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## Read Free Fingerprinting Dna Rf Using Discrimination Hardware Plc

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**KEY=PLC - VANG SPENCE**

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### Plc Hardware Discrimination Using Rf-dna Fingerprinting

**Createspace Independent Publishing Platform Programmable Logic Controllers are used to control and monitor automated process in many Supervisory Control and Data Acquisition (SCADA) critical applications. As with virtually all electronic devices, PLCs contain Integrated Circuits (IC) that are often manufactured overseas. ICs that have been unknowingly altered (counterfeited, manufactured with hardware Trojans, etc.) pose a significant security vulnerability. To mitigate this risk, the RF-Distinct Native Attribute (RF-DNA) fingerprinting process is applied to PLC hardware devices to augment bit-level security. RF-DNA fingerprints are generated using two independent signal collection platforms. Two different classifiers are applied for device classification. A verification process is implemented for analysis of Authorized Device Identification and Rogue Device Rejection. Fingerprint feature dimensional reduction is evaluated both Qualitatively and Quantitatively to enhance experimental-to-operational transition potential. The findings of this research are that the higher quality signal collection platform had a classification performance gain of approximately 10dB SNR. Performance of the classifiers varied between signal collection platforms, and also with the application of fingerprint dimensional reduction. The lower quality signal collection platform saw a maximum gain of 5dB SNR using reduced dimensional feature sets compared against the full dimensional feature set.**

### ICT Systems Security and Privacy Protection

30th IFIP TC 11 International Conference, SEC 2015, Hamburg, Germany, May 26-28, 2015, Proceedings

**Springer This book constitutes the refereed proceedings of the 30th IFIP TC 11 International Information Security and Privacy Conference, SEC 2015, held in Hamburg, Germany, in May 2015. The 42 revised full papers presented were carefully reviewed and selected from 212 submissions. The papers are organized in topical sections on privacy, web security, access control, trust and identity management, network security, security management and human aspects of security, software security, applied cryptography, mobile and cloud services security, and cyber-physical systems and critical infrastructures security.**

ICMLG 2017 5th International Conference on Management Leadership and

## Governance

Academic Conferences and publishing limited

### ICCWS 2017 12th International Conference on Cyber Warfare and Security

Academic Conferences and publishing limited

### 11th International Conference on Cyber Warfare and Security

### ICCWS2016

Academic Conferences and publishing limited The 11th International Conference on Cyber Warfare and Security (ICCWS 2016) is being held at Boston University, Boston, USA on the 17-18th March 2016. The Conference Chair is Dr Tanya Zlateva and the Programme Chair is Professor Virginia Greiman, both from Boston University. ICCWS is a recognised Cyber Security event on the International research conferences calendar and provides a valuable platform for individuals to present their research findings, display their work in progress and discuss conceptual and empirical advances in the area of Cyber Warfare and Cyber Security. It provides an important opportunity for researchers and managers to come together with peers to share their experiences of using the varied and expanding range of Cyberwar and Cyber Security research available to them. The keynote speakers for the conference are Daryl Haegley from the Department of Defense (DoD), who will address the topic Control Systems Networks...What's in Your Building? and Neal Ziring from the National Security Agency who will be providing some insight to the issue of Is Security Achievable? A Practical Perspective. ICCWS received 125 abstract submissions this year. After the double blind, peer review process there are 43 Academic Research Papers 8 PhD papers Research papers, 7 Masters and 1 work-in-progress papers published in these Conference Proceedings. These papers represent work from around the world, including: Australia, Canada, China, Czech Republic, District of Columbia, Finland, France, Israel, Japan, Lebanon, Netherlands, Pakistan, Russian Federation, Saudi Arabia, South Africa, Turkey, United Arab Emirates, UK, USA.

## Genetic Witness

### Forensic Uses of DNA Tests

### Proceedings of International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications

### ICMISC 2020

Springer Nature This book gathers selected research papers presented at the International Conference on Recent Trends in Machine Learning, IOT, Smart Cities & Applications (ICMISC 2020), held on 29-30 March 2020 at CMR Institute of Technology, Hyderabad, Telangana, India. Discussing current trends in machine learning, Internet of things, and smart cities applications, with a focus on multi-disciplinary research in the area of artificial intelligence and cyber-physical systems, this book is a valuable resource for scientists, research scholars and PG students wanting formulate their research ideas and find the future directions in these areas. Further, it serves as a reference work anyone wishing to understand

the latest technologies used by practicing engineers around the globe.

