Enhancement Of Underwater Images A Review Ijcsit | 67f5131367c87cd3128ce42dcd290a53

Histogram Based Underwater Image Contrast Enhancement TechniquesUnderwater SLAM for Structured Environments Using an Imaging Sonar2021 6th International Conference for Convergence in Technology (I2CT)Nature Inspired Optimization Techniques for Image Processing ApplicationsAutomatic Control, Mechatronics and Industrial EngineeringUnderwater Image Enhancement Using Histogram Equalization MethodsImage and GraphicsInternet Multimedia Computing and ServiceImage Blending Techniques and their Application in Underwater MosaicingAdvanced Manufacturing and Automation VIINPS-62-89-023Image Enhancement and RestorationIntelligent Multidimensional Data and Image ProcessingArtificial Intelligence and Computer Vision2018 25th IEEE International Conference on Image Processing (ICIP)Artificial Intelligence and SecurityComputer Vision: Concepts, Methodologies, Tools, and ApplicationsResearch Developments in Computer Vision and Image Processing: Methodologies and Applications2019 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT)Image-Based Damage Assessment for Underwater InspectionsModified Laplacian Filter and Edge Detection2019 3rd International Conference on Robotics and Automation Sciences (ICRAS)Energy-Efficient Underwater Wireless Communications and Networking2021 5th International Conference on Intelligent Computing and Control Systems (ICICCS)Underwater image enhancementICCCE 2020Smart Innovations in Communication and Computational Sciences2019 5th International Conference on Advanced Computing and Communication Systems (ICACCS)Sonar ImagesGraphics Gems IV2017 International Conference on Computer Systems,

Electronics and Control (ICCSEC)Biomedical Applications Based on Natural and Artificial ComputingProceedings of the 11th National Technical Seminar on Unmanned System Technology 2019Image and Graphics2020 IEEE 9th International Conference on Communication Systems and Network Technologies (CSNT)Readings in Computer VisionData Driven Approach Towards Disruptive TechnologiesImage Quality EnhancementImage and GraphicsProceedings of the 10th National Technical Seminar on Underwater System Technology 2018

Histogram Based Underwater Image Contrast Enhancement Techniques

This three-volume set LNCS 12888, 12898, and 12890 constitutes the refereed conference proceedings of the 11th International Conference on Image and Graphics, ICIG 2021, held in Haikou, China, in August 2021.* The 198 full papers presented were selected from 421 submissions and focus on advances of theory, techniques and algorithms as well as innovative technologies of image, video and graphics processing and fostering innovation, entrepreneurship, and networking. *The conference was postponed due to the COVID-19 pandemic.

Underwater SLAM for Structured Environments Using an Imaging Sonar

This book includes research papers from the 11th National Technical Symposium on Unmanned System Technology. Covering a number of topics, including intelligent robotics, novel sensor technology, control algorithms, acoustics signal processing, imaging techniques, biomimetic robots, green energy sources, and underwater communication backbones and protocols, it will appeal to researchers developing marine technology solutions and policy-makers interested in

technologies to facilitate the exploration of coastal and oceanic regions.

2021 6th International Conference for Convergence in Technology (I2CT)

This three-volume set LNCS 10666, 10667, and 10668 constitutes the refereed conference proceedings of the 9thInternational Conference on Image and Graphics, ICIG 2017, held in Shanghai, China, in September 2017. The 172 full papers were selected from 370 submissions and focus on advances of theory, techniques and algorithms as well as innovative technologies of image, video and graphics processing and fostering innovation, entrepreneurship, and networking.

