An Introduction to 3D Computer Vision Techniques and Algorithms

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Wiley, 2009. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: Preface.Acknowledgements.Notation and Abbreviations.Part I.1 Introduction.1.1 Stereo-pair Images and Depth Perception.1.2 3D Vision Systems.1.3 3D Vision Applications.1.4 Contents Overview: The 3D Vision Task in Stages.2 Brief History of Research on Vision.2.1 Abstract.2.2 Retrospective of Vision Research.2.3 Closure.Part II.3 2D and 3D Vision Formation.3.1 Abstract.3.2 Human Visual System.3.3 Geometry and Acquisition of a Single Image.3.4 Stereoscopic Acquisition Systems.3.5 Stereo Matching Constraints.3.6 Calibration of Cameras.3.7 Practical Examples.3.8 Appendix: Derivation of the Pin-hole Camera Transformation.3.9 Closure.4 Low-level Image Processing for Image Matching.4.1 Abstract.4.2 Basic Concepts.4.3 Discrete Averaging.4.4 Discrete Differentiation.4.5 Edge Detection.4.6 Structural Tensor.4.7 Corner Detection.4.8 Practical Examples.4.9 Closure.5 Scale-space Vision.5.1 Abstract.5.2 Basic Concepts.5.3 Constructing a Scale-space.5.4 Multi-resolution Pyramids.5.5 Practical Examples.5.6 Closure.6 Image Matching Algorithms.6.1 Abstract.6.2 Basic Concepts.6.3 Match Measures.6.4 Computational Aspects of Matching.6.5 Diversity of Stereo Matching Methods.6.6 Area-based Matching.6.7 Area-based Elastic Matching.6.8 Feature-based Image Matching.6.9 Gradient-based Matching.6.10 Method of Dynamic Programming.6.11 Graph Cut Approach.6.12 Optical Flow.6.13 Practical Examples.6.14 Closure.7 Space Reconstruction and Multiview Integration.7.1 Abstract.7.2 General 3D

Reviews

This book is definitely not straightforward to get started on studying but extremely exciting to read. It is really simplistic but shocks in the 50 percent of the ebook. Once you begin to read the book, it is extremely difficult to leave it before concluding.
-- Ally Reichel

This publication is amazing. It is definitely basic but shocks in the fifty percent of your publication. You wont feel monotony at anytime of your own time (that's what catalogues are for concerning if you question me).
-- Prof. Kirk Cruickshank DDS