## Biometrics

### Concepts, Methodologies, Tools, and Applications, VOL 1

Information Science Publishing

## Physical-Layer Security

### From Information Theory to Security Engineering

**Cambridge University Press** This complete guide to physical-layer security presents the theoretical foundations, practical implementation, challenges and benefits of a groundbreaking new model for secure communication. Using a bottom-up approach from the link level all the way to end-to-end architectures, it provides essential practical tools that enable graduate students, industry professionals and researchers to build more secure systems by exploiting the noise inherent to communications channels. The book begins with a self-contained explanation of the information-theoretic limits of secure communications at the physical layer. It then goes on to develop practical coding schemes, building on the theoretical insights and enabling readers to understand the challenges and opportunities related to the design of physical layer security schemes. Finally, applications to multi-user communications and network coding are also included.

## Methodologies for Metabolomics

### Experimental Strategies and Techniques

**Cambridge University Press** Metabolomics, the global characterisation of the small molecule complement involved in metabolism, has evolved into a powerful suite of approaches for understanding the global physiological and pathological processes occurring in biological organisms. The diversity of metabolites, the wide range of metabolic pathways and their divergent biological contexts require a range of methodological strategies and techniques. Methodologies for Metabolomics provides a comprehensive description of the newest methodological approaches in metabolomic research. The most important technologies used to identify and quantify metabolites, including nuclear magnetic resonance and mass spectrometry, are highlighted. The integration of these techniques with classical biological methods is also addressed. Furthermore, the book presents statistical and chemometric methods for evaluation of the resultant data. The broad spectrum of topics includes a vast variety of organisms, samples and diseases, ranging from in vivo metabolomics in humans and animals to in vitro analysis of tissue samples, cultured cells and biofluids.

## Software Defined Radio

### Enabling Technologies

**John Wiley & Sons** Software defined radio (SDR) is one of the most important topics of research, and indeed development, in the area of mobile and personal communications. SDR is viewed as an enabler of global roaming and as a unique platform for the rapid introduction of new services into existing live networks. It therefore promises mobile communication networks a major increase in flexibility and capability. SDR brings together two key technologies of the last decade - digital radio and downloadable software. It encompasses not only reconfiguration of the air interface parameters of handset and basestation products but also the whole mobile network, to facilitate the dynamic introduction of new

functionality and mass-customised applications to the user's terminal, post-purchase. This edited book, contributed by internationally respected researchers and industry practitioners, describes the current technological status of radio frequency design, data conversion, reconfigurable signal processing hardware, and software issues at all levels of the protocol stack and network. The book provides a holistic treatment of SDR addressing the full breadth of relevant technologies - radio frequency design, signal processing and software - at all levels. As such it provides a solid grounding for a new generation of wireless engineers for whom radio design in future will assume dynamic flexibility as a given. In particular it explores \* The unique demands of SDR upon the RF subsystem and their implications for front end design methodologies \* The recent concepts of the 'digital front end' and 'parametrization' \* The role and key influence of data conversion technologies and devices within software radio, essential to robust product design \* The evolution of signal processing technologies, describing new architectural approaches \* Requirements and options for software download \* Advances in 'soft' protocols and 'on-the-fly' software reconfiguration \* Management of terminal reconfiguration and its network implications \* The concepts of the waveform description language The book also includes coverage of \* Potential breakthrough technologies, such as superconducting RSFQ technology and the possible future role of MEMS in RF circuitry \* Competing approaches, eg all-software radios implemented on commodity computing vs advanced processing architectures that dynamically optimise their configuration to match the algorithm requirements at a point in time The book opens with an introductory chapter by Stephen Blust, Chair of the ITU-R WP8F Committee and Chair of the SDR Forum presenting a framework for SDR, in terms of definitions, evolutionary perspectives, introductory timescales and regulation. Suitable for today's engineers, technical staff and researchers within the wireless industry, the book will also appeal to marketing and commercial managers who need to understand the basics and potential of the technology for future product development. Its balance of industrial and academic contributors also makes it suitable as a text for graduate and post-graduate courses aiming to prepare the next generation of wireless engineers.