Nature Inspired Optimization Techniques for Image Processing Applications

Algorithms Information Systems Machine Learning Artificial Intelligence Expert Systems Computer Vision Pattern Recognition Human Computer Interaction Natural Language Processing Bioinformatics Software Engineering Database Data Mining Big Data Distributed, Mobile and Cloud Computing Signal Processing Image Processing Computer Graphics Audio, Video and Multimedia Processing Computer Networks Data Communication Network and System Security Internet of Things Computer Architecture Robotics Control Systems Embedded Systems VLSI Design and Fabrication Mobile and Wireless Communication

Automatic Control, Mechatronics and Industrial Engineering

2019 International Conference on Advanced Computing & Communication Systems (ICACCS 2019) aims at exploring the interface between the industry and real time environment with

state of the art techniques ICACCS 2019 publishes original and timely research papers and survey articles in current areas of energy, smart city, temperature, power and environment related research areas of current importance to readers

Underwater Image Enhancement Using Histogram Equalization Methods

This report describes software for performing image enhancement on live or recorded video images. The software was developed for operational use during underwater recovery operations at the Naval Undersea Warfare Engineering Station. The image processing is performed on an IBM-PC/AT compatible computer equipped with hardware to digitize and display video images. The software provides the capability to provide contrast enhancement and other similar functions in real time through hardware lookup tables, to automatically perform histogram equalization, to capture one or more frames and average them or apply one of several different processing algorithms to a captured frame. The report is in the form of a user manual for the software and includes guided tutorial and reference sections. A Digital Image Processing Primer in the appendix serves to explain the principle concepts that are used in the image processing. (rrh).

Image and Graphics

Examines many kinds of sonar recorders, depth finders, and side-scan sonars that proliferated in the marketplace and predicts additional equipment and uses to be developed.

Internet Multimedia Computing and Service

communication systems, network technologies, network protocols, VLSI, IoT, Big Data, Microwave Communication, Design aspects

Image Blending Techniques and their Application in Underwater Mosaicing

The International Conference on Image Processing (ICIP), sponsored by the IEEE Signal Processing Society, is the premier forum for the presentation of technological advances and research results in the fields of theoretical, experimental, and applied image and video processing ICIP 2018, the 25th in the series that has been held annually since 1994, brings together leading engineers and scientists in image and video processing from around the world

Advanced Manufacturing and Automation VII

This book presents the latest advances and research findings in the fields of computational science and communication presented at the International Conference on Smart Innovations in Communications and Computational Sciences (ICSICCS 2020). The areas covered include smart innovation; systems and technologies; embedded knowledge and intelligence; innovation and sustainability; advanced computing; networking and informatics. It also focuses on the knowledge-transfer methodologies and the innovation strategies employed to make these effective. This fascinating compilation appeals to researchers, academics and engineers around the globe.

NPS-62-89-023

This work proposes strategies and solutions to tackle the problem of building photo-mosaics of very large underwater optical surveys, presenting contributions to the image preprocessing, enhancing and blending steps, and resulting in an improved visual quality of the final photo-mosaic. The text opens with a comprehensive review of mosaicing and blending techniques, before proposing an approach for large scale underwater image mosaicing and blending. In the image

preprocessing step, a depth dependent illumination compensation function is used to solve the non-uniform illumination appearance due to light attenuation. For image enhancement, the image contrast variability due to different acquisition altitudes is compensated using an adaptive contrast enhancement based on an image quality reference selected through a total variation criterion. In the blending step, a graph-cut strategy operating in the image gradient domain over the overlapping regions is suggested. Next, an out-of-core blending strategy for very large scale photo-mosaics is presented and tested on real data. Finally, the performance of the approach is evaluated and compared with other approaches.

Image Enhancement and Restoration

The advent of ever augmenting and ubiquitous computational and control resources enhanced the opportunities for developing various intelligent computational and control techniques to solve number of real time issues like uncertainties, vagueness and imprecision techniques ICICCS 2021 rapidly covers the research topics with myriad of applications for developing innovative next generation technologies Enormous number of intelligent computational and control algorithms with the increasing computational and control power of computers have significantly extended the focus of researchers and scientists on providing unprecedented innovations in intelligent computing and control systems ICICCS 2021 will be an international forum for providing intelligent solutions using Artificial Intelligence AI , Machine Learning, scientific Computing, evolutionary algorithms, intelligent agents, Fuzzy logic control, neuro fuzzy control, neural network control, genetic control and so on

