Matlab Code For Image Hiding Using Dct

Yeah, reviewing a books **matlab code for image hiding using dct** could ensue your near associates listings. This is just one of the solutions for you to be successful. As understood, triumph does not suggest that you have extraordinary points.

Comprehending as skillfully as conformity even more than further will give each success. adjacent to, the publication as well as sharpness of this matlab code for image hiding using dct can be taken as skillfully as picked to act.

Data Hiding Michael T. Raggo 2012-12-31 As data hiding detection and forensic techniques have matured, people are creating more advanced stealth methods for spying, corporate espionage, terrorism, and cyber warfare all to avoid detection. Data Hiding provides an exploration into the present day and next generation of tools and techniques used in covert communications, advanced malware methods and data concealment tactics. The hiding techniques outlined include the latest technologies including mobile devices, multimedia, virtualization and others. These concepts provide corporate, goverment and military personnel with the knowledge to investigate and defend against insider threats, spy techniques, espionage, advanced malware and secret communications. By understanding the plethora of threats, you will gain an understanding of the methods to defend oneself from these threats through detection, investigation, mitigation and prevention. Provides many real-world examples of data concealment on the latest technologies including iOS, Android, VMware, MacOS X, Linux and Windows 7 Dives deep into the less known approaches to data hiding, covert communications, and advanced malware Includes never before published information about next generation methods of data hiding Outlines a well-defined methodology for countering threats Looks ahead at future predictions for data hiding

Information Hiding Fabien A. P. Petitcolas 2003-01-21 This book constitutes the thoroughly refereed post-proceedings of the 5th International Workshop on Information Hiding, IH 2002, held in Noordwijkerhout, The Netherlands, in October 2002. The 27 revised full papers presented were carefully selected during two rounds of reviewing and revision from 78 submissions. The papers are organized in topical sections on information hiding and networking, anonymity, fundamentals of watermarking, watermarking algorithms, attacks on watermarking algorithms, steganography algorithms, steganalysis, and hiding information in unusual content.

Digital Watermarking and Steganography Ingemar Cox 2007-11-23 Digital audio, video, images, and documents are flying through cyberspace to their respective owners. Unfortunately, along the way, individuals may choose to intervene and take this content for themselves. Digital watermarking and steganography technology greatly reduces the instances of this by limiting or eliminating the ability of third parties to decipher the content that he has taken. The many techniques of digital watermarking (embedding a code) and steganography (hiding information) continue to evolve as applications that necessitate them do the same. The authors of this second edition provide an update on the framework for applying these techniques that they provided researchers and professionals in the first well-

received edition. Steganography and steganalysis (the art of detecting hidden information) have been added to a robust treatment of digital watermarking, as many in each field research and deal with the other. New material includes watermarking with side information, QIM, and dirty-paper codes. The revision and inclusion of new material by these influential authors has created a must-own book for anyone in this profession. This new edition now contains essential information on steganalysis and steganography New concepts and new applications including QIM introduced Digital watermark embedding is given a complete update with new processes and applications

Biometric Systems Zahid Riaz 2011-10-21 Biometric authentication has been widely used for access control and security systems over the past few years. The purpose of this book is to provide the readers with life cycle of different biometric authentication systems from their design and development to qualification and final application. The major systems discussed in this book include fingerprint identification, face recognition, iris segmentation and classification, signature verification and other miscellaneous systems which describe management policies of biometrics, reliability measures, pressure based typing and signature verification, bio-chemical systems and behavioral characteristics. In summary, this book provides the students and the researchers with different approaches to develop biometric authentication systems and at the same time includes state-of-the-art approaches in their design and development. The approaches have been thoroughly tested on standard databases and in real world applications.