## Antenna Fundamentals for Legacy Mobile Applications and Beyond

Springer This book highlights technology trends and challenges that trace the evolution of antenna design, starting from 3rd generation phones and moving towards the latest release of LTE-A. The authors explore how the simple monopole and whip antenna from the GSM years have evolved towards what we have today, an antenna design that is compact, multi-band in nature and caters to multiple elements on the same patch to provide high throughput connectivity. The scope of the book targets a broad range of subjects, including the microstrip antenna, PIFA antenna, and the monopole antenna to be used for different applications over three different mobile generations. Beyond that, the authors take a step into the future and look at antenna requirements for 5G communications, which already has the 5G drive in place with prominent scenarios and use-cases emerging. They examine these, and put in place the challenges that lie ahead for antenna design, particularly in mm-Wave design. The book provides a reference for practicing engineers and under/post graduate students working in this field.

## Cryptographic Hardware and Embedded Systems - CHES 2009

### 11th International Workshop Lausanne, Switzerland, September 6-9, 2009

#### Proceedings

Springer CHES 2009, the 11th workshop on Cryptographic Hardware and Embedded Systems, was held in Lausanne, Switzerland, September 6-9, 2009. The workshop was sponsored by the International Association for Cryptologic Research (IACR). The workshop attracted a record number of 148 submissions from 29 countries, of which the Program Committee selected 29 for publication in the workshop proceedings, resulting in an acceptance rate of 19.6%, the lowest in the history of CHES. The review process followed strict standards: each paper received at least four reviews, and some as many as eight reviews. Members of the Program Committee were restricted to co-authoring at most two submissions, and their papers were evaluated by an extended number of reviewers. The Program Committee included 53 members representing 20 countries and 7 continents. These members were carefully selected to represent academia, industry, and government, as well as to include world-class experts in various research fields of interest to CHES. The Program Committee was supported by 148 external reviewers. The total number of people contributing to the review process, including Program Committee members, external reviewers, and Program Co-chairs, exceeded 200. The papers collected in this volume represent cutting-edge worldwide research in the rapidly growing and evolving area of cryptographic engineering.

## Recent Advances on Soft Computing and Data Mining

### Proceedings of the Fourth International Conference on Soft Computing and Data Mining (SCDM 2020), Melaka, Malaysia, January 22–23, 2020

**Springer Nature** This book provides an introduction to data science and offers a practical overview of the concepts and techniques that readers need to get the most out of their large-scale data mining projects and research studies. It discusses data-analytical thinking, which is essential to extract useful knowledge and obtain commercial value from the data. Also known as data-driven science, soft computing and data mining disciplines cover a broad interdisciplinary range of scientific methods and processes. The book provides readers with sufficient knowledge to tackle a wide range of issues in complex systems, bringing together the scopes that integrate soft computing and data mining in various combinations of applications and practices, since to thrive in these data-driven ecosystems, researchers, data analysts and practitioners must understand the design choice and options of these approaches. This book helps readers to solve complex benchmark problems and to better appreciate the concepts, tools and techniques used.

**NUREG/CR.**

## Fingerprint Development Techniques

### Theory and Application

**John Wiley & Sons** A comprehensive review of the latest fingerprint development and imaging techniques With contributions from leading experts in the field, **Fingerprint Development Techniques** offers a comprehensive review of the key techniques used in the development and imaging of fingerprints. It includes a review of the properties of fingerprints, the surfaces that fingerprints are deposited on, and the interactions that can occur between fingerprints, surfaces and environments. Comprehensive in scope, the text explores the history of each process, the theory behind the way fingerprints are either developed or imaged, and information about the role of each of the chemical constituents in recommended formulations. The authors explain the methodology employed for carrying out comparisons of effectiveness of various development techniques that clearly demonstrate how to select the most effective approaches. The text also explores how techniques can be used in sequence and with techniques for recovering other forms of forensic evidence. In addition, the book offers a guide for the selection of fingerprint development techniques and includes information on the influence of surface contamination and exposure conditions. This important resource: Provides clear methodologies for conducting comparisons of fingerprint development technique effectiveness Contains in-depth assessment of fingerprint constituents and how they are utilized by development and imaging processes Includes background information on fingerprint chemistry Offers a comprehensive history, the theory, and the applications for a broader range of processes, including the roles of each constituent in reagent formulations **Fingerprint Development Techniques** offers a comprehensive guide to fingerprint development and imaging, building on much of the previously unpublished research of the Home Office Centre for Applied Science and Technology.