Intelligent Multidimensional Data and Image Processing

Underwater image and video normally suffer from some

problems such as blue-green illumination, low color and contrast, induced under- and over-enhanced areas, and less detail. These problems restrict the important information to be extracted from the image or video for further processing. Nevertheless, these problems limit further applications of the image and video such as in object detection and tracking, as the information is covered by blue-green illumination of the water. This book describes in details about the enhancement techniques of underwater image and video to reduce the above-mentioned problems. The proposed techniques are based on histogram modification and could be applied and implemented for underwater image and video. Histogram modification could be regarded as the simplest method of enhancement and requires less computational complexity. Through the proposed techniques, the aforementioned problems are significantly reduced and the image and video are successfully improved especially in terms of color and contrast. In addition, the blue green illumination and under- and over-enhanced areas are adequately reduced.

Artificial Intelligence and Computer Vision

Underwater wireless sensor networks (UWSN) are envisioned as an aquatic medium for a variety of applications including oceanographic data collection, disaster management or prevention, assisted navigation, attack protection, and pollution monitoring. Similar to terrestrial wireless sensor networks (WSN), UWSNs consist of sensor nodes that collect the information and pass it to a base station; however, researchers have to face many challenges in executing the network in an aquatic medium. Energy-Efficient Underwater Wireless Communications and Networking is a crucial reference source that covers existing and future possibilities of the area as well as the current challenges presented in the implementation of underwater sensor networks. While highlighting topics such as digital signal processing, underwater localization, and acoustic

channel modeling, this publication is ideally designed for machine learning experts, IT specialists, government agencies, oceanic engineers, communication experts, researchers, academicians, students, and environmental agencies concerned with optimized data flow in communication network, securing assets, and mitigating security attacks.

2018 25th IEEE International Conference on Image Processing (ICIP)

Artificial Intelligence and Security

Engineering technology development and implementation play an important role in making the industry more sustainable in an increasingly competitive world. This book covers significant recent developments in both fundamental and applied research in the engineering field. Domains of application include, but are not limited to, Intelligent Control Systems and Optimization, Signal Processing, Sensors, Systems Modeling and Control, Robotics and Automation, Industrial and Electric Engineering, Production and Management. This book is an excellent reference work to get up to date with the latest research and developments in the fields of Automation, Mechatronics and Industrial Engineering. It aims to provide a platform for researchers and professionals in all relevant fields to gain new ideas and establish great achievements in scientific development.

Computer Vision: Concepts, Methodologies, Tools, and Applications

Robotics is undergoing a major transformation in scope and dimension. From a largely dominant industrial focus, robotics is rapidly expanding into human en- ronments and vigorously engaged in its new challenges. Interacting with, assisting,

serving, and exploring with humans, the emerging robots will increasingly touch people and their lives. Beyond its impact on physical robots, the body of knowledge robotics has p- duced is revealing a much wider range of applications reaching across diverse research areas and scienti?c disciplines, such as: biomechanics, haptics, neu- sciences, virtual simulation, animation, surgery, and sensor networks among others. In return, the challenges of the new emerging areas are proving an abundant source of stimulation and insights for the ?eld of robotics. It is indeed at the intersection of disciplines that the most striking advances happen. The SpringerTracts in AdvancedRobotics(STAR) is devoted to bringing to the research community the latest advances in the robotics ?eld on the basis of their signi?cance and quality. Through a wide and timely dissemination of critical - search developments in robotics, our objective with this series is to promote more exchanges and collaborations among the researchers in the community and c- tribute to further advancements in this rapidly growing ?eld.

Research Developments in Computer Vision and Image Processing: Methodologies and Applications

2019 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT)

As the most natural and convenient means of conveying or transmitting information, images play a vital role in our daily lives. Image processing is now of paramount importance in the computer vision research community, and proper processing of two-dimensional (2D) real-life images plays a key role in many real-life applications as well as commercial developments. Intelligent Multidimensional Data and Image Processing is a vital research publication that contains an in-depth exploration

of image processing techniques used in various applications, including how to handle noise removal, object segmentation, object extraction, and the determination of the nearest object classification and its associated confidence level. Featuring coverage on a broad range of topics such as object detection, machine vision, and image conversion, this book provides critical research for scientists, computer engineers, professionals, researchers, and academicians seeking current research on solutions for new challenges in 2D and 3D image processing.

