**Guide to Cisco Routers Configuration**

**Becoming a Router Geek**

This work provides a guide to the configuration of Cisco routers, from tasks for beginners to advanced operations. A collection of detailed "how-to" instructions are presented, which will be of use to all professionals and students who engage with Cisco routers in the field or in the lab. The guide starts with the simple step-by-step task of connecting the router and performing basic configuration, before building up to complex and sensitive operations such as router IOS upgrade and Site-to-Site VPNs.

**Features**
- Provides a guide to the configuration of Cisco routers
- Presents detailed and easy-to-follow “how-to” instructions
- For beginners and advanced users alike

**Contents**

**Fields of interest**
Computer Communication Networks

**Target groups**
Research

**Product category**
Brief

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**Logic Programs, Norms and Action**

**Essays in Honor of Marek J. Sergot on the Occasion of His 60th Birthday**

**Contents**

**Fields of interest**
Artificial Intelligence (incl. Robotics); Computer Communication Networks; Mathematical Logic and Formal Languages

**Target groups**
Research

**Product category**
Monograph

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**Instruction Sequences for Computer Science**

This book demonstrates that the concept of an instruction sequence offers a novel and useful viewpoint on issues relating to diverse subjects in computer science. Selected issues relating to well-known subjects from the theory of computation and the area of computer architecture are rigorously investigated in this book thinking in terms of instruction sequences.

**Features**
- Contains a complete and self-contained theory about imperative programs based on very elementary principles
- Presents the first theory of instruction sequences, a forgotten basic concept of computer science
- Provides a new perspective on non-uniform computational complexity
- Provides a new perspective on the halting problem

**Contents**

**Fields of interest**
Computation by Abstract Devices; Logics and Meanings of Programs; Mathematical Logic and Formal Languages

**Target groups**
Research

**Product category**
Monograph

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**Instruction Sequences for Computer Science**

**Due July 2012**

2012. XX, 425 p. 36 illus. (Lecture Notes in Computer Science / Lecture Notes in Artificial Intelligence, Volume 7360) Softcover
- *€ (D) 66,34 | € (A) 68,20 | sFr 83,00
- *€ 62,00 | £55.99
ISBN 978-3-642-29413-6

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**Due July 2012**

- approx. *€ (D) 85,55 | € (A) 87,95 | sFr 106,50
- approx. *€ 79,95 | £72.00
ISBN 978-94-91216-64-0
**M. Bernardo**, Università di Urbino „Carlo Bo”, Italy;
**V. Cortellessa, A. Pierantonio**, Università dell’Aquila,
Coppito-L’Aquila, Italy (Eds)

**Formal Methods for Model-Driven Engineering**


This book presents 11 tutorial lectures by leading researchers given at the 12th edition of the International School on Formal Methods for the Design of Computer, Communication and Software Systems, SFM 2012, held in Bertinoro, Italy, in June 2012. SFM 2012 was devoted to model-driven engineering and covered several topics including modeling languages; model transformations, functional and performance modeling and analysis; and model evolution management.

**Features**

► Made for students, researchers, and practitioners
► Original, readable, and useful lecture notes
► Thoroughly revised tutorials

**Contents**

**Fields of interests**
Software Engineering; Software Engineering/Programming and Operating Systems; Mathematical Logic and Formal Languages

**Target groups**
Research

**Product category**
Contributed volume

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**P. Christen**, The Australian National University, Canberra, ACT, Australia

**Data Matching**

Concepts and Techniques for Record Linkage, Entity Resolution, and Duplicate Detection

Data matching (also known as record or data linkage, entity resolution, object identification, or field matching) is the task of identifying, matching and merging records that correspond to the same entities from several databases or even within one database.

**Features**

► First book on a topic of growing importance for applications
► Brings together research from various areas like databases, statistics, information retrieval, data mining, and machine learning
► Details the data matching process step by step
► Includes an overview of freely available data matching systems and a detailed discussion of practical aspects and limitations

**Contents**

**Fields of interests**
Database Management; Data Mining and Knowledge Discovery; Information Storage and Retrieval

**Target groups**
Research

**Product category**
Monograph

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**K. H. Dam, I. Nikolic, Z. Lukasz**, Delft University of Technology, The Netherlands (Eds)

**Agent-Based Modelling of Socio-Technical Systems**

Decision makers in large scale interconnected network systems require simulation models for decision support.