Information Hiding Stefan Katzenbeisser 2016-01-01 A successor to the popular Artech House title Information Hiding Techniques for Steganography and Digital Watermarking, this comprehensive and up-to-date new resource gives the reader a thorough review of steganography, digital watermarking and media fingerprinting with possible applications to modern communication, and a survey of methods used to hide information in modern media. This book explores Steganography, as a means by which two or more parties may communicate using invisible or subliminal communication. "Steganalysis" is described as methods which can be used to break steganographic communication. This comprehensive resource also includes an introduction to watermarking and its methods, a means of hiding copyright data in images and discusses components of commercial multimedia applications that are subject to illegal use. This book demonstrates a working knowledge of watermarking's pros and cons, and the legal implications of watermarking and copyright issues on the Internet.

Lectures on the Fourier Transform and Its Applications Brad G. Osgood 2019-01-18 This book is derived from lecture notes for a course on Fourier analysis for engineering and science students at the advanced undergraduate or beginning graduate level. Beyond teaching specific topics and techniques—all of which are important in many areas of engineering and science—the author's goal is to help engineering and science students cultivate more advanced mathematical know-how and increase confidence in learning and using mathematics, as well as appreciate the coherence of the subject. He promises the readers a little magic on every page. The section headings are all recognizable to mathematicians, but the arrangement and emphasis are directed toward students from other disciplines. The material also serves as a foundation for advanced courses in signal processing and imaging. There are over 200 problems, many of which are oriented to applications, and a number use standard software. An unusual feature for courses meant for engineers is a more detailed and

accessible treatment of distributions and the generalized Fourier transform. There is also more coverage of higher-dimensional phenomena than is found in most books at this level.

Image Encryption Fathi E. Abd El-Samie 2013-12-14 Presenting encryption algorithms with diverse characteristics, Image Encryption: A Communication Perspective examines image encryption algorithms for the purpose of secure wireless communication. It considers two directions for image encryption: permutation-based approaches and substitution-based approaches. Covering the spectrum of image encryption principles and techniques, the book compares image encryption with permutation- and diffusion-based approaches. It explores number theory-based encryption algorithms such as the Data Encryption Standard, the Advanced Encryption Standard, and the RC6 algorithms. It not only details the strength of various encryption algorithms, but also describes their ability to work within the limitations of wireless communication systems. Since some ciphers were not designed for image encryption, the book explains how to modify these ciphers to work for image encryption. It also provides instruction on how to search for other approaches suitable for this task. To make this work comprehensive, the authors explore communication concepts concentrating on the orthogonal frequency division multiplexing (OFDM) system and present a simplified model for the OFDM communication system with its different implementations. Complete with simulation experiments and MATLAB® codes for most of the simulation experiments, this book will help you gain the understanding required to select the encryption method that best fulfills your application requirements.

SC-FDMA for Mobile Communications Fathi E. Abd El-Samie 2016-04-19 SC-FDMA for Mobile Communications examines Single-Carrier Frequency Division Multiple Access (SC-FDMA). Explaining this rapidly evolving system for mobile communications, it describes its advantages and limitations and outlines possible solutions for addressing its current limitations. The book explores the emerging trend of cooperative communication with SC-FDMA and how it can improve the physical layer security. It considers the design of distributed coding schemes and protocols for wireless relay networks where users cooperate to send their data to the destination. Supplying you with the required foundation in cooperative communication and cooperative diversity, it presents an improved Discrete Cosine Transform (DCT)-based SC-FDMA system. It introduces a distributed space–time coding scheme and evaluates its performance and studies distributed SFC for broadband relay channels. Presents relay selection schemes for improving the physical layer Introduces a new transceiver scheme for the SC-FDMA system Describes space–time/frequency coding schemes for SC-FDMA Includes MATLAB® codes for all simulation experiments The book investigates Carrier Frequency Offsets (CFO) for the Single-Input Single-Output (SISO) SC-FDMA system, and Multiple-Input Multiple-Output (MIMO) SC-FDMA system simulation software. Covering the design of cooperative diversity schemes for the SC-FDMA system in the uplink direction, it also introduces and studies a new transceiver scheme for the SC-FDMA system.

