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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 12509
Disciplina	006.4
Soggetti	Image Processing and Computer Vision Artificial intelligence Pattern perception
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Deep Learning -- Regularization and Sparsity for Adversarial Robustness and Stable Attribution -- Self-Competitive Neural Networks -- A Novel Contractive GAN Model for a Unified Approach Towards Blind Quality Assessment of Images from Heterogeneous Sources -- Nonconvex Regularization for Network Slimming: Compressing CNNs Even More -- Biologically Inspired Sleep Algorithm for VariationalAuto-Encoders -- A Deep Genetic Programming based Methodology for Art Media Classification Robust to Adversarial Perturbations -- rcGAN: Learning a generative model for arbitrary size image generation -- Sketch-Inspector: a Deep Mixture Model for High-Quality Sketch Generation of Cats -- Depthwise Separable Convolutions and Variational Dropout within the context of YOLOv3 -- Uncertainty Estimates in Deep Generative Models using Gaussian Processes -- Segmentation -- Towards Optimal Ship Navigation Using Image Processing -- Overscan Detection in Digitized Analog Films by Precise Sprocket Hole Segmentation -- Pixel-level Corrosion Detection on Metal Constructions by Fusion of Deep Learning Semantic and Contour Segmentation -- CSC-GAN: Cycle and semantic consistency for dataset augmentation -- Improvements on the Superpixel Hierarchy Algorithm

with Applications to Image Segmentation and Saliency Detection -- Visualization -- Referenced Based Color Transfer for Medical Volume Rendering -- An Empirical Methodological Study of Evaluation Methods Applied to Educational Timetabling Visualizations -- Real-Time Contrast Enhancement for 3DMedical Images using Histogram Equalization -- Flow Map Processing by Space-Time Deformation -- GenExplorer: Visualizing and Comparing Gene Expression Levels via Differential Charts -- Video Analysis and Event Recognition -- An Event-Based Hierarchical Method for Customer Activity Recognition in Retail Stores -- Fully Autonomous UAV-based Action Recognition System Using Aerial Imagery -- Hierarchical Action Classification with Network Pruning -- An Approach Towards Action Recognition using Part Based Hierarchical Fusion -- ST: Computational Bioimaging -- Ensemble Convolutional Neural Networks for the Detection of Microscopic Fusarium Oxysporum -- Offline versus Online Triplet Mining based on Extreme Distances of Histopathology Patches -- Multi-Label Classification of Panoramic Radiographic Images using a Convolutional Neural Network -- Ink Marker Segmentation in Histopathology Images Using Deep Learning -- P-FideNet: Plasmodium Falciparum Identification Neural Network -- Applications -- Lightless Fields: Enhancement and Denoising of Light-deficient Light Fields -- FA3D: Fast and Accurate 3D Object Detection -- Generalized Inverted Dirichlet Optimal predictor for Image inpainting -- BVNet: A 3D End-to-end Model Based on Point Cloud -- Evaluating Single Image Dehazing Methods Under Realistic Sunlight Haze -- Biometrics -- Deep Partial Occlusion Facial Expression Recognition via Improved CNN -- Towards an Effective Approach for Face Recognition with DCGANs Data Augmentation -- Controlled AutoEncoders to Generate Faces from Voices -- Gender and Age Estimation without Facial Information from Still Images -- Face Reenactment Based Facial Expression Recognition -- Motion and Tracking -- Coarse-to-Fine Object Tracking Using Deep Features and Correlation Filters -- Asynchronous Corner Tracking Algorithm based on Lifetime of Events for DAVIS Cameras -- TAGCN: Topology-Aware Graph Convolutional Network for Trajectory Prediction -- 3D articulated body model using anthropometric control points and an articulation video -- Body Motion Analysis for Golf Swing Evaluation -- Computer Graphics -- Simulation of High-Definition Pixel-Headlights -- ConcurrentHull: A Fast Parallel Computing Approach to the Convex Hull Problem -- A Data-Driven Creativity Measure for 3D Shapes -- Virtual Reality -- Walking in a Crowd Full of Virtual Characters: Effects of Virtual Character Appearance on Human Movement Behavior -- Improving Chinese Reading Comprehensions of Dyslexic Children via VR Reading -- Improving User Experience in Augmented Reality Mirrors with 3D Displays -- Passenger Anxiety about Virtual Driver Awareness During a Trip with a Virtual Autonomous Vehicle -- Investigating the Display Fidelity of Popular Head-Mounted Display Systems on Spatial Updating and Learning in VR -- ST: Computer Vision Advances in Geo-Spatial Applications and Remote Sensing -- Natural Disaster Building Damage Assessment Using a Two-Encoder U-Net -- Understanding Flooding Detection Using Overhead Imagery -- Lessons Learned -- Hyperspectral Image Classification via Pyramid Graph Reasoning -- Semi-Supervised Fine-Tuning for Deep Learning Models in Remote Sensing Applications -- Scene Classification of Remote Sensing Images using convNet Features and Multi-grained Forest.

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## Sommario/riassunto

This two-volume set of LNCS 12509 and 12510 constitutes the refereed proceedings of the 15th International Symposium on Visual Computing, ISVC 2020, which was supposed to be held in San Diego,

CA, USA in October 2020, took place virtually instead due to the COVID-19 pandemic. The 114 full and 4 short papers presented in these volumes were carefully reviewed and selected from 175 submissions. The papers are organized into the following topical sections: Part I: deep learning; segmentation; visualization; video analysis and event recognition; ST: computational bioimaging; applications; biometrics; motion and tracking; computer graphics; virtual reality; and ST: computer vision advances in geo-spatial applications and remote sensing Part II: object recognition/detection/categorization; 3D reconstruction; medical image analysis; vision for robotics; statistical pattern recognition; posters.

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