## Expert Clouds and Applications

## Proceedings of ICOECA 2021

**Springer Nature** This book features original papers from International Conference on Expert Clouds and Applications (ICOECA 2021), organized by GITAM School of Technology, Bangalore, India during February 18-19, 2021. It covers new research insights on artificial intelligence, big data, cloud computing, sustainability, and knowledge-based expert systems. The book discusses innovative research from all aspects including theoretical, practical, and experimental domains that pertain to the expert systems, sustainable clouds, and artificial intelligence technologies.

## ICT Systems Security and Privacy Protection

### 30th IFIP TC 11 International Conference, SEC 2015, Hamburg, Germany, May 26-28, 2015, Proceedings

This book constitutes the refereed proceedings of the 30th IFIP TC 11 International Information Security and Privacy Conference, SEC 2015, held in Hamburg, Germany, in May 2015. The 42 revised full papers presented were carefully reviewed and selected from 212 submissions. The papers are organized in topical sections on privacy, web security, access control, trust and identity management, network security, security management and human aspects of security, software security, applied cryptography, mobile and cloud services security, and cyber-physical systems and critical infrastructures security.

## Proceedings of the 8th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications (SETIT18), Vol. 1

This two-volume book presents an unusually diverse selection of research papers, covering all major topics in the fields of information and communication technologies and related sciences. It provides a wide-angle snapshot of current themes in information and power engineering, pursuing a cross-disciplinary approach to do so. The book gathers revised contributions that were presented at the 2018 International Conference: Sciences of Electronics, Technologies of Information and Telecommunication (SETIT'18), held on 20-22 December 2018 in Hammamet, Tunisia. This eighth installment of the event attracted a wealth of submissions, and the papers presented here were selected by a committee of experts and underwent additional, painstaking revision. Topics covered include: · Information Processing · Human-Machine Interaction · Computer Science · Telecommunications and Networks · Signal Processing · Electronics · Image and Video This broad-scoped approach is becoming increasingly popular in scientific publishing. Its aim is to encourage scholars and professionals to overcome disciplinary barriers, as demanded by current trends in the industry and in the consumer market, which are rapidly leading toward a convergence of data-driven applications, computation, telecommunication, and energy awareness. Given its coverage, the book will benefit graduate students, researchers and practitioners who need to keep up with the latest technological advances.

## Smart Monitoring and Control in the Future Internet of Things

The Internet of Things (IoT) and related technologies have the promise of realizing pervasive and smart applications which, in turn, have the potential of improving the quality of life of people living in a connected world. According to the IoT vision, all things can cooperate amongst themselves and be managed from anywhere via the Internet, allowing tight integration between the physical and cyber worlds and thus improving efficiency, promoting usability, and opening up new application opportunities. Nowadays, IoT technologies have successfully been exploited in several domains, providing both social and economic benefits. The realization of the full potential of the next generation of the Internet of Things still needs further research efforts concerning, for instance, the identification of new architectures, methodologies, and infrastructures dealing with distributed and

decentralized IoT systems; the integration of IoT with cognitive and social capabilities; the enhancement of the sensing-analysis-control cycle; the integration of consciousness and awareness in IoT environments; and the design of new algorithms and techniques for managing IoT big data. This Special Issue is devoted to advancements in technologies, methodologies, and applications for IoT, together with emerging standards and research topics which would lead to realization of the future Internet of Things.

## Advances in Emerging Trends and Technologies

### Volume 1

**Springer Nature** This book constitutes the proceedings of the 1st International Conference on Advances in Emerging Trends and Technologies (ICAETT 2019), held in Quito, Ecuador, on 29-31 May 2019, jointly organized by Universidad Tecnológica Israel, Universidad Técnica del Norte, and Instituto Tecnológico Superior Rumiñahui, and supported by SNOTRA. ICAETT 2019 brought together top researchers and practitioners working in different domains of computer science to share their expertise and to discuss future developments and potential collaborations. Presenting high-quality, peer-reviewed papers, the book discusses the following topics: Technology Trends Electronics Intelligent Systems Machine Vision Communication Security e-Learning e-Business e-Government and e-Participation

