Revilla, George Mason University, Fairfax, VA, USA

**Introduction to Computational Social Science**

**Principles and Applications**

This reader-friendly textbook is the first work of its kind to provide a unified Introduction to Computational Social Science (CSS). Four distinct methodological approaches are examined in detail, namely automated social information extraction, social network analysis, social complexity theory and social simulation modeling. The coverage of these approaches is supported by a discussion of the historical context, as well as by a list of texts for further reading.

**Features**

- Introduces the key concepts in computational social science, providing formal definitions and a glossary
- Describes the scope and content of each area of computational social science, covering topics on information extraction, social networks, complexity theory and social simulations
- Discusses a number of methodological tools, including extracting entities from text, computing social network indices and building an agent-based model

**Contents**


**Fields of interest**

Computer Appl. in Social and Behavioral Sciences; Methodology of the Social Sciences; Data Mining and Knowledge Discovery

**Target groups**

Graduate

**Discount group**

Professional Non-Medical

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**Due January 2014**

2014. XVI, 750 p. 445 illus., 292 in color. Hardcover

$189.00

ISBN 978-3-319-02629-9

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**Due January 2014**


$109.00

ISBN 978-3-319-03655-7

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**Due January 2014**

2014. XXXII, 270 p. 59 illus., 21 in color. (Texts in Computer Science) Hardcover

$79.99

ISBN 978-1-4471-5660-4
Visualizing the Data City
Social Media as a Source of Knowledge for Urban Planning and Management

This book investigates novel methods and technologies for the collection, analysis, and representation of real-time user-generated data at the urban scale in order to explore potential scenarios for more participatory design, planning, and management processes. For this purpose, the authors present a set of experiments conducted in collaboration with urban stakeholders at various levels (including citizens, city administrators, urban planners, local industries, and NGOs) in Milan and New York in 2012. It is examined whether geo-tagged and user-generated content can be of value in the creation of meaningful, real-time indicators of urban quality, as it is perceived and communicated by the citizens. The meanings that people attach to places are also explored to discover what such an urban semantic layer looks like and how it unfolds over time.

Features
► Describes new categories and original interpretations of social media data as a novel source of urban information
► Presents two ongoing research projects (Telltale and UrbanSensing) and their results
► Adopts a design-oriented approach

Contents

Fields of interest
Data Mining and Knowledge Discovery; Landscape/Regional and Urban Planning; Graphic Design

Target groups
Research

Discount group
Professional Non-Medical

D. L. Dowe, Monash University, Melbourne, VIC, Australia (Ed)

Algorithmic Probability and Friends. Bayesian Prediction and Artificial Intelligence

Papers from the Ray Solomonoff 85th Memorial Conference, Melbourne, VIC, Australia, November 30 – December 2, 2011

Contents
Transactions on Computational Science XX

Special Issue on Voronoi Diagrams and Their Applications

Features
- Contains revised and extended versions of the very best papers presented at ISVD 2012
- Focuses on recent advancements in geometric algorithms, specifically Voronoi diagrams and their applications
- Features a position paper by the guest editor (ISVD 2012 conference chair)

Contents

Fields of interest
Computer Graphics; Image Processing and Computer Vision; Artificial Intelligence (incl. Robotics)

Target groups
Research

Discount group
Professional Non-Medical

M. Gavrilova, University of Calgary, Calgary, AB, Canada; C. K. Tan, CloudfabriQ Ltd., London, UK; B. Kalantari, Rutgers University, New Brunswick, NJ, USA (Eds)

S. Gong, Queen Mary University, London, UK; M. Cristani, University of Verona, Italy; S. Yan, National University of Singapore, Singapore; C. C. Loy, The Chinese University of Hong Kong, Shatin, Hong Kong SAR (Eds)

Person Re-Identification

Contents
The Re-Identification Challenge.- Part I: Features and Representations.- Discriminative Image Descriptors for Person Re-Identification.- SDALF.- Re-Identification by Covariance Descriptors.- Attributes-Based Re-Identification.- Person Re-Identification by Attribute-Assisted Clothes Appearance.- Person Re-Identification by Articulated Appearance Matching.- One-Shot Person Re-Identification with a Consumer Depth Camera.- Group Association.- Evaluating Feature Importance for Re-Identification.- Part II: Matching and Distance Metric.- Learning Appearance Transfer for Person Re-Identification.- Mahalanobis Distance Learning for Person Re-Identification.- Dictionary-Based Domain Adaptation Methods for the Re-Identification of Faces.- From Re-Identification to Identity Inference.- Re-Identification for Improved People Tracking.- Part III: Evaluation and Application.- Benchmarking for Person Re-Identification.- Person Re-Identification.- People Search with Textual Queries about Clothing Appearance Attributes.- Large Scale Camera Topology Mapping.- Scalable Multi-Camera Tracking in a Metropolis.

