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Gian Luca Foresti · Andrea Fusiello ·
Edwin Hancock
Editors

Image Analysis and Processing – ICIAP 2023

22nd International Conference, ICIAP 2023 Udine, Italy, September 11–15, 2023 Proceedings, Part I

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Preface

The International Conference on Image Analysis and Processing (ICIAP) is a biennial scientific meeting promoted by the Italian Association for Computer Vision, Pattern Recognition and Machine Learning (CVPL - formerly GIRPR), the Italian IAPR Member Society. The 22nd International Conference on Image Analysis and Processing (ICIAP 2023) was held in Udine, Italy, from 11 to 15 September 2023, in the prestigious venue of Palazzo di Toppo – Garzolini – Wasserman. It was co-organised by the Department of Informatics, Mathematics and Physics (DMIF) and the Polytechnic Department of Engineering and Architecture (DPIA) of the University of Udine, and sponsored by ST Microelectronics.

The conference traditionally covers topics related to theoretical and experimental areas of Computer Vision, Image Processing, Pattern Recognition and Machine Learning, with emphasis on theoretical aspects and applications. Keeping with this trend, ICIAP 2023 focused on the following areas: Pattern Recognition, Machine Learning and Deep Learning, 3D Computer Vision and Geometry, Image Analysis: Detection and Recognition, Video Analysis & Understanding, Biomedical and Assistive Technology, Digital Forensics and Biometrics, Multimedia, Cultural Heritage, Robot Vision and Automotive, Shape Representation, Recognition and Analysis, Augmented and Virtual Reality, Geospatial Analysis, and Computer Vision for UAVs.

The ICIAP 2023 main conference received 144 paper submissions from all over the world. The selection process, guided by the three Programme Chairs, resulted in the final selection of 92 high-quality manuscripts, with an overall acceptance rate of 64%.

To ensure the quality of papers ICIAP 2023 implemented a two-round review process. Each submission was managed by two Area Chairs and reviewed by at least three reviewers. Papers were selected through a double-blind peer review process, considering originality, significance, clarity, soundness, relevance and technical content.

The main conference programme included 24 oral presentations, 68 posters and three invited talks by leading experts in computer vision and pattern recognition: Danijel Skočaj (University of Ljubljana), Andrew Fitzgibbon (Graphcore), and Tomas Pajdla (CTU in Prague).

ICIAP 2023 also included 4 tutorials and hosted 15 workshops and 2 competitions, on topics of great relevance with respect to the state of the art. An industrial poster session was organised to bring together papers written by scientists working in industry and with a strong focus on application.

Several awards were presented during the ICIAP 2023 conference. The Eduardo Caianiello award was attributed to the best paper authored or co-authored by at least one young researcher. A Best Paper Award dedicated to Prof. Alfredo Petrosino was also assigned after a careful selection made by an ad hoc appointed committee.

The success of ICIAP 2023 is due to the contribution of many people. Special thanks go to all the reviewers and Area Chairs for their hard work in selecting the papers. Our thanks also go to the organising committee for their tireless efforts, advice and support.

We hope that you will find the papers in this volume interesting and informative, and that they will inspire you to further research in the field of image analysis and processing.

September 2023

Gian Luca Foresti
Andrea Fusiello
Edwin Hancock

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International Association for Pattern Recognition (IAPR)
Italian Association for Computer Vision, Pattern Recognition and Machine Learning (CVPL)

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