Big Data in Medical Image Processing R. Suganya 2018-01-29 The field of medical imaging seen rapid development over the last two decades and has consequently revolutionized the way in which modern medicine is practiced. Diseases and their symptoms are constantly changing therefore continuous updating is necessary for the data to be relevant. Diseases fall into different categories, even a small difference in symptoms may result in categorising it in a different group altogether. Thus analysing data accurately is of critical importance. This book concentrates on diagnosing diseases like cancer or tumor from different modalities of images.

This book is divided into the following domains: Importance of big data in medical imaging, pre-processing, image registration, feature extraction, classification and retrieval. It is further supplemented by the medical analyst for a continuous treatment process. The book provides an automated system that could retrieve images based on user's interest to a point of providing decision support. It will help medical analysts to take informed decisions before planning treatment and surgery. It will also be useful to researchers who are working in problems involved in medical imaging.

Digital Signal Processing Using MATLAB for Students and Researchers John W. Leis 2011-10-14 Quickly Engages in Applying Algorithmic Techniques to Solve Practical Signal Processing Problems With its active, hands-on learning approach, this text enables readers to master the underlying principles of digital signal processing and its many applications in industries such as digital television, mobile and broadband communications, and medical/scientific devices. Carefully developed MATLAB® examples throughout the text illustrate the mathematical concepts and use of digital signal processing algorithms. Readers will develop a deeper understanding of how to apply the algorithms by manipulating the codes in the examples to see their effect. Moreover, plenty of exercises help to put knowledge into practice solving real-world signal processing challenges. Following an introductory chapter, the text explores: Sampled signals and digital processing Random signals Representing signals and systems Temporal and spatial signal processing Frequency analysis of signals Discrete-time filters and recursive filters Each chapter begins with chapter objectives and an introduction. A summary at the end of each chapter ensures that one has mastered all the key concepts and techniques before progressing in the text. Lastly, appendices listing selected web resources, research papers, and related textbooks enable the investigation of individual topics in greater depth. Upon completion of this text, readers will understand how to apply key algorithmic techniques to address practical signal processing problems as well as develop their own signal processing algorithms. Moreover, the text provides a solid foundation for evaluating and applying new digital processing signal techniques as they are developed.

Cryptography: Breakthroughs in Research and Practice Management Association, Information Resources 2019-12-06 Advances in technology have provided numerous innovations that make people's daily lives easier and more convenient. However, as technology becomes more ubiquitous, corresponding risks also increase. The field of cryptography has become a solution to this ever-increasing problem. Applying strategic algorithms to cryptic issues can help save time and energy in solving the expanding problems within this field. Cryptography: Breakthroughs in Research and Practice examines novel designs and recent developments in cryptographic security control procedures to improve the efficiency of existing security mechanisms that can help in securing sensors, devices, networks, communication, and data. Highlighting a range of topics such as cyber security, threat detection, and encryption, this publication is an ideal reference source for academicians, graduate students, engineers, IT specialists, software engineers, security analysts, industry professionals, and researchers interested in expanding their knowledge of current trends and techniques within the cryptology field.

Emerging Research in Electronics, Computer Science and Technology V. Sridhar 2019-04-24 This book presents the proceedings of the International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT) organized by PES College of Engineering in Mandya. Featuring cutting-edge, peer-reviewed articles from the field of

electronics, computer science and technology, it is a valuable resource for members of the scientific research community.

Advanced Image and Video Processing Using MATLAB Shengrong Gong 2018-08-21 This book offers a comprehensive introduction to advanced methods for image and video analysis and processing. It covers deraining, dehazing, inpainting, fusion, watermarking and stitching. It describes techniques for face and lip recognition, facial expression recognition, lip reading in videos, moving object tracking, dynamic scene classification, among others. The book combines the latest machine learning methods with computer vision applications, covering topics such as event recognition based on deep learning,dynamic scene classification based on topic model, person re-identification based on metric learning and behavior analysis. It also offers a systematic introduction to image evaluation criteria showing how to use them in different experimental contexts. The book offers an example-based practical guide to researchers, professionals and graduate students dealing with advanced problems in image analysis and computer vision.