## Internet of Things and Big Data Analytics Toward Next-Generation Intelligence

**Springer** This book highlights state-of-the-art research on big data and the Internet of Things (IoT), along with related areas to ensure efficient and Internet-compatible IoT systems. It not only discusses big data security and privacy challenges, but also energy-efficient approaches to improving virtual machine placement in cloud computing environments. Big data and the Internet of Things (IoT) are ultimately two sides of the same coin, yet extracting, analyzing and managing IoT data poses a serious challenge. Accordingly, proper analytics infrastructures/platforms should be used to analyze IoT data. Information technology (IT) allows people to upload, retrieve, store and collect information, which ultimately forms big data. The use of big data analytics has grown tremendously in just the past few years. At the same time, the IoT has entered the public consciousness, sparking people's imaginations as to what a fully connected world can offer. Further, the book discusses the analysis of real-time big data to derive actionable intelligence in enterprise applications in several domains, such as in industry and agriculture. It explores possible automated solutions in daily life, including structures for smart cities and automated home systems based on IoT technology, as well as health care systems that manage large amounts of data (big data) to improve clinical decisions. The book addresses the security and privacy of the IoT and big data technologies, while also revealing the impact of IoT technologies on several scenarios in smart cities design. Intended as a comprehensive introduction, it offers in-depth analysis and provides scientists, engineers and professionals the latest techniques, frameworks and strategies used in IoT and big data technologies.

## Advanced Research on Computer Education, Simulation and Modeling

### International Conference, CESM 2011, Wuhan, China, June 18-19, 2011. Proceedings, Part II

**Springer** This two-volume set (CCIS 175 and CCIS 176) constitutes the refereed proceedings of the International Conference on Computer Education, Simulation and Modeling, CSEM 2011, held in Wuhan, China, in June 2011. The 148 revised full papers presented in both volumes were carefully reviewed and selected from a large number of submissions. The papers cover issues such as multimedia and its application, robotization and automation, mechatronics, computer education, modern education research, control systems, data mining, knowledge management, image processing, communication software, database technology, artificial intelligence, computational intelligence, simulation and modeling, agent based simulation, biomedical visualization, device simulation & modeling, object-oriented simulation, Web and security visualization, vision and visualization, coupling dynamic modeling theory, discretization method, and modeling method research.

## Potato in progress

### Science meets practice

**Wageningen Academic Publishers** This book contains the proceedings of the Potato 2005 conference, held in Emmeloord, The Netherlands. This conference offered a platform to a diverse group of stakeholders in the potato industry to learn what science has to offer. At the same time it created an environment for scientists to learn what drives the industry in the rapidly changing world of the potato. The contributions in this book reflect the rapid developments both in the industry and in science. The nutritional aspects of the potato tuber are discussed as well as the volatile consumer moods in saturated or new markets. Latest developments in potato breeding and seed potato production are highlighted and these contributions underline how these potato sectors have been revolutionized. The present and future role of decision support systems in managing inputs of nitrogen and water and in managing pests (and thus in making potato production more sustainable) is described. Several innovations in technology development in potato production and storage are illustrated. Experts provide the latest news on crop protection, with a focus on developments in the control of the potato brown rot bacterium and late blight. Finally the trends in potato trade are described. This book shows that the potato crop is progressing globally - with increasing impact on food supply and added value - providing many opportunities for science to meet practice.

## Mastitis in dairy production

### Current knowledge and future solutions

**Wageningen Academic Publishers** Worldwide, mastitis is still one of the most important diseases in the dairy sector. Being a multifactorial disease, caused by multiple pathogens, control remains a difficult issue. Mastitis not only affects the health of milk-producing animals, having consequences for the profitability of dairy farms, it also affects the animal welfare. Moreover, mastitis negatively influences the milk quality having consequences for the dairy processing industry. In other words: mastitis affects a large part of the dairy production chain. Due to ongoing scientific effort, insight in mastitis in the context of increasingly complex farming systems, is improving. This insight leads to better methods to control mastitis, either by prevention or by adequate measures (e.g. therapy) when a cow (or goat or sheep) gets mastitis. This book reflects the current knowledge from all over the world on mastitis as it was presented during the 4th IDF International Mastitis Conference, held in June 2005 in Maastricht, the Netherlands. The papers of the 115 oral presentations and the 13 keynote presentations are reflecting not only the current knowledge of mastitis control but are also giving ideas for future solutions for control measures.

## Solid-state NMR

### Applications in Biomembrane Structure

The purpose of this book is to describe the methodology and applications of solid-state NMR spectroscopy to studies of membrane proteins, membrane-active peptides and model biological membranes. As well as structural studies, this book contains coverage of membrane interactions and molecular motions. Advances in biological solid-state NMR are very pertinent with high-field developments seeing applications in biological membranes and whole cells. Experts who are leaders in the development and application of biological solid-state NMR are chapter contributors. Part of Biophysical Society-IOP series.



