

Preface

These proceedings gather the selected papers of the Advanced Concepts for Intelligent Vision Systems (ACIVS) conference which was held in Catania, Italy, during October 26–29, 2015.

This event was the 16th ACIVS. After the first event in Germany in 1999, ACIVS has become a larger and independent scientific conference. However, the seminal distinctive governance rules have been maintained:

- To update the conference scope on a yearly basis. While keeping a technical backbone (the classic low-level image processing techniques), we have introduced topics of interest such as – chronologically – image and video compression, 3D, surveillance, etc., in order to fit the conference scope to our scientific community's needs. In addition, speakers usually give invited talks on hot issues.
- To remain a single-track conference in order to promote scientific exchanges within the audience.
- To grant oral presentations a duration of 25 minutes and published papers a length of 12 pages, which is significantly different from most other conferences.

The second and third items generate a complex management of the conference; in particular, the number of time slots is rather small. Although the selection between the two presentation formats is primarily determined by the need to compose a well-balanced program, papers presented during plenary and poster sessions enjoy the same importance and publication format.

The first item is strengthened by the notoriety of ACIVS, which has been growing over the years: official 2015 Springer records show a cumulated number of downloads on January 1, of more than 325,000.

ACIVS 2015 started with a special session on the topic of large-scale video processing and embedded intelligence highlighted by invited talks from Michael Tcha-gaspanian (CEA, France) and Alessandro Capra (STMicroelectronics, Italy). The goal of this special session was to facilitate discussion of the state of the art and future challenges in the booming research area of computer vision and video processing for interconnected camera systems. The session provided an opportunity for liaison between academic and industrial research and development in this field demonstrated by several successful cross-national projects and collaborations whose representatives were among the session participants.

The regular sessions also included a couple of invited talks by Prof. Raimondo Schettini (University of Milano Bicocca) and Prof. Gabriela Csurka (Xerox Research Centre Europe). We would like to thank all of them for enhancing the technical program with their presentations.

ACIVS 2015 attracted submissions from many different countries, mostly from Europe, but also from the rest of the world: Algeria, Australia, Austria, Brazil, Belgium, Canada, China, Cyprus, Czech Republic, Denmark, Ecuador, France, Finland,

Germany, Hungary, India, Israel, Italy, Korea, Mexico, The Netherlands, Poland, Romania, Russia, Switzerland, Taiwan, Tunisia, Turkey, the Ukraine, United Arab Emirates, the UK, and the USA.

From 129 submissions, 35 were selected for oral presentation and 41 as posters. The paper submission and review procedure was carried out electronically and a minimum of three reviewers were assigned to each paper. A large and energetic Program Committee (87 people), helped by additional referees (about 150 people in total), as listed on the following pages, completed the long and demanding reviewing process. We would like to thank all of them for their timely and high-quality reviews, achieved in quite a short time and just before the summer holidays.

Also, we would like to thank our sponsors (in alphabetical order) Antwerp University, University of Catania, CSIRO (Commonwealth Scientific and Industrial Research Organization), Ghent University, and GIRPR (Gruppo Italiano Ricercatori in Pattern Recognition) for their valuable support.

Finally, we would like to thank all the participants who trusted in our ability to organize this conference for the 16th time. We hope they attended a different and stimulating scientific event and that they enjoyed the atmosphere of the ACIVS social events in the city of Catania.

As explained, a conference like ACIVS would not be feasible without the concerted effort of many people and the support of various institutions. We are indebted to the local organizers for having smoothed all the harsh practical details of an event venue, and we hope to welcome them in the near future.

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