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New Trends in Image Analysis and Processing – ICIAP 2017

ICIAP International Workshops, WBICV, SSPandBE,
3AS, RGBD, NIVAR, IWBAAS, and MADiMa 2017
Catania, Italy, September 11–15, 2017
Revised Selected Papers

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Preface

This volume contains the 46 papers accepted for presentation at the workshops hosted by the 19th International Conference on Image Analysis and Processing (ICIAP), held in Catania, Italy, September 11–15, 2017.

ICIAP is the conferences organized every two years by the GIRPR, the Italian group of researchers affiliated with the International Association for Pattern Recognition (IAPR). The aim of the conference is to bring together researchers working on image processing, computer vision, and pattern recognition from around the world.

Seven individual workshops – four full-day and three half-day – were selected by the workshop chairs, Giovanni Maria Farinella and Marco Leo, to complement ICIAP 2017 in Catania:

- First International Workshop on Brain-Inspired Computer Vision (WBICV) 2017;
- Social Signal Processing and Beyond (SSPandBE) 2017;
- Automatic Affect Analysis and Synthesis (3AS) 2017;
- Background Learning for Detection and Tracking from RGBD Videos (RGBD) 2017;
- Natural Human–Computer Interaction and Ecological Perception in Immersive Virtual and Augmented Reality (NIVAR) 2017;
- First International Workshop on Biometrics As-a-Service: Cloud-Based Technology, Systems, and Applications (IWBAAS) 2017;
- Third International Workshop on Multimedia-Assisted Dietary Management (MADiMa) 2017.

The International Workshop on Brain-Inspired Computer Vision (WBICV) organized by George Azzopardi (University of Malta, Malta), Laura Fernández-Robles (University of León, Spain), and Antonio Rodríguez-Sánchez (University of Innsbruck, Austria) provided a forum for researchers of diverse fields in the context of the modelling different phenomena of the visual system of the brain.

The Workshop on Social Signal Processing and Beyond (SSPandBE) organized by Mariella Dimiccoli (University of Barcelona, Spain), Petia Ivanova Radeva (University of Barcelona, Spain), and Marco Cristani (University of Verona, Italy) provided an interdisciplinary forum to bring together researchers and professionals studying social signal processing and social behavior to present novel ideas and discuss future directions in the field.

The Workshop on Automatic Affect Analysis and Synthesis (3AS) organized by Nadia Berthouze (University College London, UK), Simone Bianco (University of Milan-Bicocca, Italy), Giuseppe Boccignone (University of Milan, Italy), and Paolo Napoletano (University of Milan-Bicocca, Italy) considered the research field that tries to endow machines with capabilities to recognize, interpret, and express emotions.

The Workshop on Background Learning for Detection and Tracking from RGBD Videos (RGBD) organized by Massimo Camplani (University of Bristol, UK), Lucia Maddalena (ICAR-CNR, Italy), and Luis Salgado (Universidad Politécnica de Madrid, Spain) aimed to bring together researchers interested in background learning for detection and tracking from RGBD videos.

The scope of the NIVAR workshop organized by Manuela Chessa (University of Genoa, Italy), Fabio Solari (University of Genoa, Italy), and Jean-Pierre Bresciani (Université de Fribourg, Switzerland) has been to provide a forum for researchers and practitioners from both academia and industry, interested in studying and developing innovative solutions with the aim of achieving a natural human–computer interaction and an ecological perception in VR and AR systems.

The International Workshop on Biometrics As-a-Service: Cloud-Based Technology, Systems, and Applications (IWBAAS) organized by Silvio Barra (University of Cagliari, Italy), Arcangelo Castiglione (University of Salerno, Italy), Kim-Kwang Raymond Choo (University of Texas, USA), and Fabio Narducci (University of Molise, Italy) solicited work and ideas on cloud-based biometric systems and services.

The International Workshop on Multimedia-Assisted Dietary Management (MADiMa) organized by Stavroula Mougiakakou (University of Bern, Switzerland), Giovanni Maria Farinella (University of Catania, Italy), and Keiji Yanai (The University of Electro-Communications, Tokyo, Japan) aimed to bring together researchers from the diverse fields of engineering, computer science, and nutrition who investigate the use of information and communication technologies for better monitoring and management of food intake.

We thank all the workshop organizers who made possible such an interesting pre-conference program.

August 2017

Giovanni Maria Farinella
Marco Leo

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About This Book

This book constitutes the refereed proceedings of seven workshops held at the 19th International Conference on Image Analysis and Processing, ICIAP 2017, in Catania, Italy, in September 2017: the First International Workshop on Brain-Inspired Computer Vision – WBICV 2017; Social Signal Processing and Beyond – SSPandBE 2017; Automatic Affect Analysis and Synthesis – 3AS 2017; Background Learning for Detection and Tracking from RGBD Videos – RGBD 2017; Natural Human–Computer Interaction and Ecological Perception in Immersive Virtual and Augmented Reality – NIVAR 2017; First International Workshop on Biometrics As-a-Service: Cloud-Based Technology, Systems, and Applications – IWBAAS 2017; Third International Workshop on Multimedia-Assisted Dietary Management – MADiMa 2017.

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