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Gerhard Rigoll (Ed.)

# Pattern Recognition

30th DAGM Symposium

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Proceedings



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# Preface

This year, 2008, we had a very special Annual Symposium of the Deutsche Arbeitsgemeinschaft für Mustererkennung (DAGM) in Munich, and there are several reasons for that.

First of all, this year was the 30th anniversary of the symposium. This means that the first symposium was organized in 1978 and the location of this event was: Munich! Just two years before, in 1976, the DAGM was founded in: Munich! And Munich was also the location of two further DAGM symposia, in 1991 and in 2001. When I attended the conference in 2001, I was in negotiations for my appointment to the Chair of Human–Machine Communication at the Technische Universität München (TUM) and certainly I did not at all anticipate that I would have the pleasure and honor to host this conference just seven years later again in Munich for its 30th anniversary.

But special dates are not the only reason why DAGM was somewhat different this time. This year, DAGM was organized in conjunction with Automatica, the Third International Trade Fair for Automation in Assembly, Robotics, and Vision, one of the world's leading fairs in automation and robotics. This was an ideal platform for the exchange of ideas and people between the symposium and the fair, and the conference thus took place in a somewhat unusual but extraordinary location, the International Congress Center (ICM), in the direct vicinity of the New Munich Trade Fair Center, the location of the Automatica fair. With free access to Automatica, the registrants of DAGM got the opportunity to make full use of all the synergy effects associated with this special arrangement. Coming one last time back to dates, this synchronization with Automatica also resulted in yet another unusual fact, namely, that the DAGM symposium was moved this year from its usual time slot in early September to mid-June.

The fact that the conference was organized by the Institute for Human–Machine Communication of Technische Universität München (TUM) shows the strong relation between pattern recognition and human–computer interaction (HCI). While HCI is a relatively broad field and contains several areas with only little interconnection to pattern recognition, several core areas of HCI make heavy use of pattern recognition algorithms, especially in the perception of audio and visual information for humans. Moreover, machine learning techniques are very important for adaptive user interfaces as well as for most recognition methods which, especially in human–machine communication, often rely on statistical approaches with parameter learning from very large databases.

The technical program covered all aspects of pattern recognition as in recent years and consisted of oral presentations and poster contributions, which were treated equally and were given the same number of pages in the proceedings as usual. Each section is devoted to one specific topic and contains all oral and poster papers for this topic, sorted alphabetically by first author. One further

point that also made this year's DAGM special was the unusual low acceptance rate of only 39% accepted papers; therefore all authors of the papers in this volume can indeed be pleased since the inclusion of their contribution has been the product of a very strict paper selection process.

We therefore congratulate these authors again on their extraordinary success and of course have to thank them but also all other authors who submitted a paper to DAGM 2008 because the overall quality of all these submitted papers was the true basis for this highly selective review process. Sincere thanks also have to be expressed to our invited speakers, the reviewers from the Program Committee and all people involved in the organization of this event, especially the members of our Institute for Human–Machine Communication and the colleagues from the Munich Trade Fair Center who were involved in the local arrangements in conjunction with Automatica.

Last but not least, our sponsors OLYMPUS Europe Foundation Science for Life, MVTec Software GmbH, Continental, SMI SensoMotoric Instruments, STEMMER IMAGING, Siemens, PCO. Imaging, deserve our gratitude for their helpful support, which contributed to several awards at the conference and reasonable registration fees.

We are happy that the Annual Symposium of DAGM was back in Munich to celebrate its 30th birthday and that we were able to contribute to this event before passing the baton on to Jena for DAGM in 2009.

June 2008

Gerhard Rigoll

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