Fields of interest
Image Processing and Computer Vision; Pattern Recognition; Math Applications in Computer Science

Target groups
Research

Discount group
Professional Non-Medical

M. Grzegorzek, University of Siegen, Siegen, Germany; C. Theobalt, MPI Informatik, Saarbrücken, Germany; R. Koch, Universität Kiel, Kiel, Germany; A. Koll, Universität Siegen FB 12 Informatik, Siegen, Germany (Eds)

Time-of-Flight and Depth Imaging. Sensors, Algorithms and Applications

Dagstuhl Seminar 2012 and GCPR Workshop on Imaging New Modalities

Contents

Fields of interest
Image Processing and Computer Vision; Pattern Recognition; Artificial Intelligence (incl. Robotics)

Target groups
Research

Discount group
Professional Non-Medical

Available
2013. XII, 181 p. 103 illus. (Lecture Notes in Computer Science / Transactions on Computational Science, Volume 8110) Softcover
$72.00
ISBN 978-3-642-41904-1

Due February 2014
2014. XVIII, 453 p. 162 illus., 152 in color. (Advances in Computer Vision and Pattern Recognition) Hardcover
$129.00

Available
$83.00
ISBN 978-3-642-44963-5
3D Multiscale Physiological Human

Contents

Fields of interest
Computer Graphics; Bioinformatics; Human Physiology

Target groups
Research

Discount group
Professional Non-Medical

Social Interaction, Globalization and Computer-Aided Analysis

A Practical Guide to Developing Social Simulation

Tackling globalization is a great challenge – it is both extremely beneficial and essentially problematic. This comprehensive, multidisciplinary study confronts this ambivalence through the use of computer simulation.

Features
- Describes an integrated approach to developing computer systems that simulate different scenarios of intercultural social interaction
- Discusses a methodology to simulate such scenarios in computer systems including computationally-feasible models of emotional behavior, personality and culture
- Includes a special chapter about SocioFramework, a framework for simulating scenarios of social interaction, relying on a computational apparatus for conducting experiments on social interaction

Contents

Fields of interest
User Interfaces and Human Computer Interaction; Computer Appl. in Social and Behavioral Sciences; Psycholinguistics

Target groups
Research

Discount group
Professional Non-Medical

Software Project Effort Estimation

Software effort estimation is one of the oldest and most important problems in software project management, and thus today there are a large number of models, each with its own unique strengths and weaknesses in general, and even more importantly, in relation to the environment and context in which it is to be applied. Trendowicz and Jeffery present a comprehensive look at the principles of software effort estimation and support software practitioners in systematically selecting and applying the most suitable effort estimation approach.

Their book not only presents what approach to take and how to apply and improve it, but also explains why certain approaches should be used in specific project situations. Moreover, it explains popular estimation methods, summarizes estimation best-practices, and provides guidelines for continuously improving estimation capability. Additionally, the book offers invaluable insights into project management in general, discussing issues including project trade-offs, risk assessment, and organizational learning.

Features
- Most comprehensive reference work on all aspects of software estimation
- Authors have more than 20 years experience in academia, the industry and public sector
- Explains the what, how and why of all major software estimation methods
- Also offers invaluable insights into general project management, risk management and organizational learning

Fields of interest
Software Engineering; Management of Computing and Information Systems; Project Management

Target groups
Professional/practitioner

Discount group
Professional Non-Medical
Mathematics for Computer Graphics

John Vince explains a wide range of mathematical techniques and problem-solving strategies associated with computer games, computer animation, virtual reality, CAD and other areas of computer graphics in this updated and expanded fourth edition. The first four chapters revise number sets, algebra, trigonometry and coordinate systems, which are employed in the following chapters on vectors, transforms, interpolation, 3D curves and patches, analytic geometry and barycentric coordinates. Following this, the reader is introduced to the relatively new topic of geometric algebra, and the last two chapters provide an introduction to differential and integral calculus, with an emphasis on geometry.

Features
- One of the few student texts on introductory mathematics including a chapter on geometric algebra
- Written specifically for computer graphics students
- Covers a broad range of relevant mathematical topics
- Includes over 170 illustrations and many worked examples
- Takes the reader from humble introductory ideas through to some advanced concepts

Contents

Fields of interest
Computer Graphics; Mathematical Applications in Computer Science

Target groups
Lower undergraduate

Discount group
Professional Non-Medical

Due February 2014
4th ed. XII, 417 p. 280 illus. (Undergraduate Topics in Computer Science) Softcover
► approx. $69.99
ISBN 978-1-4471-6289-6

Systems and Software Quality

The next step for industrialisation

What is the contribution of software and systems quality to the success of a company’s business and how can we guarantee the quality of software-based systems and products? As in other industries, the software industry is also changing in many respects. Innovations and new solutions are mostly driven by new demands coming from the different markets. For many years, the software industry itself has been affected by its high innovation rate, which has had an impact on all areas of the software and systems (product) lifecycle. This also includes quality management and quality assurance. The changes we see in software also include quality management and quality assurance as a whole. Although a number of good practices are in place there is still huge room for improvements. In our view, a holistic approach for software and systems (product) quality is missing in IT. It must be a notion that defines the quality of software-based systems and products.

Features
- The best from two worlds: what do we learn from IT and embedded Systems
- Helps management to find the right software and systems quality
- Leads to more productivity and reduced costs

Contents
Forewords.- Preface.- Introduction.- What is right software and systems quality?- How can we establish right quality at an enterprise level.- How can we implement a framework for right quality.- Right quality promoting industrialisation.- Appendix.- Glossary.- References.

Fields of interest
Computer Science, general; Engineering, general

Target groups
Professional/practitioner

Discount group
Professional Non-Medical

Due May 2014
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► approx. $59.99
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