**Features**

► Gives a practical introduction to agent-based modelling of socio-technical systems, such as infrastructures
► Includes practical suggestions and procedures based on years of modelling experience
► Provides numerous examples in various (infrastructure) domains which take the reader through the development process and can inspire new applications

**Contents**

**Fields of interests**
Simulation and Modeling; Complexity; Computational Intelligence

**Target groups**
Graduate

**Product category**
Monograph

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Due June 2012

2012, VII, 439 p. 158 illus. (Lecture Notes in Computer Science / Programming and Software Engineering, Volume 7320) Softcover
► * € (D) 66,34 | € (A) 68,20 | sFr 83,00
► * € 62,00 | £55.99
ISBN 978-3-642-30981-6

Due August 2012

2012, XVI, 274 p. 66 illus. (Data-Centric Systems and Applications) Hardcover
► approx. * € (D) 58,80 | € (A) 60,45 | sFr 73,50
► approx. * £ 54,95 | £49.99
ISBN 978-3-642-31163-5

Due October 2012

2013, XXI, 275 p. 207 illus., 7 in color. (Agent-Based Social Systems, Volume 9) Hardcover
► * € (D) 90,90 | € (A) 93,45 | sFr 113,50
► * £ 84,95 | £76.50
ISBN 978-94-007-4932-0

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News 7/2012

Computer Science
Contributed volume

Due September 2012


- * € (D) 90,90 | € (A) 93,45 | sFr 113,50
- € 84,95 | £75.95


Due July 2012


- * € (D) 85,55 | € (A) 87,95 | sFr 106,50
- € 79,95 | £72.00


Available

2012. Approx. 200 p. 88 illus. (Lecture Notes in Computer Science / Programming and Software Engineering, Volume 7365) Softcover

- * € (D) 49,22 | € (A) 50,60 | sFr 61,50
- € 46,00 | £41.99

ISBN 978-3-642-30834-5
Two-Dimensional Change Detection Methods

Remote Sensing Applications

Change detection using remotely sensed images has many applications, such as urban monitoring, land-cover change analysis, and disaster management. This work investigates two-dimensional change detection methods. The existing methods in the literature are grouped into four categories: pixel-based, transformation-based, texture analysis-based, and structure-based. In addition to testing existing methods, four new change detection methods are introduced: fuzzy logic-based, shadow detection-based, local feature-based, and bipartite graph matching-based. The latter two methods form the basis for a structural analysis of change detection. Three thresholding algorithms are compared, and their effects on the performance of change detection methods are measured. These tests on existing and novel change detection methods make use of a total of 35 panchromatic and multi-spectral Ikonos image sets. Quantitative test results and their interpretations are provided.

Due July 2012

2012. VIII, 76 p. 48 illus., 22 in color. (SpringerBriefs in Computer Science) Softcover
► € (D) 42,75 | € (A) 43,95 | sFr 53,50
► € 39,55 | £35.99
ISBN 978-1-4471-4254-6

Due August 2012

2012. V, 95 p. 10 illus. (SpringerBriefs in Electrical and Computer Engineering) Softcover
► approx. € (D) 42,75 | € (A) 43,95 | sFr 53,50
► approx. € 39,95 | £26.99
ISBN 978-1-4614-4662-0

Agent-based Semantic Web Service Composition

Agent-based Semantic Web Service Composition closely examines the various aspects of SWS composition, and explores the concept that a Multi-Agent system can serve as an SWS composition system in which its agents can interact with one another to satisfy a high-level goal. In addition to surveying various proposed multi-agent-based SWS composition models, the book also highlights the cognitive parameter-based semantic web service selection models that can be used in multi-agent-based SWS composition, and outlines a new negotiation agreement-based SWS composition that can outperform existing techniques. Agent-based Semantic Web Service Composition is intended for researchers and practitioners as a reference guide for optimizing SWS composition and implementing multi-agent systems. Instructors and other academics working in a related field will also find the book invaluable.

Contents

Fields of interests
Database Management; Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics)

Target groups
Research

Product category
Brief

用手 on examples ► Including simple but comprehensive case study ► Knowledge to handle all basic business processes in Dynamics AX

Contents

Fields of interests
Software Engineering/Programming and Operating Systems; Software Engineering; Computer Science, general

Target groups
Professional/practitioner

Product category
Professional book

A. Luszczak, Wien
Using Microsoft Dynamics AX 2012

Precise descriptions and instructions enable users, students and consultants to easily understand Microsoft Dynamics AX 2012. Microsoft offers Dynamics AX as its premium ERP solution to support large and mid-sized organizations with a complete business management solution which is easy to use. Going through a simple but comprehensive case study – the sample company ‘Anso Technologies Inc.’ – this book provides the required knowledge to handle all basic business processes in Dynamics AX. Exercises are there to train the processes and functionality, also making this book a good choice for self-study. Contents Basics and Technology – Navigation and User Interface – Supply Chain Management – Trade and Logistics – Manufacturing – Financial Management Target Group – IT executives – IT professionals and consultants for business management solutions – New and current users of Dynamics AX – Students of information technology, business administration and similar disciplines Author Dr.

