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# Pattern Recognition

27th DAGM Symposium
Vienna, Austria, August 31 – September 2, 2005
Proceedings

Springer

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# Preface

It is both an honor and a pleasure to hold the 27th Annual Meeting of the German Association for Pattern Recognition, DAGM 2005, at the Vienna University of Technology, Austria, organized by the Pattern Recognition and Image Processing (PRIP) Group. We received 122 contributions of which we were able to accept 29 as oral presentations and 31 as posters. Each paper received three reviews, upon which decisions were made based on correctness, presentation, technical depth, scientific significance and originality. The selection as oral or poster presentation does not signify a quality grading but reflects attractiveness to the audience which is also reflected in the order of appearance of papers in these proceedings. The papers are printed in the same order as presented at the symposium and posters are integrated in the corresponding thematic session.

In putting these proceedings together, many people played significant roles which we would like to acknowledge. First of all our thanks go to the authors who contributed their work to the symposium. Second, we are grateful for the dedicated work of the 38 members of the Program Committee for their effort in evaluating the submitted papers and in providing the necessary decision support information and the valuable feedback for the authors. Furthermore, the Program Committee awarded prizes for the best papers, and we want to sincerely thank the donors.

We were honored to have the following three invited speakers at the conference:

- *Jan P. Allebach (School of Electrical and Computer Engineering, Purdue University)*: Digital Printing – A Rich Domain for Image Analysis and Pattern Recognition.
- *Sven Dickinson (Department of Computer Science, University of Toronto)*: Object Categorization and the Need for Many-to-Many Matching.
- *Václav Hlaváč (Center for Machine Perception, Czech Technical University)*: Simple Solvers for Large Quadratic Programming Tasks.

We are grateful for economic support from the Austrian Computer Society, Microsoft Europe, IBM, Advanced Computer Vision, and the Vienna Convention Bureau. Many thanks to our local support team, Karin Hraby, Ernestine Zolda and Patrizia Schmidt-Simonsky, who made this symposium possible and took care of all practical tasks involved in planning DAGM 2005. Special thanks go to Martin Kampel, who wrote and maintained the symposium website and supported the organization of the review process. We hope that these proceedings, following the tradition of all DAGM symposiums, will not only impact on the current research of the readers but will also represent important archival material.

June 2005 Robert Sablatnig, Walter Kropatsch and Allan Hanbury

# DAGM[1] 2005 Organization

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Since 1978 DAGM (German Association for Pattern Recognition) has organized annual scientific conferences at various venues. The goal of each DAGM symposium is to inspire conceptual thinking, support the dissemination of ideas and research results from different areas in the field of pattern recognition, stimulate discussions and the exchange of ideas among experts, and support and motivate the next generation of young researchers.

DAGM e.V. was founded as a registered research association in September 1999. Until that time, DAGM had been comprised of the following support organizations that have since become honorary members of DAGM e.V.:

1. DGaO, Deutsche Arbeitsgemeinschaft für angewandte Optik (German Society for Applied Optics)
2. GMDS, Deutsche Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie (German Society for Medical Informatics, Biometry, and Epidemiology)
3. GI, Gesellschaft für Informatik (German Informatics Society)
4. ITG, Informationstechnische Gesellschaft (Information Technology Society)
5. DGN, Deutsche Gesellschaft für Nuklearmedizin (German Society for Nuclear Medicine)
6. IEEE, Deutsche Sektion des IEEE (Institute of Electrical and Electronics Engineers, German Section)
7. DGPF, Deutsche Gesellschaft für Photogrammetrie und Fernerkundung (German Society for Photogrammetry, Remote Sensing and Geo-information)
8. VDMA, Fachabteilung industrielle Bildverarbeitung/Machine Vision (VDMA Robotics + Automation Division)
9. GNNS, German Chapter of the European Neural Network Society
10. DGR, Deutsche Gesellschaft fur Robotik (German Robotics Society)

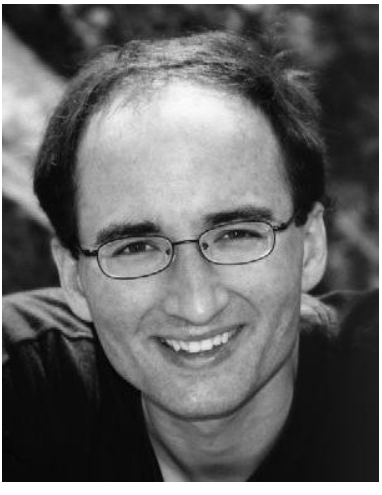
[1] DAGM e.V.: Deutsche Arbeitsgemeinschaft für Mustererkennung (German Association for Pattern Recognition).

# Prizes 2004

## Olympus Prize

The Olympus Prize 2004 was awarded to:

**Daniel Cremers**
for his significant contributions in the research area of Image Segmentation.



## DAGM Prizes

The main prize was awarded to:

**Bastian Leibe and Bernt Schiele**
Scale-Invariant Object Categorization Using a Scale-Adaptive Mean Shift Search.

Further DAGM prizes for 2004 were awarded to:

**Volker Roth and Tilman Lange**
Adaptive Feature Selection in Image Segmentation.

**Michael Felsberg and Gösta Granlund**
POI Detection Using Channel Clustering and the 2D Energy Tensor.

**Daniel Keysers, Thomas Deselaers and Hermann Ney**
Pixel-to-Pixel Matching for Image Recognition Using Hungarian Graph Matching.

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