Deblurring Images Per Christian Hansen 2006-01-01 Describes the deblurring algorithms and techniques collectively known as spectral filtering methods, in which the singular value decomposition, or a similar decomposition with spectral properties, is used to introduce the necessary regularization or filtering in the reconstructed image. The concise MATLAB® implementations described in the book provide a template of techniques that can be used to restore blurred images from many applications.

2012 International Conference on Information Technology and Management Science(ICITMS 2012) Proceedings Bing Xu 2013-02-15 The main objective of the ICITMS 2012 is to provide a platform for researchers, engineers, academics and industrial professionals from all over the world to present their research results and development activities in Information Technology and Management Science. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

Digital Signal Processing with Matlab Examples, Volume 2 Jose Maria Giron-Sierra 2016-12-02 This is the second volume in a trilogy on modern Signal Processing. The three books provide a concise exposition of signal processing topics, and a guide to support individual practical exploration based on MATLAB programs. This second book focuses on recent developments in response to the demands of new digital technologies. It is divided into two parts: the first part includes four chapters on the decomposition and recovery of signals, with special emphasis on images. In turn, the second part includes three chapters and addresses important data-based actions, such as adaptive filtering, experimental modeling, and classification.

Handbook of Image and Video Processing Alan C. Bovik 2010-07-21 55% new material in the latest edition of this "must-have for students and practitioners of image & video processing! This Handbook is intended to serve as the basic reference point on image and video processing, in the field, in the research laboratory, and in the classroom. Each chapter has been written by carefully selected, distinguished experts specializing in that topic and carefully reviewed by the Editor, Al Bovik, ensuring that the greatest depth of understanding be communicated to the reader. Coverage includes introductory, intermediate and advanced topics and as such, this book serves equally well as classroom textbook as reference resource.

• Provides practicing engineers and students with a highly accessible resource for learning and using image/video processing theory and algorithms • Includes a new chapter on image processing education, which should prove invaluable for those developing or modifying their curricula • Covers the various image and video processing standards that exist and are emerging, driving today's explosive industry • Offers an understanding of what images are, how they are modeled, and gives an introduction to how they are perceived • Introduces the necessary, practical background to allow engineering students to acquire and process their own digital image or video data • Culminates with a diverse set of applications chapters, covered in sufficient depth to serve as extensible models to the reader's own potential applications About the Editor... Al Bovik is the Cullen Trust for Higher Education Endowed Professor at The University of Texas at Austin, where he is the Director of the Laboratory for Image and Video Engineering (LIVE). He has published over 400 technical articles in the general area of image and video processing and holds two U.S. patents. Dr. Bovik was Distinguished Lecturer of the IEEE Signal Processing Society (2000), received the IEEE Signal Processing Society Meritorious Service Award (1998), the IEEE Third Millennium Medal (2000), and twice was a two-time Honorable Mention winner of the international Pattern Recognition Society Award. He is a Fellow of the IEEE, was Editor-in-Chief, of the IEEE Transactions on Image Processing (1996-2002), has served on and continues to serve on many other professional boards and panels, and was the Founding General Chairman of the IEEE International Conference on Image Processing which was held in Austin, Texas in 1994. * No other resource for image and video processing contains the same breadth of up-to-date coverage * Each chapter written by one or several of the top experts working in that area * Includes all essential mathematics, techniques, and algorithms for every type of image and video processing used by electrical engineers, computer scientists, internet developers, bioengineers, and scientists in various, image-intensive disciplines

Applied Video Processing in Surveillance and Monitoring Systems Dey, Nilanjan 2016-10-11 Video monitoring has become a vital aspect within the global society as it helps prevent crime, promote safety, and track daily activities such as traffic. As technology in the area continues to improve, it is necessary to evaluate how video is being processed to improve the quality of images. Applied Video Processing in Surveillance and Monitoring Systems investigates emergent techniques in video and image processing by evaluating such topics as segmentation, noise elimination, encryption, and classification. Featuring real-time applications, empirical research, and vital frameworks within the field, this publication is a critical reference source for researchers, professionals, engineers, academicians, advanced-level students, and technology developers.

