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Applications of Neural Adaptive Control Technology *World Scientific* **This book presents the results of the second workshop on Neural Adaptive Control Technology, NACT II, held on September 9-10, 1996, in Berlin. The workshop was organised in connection with a three-year European-Union-funded Basic Research Project in the ESPRIT framework, called NACT, a collaboration between Daimler-Benz (Germany) and the University of Glasgow (Scotland).The NACT project, which began on 1 April 1994, is a study of the fundamental properties of neural-network-based adaptive control systems. Where possible, links with traditional adaptive control systems are exploited. A major aim is to develop a systematic engineering procedure for designing neural controllers for nonlinear dynamic systems. The techniques developed are being evaluated on concrete industrial problems from within the Daimler-Benz group of companies.The aim of the workshop was to bring together selected invited specialists in the fields of adaptive control, nonlinear systems and neural networks. The first workshop (NACT I) took place in Glasgow in May 1995 and was mainly devoted to theoretical issues of neural adaptive control. Besides monitoring further development of theory, the NACT II workshop was focused on industrial applications and software tools. This context dictated the focus of the book and guided the editors in the choice of the papers and their subsequent reshaping into substantive book chapters. Thus, with the project having progressed into its applications stage, emphasis is put on the transfer of theory of neural adaptive engineering into industrial practice. The contributors are therefore both renowned academics and practitioners from major industrial users of neurocontrol. Intelligent Engineering Systems and Computational Cybernetics** *Springer Science & Business Media* **Engineering practice often has to deal with complex systems of multiple variable and multiple parameter models almost always with strong non-linear coupling. The conventional analytical techniques-based approaches for describing and predicting the behaviour of such systems in many cases are doomed to failure from the outset, even in the phase of the construction of a more or less appropriate mathematical model. These approaches normally are too categorical in the sense that in the name of "modelling accuracy" they try to describe all the structural details of the real physical system to be modelled. This can significantly increase the intricacy of the model and may result in a enormous computational burden without achieving considerable improvement of the solution. The best paradigm exemplifying this situation may be the classic perturbation theory: the less significant the achievable correction, the more work has to be invested to obtain it. A further important component of machine intelligence is a kind of "structural uniformity" giving room and possibility to model arbitrary particular details a priori not specified and unknown. This idea is similar to the ready-to-wear industry, which introduced products, which can be slightly modified later on in contrast to tailor-made creations aiming at maximum accuracy from the beginning. These subsequent corrections can be carried out by machines automatically. This "learning ability" is a key element of machine intelligence. The past decade confirmed that the view of typical components of the present soft computing as fuzzy logic, neural computing, evolutionary computation and probabilistic reasoning are of complementary nature and that the best results can be applied by their combined application. Today, the two complementary branches of Machine Intelligence, that is, Artificial Intelligence and Computational Intelligence serve as the basis of Intelligent Engineering Systems. The huge number of scientific results published in Journal and conference proceedings worldwide substantiates this statement. The present book contains several articles taking different viewpoints in the field of intelligent systems. Adaptive Computing in Design and Manufacture V** *Springer Science & Business Media* **The Adaptive Computing in Design and Manufacture Conference series is now in its tenth year and has become a well-established, application-oriented meeting recognised by several UK Engineering Institutions and the International Society of Genetic and Evolutionary Computing. The main theme of the conference again relates to the integration of evolutionary and adaptive computing technologies with design and manufacturing processes whilst also taking into account complementary advanced computing technologies. Evolutionary and adaptive computing techniques continue to increase their penetration of industrial and commercial practice as their powerful search, exploration and optimisation capabilities become ever more apparent. The last two years have seen a very significant increase in the development of commercial software tools utilising adaptive computing technologies and the emergence of related commercial research and consultancy organisations supporting the introduction of best practice in terms of industrial utilisation. Adaptive Computing