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Fabio Remondino
Mark R. Shortis
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Introduction

The Videometrics, Range Imaging, and Applications XIII conference is the fifteenth in a series started in 1991 by Sabry El-Hakim. Under the auspices of the International Society for Optics and Photonics (SPIE) from the beginning, the first conference on Industrial Vision Metrology was 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 were 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. More recently Videometrics became part of Optics + Photonics program track on Image and Signal Processing within the Optical Engineering and Applications conferences in San Diego in 2009. The conference was renamed to 'Videometrics, Range Imaging, and Applications' to reflect the changes in contemporary practice.

Throughout all of this period the attendance from North America was slowly declining, and the participation from Europe and Asia had strengthened, despite the impact of the global financial downturn. Therefore in 2011 it was decided to move the Videometrics series to Munich, Germany, to be part of the SPIE Europe conference on Optical Metrology, co-located with the World of Photonics conference and exhibition. The general theme of Optical Metrology resonates very well with Videometrics and the majority of authors and presenters from Europe confirmed the correct decision to relocate the conference.

Irrespective of the location, for more than two decades the Videometrics conference series has been providing a unique forum for optical metrology, 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 was originally focused on the metric performance of image 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 imaging, 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 sustained increase in 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.

In 2015 Videometrics, Range Imaging, and Applications XIII demonstrates the continuing broad interest in 3D optical imaging, with sessions encompassing all aspects of the field, from performance evaluation to 3D modeling and applications. The three invited speakers reinforce this span of interest: Professor Bernd Jaehne (Heidelberg Universität, Germany) presenting on light field-based videometry; Professor Reinhard Koch (German Christian-Albrechts-Universität zu Kiel, Germany) presenting on real time tracking of deforming surfaces with color+depth cameras; and Professor Stuart Robson (University College London, United Kingdom) presenting on optical metrology with low cost camera systems for advanced manufacturing. Whilst Videometrics embraces new technologies such as enhancing time of flight range imaging and developing new techniques such as in the area of fusion of range and image data, the classical problems of precise measurement and robust tracking are still well represented. The proceedings of Videometrics always contain something of interest for all practitioners involved in the 3D optical imaging field.

The Chairs recognise and acknowledge with gratitude the efforts of the Conference Committee members, the authors, presenters and audience, and especially the invited speakers, in maintaining the high level of interest in the Videometrics series of events. We acknowledge and appreciate the contribution to the success of the conference from everyone involved in Videometrics.

Fabio Remondino
Mark R. Shortis