Features
► Easily learning Dynamics AX through hands-on examples ► Including simple but comprehensive case study ► Knowledge to handle all basic business processes in Dynamics AX

Contents

Fields of interests
Software Engineering/Programming and Operating Systems; Software Engineering; Computer Science, general

Target groups
Professional/practitioner

Product category
Professional book
Knowledge Visualization Currents
From Text to Art to Culture

This text reviews the evolution of the field of visualization, providing innovative examples from various disciplines, highlighting the important role that visualization plays in extracting and organizing the concepts found in complex data.

Features
- Presents the state of the art in visualization research and development
- Highlights research developing at key intersections with other disciplines and its applicability to addressing complex real-world problems
- Discusses how visualization researchers are addressing complex issues of representation in knowledge, art, and culture

Contents
Part I: Knowledge Visualization Background.
- What is an Effective Knowledge Visualization.
- What is Knowledge Visualization.

Part II: Text.
- Tables and Early Information Visualization.
- Contract Clarity and Usability through Visualization.
- From Culture to Text to Interactive Visualization of Wine Reviews.

Part III: Art.
- Colorscore: Visualization and Condensation of Structure of Classical Music.
- The Implications of David Hockney’s Thesis for 3D Computer Graphics.
- Practice of Using Virtual Reconstruction in the Restoration of Monumental Painting.

Part IV: Culture.
- Mediation of Knowledge Construction of Historic Sites.
- Memory, Difference, and the Representation of Historic Sites.

Part V: Culture.
- Problem Clarity and Usability through Visualization.

Fields of interests
- Computer Graphics
- Data Mining and Knowledge Discovery
- Visualization

Target groups
- Research

Product category
- Contributed volume

M. Mokhtari, Paris, France; N. Martaj, Université Paris 10, France

Electronique Appliquée, Electromécanique sous Simscape & SimPowerSystems (Matlab/Simulink)


Contents
- 1er ouvrage sur Simscape et SimpowerSystems en Français
- Description des différentes librairies
- Présentation d’applications industrielles

Fields of interests
- Programming Techniques
- Electronic Circuits and Devices
- Circuits and Systems

Target groups
- Research

Product category
- Manuel professionnel

C. J. Petrie, Stanford University, Bastrop, TX, USA

Automated Configuration Problem Solving

Automated Configuration has long been the subject of intensive research, especially in Artificial Intelligence. It is a pervasive problem to be solved, and it is a good test of various knowledge representation and reasoning techniques. The problem shows up in applications such as various electrical circuit design, utility computing and even concurrent engineering. Automated Configuration Problem Solving defines the ubiquitous problem, illustrates the various solution techniques, and includes a survey using these techniques from the mid-70’s until the mid-90’s. During this time, various general approaches were developed, and then become more specialized. This book covers the development of the general problem solving techniques for automated configuration, which are based on both published academic work and patents.

Contents
- Configuration Problem Definition and Technology
- Configuration Models
- Reasoning Techniques
- Specific Configuration Systems
- Final Notes on Configuration Solving

Fields of interests
- Artificial Intelligence (incl. Robotics)
- Computer-Aided Engineering (CAD, CAE) and Design
- Engineering Design

Target groups
- Research

Product category
- Brief

Due September 2012

2012. XVI, 238 p. 96 illus., 72 in color. Hardcover
- € (D) 90,90 | € (A) 93,45 | sFr 113,50
- ISBN 978-1-4471-4302-4

Due June 2012

2012. VII, 38 p. 4 illus. (SpringerBriefs in Computer Science) Softcover
- € (D) 42,75 | € (A) 43,95 | sFr 39,50

Due June 2012

- € (D) 59,84 | € (A) 61,52 | sFr 74,50
- ISBN 978-3-642-24200-7

Due September 2012

- € (D) 84,95 | £75.50
The Basque Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
Language Translation and Linguistics; Computational Linguistics

Target groups
Popular/general

Product category
Professional book

Due August 2012
2012. Approx. 95 p. (White Paper Series) Softcover
► approx. * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-642-30795-9

The Croatian Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
Language Translation and Linguistics; Computational Linguistics

Target groups
Popular/general

Product category
Professional book

Due August 2012
2012. Approx. 95 p. (White Paper Series) Softcover
► approx. * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-642-30881-9

The Galician Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
Language Translation and Linguistics; Computational Linguistics

