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	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-defficient 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.

| 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.