Medical Image Watermarking Amit Kumar Singh 2017-08-11 This book presents medical image watermarking techniques and algorithms for telemedicine and other emerging applications. This book emphasizes on medical image watermarking to ensure the authenticity of transmitted medical information. It begins with an introduction of digital watermarking, important characteristics, novel applications, different watermarking attacks and standard benchmark tools. This book also covers spatial and transform domain medical image watermarking techniques and their merits and limitations. The authors have developed improved/novel watermarking techniques for telemedicine applications that offer higher robustness, better perceptual quality and increased embedding capacity and secure watermark. The suggested methods may find potential applications in the prevention of patient identity theft and health data management issues which is a growing concern in

telemedicine applications. This book provides a sound platform for understanding the medical image watermarking paradigm for researchers in the field and advanced-level students. Industry professionals working in this field, as well as other emerging applications demanding robust and secure watermarking will find this book useful as a reference.

Advanced Image Processing Techniques and Applications Kumar, N. Suresh 2017-02-10 Today, the scope of image processing and recognition has broadened due to the gap in scientific visualization. Thus, new imaging techniques have developed, and it is imperative to study this progression for optimal utilization. Advanced Image Processing Techniques and Applications is an essential reference publication for the latest research on digital image processing advancements. Featuring expansive coverage on a broad range of topics and perspectives, such as image and video steganography, pattern recognition, and artificial vision, this publication is ideally designed for scientists, professionals, researchers, and academicians seeking current research on solutions for new challenges in image processing.

Image Processing Tinku Acharya 2005-10-03 Image processing-from basics to advanced applications Learn how to master image processing and compression with thisoutstanding state-of-the-art reference. From fundamentals tosophisticated applications, Image Processing: Principles andApplications covers multiple topics and provides a freshperspective on future directions and innovations in the field,including: * Image transformation techniques, including wavelet transformationand developments * Image enhancement and restoration, including noise modeling andfiltering * Segmentation schemes, and classification and recognition ofobjects * Texture and shape analysis techniques * Fuzzy set theoretical approaches in image processing, neuralnetworks, etc. * Content-based image retrieval and image mining * Biomedical image analysis and interpretation, including biometricalgorithms such as face recognition and signatureverification * Remotely sensed images and their applications * Principles and applications of dynamic scene analysis and movingobject detection and tracking * Fundamentals of image compression, including the JPEG standardand the new JPEG2000 standard Additional features include problems and solutions with eachchapter to help you apply the theory and techniques, as well asbibliographies for researching specialized topics. With itsextensive use of examples and illustrative figures, this is asuperior title for students and practitioners in computer science,wireless and multimedia communications, and engineering.

Oceans '04 MTS/IEEE 2004

Security in Computing and Communications Peter Mueller 2016-09-16 This book constitutes the refereed proceedings of the 4th International Symposium on Security in Computing and Communications, SSCC 2016, held in Jaipur, India, in September 2016. The 23 revised full papers presented together with 16 short papers and an invited paper were carefully reviewed and selected from 136 submissions. The papers are organized in topical sections on cryptosystems, algorithms, primitives; security and privacy in networked systems; system and network security; steganography, visual cryptography, image forensics; applications security.