Image-Based Damage Assessment for Underwater Inspections

This book provides a platform for exploring nature-inspired optimization techniques in the context of imaging applications. Optimization has become part and parcel of all computational vision applications, and since the amount of data used in these applications is vast, the need for optimization techniques has increased exponentially. These accuracy and complexity are a major area of concern when it comes to practical applications. However, these optimization techniques have not yet been fully explored in the context of imaging applications. By presenting interdisciplinary concepts, ranging from optimization to image processing, the book appeals to a broad readership, while also encouraging budding engineers to pursue and employ innovative nature-inspired techniques for image processing applications.

Modified Laplacian Filter and Edge Detection

The two volumes LNCS 10337 and 10338 constitute the proceedings of the International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2017, held in Corunna, Spain, in June 2017. The total of 102 full papers was carefully reviewed and selected from 194 submissions during two rounds of reviewing and improvement. The papers are organized in two volumes, one on natural and

artificial computation for biomedicine and neuroscience, addressing topics such as theoretical neural computation; models; natural computing in bioinformatics; physiological computing in affective smart environments; emotions; as well as signal processing and machine learning applied to biomedical and neuroscience applications. The second volume deals with biomedical applications, based on natural and artificial computing and addresses topics such as biomedical applications; mobile brain computer interaction; human robot interaction; deep learning; machine learning applied to big data analysis; computational intelligence in data coding and transmission; and applications.

2019 3rd International Conference on Robotics and Automation Sciences (ICRAS)

This book presents cutting-edge research papers in the field of Underwater System Technology in Malaysia and Asia in general. The topics covered include intelligent robotics, novel sensor technologies, control algorithms, acoustic signal processing, imaging techniques, biomimetic robots, green energy sources, and underwater communication backbones and protocols. The book showcases some of the latest technologies and applications developed to facilitate local marine exploration and exploitation. It also addresses related topics concerning the Sustainable Development Goals (SDG) outlined by the United Nations.

Energy-Efficient Underwater Wireless Communications and Networking

Image enhancement plays a vital role in image processing for long time. The authors have keen interest in underwater images as 80% of the land is filled with water and even underwater sea images needs to be preprocessed due to quality of sea water images. Due to poor visibility conditions the enviroment of world's ocean is still not properly explored.The edges of

underwater images are distorted and poor image contrast is present.This book discusses combined approach of underwater image enhancement and edge detection by using modified laplacian and ACO.It also compares the previous developed approaches with the modified approach.

2021 5th International Conference on Intelligent Computing and Control Systems (ICICCS)

The 3-volume set CCIS 1252 until CCIS 1254 constitutes the refereed proceedings of the 6th International Conference on Artificial Intelligence and Security, ICAIS 2020, which was held in Hohhot, China, in July 2020. The conference was formerly called “International Conference on Cloud Computing and Security” with the acronym ICCCS. The total of 178 full papers and 8 short papers presented in this 3-volume proceedings was carefully reviewed and selected from 1064 submissions. The papers were organized in topical sections as follows: Part I: artificial intelligence; Part II: artificial intelligence; Internet of things; information security; Part III: information security; big data and cloud computing; information processing.

Underwater image enhancement

The field of computer vision combines techniques from physics, mathematics, psychology, artificial intelligence, and computer science to examine how machines might construct meaningful descriptions of their surrounding environment. The editors of this volume, prominent researchers and leaders of the SRI International AI Center Perception Group, have selected sixty papers, most published since 1980, with the viewpoint that computer vision is concerned with solving seven basic problems: Reconstructing 3D scenes from 2D images Decomposing images into their component parts Recognizing and assigning labels to scene objects Deducing and describing relations among scene objects Determining the nature of computer architectures that

can support the visual function Representing abstractions in the world of computer memory Matching stored descriptions to image representation Each chapter of this volume addresses one of these problems through an introductory discussion, which identifies major ideas and summarizes approaches, and through reprints of key research papers. Two appendices on crucial assumptions in image interpretation and on parallel architectures for vision applications, a glossary of technical terms, and a comprehensive bibliography and index complete the volume.