Target groups
Popular/general

Product category
Professional book

Due August 2012
2012. Approx. 95 p. (White Paper Series) Softcover
► approx. * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-642-30798-0
G. Rehm, H. Uszkoreit, DFKI GmbH, Berlin, Germany (Eds)

The Latvian Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
Language Translation and Linguistics;
Computational Linguistics

Target groups
Popular/general

Product category
Professional book

Due August 2012

2012. Approx. 95 p. (White Paper Series) Softcover
► approx. * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-642-30875-8

G. Rehm, H. Uszkoreit, DFKI GmbH, Berlin, Germany (Eds)

The Norwegian Language in the Digital Age

Bokmålsversjon

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
Language Translation and Linguistics;
Computational Linguistics

Target groups
Popular/general

Product category
Professional book

Due July 2012

2012. VI, 84 p. 24 illus. in color. (White Paper Series) Softcover
► * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► € 49,95 | £44.99
ISBN 978-3-642-31388-2

G. Rehm, H. Uszkoreit, DFKI GmbH, Berlin, Germany (Eds)

The Norwegian Language in the Digital Age

Nynorskversjon

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
Language Translation and Linguistics;
Computational Linguistics

Target groups
Popular/general

Product category
Professional book

Due July 2012

► * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► € 49,95 | £44.99
ISBN 978-3-642-31432-2
The Polish Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
- Language Translation and Linguistics;
- Computational Linguistics

Target groups
- Popular/general

Product category
- Professional book

Due August 2012
2012. Approx. 95 p. (White Paper Series) Softcover
► approx. *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-642-30810-9

The Spanish Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
- Language Translation and Linguistics;
- Computational Linguistics

Target groups
- Popular/general

Product category
- Professional book

Due August 2012
2012. Approx. 95 p. (White Paper Series) Softcover
► approx. *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-642-30840-6

The Swedish Language in the Digital Age

This white paper is part of a series that promotes knowledge about language technology and its potential. It addresses educators, journalists, politicians, language communities and others. The availability and use of language technology in Europe varies between languages. Consequently, the actions that are required to further support research and development of language technologies also differ for each language. The required actions depend on many factors, such as the complexity of a given language and the size of its community. META-NET, a Network of Excellence funded by the European Commission, has conducted an analysis of current language resources and technologies. This analysis focused on the 23 official European languages as well as other important national and regional languages in Europe. The results of this analysis suggest that there are many significant research gaps for each language. A more detailed expert analysis and assessment of the current situation will help maximise the impact of additional research and minimize any risks. META-NET consists of 54 research centres from 33 countries that are working with stakeholders from commercial businesses, government agencies, industry, research organisations, software companies, technology providers and European universities. Together, they are creating a common technology vision while developing a strategic research agenda that shows how language technology applications can address any research gaps by 2020.

Fields of interests
- Language Translation and Linguistics;
- Computational Linguistics

Target groups
- Popular/general

Product category
- Professional book

Due July 2012
2012. VI, 84 p. 25 illus., 2 in color. (White Paper Series) Softcover
► *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
► € 49,95 | £44.99
ISBN 978-3-642-30831-4
Engineering Secure Two-Party Computation Protocols

Design, Optimization, and Applications of Efficient Secure Function Evaluation

Secure two-party computation, called secure function evaluation (SFE), enables two mutually mistrusting parties, the client and server, to evaluate an arbitrary function on their respective private inputs while revealing nothing but the result. Originally the technique was considered to be too inefficient for practical privacy-preserving applications, but in recent years rapid speed-up in computers and communication networks, algorithmic improvements, automatic generation, and optimizations have enabled their application in many scenarios.

Features
► Achieves an excellent balance between theory and applicability ► Essential for researchers, students and practitioners who construct practical cryptographic protocols for privacy-preserving real-world applications ► Describes algorithm engineering methods to engineer efficient secure protocols

Contents

Fields of interests
Data Structures, Cryptology and Information Theory; Computer Systems Organization and Communication Networks; Communications Engineering, Networks

Target groups
Research

Product category
Monograph

Handbook of Neuroevolution through Erlang

Features
► Provides a friendly step-by-step guide on the construction of Topology and Weight Evolving Artificial Neural Network systems from start to finish ► Covers novel material for using Erlang in the construction of TWEANN systems ► Explains why Neural Network based Computational Intelligence systems map perfectly to Erlang's architecture, and the importance of this programming language to the future of computational intelligence ► Introduces new TWEANN algorithms, with the final result being a concurrent, cutting edge, direct and indirect encoded, plasticity enabled, TWEANN platform

Contents

Fields of interests
Software Engineering/Programming and Operating Systems; Artificial Intelligence (inclus. Robotics); Computational Biology/Bioinformatics

Target groups
Professional/practitioner

Product category
Handbook

Specification and Analytical Evaluation of Heterogeneous Dynamic Quorum-Based Data Replication Schemes

Data replication by employing quorum systems is an important concept to improve operation availability on data objects in distributed systems that have strong data consistency demands. These data replication schemes must be modeled and carefully evaluated with respect to different quality measures. Christian Storm addresses the former by a uniform data replication scheme specification method and realizes the latter by a comprehensive approach to the analytical evaluation of quorum-based data replication schemes. The system model allows to evaluate operation availability and other quality measures for the write as well as for the read operation.