in Design and Manufacture V is comprised of selected papers that cover a diverse set of industrial application areas including: engineering design and design environments, manufacturing process design, scheduling and control, electronic circuit design, fault detection. Various aspects of search and optimisation such as multi-objective and constrained optimisation are also investigated in the context of integration with industrial processes. In addition to evolutionary computing techniques, both neural-net and agent-based technologies play a role in a number of contributions. This collection of papers will be of particular interest to both industrial researchers and practitioners in addition to the academic research communities of engineering, operational research and computer science. Opto-Mechatronic Systems Handbook Techniques and Applications** *CRC Press* **Opto-mechatronics-the fusion of optical and mechatronic technologies-has been integral in the**

evolution of machines, systems, and products that are smaller and more precise, more intelligent, and more autonomous. For the technology to reach its full potential, however, engineers and researchers from many disciplines must learn to work together through every phase of system development. To date, little effort has been expended, either in practice or in the literature, to eliminate the boundaries that exist between the optics and mechatronics communities. The Opto-Mechatronics Systems Handbook is the first step in that direction. Richly illustrated and featuring contributions from an international panel of experts, it meets three essential objectives: Ö Present the definitions, fundamentals, and applications of the technology Ö Provide a multidisciplinary perspective that shows how optical systems and devices can be integrated with mechatronic systems at all stages, from conceptualization to design and manufacturing Ö Demonstrate the roles and synergistic effects of optical systems in overall system performance Along with his fresh approach and systems perspective, the editor has taken care to address real cutting-edge technologies, including precision opto-mechatronic systems, intelligent robots, and opto-microsensors. Ultimately, the Opto-Mechatronics Systems Handbook provides readers with the technological foundation for developing further innovative products and systems. Evolutionary and Adaptive Computing in Engineering Design With 98 Figures *Springer Science & Business Media* Following an introduction to the various techniques and examples of their routine application, this potential is explored through the introduction of various strategies that support searches across a far broader set of possible design solutions within time and budget constraints. Generic problem areas investigated include: - design decomposition; - whole-system design; - multi-objective and constraint satisfaction; - human-computer interaction; - computational expense. Appropriate strategies that help overcome problems often encountered when integrating computer-based techniques with complex, real-world design environments are described. A straightforward approach coupled with examples supports a rapid understanding of the manner in which such strategies can best be designed to handle the complexities of a particular problem. Adaptive Structures Engineering Applications *John Wiley & Sons* Adaptive structures have the ability to adapt, evolve or change their properties or behaviour in response to the environment around them. The analysis and design of adaptive structures requires a highly multi-disciplinary approach which includes elements of structures, materials, dynamics, control, design and inspiration taken from biological systems. Development of adaptive structures has been taking place in a wide range of industrial applications, but is particularly advanced in the aerospace and space technology sector with morphing wings, deployable space structures; piezoelectric devices and vibration control of tall buildings. Bringing together some of the foremost world experts in adaptive structures, this unique text: includes discussions of the application of adaptive structures in the aerospace, military, civil engineering structures, automotive and MEMS. presents the impact of biological inspiration in designing adaptive structures, particularly the use of hierarchy in nature, which typically induces multi-functional behavior. sets the agenda for future research in adaptive structures in one distinctive single volume. Adaptive Structures: Engineering Applications is essential reading for engineers and scientists working in the fields of intelligent materials, structural vibration, control and related smart technologies. It will also be of interest to senior undergraduate and postgraduate research students as well as design engineers working in the aerospace, mechanical, electrical and civil engineering sectors. Resilient Smart Cities Theoretical and Empirical Insights *Springer Nature* This book provides a thorough guide to building resilient cities, through the use of smart solutions enabled by information and communication technologies. It introduces innovative approaches for integrating smart solutions into urban