## New and Emerging Proteomic Techniques

**Springer Science & Business Media** Leading researchers and innovators describe in step-by-step detail the latest techniques that promise to significantly impact the practice of proteomics, as well as its success in developing novel clinical agents. The methods span the entire spectrum of top-down and bottom-up approaches, including microarrays, gels, chromatography, and affinity separations, and address every aspect of the human proteome, both quantitatively and qualitatively. The techniques of protein detection utilized are diverse and range from fluorescence and resonance light scattering to surface plasmon resonance and mass spectrometry. The protocols follow the successful *Methods in Molecular Biology*<sup>TM</sup> series format, each offering step-by-step laboratory instructions, an introduction outlining the principles behind the technique, lists of the necessary equipment and reagents, and tips on troubleshooting and avoiding known pitfalls.

## Critical Infrastructure Protection VII

7th IFIP WG 11.10 International Conference, ICCIP 2013, Washington, DC, USA, March 18-20, 2013, Revised Selected Papers

**Springer** The information infrastructure - comprising computers, embedded devices, networks and software systems - is vital to day-to-day operations in every sector: information and telecommunications, banking and finance, energy, chemicals and hazardous materials, agriculture, food, water, public health, emergency services, transportation, postal and shipping, government and defense. Global business and industry, governments, indeed society itself, cannot function effectively if major components of the critical information infrastructure are degraded, disabled or destroyed. *Critical Infrastructure Protection VII* describes original research results and innovative applications in the interdisciplinary field of critical infrastructure protection. Also, it highlights the importance of weaving science, technology and policy in crafting sophisticated, yet practical, solutions that will help secure information, computer and network assets in the various critical infrastructure sectors. Areas of coverage include: themes and issues; control systems security; infrastructure security; infrastructure modeling and simulation; and risk assessment. This book is the seventh volume in the annual series produced by the International Federation for Information Processing (IFIP) Working Group 11.10 on Critical Infrastructure Protection, an international community of scientists, engineers, practitioners and policy makers dedicated to advancing research, development and implementation efforts focused on infrastructure protection. The book contains a selection of fifteen edited papers from the Seventh Annual IFIP WG 11.10 International Conference on Critical Infrastructure Protection, held at George Washington University, Washington, DC, USA in the spring of 2013. *Critical Infrastructure Protection VII* is an important resource for researchers, faculty members and graduate students, as well as for policy makers, practitioners and other individuals with interests in homeland security. Jonathan Butts is an Assistant Professor of Computer Science at the Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA. Sujeet Shenoj is the F.P. Walter Professor of Computer Science and a Professor of Chemical Engineering at the University of Tulsa, Tulsa, Oklahoma, USA.

## Molecular Detection of Foodborne Pathogens

**CRC Press** While the vast majority of our food supplies are nutritious and safe, foodborne pathogen-related illness still affects millions of people each year. Large outbreaks of foodborne diseases- such as the recent salmonella outbreak linked to various peanut butter products- continue to be reported with alarming frequency. *All-Encompassing Guide to Detecti*

## Handbook of Molecular Descriptors

**John Wiley & Sons** Quantitative studies on structure-activity and structure-property relationships are powerful tools in directed drug research. In recent years, various strategies have been developed to characterize and classify structural patterns by means of molecular descriptors. It has become possible not only to assess diversities or similarities of structure databases, but molecular descriptors also facilitate the identification of potential bioactive molecules from the rapidly increasing number of compound libraries. They even

allow for a controlled de-novo design of new lead structures. This is the most comprehensive collection of molecular descriptors and presents a detailed review from the origins of this research field up to present day. This practically oriented reference book gives a thorough overview of the different molecular descriptors representations and their corresponding molecular descriptors. All descriptors are listed with their definition, symbols and labels, formulas, some numerical examples, data and molecular graphs, while numerous figures and tables aid comprehension of the definitions. Cross-references throughout, a list of acronyms and notations allow easy access to the information needed to solve a specific research problem. Examples of descriptor calculations along with tables of descriptor values for a set of selected reference compounds and an up-to-date reference list add to the practical value of the book, making it an invaluable guide for all those dealing with bioactive molecules as well as for researchers.

