

# Preface

This volume of Springer's *Lecture Notes in Computer Science* series comprises the scientific proceedings of the 13<sup>th</sup> International Workshop on Breast Imaging (IWDM 2016), which was held June 19–22 in Malmö, Sweden. This workshop was formerly called the International Workshop on Digital Mammography, IWDM for short. Although the term “Digital Mammography” was changed to “Breast Imaging” starting at the meeting in 2012, we still kept the familiar abbreviation “IWDM.” This new name was chosen to recognize clearly the movement in breast imaging from mammography toward recent emerging technologies and multimodality imaging solutions.

The IWDM meetings traditionally bring together a diversity of researchers (physicists, mathematicians, computer scientists, and engineers), clinicians (radiologists, surgeons, radiographers), and representatives of industry, who are jointly committed to developing technology for the early detection of breast cancer and subsequent patient management. The conference series was initiated at a 1993 meeting of the SPIE in San Jose, with subsequent meetings hosted every two years. Previous meetings have been held in York (1994), Chicago (1996), Nijmegen (1998), Toronto (2000), Bremen (2002), Durham (2004), Manchester (2006), Tucson (2008), Girona (2010), Philadelphia (2012), and Gifu (2014).

A total of 89 papers from around 20 countries were submitted to IWDM 2016. Each of the abstracts along with the four-page supporting documents was reviewed in a double-blinded process by two members of the Scientific Committee, which led to a final selection of 35 oral presentations and 50 posters during the two- and- a- half days of sequential scientific sessions. Six invited speakers gave excellent lectures on the current state of the art in their respective field of expertise. The 85 peer-reviewed papers in this proceedings volume (LNCS 9699) constitute a comprehensive state of the art in breast imaging today.

Invited speakers who are working as radiologists, medical physicists at hospitals, and researcher in universities or companies were chosen. Dr. Sophia Zackrisson of Lund University at Skåne University Hospital, Sweden, discussed the results from the Malmö Breast Tomosynthesis Screening Trial, which included 15,000 women investigated separately with breast tomosynthesis and with digital mammography. Prof. Nico Karssemeijer at Radboud University Medical Centre, The Netherlands, gave a lecture on texture analysis and CAD of breast images. Dr. Savannah Partridge, at the University of Washington in Seattle, USA, summarized the current state of the art in breast MRI and quantitative breast imaging. Prof. Per Hall at Karolinska Institutet in Stockholm, Sweden, described the possibilities to perform individualized breast cancer screening based on the experiences from the KARMA study. Dr. Eva Maria Fallenberg from Charité Universitätsmedizin Berlin, Germany, discussed the new diagnostic possibilities of spectral mammography. Finally, Prof. Marco Stampanoni, ETH Zürich, Switzerland, gave a lecture on X-ray phase contrast mammography.

Finally, a meeting as large and successful as IWDM 2016 is only possible through the efforts and commitment of many people. First, 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. Second, special thanks to Kristina Lång and Pontus Timberg for making this meeting a reality, and to Johanna Søger and Anna Zetterholm at Malmö Kongressbyrå for taking care of all the practicalities around the workshop. Third, thanks go to the local committee: Magnus Dustler, Daniel Förnvik, Hannie Petersson, Aldana Rosso, and Sophia Zackrisson. Finally, grateful acknowledgment goes to the research funds, academic partners, cooperating organizations, and industrial partners for their enthusiastic support of the scientific progress in breast imaging.

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