MATLAB Implementation of the Steganographic Algorithm F5 Wassim Al Chamaa 2019-05-07 Project Report from the year 2018 in the subject Computer Science - Programming, , language: English, abstract: The F5 algorithm proposed by Westfeld is still one of the most known algorithms in the field of DCT-based steganography. It can make a JPEG

image a container of a secret message, where no one knows the presence of the message except the sender and the intended receiver. In this programming work, we show how to realize the F5 algorithm via Matlab. We present the block diagrams of embedding and extracting processes and the entire Matlab code of the F5 algorithm. Some Notes about the F5 Matlab code: 1- The implementation code works according to the method proposed by Andreas Westfield in his paper: " F5—A Steganographic Algorithm : High Capacity Despite Better Steganalysis ". Huffman coding and decoding are implemented using the Matlab JPEG Toolbox developed by Phil Sallee. 2- The two-part Matlab code included in the report, embedding and extracting parts, can be executed in Matlab IDE. The embedding part reads the cover JPEG file and the message file we want to hide, then it creates a Stego JPEG file according to the F5 algorithm. On the other side, The extracting part reads the Stego JPEG file, and then it extracts the hidden message file. 3- The F5 code calls the main two functions of Phil Sallee's Matlab Toolbox; JPEG reading and writing. These functions make it easier to access and manipulate the quantized DCT coefficients of a given JPEG file. Using Sallee's Toolbox should accord with the used operating system, whether it is 32 or 64 bits. 4- The F5 code contains the function to form the image matrix to show the input and output images. Running this function requires ALL the Sallee's Toolbox to be installed. Otherwise, the user can REMOVE this function from the code since it doesn't affect the main F5 process and thus keep ONLY using the main two function of the Sallee's Toolbox. 5- The message file we want to hide can be any file of any kind and whatever its extension. The size of the message file should be appropriate for the size of the used cover JPEG image, so no errors will occur when executed.

Advanced Digital Imaging Laboratory Using MATLAB® Leonid Pinkhusovich I͡Aroslavskiĭ 2014 "This is an unusual book. It is a book of exercises, exercises in digital imaging engineering, one of the most important and rapidly developing branches of modern information technology. Studying digital imaging engineering, mastering this profession and working in the area is not possible without obtaining practical skills based on fundamental knowledge in the subject. The current book is aimed at providing technical support for this. It contains exercises on all major topics of digital imaging for students, researchers in experimental sciences and, generally, all practitioners in imaging engineering."--Font no determinada.

Steganography and Watermarking Ching-Nung Yang 2013-01-01 Privacy and Copyright protection is a very important issue in our digital society, where a very large amount of multimedia data are generated and distributed daily using different kinds of consumer electronic devices and very popular communication channels, such as the Web and social networks. This book "Steganography and Watermarking" introduces state-of-the-art technology on data hiding and copyright protection of digital images, and offers a solid basis for future study and research. Steganographic technique overcomes the traditional cryptographic approach, providing new solutions for secure data transmission without raising users' malicious intention. In steganography, some secret information can be inserted into the original data in imperceptible and efficient ways to avoid distortion of the image, and enhance the embedding capacity, respectively. Digital watermarking also adopts data hiding techniques for copyright protection and tampering verification of multimedia data. In watermarking, an illegitimate copy can be recognized by testing the presence of a valid watermark and a dispute on the ownership of the image resolved. Different kinds of steganographic and watermarking techniques, providing different features and diverse characteristics, have been presented in this book. This book provides a reference for theoretical problems as well as practical solutions and applications for steganography and

watermarking techniques. In particular, both the academic community (graduate student, post-doc and faculty) in Electrical Engineering, Computer Science, and Applied Mathematics; and the industrial community (engineers, engineering managers, programmers, research lab staff and managers, security managers) will find this book interesting.

Intelligence and Security Informatics Hsinchun Chen 2010-06-03 This book constitutes the proceedings of the Pacific Asia Workshop on Intelligence and Security Informatics 2010, held in Hyderabad, India, in June 2010.

