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Preface

It is with great pleasure that we welcome you to the proceedings of the 8th International Symposium on Visual Computing (ISVC 2012) that was held in Rethymnon, Crete, Greece. ISVC provides a common umbrella for the four main areas of visual computing including vision, graphics, visualization, and virtual reality. The goal is to provide a forum for researchers, scientists, engineers, and practitioners throughout the world to present their latest research findings, ideas, developments, and applications in the broader area of visual computing.

This year, the program consisted of 11 oral sessions, one poster session, seven special tracks, and six keynote presentations. The response to the call for papers was very good; we received over 200 submissions for the main symposium from which we accepted 68 papers for oral presentation and 35 papers for poster presentation. Special track papers were solicited separately through the Organizing and Program Committees of each track. A total of 45 papers were accepted for oral presentation in the special tracks.

All papers were reviewed with an emphasis on potential to contribute to the state of the art in the field. Selection criteria included accuracy and originality of ideas, clarity and significance of results, and presentation quality. The review process was quite rigorous, involving two–three independent blind reviews followed by several days of discussion. During the discussion period we tried to correct anomalies and errors that might have existed in the initial reviews. Despite our efforts, we recognize that some papers worthy of inclusion may have not been included in the program. We offer our sincere apologies to authors whose contributions might have been overlooked.

We wish to thank everybody who submitted their work to ISVC 2012 for review. It was because of their contributions that we succeeded in having a technical program of high scientific quality. In particular, we would like to thank the ISVC 2012 Area Chairs, the organizing institutions (UNR, DRI, LBNL, and NASA Ames), the industrial sponsors (BAE Systems, Intel, Ford, Hewlett Packard, Mitsubishi Electric Research Labs, Toyota, General Electric), the international Program Committee, the special track organizers and their Program Committees, the keynote speakers, the reviewers, and especially the authors that

contributed their work to the symposium. In particular, we would like to express our appreciation to BAE Systems and Riad Hammoud for their sponsorship of the “best” paper award this year.

July 2012

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Yuan Xiaoru	Peking University, China
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Zhang Hui	Indiana University, USA
Zhao Ye	Kent State University, USA
Zheng Ziyi	Stony Brook University, USA
Zhukov Leonid	Caltech, USA

ISVC 2012 Special Tracks

1. 3D Mapping, Modeling and Surface Reconstruction

Organizers

Nefian Ara	Carnegie Mellon University/NASA Ames Research Center, USA
Edwards Laurence	NASA Ames Research Center, USA
Huertas Andres	NASA Jet Propulsion Lab, USA

2. Computational Bioimaging

Organizers

Tavares João Manuel R.S.	University of Porto, Portugal
Natal Jorge Renato	University of Porto, Portugal
Cunha Alexandre	Caltech, USA

3. Optimization for Vision, Graphics and Medical Imaging

Organizers

Komodakis Nikos	University of Crete, Greece
Kohli Pushmeet	Microsoft Research Cambridge, UK
Kumar Pawan	Ecole Centrale de Paris, France
Maeder Anthony	University of Western Sydney, Australia
Carsten Rother	Microsoft Research Cambridge, UK

4. Unconstrained Biometrics: Advances and Trends

Organizers

Proença Hugo	University of Beira Interior, Covilhã, Portugal
Du Yingzi	Indiana University-Purdue University Indianapolis, Indianapolis, USA
Scharcanski Jacob	Federal University of Rio Grande do Sul Porto Alegre, Brazil
Ross Arun	West Virginia University, USA

5. Intelligent Environments: Algorithms and Applications

Organizers

Bebis George	University of Nevada, Reno, USA
Nicolescu Mircea	University of Nevada, Reno, USA
Bourbakis Nikolaos	Wright State University, USA
Tavakkoli Alireza	University of Houston, Victoria, USA

6. Object Recognition

Organizers

Scalzo Fabien	University of California at Los Angeles, USA
Salgian Andrea	The College of New Jersey, USA

7. Face Processing and Recognition

Organizers

Hussain Muhammad	King Saud Univesity, Saudi Arabia
Muhammad Ghulam	King Saud Univesity, Saudi Arabia
Bebis George	University of Nevada, Reno, USA

Organizing Institutions and Sponsors

Table of Contents – Part II

ST: Unconstrained Biometrics: Advances and Trends

ST: Computational Bioimaging II

ST: Intelligent Environments: Algorithms and Applications

Applications

Visualization III

Virtual Reality

ST: Face Processing and Recognition

Poster

Table of Contents – Part I

ST: Computational Bioimaging I

Computer Graphics I

Calibration and 3D Vision

Object Recognition

Illumination, Modeling, and Segmentation

Visualization I

ST: 3D Mapping, Modeling and Surface Reconstruction

Motion and Tracking

Computer Graphics II

ST: Optimization for Vision, Graphics and Medical Imaging

HCI and Recognition

Visualization II