ICCCE 2020

Microwave Wireless Networking Computational Intelligence Advanced Computing Electronics and Interdisciplinary Data Communication and Networking Renewable and Sustainable Energy Power Engineering and Control System Signal and Image Processing Communication System Biomedical Engineering Design, Materials and Manufacturing Fleet Technologies

Smart Innovations in Communication and Computational Sciences

Addressing the needs of sophisticated graphics users, this reference provides practical solutions for graphics problems, including coverage of such areas as rendering, color, ray tracing, and more, with all solutions written in C or C++++. (Advanced).

2019 5th International Conference on Advanced Computing and Communication Systems (ICACCS)

ICCSEC 2017 provides a forum for researchers and practitioners involved in different but related domains to confront research

results and discuss key problems The scope of ICCSEC 2017 includes the research and development fields of collaboration technologies and their applications to Computer Systems, Electronics and Control in industries and societies Application domains include, but are not limited to, computer systems, electronics, energy, transportation, communication, network, and many others Prospective authors are invited to submit high quality original research and technical contributions for presentations and posters in conference

Sonar Images

Similar to the way in which computer vision and computer graphics act as the dual fields that connect image processing in modern computer science, the field of image processing can be considered a crucial middle road between the vision and graphics fields. Research Developments in Computer Vision and Image Processing: Methodologies and Applications brings together various research methodologies and trends in emerging areas of application of computer vision and image processing. This book is useful for students, researchers, scientists, and engineers interested in the research developments of this rapidly growing field.

Graphics Gems IV

Inspection is crucial to the management of ageing infrastructure. Visual information on structures is regularly collected but very little work exists on its organised and quantitative analysis, even though image processing can significantly enhance these inspection processes and transfer real financial and safety benefits to the managers, owners and users. Additionally, new opportunities exist in the fast evolving sectors of wind and wave energy to add value to image-based inspection techniques. This book is a first for structural engineers and inspectors who wish to harness the full potential

of cameras as an inspection tool. It is particularly directed to the inspection of offshore and marine structures and the application of image-based methods in underwater inspections. It outlines a set of best practice guidelines for obtaining imagery, then the fundamentals of image processing are covered along with several image processing techniques which can be used to assess multiple damage forms: crack detection, corrosion detection, and depth analysis of marine growth on offshore structures. The book provides benchmark performance measures for these techniques under various visibility conditions using an image repository which will help inspectors to envisage the effectiveness of the techniques when applied. MATLAB® scripts and access to the underwater image repository are included so readers can run these techniques themselves. Practising engineers and managers of infrastructure assets are guided in image processing based inspection. Researchers can use this book as a primer, and it also suits advanced graduate courses in infrastructure management or on applied image processing.

2017 International Conference on Computer Systems, Electronics and Control (ICCSEC)

This book is a compilation of peer-reviewed papers presented at the International Conference on Machine Intelligence and Data Science Applications, organized by the School of Computer Science, University of Petroleum & Energy Studies, Dehradun, India, during 4-5 September 2020. The book addresses the algorithmic aspect of machine intelligence which includes the framework and optimization of various states of algorithms. Variety of papers related to wide applications in various fields like data-driven industrial IoT, bioinformatics, network and security, autonomous computing and various other aligned areas. The book concludes with interdisciplinary applications like legal, health care, smart society, cyber-physical system and smart agriculture. All papers have been carefully reviewed. The

book is of interest to computer science engineers, lecturers/researchers in machine intelligence discipline and engineering graduates.

