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Preface

This LNCS volume contains the papers presented at the 28th Annual Symposium of the German Association for Pattern Recognition, DAGM 2006, held during September 12-14, 2006 at Fraunhofer IPK in Berlin, Germany. This symposium was jointly organized by the three Fraunhofer Institutes HHI, IPK and FIRST, and it was a great honor for the organizers to host such a renowned, scientific event.

In total, 171 papers from 29 countries were submitted, of which 76 (44%) were accepted. We would therefore like to thank all the authors for submitting their work and apologize that not all papers could be accepted. This record number of submissions is an acknowledgement of the high reputation of the DAGM Symposium but at the same time it was a challenge for the Program Committee, as all papers were reviewed by three experts. Therefore we are especially grateful to the 62 members of the Program Committee for their remarkable effort and the high quality as well as the timely delivery of the reviews. Out of the 76 accepted papers, 31 were oral presentations and 45 were posters. However, this selection does not imply any quality ranking but reflects the preference of the authors or the clustering of certain topics.

It was also a special honor to have five very renowned invited speakers at this conference:

- *Gabriel Curio* – Charité, Bernstein Center for Computational Neuroscience, Berlin, Germany
- *Thomas Hofmann* – Technical University Darmstadt, Germany
- *Thomas Huang* – Beckman Institute, University of Illinois, USA
- *Sebastian Thrun* – Artificial Intelligence Lab, Stanford University, USA
- *Patrice Simard* – Document Processing and Understanding (DPU) Group - Microsoft Research, Redmond, USA

These speakers presented their views on the state of the art in pattern recognition and image processing.

One day prior to the symposium, there were four tutorials which gave an in-depth insight into topics of current interest:

- "Elements of Geometric Computer Vision" by Andrea Fusiello – University of Verona, Italy
- "Approximate Proabilistic Inference for Machine Learning" by Manfred Opper – Technical University Berlin, Germany
- "3D Camera Tracking, Reconstruction and View Synthesis at Interactive Frame Rates" by Jan-Michael Frahm – University of North Carolina at Chapel Hill (UNC), USA; Jan-Friso Evers-Senne and Reinhard Koch – Christian-Albrechts-University, Kiel, Germany
- "Level Set Methods in Computer Vision" by Daniel Cremers, Thomas Brox and Kalin Kolev –University of Bonn, Germany

The organization of such an event is not possible without the effort and the enthusiasm of the people involved. We would therefore like to thank all the members of the Local Organizing Committee and the Local Steering Committee. Moreover, special thanks go to Katrin Franke and Mario Köppen for managing the reviewing process, for handling of the papers and for the preparation of the book, to Elnaz Mazandarani for the maintenance of the conference system and to Andrea Semionyk for the complete organization of the event.

We would also like to thank our sponsors Deutsche Telekom Laboratories, Robert Bosch GmbH, Siemens AG, and idalab GmbH for their support of the symposium. We hope that these proceedings, published in Springer's *Lecture Notes in Computer Science* as in previous symposia, will not only impact on the current research of the readers, but will also represent important archival material.

June 2006

Klaus-Robert Müller
Bertram Nickolay
Ralf Schäfer

Awards 2005

Olympus Prize

The Olympus Prize 2005 was awarded to:

Michael Felsberg and
Volker Roth

for their outstanding contributions to the area of image segmentation.

DAGM Prizes

The main prize for 2005 was awarded to:

Bodo Rosenhahn, Uwe G. Kersting, Andrew W. Smith, Jason K. Gurney, Thomas Brox, Reinhard Klette

A System for Marker-less Human Motion Estimation

Further DAGM prizes for 2005 were awarded to:

Natalia Slesareva, Andrés Bruhn, Joachim Weickert

Optic Flow Goes Stereo: A Variational Method for Estimating Discontinuity-Preserving Dense Disparity Maps

Matthias Heiler, Jens Keuchel, Christoph Schnörr

Semidefinite Clustering for Image Segmentation with A-priori Knowledge

Olaf Ronneberger, Janis Fehr, Hans Burkhardt

Voxel-Wise Gray Scale Invariants for Simultaneous Segmentation and Classification

Christian Perwass, Christian Gebken, Gerald Sommer

Estimation of Geometric Entities and Operators from Uncertain Data

DAGM 2006 Organization

DAGM 2006 was organized by the Fraunhofer Institutes FIRST, HHI and IPK. This 28th symposium of the German Association for Pattern Recognition (DAGM e.V.) was intended as a convention of renowned experts in all areas of pattern recognition and image processing to present and discuss recent progress and advances.

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