# Studies in Computational Intelligence

Volume 532

*Series Editor*

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# Registration and Recognition in Images and Videos

Springer

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ISSN 1860-949X ISSN 1860-9503 (electronic)
ISBN 978-3-642-44906-2 ISBN 978-3-642-44907-9 (eBook)
DOI 10.1007/978-3-642-44907-9
Springer Heidelberg New York Dordrecht London

Library of Congress Control Number: 2013953719

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Printed on acid-free paper

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# Preface

Computer vision is the science and technology of making machines that see. It is concerned with the theory, design and implementation of algorithms that can automatically process visual data to recognize objects, track and recover their shape and spatial layout.

The International Computer Vision Summer School - ICVSS was established in 2007 to provide both an objective and clear overview and an in-depth analysis of the state-of-the-art research in Computer Vision. The courses are delivered by world renowned experts in the field, from both academia and industry, and cover both theoretical and practical aspects of real Computer Vision problems. The school is organized every year by University of Cambridge (Computer Vision and Robotics Group) and University of Catania (Image Processing Lab). Different topics are covered each year. A summary of the past Computer Vision Summer Schools can be found at: `http://www.dmi.unict.it/icvss`

This edited volume contains a selection of articles covering some of the talks and tutorials held during recent editions of the school and covering some of the key topics in computer vision. The chapters provide both an in-depth overview of challenging areas and key references to the existing literature. The main topics covered by the chapters include the visual field, advanced algorithms for visual feature extraction and description, feature matching and image registration, object detection and recognition, object tracking, image segmentation. Each chapter contains key references to the existing literature.

It is our hope that graduate students, young and senior researchers, and academic/industrial professionals will find the book useful for understanding and reviewing current approaches in Computer Vision, thereby continuing the mission of the International Computer Vision Summer School.

Sicily, Sept 2013

Roberto Cipolla
Sebastiano Battiato
Giovanni Maria Farinella

# Acknowledgements

We would like to take this opportunity to thank all contributors of this book, and all people involved in the organization of ICVSS.

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