Biomedical Applications Based on Natural and Artificial Computing

It is aimed to gather professors, researchers, scholars and industrial pioneers all over the world, ICRAS is the premier forum for the presentation and exchange of past experiences and new advances and research results in the field of theoretical and industrial experience The conference welcomes contributions which promote the exchange of ideas and rational discourse between educators and researchers all over the world

Proceedings of the 11th National Technical Seminar on Unmanned System Technology 2019

This book constitutes the refereed conference proceedings of the 8th International Conference on Image and Graphics, ICIG 2015 held in Tianjin, China, in August 2015. The 164 revised full papers and 6 special issue papers were carefully reviewed and selected from 339 submissions. The papers focus on various advances of theory, techniques and algorithms in the fields of images and graphics.

Image and Graphics

We are living in a world where we are immersed in a variety of visual information, which includes different forms and shapes, colors and textures, motion and tranquility. As the carrier of this information, still images, graphic and videos play more and more important role in our lives. Human perception is capable of acquiring, integrating and interpreting the visual information around us, while it is very challenging if we expect to impart such capability to a machine. Often images, graphics and videos

are of varying quality due to the acquisition procedure, network/communication conditions, image/video compression etc. These factors further add to the difficulties for a machine to extract the useful information from different visual scenarios. It is, therefore, very important to understand and develop superior techniques to process images

2020 IEEE 9th International Conference on Communication Systems and Network Technologies (CSNT)

This book is a collection of research papers and articles presented at the 3rd International Conference on Communications and Cyber-Physical Engineering (ICCCE 2020), held on 1-2 February 2020 at CMR Engineering College, Hyderabad, Telangana, India. Discussing the latest developments in voice and data communication engineering, cyber-physical systems, network science, communication software, image and multimedia processing research and applications, as well as communication technologies and other related technologies, it includes contributions from both academia and industry. This book is a valuable resource for scientists, research scholars and PG students working to formulate their research ideas and find the future directions in these areas. Further, it may serve as a reference work to understand the latest engineering and technologies used by practicing engineers in the field of communication engineering.

Readings in Computer Vision

The fields of computer vision and image processing are constantly evolving as new research and applications in these areas emerge. Staying abreast of the most up-to-date developments in this field is necessary in order to promote further research and apply these developments in real-world settings. Computer Vision: Concepts, Methodologies, Tools, and

Applications is an innovative reference source for the latest academic material on development of computers for gaining understanding about videos and digital images. Highlighting a range of topics, such as computational models, machine learning, and image processing, this multi-volume book is ideally designed for academicians, technology professionals, students, and researchers interested in uncovering the latest innovations in the field.

Data Driven Approach Towards Disruptive Technologies

This book constitutes the refereed proceedings of the 9th International Conference on Internet Multimedia Computing and Service, ICIMCS 2017, held in Qingdao, China, in August 2017. The 20 revised full papers and 28 revised short papers presented were carefully reviewed and selected from 103 submissions. The papers are organized in topical sections on multimedia information fusion, image processing and object recognition, machine learning and representation learning, multimedia retrieval, poster papers.

Image Quality Enhancement

The proceedings brings together a selection of papers from the 7th International Workshop of Advanced Manufacturing and Automation (IWAMA 2017), held in Changshu Institute of Technology, Changshu, China on September 11–12, 2017. Most of the topics are focusing on novel techniques for manufacturing and automation in Industry 4.0. These contributions are vital for maintaining and improving economic development and quality of life. The proceeding will assist academic researchers and industrial engineers to implement the concepts and theories of Industry 4.0 in industrial practice, in order to effectively respond to the challenges posed by the 4th industrial revolution and smart factories.

Image and Graphics

Proceedings of the 10th National Technical Seminar on Underwater System Technology 2018

This edited book presents essential findings in the research fields of artificial intelligence and computer vision, with a primary focus on new research ideas and results for mathematical problems involved in computer vision systems. The book provides an international forum for researchers to summarize the most recent developments and ideas in the field, with a special emphasis on the technical and observational results obtained in the past few years.