Signal Conditioning Apurba Das 2012-04-27 "Signal Conditioning" is a comprehensive introduction to electronic signal processing. The book presents the mathematical basics including the implications of various transformed domain representations in signal synthesis and analysis in an understandable and lucid fashion and illustrates the theory through many applications and examples from communication systems. The ease to learn is supported by well-chosen exercises which give readers the flavor of the subject. Supplementary electronic material is available on http://extras.springer.com including MATLAB codes illuminating applications in the domain of one dimensional electrical signal processing, image processing, and speech processing. The book is an introduction for students with a basic understanding in engineering or natural sciences.

Cyber Security Cryptography and Machine Learning Shlomi Dolev 2019-06-17 This book constitutes the refereed proceedings of the Third International Symposium on Cyber Security Cryptography and Machine Learning, CSCML 2019, held in Beer-Sheva, Israel, in June 2019. The 18 full and 10 short papers presented in this volume were carefully reviewed and selected from 36 submissions. They deal with the theory, design, analysis, implementation, or application of cyber security, cryptography and machine learning systems and networks, and conceptually innovative topics in these research areas.

Intelligent Copyright Protection for Images Subhrajit Sinha Roy 2019-04-16 This book describes the need of copyright protection for multimedia objects and develops an invisible image watermarking scheme to serve the purpose of copyright protection. Here intelligent systems are introduced to generate a better visual transparency with increased payload.

2013 International Conference on Machinery, Materials Science and Energy Engineering Ding Feng 2013-05-27 Collection of selected, peer reviewed papers from the 2013 International Conference on Machinery, Materials Science and Energy Engineering (ICMMSEE 2013), May 18-19, 2013, Jingzhou, Hubei, China. Volume is indexed by Thomson Reuters CPCI-S (WoS). The 124 papers cover recent research in the field and are grouped as follows: Chapter 1: Machinery Engineering; Chapter 2: Materials Science and Materials Processing; Chapter 3: Energy Engineering and Technologies for Extraction Energy Resources.

Proceedings of ELM-2014 Volume 2 Jiuwen Cao 2014-12-09 This book contains some selected papers from the International Conference on Extreme Learning Machine 2014, which was held in Singapore, December 8-10, 2014. This conference brought together the researchers and practitioners of Extreme Learning Machine (ELM) from a variety of fields to promote research and development of "learning without iterative tuning". The book covers theories, algorithms and applications of ELM. It gives the readers a glance of the most recent advances of ELM.

Computational Science and Its Applications – ICCSA 2017 Osvaldo Gervasi 2017-07-14 The six-volume set LNCS 10404-10409 constitutes the refereed proceedings of the 17th International Conference on Computational Science and Its Applications, ICCSA 2017, held in Trieste, Italy, in July 2017. The 313 full papers and 12 short papers included in the 6-volume proceedings set were carefully reviewed and selected from 1052 submissions. Apart from the general tracks, ICCSA 2017 included 43 international workshops in various areas of computational sciences, ranging from computational science technologies to specific areas of computational sciences, such as computer graphics and virtual reality. Furthermore, this year ICCSA 2017 hosted the XIV International Workshop On Quantum Reactive Scattering. The program also featured 3 keynote speeches and 4 tutorials.

Network Security: Perspectives And Challenges M.V.Ramana Murthy, S.Jeelani

Multimedia Security Chun-Shien Lu 2005-01-01 Annotation This work explores the myriad of issues regarding multimedia security. It covers various issues, including perceptual fidelity analysis, image, audio, and 3D mesh object watermarking, medical watermarking, and error detection (authentication) and concealment.

