PROCEEDINGS OF SPIE

Videometrics, Range Imaging, and Applications X

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Editors

2–3 August 2009
San Diego, California, United States

Sponsored and Published by
SPIE

Volume 7447

Proceedings of SPIE, 0277-786X, v. 7447

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from this book:
Author(s), "Title of Paper," in *Videometrics, Range Imaging, and Applications X*, edited by Fabio Remondino, Mark R. Shortis, Sabry F. El-Hakim, Proceedings of SPIE Vol. 7447 (SPIE, Bellingham, WA, 2009) Article CID Number.

ISSN 0277-786X
ISBN 9780819477378

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445
SPIE.org

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Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.

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Paper Numbering: Proceedings of SPIE follow an e-First publication model, with papers published first online and then in print and on CD-ROM. Papers are published as they are submitted and meet publication criteria. A unique, consistent, permanent citation identifier (CID) number is assigned to each article at the time of the first publication. Utilization of CIDs allows articles to be fully citable as soon they are published online, and connects the same identifier to all online, print, and electronic versions of the publication. SPIE uses a six-digit CID article numbering system in which:

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Introduction

The Videometrics, Range Imaging, and Applications X conference is the twelfth in a series commenced in 1991. Under the auspices of the International Society for Optical Engineering (SPIE), Sabry El-Hakim arranged the first conference on Industrial Vision Metrology, held in Winnipeg, Canada. Based on the success of this first venture into an emerging discipline, the conference was renamed Videometrics and held in conjunction with the SPIE Photonics East group of conferences in Boston and Philadelphia during 1992-1995. Videometrics was then re-located to become part of SPIE Photonics West, held annually in California. The conferences have been held once in San Diego in 1997, then twice in San Jose in 1999 and 2001 (given the longer title of Videometric and Optical Methods for 3D Shape Measurement), then moved to Santa Clara in 2003, and moved back to San Jose in 2005 and 2007.

For more than two decades, the Videometrics conference series has been providing a unique forum for computer vision, image processing and photogrammetry researchers and practitioners to present the latest advances in precise 3D measurement and modeling from imaging and range sensors. This conference originally focused on the metric performance of sensors and algorithms to produce the most accurate and reliable geometric measurements and models. Topics such as sensor calibration, performance evaluation and accurate object reconstruction were predominant. This has now been expanded to encompass all phases of 3D optical and range imaging and modeling of real scenes, including automation of data collection and processing, improving the visual quality and realism, visualization, animation and data management for real-time manipulation. This is in response to the fast growing interest in 3D imaging and modeling technology, and the increased demand of these models in applications such as rapid product development, virtual museums, documentation of monuments and architecture for cultural heritage, marketing and tourism, human body modeling, medicine, and exploration of remote and hazardous sites, to name just a few.

The 2009 meeting will be held once more at San Diego, but this time within SPIE Optics + Photonics, as part of the program track on Image and Signal Processing within the Optical Engineering + Applications conferences. The group of conferences that comprise Image and Signal Processing combines the disciplines of optical design, image processing, advanced metrology and remote sensing. Optics + Photonics in total comprises 80 technical conferences and 3100 papers, around 100 short courses and workshops, and a technical exhibit with more than 100 exhibitors. Although the individual conferences generally span one to three days, the schedule is staggered so that there is a selection of 20-30 technical sessions at any time during the meeting. Attendees thereby get the benefit of

seeing the broader extent of discipline areas allied to Videometrics, with the additional bonus of approximately 30 plenary presentations.

Videometrics, Range Imaging, and Applications X will have two invited speakers on range sensor calibration and markerless motion capture. In addition there will be technical sessions related to range measurement instruments, systems characterization and development, industrial metrology, image sequence analysis and image-based applications.

The Chairs of Videometrics welcome and acknowledge the efforts of the authors, presenters and audience in maintaining the high level of interest in Videometrics and contributing to the success of the meeting.

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