resilience planning and offers numerous global case studies to illustrate the benefits of the theories discussed. Against a background of increased natural disasters, pandemics, and climate change, this book answers research questions such as: • Do smart city projects contribute to urban climate resilience? • What are the indicators of smart city resilience? • What procedures should be taken to improve efficacy of smart city solutions? • What are the opportunities and challenges for promoting smart city resilience and for integrating resilience thinking into smart city planning? Including contributions from international experts, explanatory illustrations, and data-driven tables, this book is of interest to researchers, policymakers, and graduate students focused on developing more sustainable, smart, and resilient cities. Adaptive Multiscale Schemes for Conservation Laws *Springer Science & Business Media* During the last decade enormous progress has been achieved in the field of computational fluid dynamics. This became possible by the development of robust and high-order accurate numerical algorithms as well as the construc tion of enhanced computer hardware, e. g. , parallel and vector architectures, workstation clusters. All these improvements allow the numerical simulation of real world problems arising for instance in automotive and aviation indus try. Nowadays numerical simulations may be considered as an indispensable tool in the design of engineering devices complementing or avoiding expen sive experiments. In order to obtain qualitatively as well as quantitatively reliable results the complexity of the applications continuously increases due to the demand of resolving more details of the real world configuration as well as taking better physical models into account, e. g. , turbulence, real gas or aeroelasticity. Although the speed and memory of computer hardware are currently doubled approximately every 18 months according to Moore's law, this will not be sufficient to cope with the increasing complexity required by uniform discretizations. The future task will be to optimize the utilization of the available re sources. Therefore new numerical algorithms have to be developed with a computational complexity that can be termed nearly optimal in the sense that storage and computational expense remain proportional to the "inher ent complexity" (a term that will be made clearer later) problem. This leads to adaptive concepts which correspond in a natural way to unstructured grids. Stable Adaptive Systems *Courier Corporation* This graduate-level text offers a thorough understanding of the global stability properties essential to designing adaptive systems. Its self-contained, unified presentation includes detailed case studies and numerous problems. 1989 edition. Software Engineering for Self-Adaptive Systems *Springer Science & Business Media* The carefully reviewed papers in this state-of-the-art survey describe a wide range of approaches coming from different strands of software engineering, and look forward to future challenges facing this ever-resurgent and exacting field of research. Design and Implementation of Motion-adaptive

Deinterlacer Architecture for High Definition TV Machine Intelligence Quo Vadis? *World Scientific* **This book brings together the contributions of leading researchers in the field of machine intelligence, covering areas such as fuzzy logic, neural networks, evolutionary computation and hybrid systems.There is wide coverage of the subject ? from simple tools, through industrial applications, to applications in high-level intelligent systems which are biologically motivated, such as humanoid robots (and selected parts of these systems, like the visual cortex). Readers will gain a comprehensive overview of the issues in machine intelligence, a field which promises to play a very important role in the information society of the future. Adaptive Computing in Design and Manufacture The Integration of Evolutionary and Adaptive Computing Technologies with Product/System Design and Realisation** *Springer* **These papers were presented at the Third International Conference on Adaptive Computing in Design and Manufacture, organised by the Plymouth Engineering Design Centre (University of Plymouth) and held at Dartington Hall, Devon, April 1998. The collection is the work of leading international experts and researchers in the field of the development and application of evolutionary and adaptive computing techniques within the design and manufacture domain. Such techniques include Genetic Algorithms, Genetic Programming, Insect Colony Metaphors and Neural Computing utilised within overall search, optimisation and control strategies that offer significant utility to industrial design, manufacture and control. Applications address conceptual, embodiment and detailed design across aspects of civil, architectural, mechanical, electronic, aerospace and power system engineering. Manufacturing aspects include facility layout, task scheduling and system control. Application is illustrated in most cases by integration of the various algorithms and developed strategies with real-world design and manufacturing problems. This work illustrates