Features
► Publication in the field of technology

Contents

Fields of interest
Software Engineering/Programming and Operating Systems

Target groups
Research

Product category
Monograph
A. Trendowicz, Fraunhofer Institute for Experimental Software Engineering, Kaiserslautern, Germany

**Software Cost Estimation, Benchmarking, and Risk Assessment**

*The Software Decision-Makers’ Guide to Predictable Software Development*

Software effort estimation is a key element of software project planning and management. Yet, in industrial practice, the important role of effort estimation is often underestimated and/or misunderstood.

**Features**
- Both the CoBRA method and its presentation are driven by and aimed at industrial practice
- A complete and comprehensible specification of all relevant CoBRA processes is presented
- The methodological concepts and their usage are illustrated by numerous practical examples and case studies from various software organizations

**Contents**

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

**Target groups**
Research

**Product category**
Monograph

---

B. Turban

**Tool-Based Requirement Traceability between Requirement and Design Artifacts for Safety-Critical Systems**

Processes for developing safety-critical systems impose special demands for ensuring requirements traceability. Achieving valuable traceability information, however, is especially difficult concerning the transition from requirements to design. Bernhard Turban analyzes systems and software engineering theories the problem is cross-cutting in (embedded systems development, systems engineering, software engineering, requirements engineering and management, design theory and processes for safety-critical systems).

As a solution, the author proposes a new tool approach supporting designers in their thinking in order to achieve traceability as a by-product to normal design activities and extending traceability information with information about design decision rationale.

**Features**
- Assumes no prior knowledge of matrix notation
- Chapters contain practical worked examples
- Easy to read descriptions on how to apply matrix notation within the world of computer games and animation

**Contents**

**Fields of interest**
Computer Imaging, Vision, Pattern Recognition and Graphics; Mathematics, general; Image Processing and Computer Vision

**Target groups**
Lower undergraduate

**Product category**
Undergraduate textbook

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J. Vince, Bournemouth University, UK

**Matrix Transforms for Computer Games and Animation**

Matrix transforms are ubiquitous within the world of computer graphics, where they have become an invaluable tool in a programmer’s toolkit for solving everything from 2D image scaling to 3D rotation about an arbitrary axis. Virtually every software system and hardware graphics processor uses matrices to undertake operations such as scaling, translation, reflection and rotation.

Nevertheless, for some newcomers to the world of computer games and animation, matrix notation can appear obscure and challenging. Matrices and determinants were originally used to solve groups of simultaneous linear equations, and were subsequently embraced by the computer graphics community to describe the geometric operations for manipulating two- and three-dimensional structures. Consequently, to place matrix notation within an historical context, the author provides readers with some useful background to their development, alongside determinants.

**Features**
- Assumes no prior knowledge of matrix notation
- Chapters contain practical worked examples
- Easy to read descriptions on how to apply matrix notation within the world of computer games and animation

**Contents**

**Fields of interest**
Computer Imaging, Vision, Pattern Recognition and Graphics; Mathematics, general; Image Processing and Computer Vision

**Target groups**
Lower undergraduate

**Product category**
Undergraduate textbook
Persuasive Recommender Systems

Conceptual Background and Implications

Whether users are likely to accept the recommendations provided by a recommender system is of utmost importance to system designers and the marketers who implement them. By conceptualizing the advice seeking and giving relationship as a fundamentally social process, important avenues for understanding the persuasiveness of recommender systems open up. Specifically, research regarding influential factors in advice seeking relationships, which is abundant in the context of human-human relationships, can provide an important framework for identifying potential influence factors in recommender system context. This book reviews the existing literature on the factors in advice seeking relationships in the context of human-human, human-computer, and human-recommender system interactions. It concludes that many social cues that have been identified as influential in other contexts have yet to be implemented and tested with respect to recommender systems. Implications for recommender system research and design are discussed.

Contents


Fields of interests

Artificial Intelligence (incl. Robotics); Data Mining and Knowledge Discovery

Target groups

Research

Product category

Brief

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