## Reinventing the Company for the Digital Age

The seventh edition of Spanish banking group BBVA's annual series is dedicated to unveiling the new digital business models for twenty-first century companies. Esteemed experts from BBVA, "The Economist," Harvard University, Columbia Business School, Geoffrey Moore Consulting and more, contribute texts in accessible language.

## Solutions for Cyber-Physical Systems Ubiquity

IGI Global Cyber-physical systems play a crucial role in connecting aspects of online life to physical life. By studying emerging trends in these systems, programming techniques can be optimized and strengthened to create a higher level of effectiveness. *Solutions for Cyber-Physical Systems Ubiquity* is a critical reference source that discusses the issues and challenges facing the implementation, usage, and challenges of cyber-physical systems. Highlighting relevant topics such as the Internet of Things, smart-card security, multi-core environments, and wireless sensor nodes, this scholarly publication is ideal for engineers, academicians, computer science students, and researchers that would like to stay abreast of current methodologies and trends involving cyber-physical system progression.

## Fundamentals of Digital Manufacturing Science

Springer Science & Business Media The manufacturing industry will reap significant benefits from encouraging the development of digital manufacturing science and technology. *Digital Manufacturing Science* uses theorems, illustrations and tables to introduce the definition, theory architecture, main content, and key technologies of digital manufacturing science. Readers will be able to develop an in-depth understanding of the emergence and the development, the theoretical background, and the techniques and methods of digital manufacturing science. Furthermore, they will also be able to use the basic theories and key technologies described in *Digital Manufacturing Science* to solve practical engineering problems in modern manufacturing processes. *Digital Manufacturing Science* is aimed at advanced undergraduate and postgraduate students, academic researchers and researchers in the manufacturing industry. It allows readers to integrate the theories and technologies described with their own research works, and to propose new ideas and new methods to improve the theory and application of digital manufacturing science.

## Mobile Unleashed

## The Origin and Evolution of Arm Processors in Our Devices

Createspace Independent Publishing Platform This is the origin story of technology super heroes: the creators and founders of ARM, the company that is responsible for the processors found inside 95% of the world's mobile devices today. This is also the evolution story of how three companies - Apple, Samsung, and Qualcomm - put ARM technology in the hands of billions of people through smartphones, tablets, music players, and more. It was anything but a straight line from idea to success for ARM. The story starts with the triumph of BBC Micro engineers Steve Furber and Sophie Wilson, who make the audacious decision to design their own microprocessor - and it works the first time. The question becomes, how to sell it? Part I follows ARM as its founders launch their own company, select a new leader, a new strategy, and find themselves partnered with Apple, TI, Nokia, and other companies just as digital technology starts to unleash mobile devices. ARM grows rapidly, even as other semiconductor firms struggle in the dot com meltdown, and establishes itself as a standard for embedded RISC processors. Apple aficionados will find the opening of Part II of interest the moment Steve Jobs returns and changes the direction

toward fulfilling consumer dreams. Samsung devotees will see how that firm evolved from its earliest days in consumer electronics and semiconductors through a philosophical shift to innovation. Qualcomm followers will learn much of their history as it plays out from satellite communications to development of a mobile phone standard and emergence as a leading fabless semiconductor company. If ARM could be summarized in one word, it would be "collaboration." Throughout this story, from Foreword to Epilogue, efforts to develop an ecosystem are highlighted. Familiar names such as Google, Intel, Mediatek, Microsoft, Motorola, TSMC, and others are interwoven throughout. The evolution of ARM's first 25 years as a company wraps up with a shift to its next strategy: the Internet of Things, the ultimate connector for people and devices. Research for this story is extensive, simplifying a complex mobile industry timeline and uncovering critical points where ARM and other companies made fateful and sometimes surprising decisions. Rare photos, summary diagrams and tables, and unique perspectives from insiders add insight to this important telling of technology history.

## Quality Control of Herbal Medicines and Related Areas

**BoD - Books on Demand** The authors of this thematic issue provide a comprehensive summary of most recent knowledge and references on quality control in wide fields. Quality control is essential for natural products like natural medicine and related food products. In this issue fifteen chapters have been included, discussing in detail various aspects of quality control. It will certainly prove useful not only for phytochemical researchers, but also many scientists working in numerous fields. Much effort has been invested by the contributors to share current information. Without their efforts and input 'Quality Control of Herbal Medicine and Related Areas' could not exist.