the significant increase in application-oriented research relating to adaptive computing technologies in recent years and the increasing industrial interest in their integration with current practice. The content can be considered state-of-the-art in terms of application and will be of particular interest to associated research communities and to industrial design and manufacture groups who are either currently utilising such techniques or who wish to introduce them to their organisations. Contracting for Engineering and Construction Projects** *Routledge* **Peter Marsh's book has long been recognized as a standard work. With its emphasis on the commercial aspects of contracting, this book represents an eminently practical guide to this complex subject for purchaser and contractor alike. This edition reflects recent changes in case law and legislation, the major change being the passing of the Housing Grants, Construction and Regeneration Act 1996. The book also charts changes to model forms of contract conditions, in particular the new PACE forms of government contracts. Contracts covered are those for the construction of buildings and civil engineering works, the supply and installation of mechanical, electrical and process plants and also for computer system and facilities management. Methods of contracting, including PFI schemes, are critically examined and reference is made to the Government's latest thinking on prime contracting. As in previous editions, this book covers contract planning and contract administration, deals with both the preparation and the appraisal of tenders and explains in detail how to draft the key clauses in a contract to ensure the maximum advantage. In this revised version, Contracting for Engineering and Construction Projects will continue to serve the needs of purchasing and contracts staff, engineers, quantity surveyors, project managers and legal advisers seeking a reliable source of guidance. Model-Based Design of Adaptive Embedded Systems** *Springer Science & Business Media* **This book describes model-based development of adaptive embedded systems, which enable improved functionality using the same resources. The techniques presented facilitate design from a higher level of abstraction, focusing on the problem domain rather than on the solution domain, thereby increasing development efficiency. Models are used to capture system specifications and to implement (manually or automatically) system functionality. The authors demonstrate the real impact of adaptivity on engineering of embedded systems by providing several industrial examples of the models used in the development of adaptive embedded systems. Engineering Societies in the Agents World III Third International Workshop, ESAW 2002, Madrid, Spain, September 16-17, 2002, Revised Papers** *Springer* **The characteristics of software systems are undergoing dramatic changes. We are moving rapidly into the age of ubiquitous information services. Persistent computing systems are being embedded in everyday objects. They interact in an autonomouswaywith eachother to provideus with increasinglycomplexservices and functionalities that we can access at any time from anywhere. As a con- quence, not only do the numbers of components of software systems increase; there is also a strong qualitative impact. Software systems are increasingly made up of autonomous, proactive, networked components. These interact with each other in patterns and via mechanisms that can hardly be modeled in terms of classical models of interaction or service-oriented coordination. To some extent, future software systems will exhibit characteristics making them more res- blant of natural systems and societies than of mechanical systems and software architectures. This situation poses exciting challenges to computer scientists and software engineers. Already, software agents and multi-agent systems are recognized as both useful abstractions and e?ective technologies for the modeling and building of complex distributed applications. However, little is done with regard to e?- tive and methodic development of complex software systems in terms of mul- agent societies. An urgent need exists for novel approaches to software modeling and software engineering that enable the successful deployment of software s- tems made up ofa massive number ofautonomous components, and that allowus to control and predict their behaviour. Transdisciplinary Engineering: Crossing Boundaries Proceedings of the 23rd ISPE Inc. International Conference on Transdisciplinary Engineering October 3 – 7, 2016** *IOS Press* **The Concurrent Engineering (CE) approach was developed in the 1980s, based on the concept that different phases of a product life cycle should be conducted concurrently and initiated as early as possible within the Product Creation Process (PCP). CE concepts have matured and become the foundation of many new ideas, methodologies, initiatives, approaches and tools. This book contains the proceedings from the 23rd ISPE Inc. International Conference on Transdisciplinary (formerly: Concurrent) Engineering, held in Curitiba, Parana, Brazil, in October 2016. The conference, entitled 'Transdisciplinary Engineering: Crossing Boundaries', provides an important forum for international scientific exchange on Concurrent Engineering and**