Electrical, Information Engineering and Mechatronics 2011 Shaobo Zhong 2012-03-14 As future generation electrical, information engineering and mechatronics become specialized and fragmented, it is easy to lose sight of the fact that many topics in these areas have common threads and, because of this, advances in one discipline may be transmitted to others. The 2011 International Conference on Electrical, Information Engineering and Mechatronics (EIEM 2011) is the first conference that attempts to follow the above idea of hybridization in electrical, information engineering, mechatronics and applications. This Proceedings of the 2011 International Conference on Electrical, Information Engineering and Mechatronics provides a forum for engineers and scientists to address the most innovative research and development including technical challenges and social, legal, political, and economic issues, and to present and discuss their ideas, results, works in progress and experience on all aspects of electrical, information engineering, mechatronics and applications. Engineers and scientists in academia, industry, and government will find a insights into the solutions that combine ideas from multiple disciplines in order to achieve something more significant than the sum of the individual parts in all aspects of electrical, information engineering, mechatronics and applications.

Statistical Steganalysis Niels Holger Gerhard Konstantin Provos 2003

Digital Image Watermarking Surekha Borra 2018-12-07 The Book presents an overview of newly developed watermarking techniques in various independent and hybrid domains Covers the basics of digital watermarking, its types, domain in which it is implemented and the application of machine learning algorithms onto digital watermarking Reviews hardware implementation of watermarking Discusses optimization problems and solutions in watermarking with a special focus on bio-inspired algorithms Includes a case study along with its MATLAB code and simulation results

Digital Image Forensics Husrev Taha Sencar 2012-08-01 Photographic imagery has come a long way from the pinhole cameras of the nineteenth century. Digital imagery, and its applications, develops in tandem with contemporary society's sophisticated literacy of this

subtle medium. This book examines the ways in which digital images have become ever more ubiquitous as legal and medical evidence, just as they have become our primary source of news and have replaced paper-based financial documentation. Crucially, the contributions also analyze the very profound problems which have arisen alongside the digital image, issues of veracity and progeny that demand systematic and detailed response: It looks real, but is it? What camera captured it? Has it been doctored or subtly altered? Attempting to provide answers to these slippery issues, the book covers how digital images are created, processed and stored before moving on to set out the latest techniques for forensically examining images, and finally addressing practical issues such as courtroom admissibility. In an environment where even novice users can alter digital media, this authoritative publication will do much so stabilize public trust in these real, yet vastly flexible, images of the world around us.

Practical Image and Video Processing Using MATLAB Oge Marques 2011-08-04 UP-TO-DATE, TECHNICALLY ACCURATE COVERAGE OF ESSENTIAL TOPICS IN IMAGE AND VIDEO PROCESSING This is the first book to combine image and video processing with a practical MATLAB®-oriented approach in order to demonstrate the most important image and video techniques and algorithms. Utilizing minimal math, the contents are presented in a clear, objective manner, emphasizing and encouraging experimentation. The book has been organized into two parts. Part I: Image Processing begins with an overview of the field, then introduces the fundamental concepts, notation, and terminology associated with image representation and basic image processing operations. Next, it discusses MATLAB® and its Image Processing Toolbox with the start of a series of chapters with hands-on activities and step-by-step tutorials. These chapters cover image acquisition and digitization; arithmetic, logic, and geometric operations; point-based, histogram-based, and neighborhood-based image enhancement techniques; the Fourier Transform and relevant frequency-domain image filtering techniques; image restoration; mathematical morphology; edge detection techniques; image segmentation; image compression and coding; and feature extraction and representation. Part II: Video Processing presents the main concepts and terminology associated with analog video signals and systems, as well as digital video formats and standards. It then describes the technically involved problem of standards conversion, discusses motion estimation and compensation techniques, shows how video sequences can be filtered, and concludes with an example of a solution to object detection and tracking in video sequences using MATLAB®. Extra features of this book include: More than 30 MATLAB® tutorials, which consist of step-by-step guides toexploring image and video processing techniques using MATLAB® Chapters supported by figures, examples, illustrative problems, and exercises Useful websites and an extensive list of bibliographical references This accessible text is ideal for upper-level undergraduate and graduate students in digital image and video processing courses, as well as for engineers, researchers, software developers, practitioners, and anyone who wishes to learn about these increasingly popular topics on their own.