## Smart Packaging Technologies for Fast Moving Consumer Goods

**John Wiley & Sons** Smart Packaging Technologies for Fast Moving Consumer Goods approaches the subject of smart packaging from an innovative, thematic perspective: Part 1 looks at smart packaging technologies for food quality and safety Part 2 addresses smart packaging issues for the supply chain Part 3 focuses on smart packaging for brand protection and enhancement Part 4 centres on smart packaging for user convenience. Each chapter starts with a definition of the technology, and proceeds with an analysis of its workings and components before concluding with snapshots of potential applications of the technology. The Editors, brought together from academia and industry, provide readers with a cohesive account of the smart packaging phenomenon. Chapter authors are a mixture of industry professionals and academic researchers from the UK, USA, EU and Australasia.

## Documents

“the” Developer's Toolkit

The Illustrated Wavelet Transform Handbook

Introductory Theory and Applications in Science, Engineering, Medicine and Finance,  
Second Edition

**CRC Press** This second edition of *The Illustrated Wavelet Transform Handbook: Introductory Theory and Applications in Science, Engineering, Medicine and Finance* has been fully updated and revised to reflect recent developments in the theory and practical applications of wavelet transform methods. The book is designed specifically for the applied reader in science, engineering, medicine and finance. Newcomers to the subject will find an accessible and clear account of the theory of continuous and discrete wavelet transforms, while readers already acquainted with wavelets can use the book to broaden their perspective. One of the many strengths of the book is its use of several hundred illustrations, some in colour, to convey key concepts and their varied practical uses. Chapters exploring these practical applications highlight both the similarities and differences in wavelet transform methods across different disciplines and also provide a comprehensive list of over 1000 references that will serve as a valuable resource for further study. Paul Addison is a

Technical Fellow with Medtronic, a global medical technology company. Previously, he was co-founder and CEO of start-up company, CardioDigital Ltd (and later co-founded its US subsidiary, CardioDigital Inc) - a company concerned with the development of novel wavelet-based methods for biosignal analysis. He has a master's degree in engineering and a PhD in fluid mechanics, both from the University of Glasgow, Scotland (founded 1451). His former academic life as a tenured professor of fluids engineering included the output of a large number of technical papers, covering many aspects of engineering and bioengineering, and two textbooks: *Fractals and Chaos: An Illustrated Course* and the first edition of *The Illustrated Wavelet Transform Handbook*. At the time of publication, the author has over 100 issued US patents concerning a wide range of medical device technologies, many of these concerning the wavelet transform analysis of biosignals. He is both a Chartered Engineer and Chartered Physicist.

## Access Controlled

### The Shaping of Power, Rights, and Rule in Cyberspace

MIT Press Reports on a new generation of Internet controls that establish a new normative terrain in which surveillance and censorship are routine. Internet filtering, censorship of Web content, and online surveillance are increasing in scale, scope, and sophistication around the world, in democratic countries as well as in authoritarian states. The first generation of Internet controls consisted largely of building firewalls at key Internet gateways; China's famous "Great Firewall of China" is one of the first national Internet filtering systems. Today the new tools for Internet controls that are emerging go beyond mere denial of information. These new techniques, which aim to normalize (or even legalize) Internet control, include targeted viruses and the strategically timed deployment of distributed denial-of-service (DDoS) attacks, surveillance at key points of the Internet's infrastructure, take-down notices, stringent terms of usage policies, and national information shaping strategies. *Access Controlled* reports on this new normative terrain. The book, a project from the OpenNet Initiative (ONI), a collaboration of the Citizen Lab at the University of Toronto's Munk Centre for International Studies, Harvard's Berkman Center for Internet and Society, and the SecDev Group, offers six substantial chapters that analyze Internet control in both Western and Eastern Europe and a section of shorter regional reports and country profiles drawn from material gathered by the ONI around the world through a combination of technical interrogation and field research methods.

## Intelligent Communication, Control and Devices

### Proceedings of ICICCD 2017

Springer The book focuses on the integration of intelligent communication systems, control systems, and devices related to all aspects of engineering and sciences. It contains high-quality research papers presented at the 2nd international conference, ICICCD 2017, organized by the Department of Electronics, Instrumentation and Control Engineering of University of Petroleum and Energy Studies, Dehradun on 15 and 16 April, 2017. The volume broadly covers recent advances of intelligent communication, intelligent control and intelligent devices. The work presented in this book is original research work, findings and practical development experiences of researchers, academicians, scientists and industrial practitioners.