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Digital Mammography

10th International Workshop, IWDM 2010
Girona, Catalonia, Spain, June 16-18, 2010
Proceedings



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Preface

This volume of Springer's *Lecture Notes in Computer Science* series comprises the scientific proceedings of the 10th International Workshop on Digital Mammography (IWDM), which was held June 16–18, 2010 in Girona, Catalonia. The IWDM meetings traditionally bring together a diverse set of researchers (physicists, mathematicians, computer scientists, engineers), clinicians (radiologists, surgeons) and representatives of industry, who are jointly committed to developing technology, not just for its own sake, but to support clinicians in the early detection and subsequent patient management of breast cancer. The IWDM conference series was initiated at a 1993 meeting of the SPIE Medical Imaging Symposium in San Jose, CA, with subsequent meetings hosted every two years by researchers around the world. Former workshops were held in York, England (1994), Chicago, IL USA (1996), Nijmegen, The Netherlands (1998), Toronto, Canada (2000), Bremen, Germany (2002), Durham, NC, USA (2004), Manchester, UK (2006) and Tucson, AZ USA (2008). Each of these scientific events was combined with very successful and focused industrial and research exhibits, which demonstrated the milestones of digital mammography over the years.

A total number of 141 paper submissions from 21 countries were received. Each of these four-page abstract submissions was reviewed in a blind process by at least two members of the Scientific Committee, which led to a final selection of 46 oral presentations and 57 posters during the two and one-half days of scientific sessions. At this point I would like to acknowledge the excellent work of the Scientific Committee in guaranteeing scientific significance by means of providing feedback to the authors for the final papers. Thus, the 103 final papers included in this proceedings volume (*LNCS* 6136) constitute a comprehensive state of the art in breast imaging today.

As in the previous meetings, the 2010 IWDM program reflects not only the major challenges over the past that still remain active (CAD, lesion detection, image segmentation, image registration, risk assessment), but also the current trends and efforts being made to improve digital mammography for the early detection of breast cancer, paying special attention to volumetric imaging and digital breast tomosynthesis. We were also very honored to have as keynote speakers such internationally recognized researchers as Melcior Sentís, from UDIAT, Spain, who discussed the “Transition to Digital Mammography: Challenges and Future Trends,” Ingvar Andersson from Malmö University Hospital, who raised the question “Breast Tomosynthesis: Mammography of the Future?,” and Sir Michael Brady from the University of Oxford, UK, who spoke on “Information from Breast Images.” The three keynote speakers provided a window to give us a glance at the future in breast imaging by means of understanding the past and current achievements.

The 10th IWDM also took advantage of the participation of industrial partners who both exhibited at the meeting and provided sponsorship of various conference events, thus adding considerable quality and visibility to the meeting.

Organizing an event like the IWDM meeting is not feasible without a bunch of active people working behind the scenes. Among them, Laura Batlle, who worked many hours to recruit the industrial partners and helped during the registration process; Àric Monterde, responsible of all the 2010 IWDM designs, including the logos and poster; Xavier Lladó, who took care of all the details related to the conference center; Jordi Freixenet, in front of the social events; Arnau Oliver, who timely produced the final version of the proceedings; and Joseta Roca, always in search of financial support. The contribution of Robert Martí as scientific and technical advisor became essential when planning and executing the phases of the meeting. Many thanks also to Reyer Zwiggelaar, who conveniently pushed me to apply for the organization of the conference during my research stay at Aberystwyth University (Wales) in 2008.

June 2010

Joan Martí

Organization

The 10th International Workshop on Digital Mammography (IWDM) was organized by the *Computer Vision and Robotics Group* at the University of Girona (UdG).

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