collaborative enterprises, and attracts the participation of researchers, industry experts and students, as well as government representatives. The 108 peer reviewed papers and keynote speech included here, range from theoretical and conceptual to strongly pragmatic works, which are organized into 17 sections including: Concurrent Engineering and knowledge exchange; engineering for sustainability; multidisciplinary project management; collaborative design and engineering; optimization of engineering operations and data analytics; and multidisciplinary design optimization, among others. The book gives an overview of the latest research, advancements and applications in the field and will be of interest to researchers, design practitioners and educators. Domestic Technology Transfer Issues and Options National Innovation Systems A Comparative Analysis *Oxford University Press on Demand* This study surveys the manner in which 17 different countries have evolved systems for technological innovation. Methods are compared not only in large, industrialized nations, but also in developing countries and smaller nations with high incomes. Adaptive Filtering Prediction and Control *Courier Corporation* This unified survey focuses on linear discrete-time systems and explores natural extensions to nonlinear systems. It emphasizes discrete-time systems, summarizing theoretical and practical aspects of a large class of adaptive algorithms. 1984 edition. Macrologistics Management A Catalyst for Organizational Change *CRC Press* Macrologistics Management defines the term "Macrologistics" as a means for designing a catalyst for change in any organization. The "macro" approach means seeing the big picture-to use time and place strategies for competitive advantage. It is a "breakthrough" strategy because it prioritizes "logistics" selection as a key factor in developing customer satisfaction and market penetration. Traditional management approaches the product and cost savings as key factors in their strategy. This book demonstrates how new approaches can be even more effective and more profitable-it will help you achieve complete transformation in your organization through a systematic process for managing change and by using carefully prioritized change management strategies. The framework for change, as explained in this book, is one where continuous monitoring is facilitated by a relevant and responsive information system, workers and managers are empowered and rewarded for innovation, and leaders encourage a passion for change. With Macrologistics Management you will learn how to unleash new sources of synergy-ways for various groups involved with the organization to work together-that help promote creativity and motivate an effective and rapid revolution in your workplace! 1983 NASA Authorization Hearing Before the Subcommittee on Transportation, Aviation, and Materials of the Committee on Science and Technology, U.S. House of Representatives, Ninety-seventh Congress, Second Session 1983 NASA Authorization and NOAA Landsat Authorization for 1983 Hearings Federal Technology Transfer Directory of Programs, Resources, Contact Points Code of Federal Regulations 1985-1999 Special edition of the Federal Register, containing a codification of documents of general applicability and future effect ... with ancillaries. The Code of Federal Regulations of the United States of America The Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. Programming Concepts, Automata, and Adaptive Systems An Intensive Course for Engineers, Scientists, and Mathematicians Adaptive Structures Dynamics and Control *Wiley-Interscience* Mechanical Engineering/Materials Science An applications-oriented approach for engineers and advanced students Adaptive Structures covers the key concepts and practical issues involved in translating much of the theory of adaptive structures into successful, real-world hardware. Easily applied to a variety of application physics, the material emphasizes the integration of control strategies, transduction device dynamics, and spatial signal processing through novel sensing methods and actuator configurations (physical or transformed coordinates). The book contains essential models of adaptive structures and components to facilitate design approaches. The accompanying disk features script files, operating under MATLAB, which can be used to generate most of the results presented throughout the book and are invaluable to readers developing their own structural models. Topics include: * Fundamentals of structural dynamics; linear systems and signals; and signal processing and digital filters * The integration of spatial and temporal signal processing techniques * Transduction device dynamics and links between physical, modal, and wave domain models for structural dynamic analysis and control * An overview of classical controls * An application-oriented review of adaptive feedforward control and multivariable feedback control system architectures Model Reference Adaptive Control From Theory to Practice Adaptive Control Systems Techniques and Applications *Routledge* impossible to access. It has been widely scattered in papers, reports, and proceedings of symposia, with different authors employing different symbols and terms. But now there is a book that covers all aspects of this dynamic topic in a systematic manner. Featuring consistent terminology and compatible notation, and emphasizing unified strategies, Adaptive Control Systems provides a comprehensive, integrated account of basic concepts, analytical tools, algorithms, and a wide variety of application trends and techniques. Adaptive Control Systems deals not only with the two principal approaches model reference adaptive control and self-tuning regulators-but also considers other adaptive strategies involving variable structure systems, reduced order schemes, predictive control, fuzzy logic, and more. In addition, it highlights a large number of practical applications in a range of fields from electrical to biomedical and aerospace engineering ...and includes coverage of industrial robots. The book identifies current trends in the development of adaptive control systems ...delineates areas for further research . : . and provides an invaluable bibliography of over 1,200 references to the literature. The first authoritative reference in this important area of work, Adaptive Control Systems is an essential information source for electrical and electronics, R&D, chemical, mechanical, aerospace, biomedical, metallurgical, marine, transportation, and power plant engineers. It is also useful as a text in professional society seminars and inhouse training programs for personnel involved with the control of complex systems, and for graduate students engaged in the study of adaptive control systems. Agent-Oriented Software Engineering VI 6th International Workshop, AOSE 2005, Utrecht, The Netherlands, July 25, 2005. Revised and Invited Papers *Springer* This book represents the thoroughly refereed post-proceedings of the 6th International Workshop on Agent-Oriented Software Engineering, AOSE 2005. The 18 revised full papers were carefully selected from 35 submissions during two rounds of reviewing and improvement. The papers are organized in topical sections on modeling tools, analysis and

validation tools, multiagent systems design, implementation tools, and experiences and comparative evaluations. **Adaptive Control Design and Analysis** *John Wiley & Sons* **A systematic and unified presentation of the fundamentals of adaptive control theory in both continuous time and discrete time Today, adaptive control theory has grown to be a rigorous and mature discipline. As the advantages of adaptive systems for developing advanced applications grow apparent, adaptive control is becoming more popular in many fields of engineering and science. Using a simple, balanced, and harmonious style, this book provides a convenient introduction to the subject and improves one's understanding of adaptive control theory. Adaptive Control Design and Analysis features: Introduction to systems and control Stability, operator norms, and signal convergence Adaptive parameter estimation State feedback adaptive control designs Parametrization of state observers for adaptive control Unified continuous and discrete-time adaptive control L1+a robustness theory for adaptive systems Direct and indirect adaptive control designs Benchmark comparison study of adaptive control designs Multivariate adaptive control Nonlinear adaptive control Adaptive compensation of actuator nonlinearities End-of-chapter discussion, problems, and advanced topics As either a textbook or reference, this self-contained tutorial of adaptive control design and analysis is ideal for practicing engineers, researchers, and graduate students alike. Design and Use Patterns of Adaptability in Enterprise Systems** *GITO mbH Verlag* **Technology Transfer and International Production The Development of the Electronics Industry in Korea** *Edward Elgar Publishing* **"This book analyses the technology development efforts of Korea's electronics industry (the country's largest exporter). It asks how the Korean electronics industry was able to develop, both in terms of production and technology, despite low inflows of licensing and foreign direct investments. The books argues that the key to its spectacular growth has been through its participation and learning from an inter-firm arrangement called original equipment manufacturing arrangement (OEM). A number of firm-level case studies on the Korean electronics industry support this argument. The role of the government, especially related to its technology policy, has also been analysed. The government was effective in providing financial incentives for the firms' technological upgrading efforts, but its supplying of direct technological assistance had limited success. Overall, this book argues that contrary to many previous studies, the role of multinational enterprises has been significant in the development of Korea's electronics industry, and that they have acted as a 'technological tutor' for Korea through OEM"--P. xiv.tributors, world** $\underline{0}$**. Guide to Traffic Engineering Practice Traffic signals Neural Networks and Analog Computation Beyond the Turing Limit** *Springer