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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2018
Disciplina	621.36/7
Soggetti	Optical data processing Lasers Photonics Pattern recognition Artificial intelligence Computer graphics Image Processing and Computer Vision Optics, Lasers, Photonics, Optical Devices Pattern Recognition Artificial Intelligence Computer Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Invited Presentation -- Pursuing Reality with Image-Based Modeling, Rendering, and Lighting -- Computations and Algorithms -- Frame Decimation for Structure and Motion -- Stabilizing Image Mosaicing by Model Selection -- On Computing Metric Upgrades of Projective Reconstructions under the Rectangular Pixel Assumption -- A Progressive Scheme for Stereo Matching -- Panel Session on Computations and Algorithms -- Visual Scene Representations -- Rendering with Non-uniform Approximate Concentric Mosaics -- Volumetric Warping for Voxel Coloring on an Infinite Domain -- A

Compact Model for Viewpoint Dependent Texture Synthesis --  
Augmented Reality Using Uncalibrated Video Sequences -- Panel  
Session on Visual Scene Representation -- Extended Environments --  
Geometry and Texture from Thousands of Images -- VideoPlus: A  
Method for Capturing the Structure and Appearance of Immersive  
Environments -- Eyes from Eyes -- Sequential Localisation and Map-  
Building in Computer Vision and Robotics -- Panel Session on Extended  
Environments.

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Sommario/riassunto

This volume contains the final version of the papers originally presented at the second SMILE workshop 3D Structure from Multiple Images of Large-scale Environments, which was held on 1-2 July 2000 in conjunction with the Sixth European Conference in Computer Vision at Trinity College Dublin. The subject of the workshop was the visual acquisition of models of the 3D world from images and their application to virtual and augmented reality. Over the last few years tremendous progress has been made in this area. On the one hand important new insights have been obtained resulting in more flexibility and new representations. On the other hand a number of techniques have come to maturity, yielding robust algorithms delivering good results on real image data. Moreover supporting technologies – such as digital cameras, computers, disk storage, and visualization devices – have made things possible that were infeasible just a few years ago. Opening the workshop was Paul Debevec's invited presentation on image-based modeling, rendering, and lighting. He presented a number of techniques for using digital images of real scenes to create 3D models, virtual camera moves, and realistic computer animations. The remainder of the workshop was divided into three sessions: Computation and Algorithms, Visual Scene Representations, and Extended Environments. After each session there was a panel discussion that included all speakers. These panel discussions were organized by Bill Triggs, Marc Pollefeys, and Tomas Pajdla respectively, who introduced the topics and moderated the discussion. A substantial part of these proceedings are the transcripts of the discussions following each paper and the full panel sessions. These discussions were of very high quality and were an integral part of the workshop.

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