Science & Business Media* **The theoretical foundations of Neural Networks and Analog Computation conceptualize neural networks as a particular type of computer consisting of multiple assemblies of basic processors interconnected in an intricate structure. Examining these networks under various resource constraints reveals a continuum of computational devices, several of which coincide with well-known classical models. On a mathematical level, the treatment of neural computations enriches the theory of computation but also explicated the computational complexity associated with biological networks, adaptive engineering tools, and related models from the fields of control theory and nonlinear dynamics. The material in this book will be of interest to researchers in a variety of engineering and applied sciences disciplines. In addition, the work may provide the base of a graduate-level seminar in neural networks for computer science students. Self-Tuning Systems Control and Signal Processing** *Wiley-Blackwell* **Geared to the users' needs, this work provides comprehensive coverage of the main techniques and methods necessary to construct a self-tuning and self-adaptive system. Eliminating a lot of theoretical rigor, it provides the reader with a fundamental understanding of basic algorithms and techniques useful in self-tuning control and signal processing. Every aspect of adaptive engineering is thoroughly covered including extensive descriptions of applications, commercial instruments and current research. Besides offering sections on advanced and detailed topics, the book provides a wide selection of tutorial problems that will aid and stimulate the reader. Ecology, Engineering, and Management Reconciling Ecosystem Rehabilitation and Service Reliability** *Oxford University Press on Demand* **Ecology, Engineering, and the Paradox of Management is the first book that addresses and reconciles what many take to be the core paradox facing environmental decision-makers and stakeholders: How do they restore the environment while at the same time provide ever more services reliably from that environment, including clean air, water and energy for more and more people? The book provides a conceptual framework, empirical case analyses, and organizational proposals to resolve the paradox, be it in the US, Europe, or elsewhere. Thus, Ecology, Engineering, and the Paradox of Management has multiple audiences. First are the key professions involved in the protection and improvement of ecosystems and in the provision and delivery of services from those ecosystems. These include ecologists (and other natural scientists such as conservation biologists, climatologists, forest scientists, and toxicologists), engineers (as well as hydrologists, environmental engineers, civil engineers, and line operators), modeling and gaming experts, managers, planners, and power, agriculture, and recreation communities. Another audience includes university researchers in ecology, conservation biology, engineering, the policy sciences, and resource management. Those interested in interdisciplinary approaches in these fields will also find the book especially helpful. Finally, those interested in the Everglades, the Columbia River Basin, San Francisco Bay-Delta, and the Green Heart of western Netherlands will find new insights here, as the book provides a detailed examination of the paradox in each of these cases. Assurances for Self-Adaptive Systems Principles, Models, and Techniques** *Springer* **The increasing complexity of systems and the growing uncertainty in their operational environments have created a critical need to develop systems able to improve their operation, adapt to change, and recover from failures autonomously. This situation has led to recent advances in self-adaptive systems able to reconfigure their structure and modify their behavior at run-time to adapt to environmental changes. Despite these advances, one key aspect of self-adaptive systems that remains to be tackled in depth is "assurances": the provision of evidence that the system satisfies its stated functional and non-functional requirements during its operation in the presence of self-adaptation. This book is one of the outcomes of the ESEC/FSE 2011 Workshop on Assurances for Self-Adaptive Systems (ASAS), held in Szeged, Hungary, in September 2011. It contains extended versions of some of the papers presented during the workshop, as well as**

invited papers from recognized experts. The 12 refereed papers were thoroughly reviewed and selected. The book consists of four parts: formal verification, models and middleware, failure prediction, and assurance techniques. Technological Capabilities and Export Success in Asia *Routledge* What accounts for export success? A team of international contributors show that learning and capability formation are critical to sustain competitiveness. Through a series of case studies of firms in the textile and garment and electronics industries of five Asian economies - Korea, Taiwan, Thailand, Indonesia and Vietnam - Technological Capabilities and Export Success in Asia demonstrates that cheap labour, combined with currency devaluation, is no longer sufficient for export success.